Clinical Psychology: Development of Measures for Schema Therapy

A thesis submitted to the University of Stirling for the degree of
Doctor of Philosophy

February, 2018

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Declaration Of Own Work

I confirm that all this work is my own except where indicated. Further, I have:

- Clearly referenced/listed all sources as appropriate
- Not made undue use of essay(s) of any other student(s) either past or present (or where used, this has been referenced appropriately)
- Not submitted the work for any other degree or professional qualification except as specified
- Acknowledged in appropriate places any help that I have received from others (e.g. statisticians, external sources, professors)

Signature …… Date: 18 February 2018

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Dr Alex Wood – November 2015 to September 2017

Dr Simon McCabe / Dr Michael Daly – October 2017 to February 2018

Acknowledgements

When I first embarked on this PhD in 2015, I was 52 years old. It would be an understatement to say that at that point in life, my plate was already full, attending to the many needs around Southeast Asia in relation to the work my wife and I had begun in 1988. It goes without saying that I could not have begun this PhD journey without the support of many colleagues and family members, who were willing to take on some of my usual responsibilities in order to create space in my life for this endeavour.

On the academic side, I want to thank Dr Alex Wood, who introduced me to this course and for his invaluable guidance thereafter. Given his immense knowledge in the field of scale development, I could not have imagined having a better supervisor for my PhD study. *Even though you left the University of Stirling officially in September 2017 to do humanitarian work in Cambodia, you continued to provide supervision until I crossed the finish line. I am very grateful for your excellent supervision.*

I want to also thank Dr George Lockwood, my fellow colleague and friend in the field of schema therapy, who stayed with me all the way, helping me edit my manuscripts. *Our many stimulating discussions and exchange of insights makes me grateful for our partnership. You have taken my understanding of schema therapy to a deeper level.*

Deserving much recognition is Ms Patricia Sim, who helped me with the formatting of the manuscripts, and from day one, assisted in getting the questionnaires out to the participants. *Your help made a huge difference and life would have been a lot more difficult without your contribution.*

Gratitude must be extended to Mr Teo Yig Yern and his team of volunteers who partnered with me to scan the seemingly unending data collected from the various volunteer organisations. *This was a difficult task and I want to thank you for your help.*

I appreciate Dr Jayaraman Krishnaswamy**,** who provided guidance in SPSS when I first began the PhD. *Thank you for being there when I got started.*

I would like to also recognise the contribution of my other co-authors and advisers, Dr Eamonn Ferguson and Dr Ringo Ho. I learned from them when I got stuck in some of

the statistical analysis, and their expert advice helped get the first paper published by a top-tier journal. *Thank you for your help and guidance.*

Apart from the above, I want to thank Dr Simon McCabe and Dr Michael Daly who took over when Dr Alex Wood left Stirling and helped me in the final stages. *Thank you for coming in and providing guidance at the end.*

The leadership team and Singapore Management Committee that oversee the work we do together in Southeast Asia, with whom I have worked side by side for 25-30 years, have cheered me on from the side-lines when the going got tough. *I want to thank each and every one of you for encouraging and motivating me to take this academic path.*

This list would be far from complete if I did not acknowledge my wife, Karen McDonald Louis. She is the person who drew from within me the hidden desire to do a PhD in Scotland on the topics about which I am most passionate – schemas and parenting. She is the one who gave me encouragement in the midst of my fear and stayed with me. *Thank you for encouraging me to not give up and for shouldering some of my responsibilities so that I could focus on this monumental task without losing my sanity!* In addition, thanks are in order for our two adult children, Sonia Louis Masilamani and David Philip Louis who are a joy every day of my life. *Parenting you from infancy with your mum has been my greatest achievement*. It was real gift to embrace my new son-in-law, Tarun John Masilamani, who married my daughter about half way through my work. *Welcome to the family.*

I am supremely grateful to God in Jesus Christ for His guidance as I began learning about parenting, which led me to Ephesians 6:4. From the translation of this biblical text in the American Standard Version and the New International Version, fathers (and mothers) are commanded to not *exasperate* but to *nurture* their children in the Lord. This directive set me on a path to grasp a fuller meaning of "exasperate" and "nurture", which eventually led to the empirical studies on parenting written in this thesis. I have served God since I was 19 years of age, and in spite of my many shortcomings, I hope to continue to fulfil the plans He has for me. *Thank You for Your guidance, grace and mercy, always.*

Abstract

Schema therapy is a leading contemporary approach to treating mental illness. The therapy integrally uses self-report measures of negative schemas ("long lasting patterns of emotions, cognitions and memories"), and the negative parenting patterns that are linked to the development of these schemas. However, the negative parenting measures are insufficient, and there are no corresponding measures of positive schemas or positive parenting patterns.

Study 1 focused on the development of a measure for positive schemas, the Young Positive Schema Questionnaire (YPSQ). Study 2 focused on the development of a measure for positive parenting patterns, the Positive Parenting Schema Inventory (PPSI). Finally, Study 3 empirically showed that the subscales of the Young Parenting Inventory (YPI) were not robust, and it provided a revised alternative (YPI-R2). For all three studies combined, community samples (n = 204 to 628) were collected from five countries in Asia (India, Indonesia, Malaysia, Singapore, and the Philippines) as well as the United States. The factor structure of the three instruments (the YPSQ, PPSI and YPI-R2) was stable in both Eastern and Western samples (in multigroup confirmatory factor analysis). All three scales showed prediction of mental health over and above what was possible with previous measures (incremental validity). The scales were not simply proxies for previously measured constructs (divergent validity). These scales also demonstrated significant associations with other established measures of parenting (construct validity). They also showed associations with negative schemas, well-being and ill-being (convergent validity).

This thesis provides the tools needed to include a focus on positive as well as negative schemas and parenting patterns in both research and clinical practice. It also shows the benefits of so doing.

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Chapter 1 – Introduction

This thesis aims to develop psychological measures to assist in the practice of schema therapy (ST), a form of psychotherapy that has been developed over the last 25 years. This chapter will begin with an overview of the evolution of the concept "schema", and how it made its way into psychology and ST. Since schemas, from the vantage point of ST, are believed to be linked with early parenting experiences, a section on parenting and the constructs developed over the past several decades will be discussed. This will be followed by a description of the key concepts, how existing ST-based measures are used, limitations of these measures, and why new measures and improvements to existing ones are necessary. This study's research questions and primary aims will also be outlined.

1.1 Brief Overview of "Schema" in Psychology

The word "schema" comes from the Greek word *σχήμα* and has a long history in philosophy, appearing in the writings of early Greek philosophers such as Plato and Aristotle. In Greek, schema means "form" or "figure" (Oxford University Press, 2017). Plato's dialogue, *The Meno*, discusses a schema in terms of a "figure" in the form of memories imprinted in a wax-like manner and stored in the brain (*The Meno* as cited in Marshall, 1995). Aristotle used schema in metaphysics to mean "categories" (*The Metaphysics* as cited in Marshall, 1995). This metaphor of a schema being a means of storing information remained unchanged for centuries and stayed largely in the field of philosophy.

The concept of schema was first introduced into psychology by British psychologist Frederic Bartlett (1886-1969). Bartlett's understanding of schema was based on an earlier view by Head and Holmes (1911); he said that "schemata" (alternate plural for schema) should be understood as always active and developing, not something static as implied by the storage metaphor. Bartlett's use of the term schema was centred on the concept of memory – what and how we remember. He believed that a schema was not something static, but something that evolves with the environment. This notion was supported in his famous experiment: Bartlett assigned a narrative entitled *The War of Ghosts* to a number of participants and asked them to recollect as much detail as

possible. He found that their recollections were distorted in favour of their own cultural biases (Bartlett, 1932; Wagoner, 2013).

While Bartlett associated the concept of schema with cognition and memory, Jean Piaget (1896-1980), a Swiss clinical psychologist, used schema in his study on the development of reasoning in infants and children. He believed that children, starting from infancy, develop very basic concepts or schemas. As new information is learned through different stages of development, these form new schemas, which are added as building blocks to the previously formed basic schemas (Kibler, 2011). He viewed cognitive development as a process that is due to both biological maturation and interactions with the environment.

With the rise of cognitive psychology, the word schema underwent a great deal of change and has been operative across a range of domains in various fields of psychology, including educational psychology (Anderson, Pichert, & Shirley, 1983), interpersonal psychology (Baldwin, 1992), cognitive semantics (Gibbs & Colston, 1995), psycholinguistics, the scientific study of emotions (Izard, 2007), and most recently, neurobiology (e.g. Free, 2007; Ghosh & Gilbao, 2014). In educational psychology, the word schema is used in the context of a cognitive structure that allows a reader to comprehend material s/he is reading or hearing. Without a suitable schema, a reader may find certain information less comprehensible. Individuals may benefit from activating a schema that will allow them to absorb and retain new material (Anderson et al., 1983). It has been shown that when a schema representation was made accessible by reading it from a different perspective, it aided in the memory of a particular story or text (Bloom, 1988). For example, in a reading experiment, a schema activated because a particular perspective had been brought up prior to reading the material had an influence on what kind of information was recalled. In the same way, the impact of schemas on the memory of places has also found support (Brewer & Treyens, 1981).

The concept of a *relational schema* has been applied to cognitive structures representing regularities in patterns of interpersonal relatedness (Baldwin, 1992). In the study of early childhood development, the term relational schemas has been used to describe the manner in which a caregiver guides his/her evaluation and reaction to a child's behaviour. One study found that negative relational schemas between parent and

children at the ages of 2 and 4 predict aggressive and oppositional behaviours later on at the ages of 7.5 and 8.5 years (Smith, Dishion, Shaw, & Wilson, 2015).

The notion of schema has also entered the field of cognitive semantics. The phrase *image schemas* is used to describe different patterns of recurring bodily experiences that emerge from the sensorimotor activities that give coherence and structure to our bodily selves. These are seen as existing beneath our consciousness. Evidence for the existence of these structures has emerged from the fields of psycholinguistics, cognitive psychology, and developmental psychology (Gibbs & Colston, 1995).

In the scientific study of emotions, *emotion schemas* are defined as the dynamic interaction of emotion and cognition (Izard, 2007). Emotion schemas consist of an internal template through which current emotional experiences are processed. They include, for example, levels of energy of caregivers and facial muscle patterns observed in caregivers during emotional interactions. Emotional schemas, unlike basic emotions, are shaped by emotional experiences and interactions that evolve over time and include learned concepts that shape the personality.

Schemas have been shown to possess a number of characteristics in the field of neurobiological investigations. Firstly, they are made up of an associative network structure that comprises basic units that are interconnected. These units are referred to as nodes (Free, 2007), events or variables (Ghosh & Gilbao, 2014). Secondly, schemas are made up of the commonalities that cut across events and serve to organise the information across a range of events. Thirdly, schemas are flexible and continually develop over time as new experience provides additional information. Thus, while schemas store new information, the associated template is constantly updated. Neurobiological investigations of schemas have more recently led to an understanding of them as also being sensitive to chronological relationships, where chronological events are embedded into the schema units. Schemas are seen as being organised into a hierarchy, with subschemas. Schema activation can take place from top to bottom or from bottom to up. Schemas can also communicate and overlap with each other. While knowledge is viewed as central to schemas, they also link to specific knowledge and behaviour. This behaviour is viewed as part of the schema itself. On a neurological level, schema functioning has been linked to the ventromedial prefrontal cortex and its interactions with the hippocampus and posterior (Ghosh & Gilbao, 2014).

While the concept has been applied in a range of contexts and investigated and developed through the use of diverse methodologies, a great deal of overlap has emerged in our understanding of a schema's structure and function. This lends support to the idea that schemas do exist. It also shows that the concept of schemas has undergone a significant degree of expansion and refinement, from philosophy and the first use by Plato and Aristotle, to Bartlett, Piaget and other contributors in various fields of psychology and neuroscience. Taken together, the definition of a schema can be summarised as follows: a mental structure, frame or script of an event, situation, object, experience or emotions made up of an associative network of units used to retrieve previously stored information and interpret a current experience or object as the individual interacts with his/her environment. A schema operates within a network of others schemas and is sensitive chronologically. The interpretation resulting from the schema is influenced or distorted based on prior knowledge or past experience. Schemas have therefore been understood as vital structures in the process of our responding adaptively to the rapid and complex flow of information that comes at us in day to day life. The significant role they seem to play in adaptation may be why they have inspired such broad-based interest. Beyond the notion that schemas are indeed "a thing" and do exist, this has lent support to the idea that they are of central importance to our functioning.

1.2 Schemas in Cognitive Behavioural Therapy, Cognitive Therapy and Schema Therapy

Moving from cognitive and other forms of psychology, the word schema was introduced in the context of the psychotherapeutic approach developed in the 1970s known as Cognitive Therapy (CT). At that time, there were other emerging models of therapy, especially behavioural therapies, that were diverging from the more predominant psychodynamic approaches by taking a more direct and symptom focused approach to behavioural change (London, 1972). Since there was considerable overlap on both a theoretical and technical level, cognitive and behavioural methods became linked together, leading to what was called Cognitive Behavioural Therapy (CBT). CT was then regarded as one of the therapeutic approaches falling under the umbrella of CBT.

In CT, founder Aaron Beck (born 1921) defined a schema as "a structure for screening,

coding, and evaluating the stimuli that impinge on the organism" (Beck, 1967). "It is the mode by which the environment is broken down and organised into its many psychologically relevant facets. On the basis of schemas, the individual is able to … categorise and interpret his experiences in a meaningful way" (Beck, 1967, p. 283). When formulating his therapeutic treatment for depression, Beck viewed schemas as leading to automatic, spontaneous and seemingly uncontrollable negative thoughts about the self, the world and the future (Beck, Rush, Shaw, & Emery, 1987). Beck equated schemas with core beliefs and understood them as underlying structures consisting of specific rules that govern information processing and behaviour (Beck et al., 1990, p.8). CT is based on information processing theory; it views schemas as evolving and being grouped into categories to help us understand and organise our world.

Much of CT relies on modifying these negative core beliefs by helping an individual evaluate the rational argument for them in light of more adaptive alternative beliefs. This kind of shift can take place in a short duration and often during therapeutic sessions, if the person also has in his repertoire alternative adaptive schemas which are available when the person is not depressed. However, the shift is not easy for people with lifelong problems, and who do not have an alternative healthy or adaptive schema in their arsenal. Some are able to make a cognitive shift and dispute the maladaptive schema in their head but still, on a gut level, feel the same. Other patients may have difficulty cooperating with the logical disputation process and therefore don't comply with the homework as they repeat many of their relationship difficulties they are having in their day-to-day life with the therapist. These and similar difficulties might be viewed as instances in which the maladaptive affective, motivational and instrumental schemas have primacy over the adaptive cognitive schemas. Given these challenges, especially for patients with very deeply and strongly held core beliefs, although CBT had a success rate of over 60%, its relapse rate was about 30% (Young, Weinberger & Beck, 2001). Many of the patients unsuccessfully treated were those with severe underlying personality disorders.

During the 90s, Jeffrey Young (born 1950), the founder of ST, took special interest in these difficult-to-treat patients. Drawing from his own clinical experience and that of his colleagues, Young began to integrate constructs and strategies from a broad range of

other psychotherapy approaches as a means of addressing the therapeutic impasses arising with these patients. Therefore ST significantly overlaps with other models of psychotherapy such as CBT, emotion-focused, attachment, psychodynamic, and experiential techniques drawn from Gestalt Therapy, with a central dimension unique to ST called "Limited Reparenting". Limited Reparenting stems from the notion of maladaptive schemas being caused by the failure of parents and caregivers to meet core emotional needs (see more detailed description of core emotional needs in Section 1.10), hence the need for more parenting, but *limited* since it is with the therapist, not the actual parents. ST calls for the therapist to be a transitional and partial parent figure to help meet these needs in an adaptive manner and thereby help replace negative maladaptive schemas with adaptive schemas.

The early stages of this integrative work led to the first publication of ST (Young, 1990) in which Young hypothesised that at the core of personality disorders are active, deeply entrenched maladaptive schemas. In contrast to Beck, Young's view of a maladaptive schema included cognitive, affective, interpersonal and motivational processes. It excluded instrumental processes, which were conceptualised under the construct of coping strategies. Maladaptive schemas were seen as self-perpetuating due to selective attention and distorted processing of information. Metaphorically, schemas were seen as fighting to be maintained. The most significant role in their maintenance was viewed as being played by patients' efforts to cope with the maladaptive schemas. Actions taken to compensate, avoid or go along with a schema were seen as playing a central role in perpetuating it.

Identifying maladaptive schemas was also a central focus of CT. In the case of CT, the therapist would work with the client to draw out specific and unique schemas that would only apply to the patient in question. Two people with severe depression may have two different schemas or core beliefs that are the driving force behind their depression. One may have a core belief that says, "Others are not accepting of me because they have another agenda", while the other could have a slightly different core belief that says, "Others like to see what I have to offer and will take advantage of me". Thus, in CT it was assumed that there would be different schemas for each person with the same affective disorder. However, Young and his colleagues (Young, Klosko, & Weishaar, 2003), drawing from their numerous clinical cases, hypothesised universal

schematic themes across cultures, with a common core that applied to all people. Young considered these maladaptive schemas to be at the core of dysfunctional thoughts and behavioural dispositions, especially the difficult-to-treat patients with personality disorders. He also hypothesised that these maladaptive schemas did not evolve from normal cognitive development, as assumed in CT, but primarily from negative parenting experiences involving, but not limited to severe abuse, neglect and lack of healthy limits.

Given that the underlying assumptions about the formation of maladaptive schemas were different in CT and ST, Young came up with his own definition of maladaptive schemas that gave primacy to the contribution of early childhood experiences from primary caregivers. To date, there are 18 such maladaptive schemas, each systematically defined (see Appendix B for the complete list of schemas). If a patient grew up experiencing trauma and toxic experiences such as abandonment from his primary caregivers early on, then as an adult, when faced with the perception of abandonment (for example, when a friend did not keep up with him the way he expected), his maladaptive Abandonment schema would be triggered, accompanied by strong negative affect such as prolonged sadness. On the other hand, a patient may not have experienced a traumatic childhood but may have been spoiled, leading to the development of a maladaptive schema of Entitlement/Grandiosity. According to Young, many patients (not all) with such strong schemas are drawn to events that seem "familiar" to them even though they may be unhealthy. They come to find some measure of comfort from the dysfunction. This is one of the factors that leads to schemas being perpetuated. Although they are perpetuated into adulthood, virtually all maladaptive schemas are believed to be associated with early parenting experiences.

Patients cope with their strong maladaptive schemas in different ways. They may adopt an avoidance strategy, surrender to the message of the schema, or overcompensate to try to prove that the message is not true. Young also postulated positive or adaptive schemas corresponding to every maladaptive schema. Young focused on maladaptive schemas since he believed that these were at the core of personality disorders (Young et al., 2003). He saw that patients needed help in overcoming the roadblocks that had arisen to their natural course of development, and that once these roadblocks were weakened, patients would be able to find their own way forward. Up until this time, no attention had been given to developing early adaptive schemas (EASs) in ST. This was

also the case in CT, even though in both CT and ST, one of the ultimate goals in treatment is to weaken maladaptive schemas and strengthen adaptive ones. Young's framework of maladaptive schemas struck strong resonant chords with therapists, researchers and patients across a broad range of cultures and geographic boundaries. Although ST overlapped with CBT/CT, there were also notable differences that led to ST having its own identity.

1.3 Empirical Support for Maladaptive Schemas and Efficacy of ST

Over the past several decades, many empirical studies carried out in different parts of the world have provided a strong base of empirical support for the 18 maladaptive schemas hypothesised by Young and his colleagues (Australia: Lee, Taylor, & Dunn, 1999; China: Cui, Lin, & Oei, 2011; Denmark: Bach, Simonsen, Christoffersen, & Kriston, 2017; Germany: Kriston, Schafer, Jacob, Harter, & Holzel, 2013; Korea & Australia: Baranoff, Oei, Cho, & Kwon, 2006; Lee, Choi, Rim, Won, & Lee, 2015; Norway: Hoffart et al., 2005; Turkey: Soygüt, Karaosmanoğlu, & Cakir, 2009; United Kingdom: Waller, Meyer, & Ohanian, 2001; and the United States: Cecero, Nelson, & Gillie, 2004).

Many studies have also demonstrated the impressive efficacy of ST through the years. For example, Farrell, Shaw, and Webber (2009) added an 8 month programme (30 sessions) of schema focused therapy to the group and individual psychotherapy for patients with borderline personality disorder (BPD); by the end, 94% no longer met BPD diagnosis criteria. Giesen-Bloo et al. (2006) compared the efficacy of ST with transference focused psychotherapy and found that after three years of treatment, ST patients showed greater recovery and clinical improvement on the BPD Severity Index. Bamelis, Evers, Spinhoven, and Arntz (2014) similarly compared ST with two other forms of psychotherapy, with ST resulting in greater recovery for paranoid, histrionic or narcissistic personality disorder. Nadort et al. (2009) and Sempertegui, Karreman, Arntz, and Bekker (2013) did comprehensive reviews of its effectiveness and found ST to be a promising treatment that could be readily implemented as a cost-effective strategy.

Notwithstanding the above impressive outcomes, this research study is focused on the development of new measures as well as improving an existing ST-based instrument. Attention will therefore now be turned to parenting since, according to ST, early parenting patterns play a pivotal role in the development of schemas.

1.4 Empirical Support for the Influence of Parenting

The quality of parent-child interactions has been shown to be positively associated with child development in recent studies (e.g., National Academies of Sciences, Engineering, and Medicine, 2016). These findings are in line with an extensive body of research conducted over past decades, perhaps the most influential being the line of research on attachment first initiated by Ainsworth and her colleagues (Ainsworth, Blehar, Waters, & Wall, 1978) and further developed by Main and Solomon (1990). Much of the research on parent-child relationships to date is done from three vantage points: social learning theory, attachment theory, and parenting styles (O'Connor & Scott, 2007). The research on parent-child relationships and child outcomes has been extensively reviewed, both conceptually and empirically. For example, Rothbaum and Weisz (1994) conducted a meta-analysis on parental caregiving and child externalising behaviour (aggressive, hostile and noncompliant behaviour). The results supported a strong and positive correlation between higher quality parenting and less externalising behaviour. Evidence supporting a link between the quality of parent-child relationships and internalising problems (such as depression, anxiety, somatic complaints and social withdrawal) is almost as robust as that found for externalising outcomes (National Academies of Sciences, Engineering, and Medicine, 2016). Links have been found between parent-child relationships and outcomes in cognitive and educational performance (Desforges & Abouchaar, 2003), social competence and peer relationships (Lieberman, Doyle, & Markiewicz, 1999), self-esteem and identity (Steinberg, Lamborn, Darling, Mounts, & Dournbusch, 1994b; Hetherington, Henderson, & Reiss, 1999), and general health and biological development (Jebb, Rennie, & Cole, 2004). A meta-analysis conducted by Collins, Maccoby, Steinburg, Hetherington, and Bornstein (2000) stated that “parental influences on child development are neither as unambiguous as earlier researchers suggested nor as insubstantial as current critics claim”. A meta-analytic of 46 observational studies showed that negative maternal behaviour was associated with depression (Lovejoy, Graczyk, O’Hare, & Neuman, 2000). Another recent and influential meta-analysis conducted by Pinquart (2017) integrated research from 1,435 studies on associations of parenting dimensions and styles with externalising symptoms in children and adolescents. Harsh control, psychological control and authoritarian, permissive, and neglectful parenting were found to correlate with higher levels of externalising problems. Parental warmth,

behavioural control, autonomy granting, and an authoritative (positive) parenting style showed negative correlations, albeit smaller in size, with externalising problems.

The findings of the above studies are in line with one of the core tenets of ST, that early parenting experiences play a crucial role in child development (Young et al., 2003). However, in ST, these developmental outcomes are associated with schemas. According to Young, there are four types of early negative parenting experiences. The first is toxic frustration of needs when a child experiences "too little of a good thing", such as deprivation of care and love in the early environment, which will likely lead to the development of Emotional Deprivation or/and Abandonment/Instability schemas. The second type of experience is traumatisation or victimisation where a child is harmed emotionally or physically – this can lead to the Mistrust/Abuse or Defectiveness/Shame schemas. The third type is when the child experiences "too much of a good thing", which likely leads to the development of the Insufficient Self-Control/Self-Discipline and/or the Entitlement/Grandiosity schemas. The fourth type is selective internalisation with significant others, where the child selectively identifies with and internalises the parent's thoughts, feelings, experiences and behaviours; this is largely dependent on the temperament of the child. These kinds of childhood experiences with primary caregivers would prevent certain needs from being met adequately and are associated with the development of maladaptive schemas (Young et al., 2003, p. 10-11).

In recent years, studies have found support for the association between negative early parenting experiences and these maladaptive schemas. For example, Cecero, Nelson & Gillie (2004) showed correlations between maladaptive schemas and adult attachment and childhood trauma. Thimm (2010) revealed that maladaptive schemas mediated the relationships between perceived past parenting experiences and personality disorder symptoms. Wright, Crawford and Del Castillo (2009) revealed that perceptions of childhood emotional neglect and abuse continued to exert an influence on later symptoms after controlling for gender, income, parental alcoholism, and other child abuse experiences. A 15 year longitudinal study by Simard, Moss, and Pascuzzo (2011) found that among young adults with either an insecure ambivalent child attachment style, or an insecure preoccupied adult attachment style, compared to their secure peers were linked to various maladaptive schemas. Lumley and Harkness (2007) found that schemas mediated the relationship between childhood adversity, anhedonic

symptoms, and anxious symptoms. Fischer, Smout, and Delfabbro (2016) showed that maladaptive schemas mediated the effect of parenting behaviour on psychological flexibility. Finally, Haugh, Miceli, and DeLorme (2016) showed that maladaptive schemas mediated the relationship between perceived parenting styles and depressive symptoms.

Other secondary factors, according to Young, believed to contribute to the development of maladaptive schemas include the quality of a parent's marriage (Young et al., 2003; Louis & Louis, 2015). A dysfunctional marriage may lead to the child's core emotional needs not being adequately met or to the child later concluding that finding and maintaining a loving and stable relationship is unlikely. Studies have certainly shown that quality of a parent's marriage does impact the developmental outcomes in children (Cheung, Cummings, Zhang & Davies, 2016). Other factors hypothesised to contribute to the development of schemas are environmental influences (Sherlock & Zietsch, 2017) and a child's temperament (Slagt, Dubas, Dekovic, & van Aken, 2016). Temperament plays a role in schema development insofar as temperament determines coping style, i.e., the way a child copes with toxic interactions. Culture is also a very likely factor; for example, some cultures are seen as promoting more self-sacrificing behaviour (Sachdeva, 2010) and this in turn may cause children to put their parents' or others' needs ahead of their own needs, thereby facilitating the development of what is known as the Self Sacrifice schema. Maladaptive schemas have also been known to develop later in life, albeit more rarely, particularly following deeply distressing events (Young et al., 2003). Thus, a large number of studies conducted over the last several decades from a range of vantage points provide significant empirical support for the link between the quality of parenting and a broad range of developmental outcomes in children and their association with maladaptive schemas later on in life.

1.5 Other Influencing Factors Linked to Outcomes in Children

While a good deal of research has been conducted on the link between parental influence and developmental outcomes in children, investigators have often jumped to the conclusion that the nature of the link is causal, such as by Alanko et al. (2011; i.e., that only bad parenting leads directly to poor outcomes) without having adequately controlled for the role of genetics (e.g., parents who are genetically prone to dysfunctional interactions of certain types may give birth to children who are similarly prone, aside from the nature of their parenting). In fact, behavioural genetics

research has provided evidence supporting the notion that variability in children's outcomes is due to genetic factors rather than the influence of parents. These findings have largely come from studies on identical (100% genetic similarity) and non identical twins (50% genetic similarity) that are able to provide estimates of genetic and environmental influences on a trait (Sherlock & Zietsch, 2017). One such study conducted by Fearson, Shmueli-Goetz, Viding, Fonagy, and Plomin (2014) estimated that genetic influences accounted for 40% of the variance in twins' responses, whereas the influence of the shared environment (i.e., family of upbringing) was negligible. Another example is a study by Picardi, Fagnani, Nistico, and Stazi (2011) that found genetic influences accounted for 45% of the variation in young adult twins' attachment-related anxiety and 36% of the variation in their avoidance, and again, no influence of the shared environment.

One study showed that the offspring of parents with BPD have up to a 4- to 20-fold increase in likelihood of developing this disorder compared to the generational population (Barnow, Spitzer, Grabe, Kessler, & Freyberger, 2006). Another study demonstrating the influence of genetics on childhood personality, emotionality and psychopathology was Plomin, DeFries, Knopik, and Neiderhiser (2013). These studies and others like them show that traits affected by parenting influence should be controlled for genetic influences, given that every studied trait is heritable to some degree (Polderman et al., 2015). While the long and hotly debated role of nature versus nurture has shown an increasingly larger role for the influence of genetic, it may well be the case that when childhood maltreatment is more severe with prolonged forms of neglect or abuse, the influence of the environment is greater.

A rapidly growing body of research has begun to examine the interaction between nature and nurture by studying the links between parenting and developmental outcomes as influenced by a child's temperament. The differential susceptibility model of these gene by environment interactions views children with certain types of temperament as both more likely to do poorly when subjected to poor parenting and more likely to benefit from good parenting than children without these traits. Slagt et al. (2016), after conducting a meta-analysis of 84 studies, found broad support for the finding that children with a more difficult temperament, versus an easy temperament, were more vulnerable to poor parenting but also benefited more from positive parenting.

Other studies considered broad factors, such as multiple layers of environment and their interconnectedness (Bronfenbrenner, 1986). For example, the links between marital and sibling relationships, neighbourhood violence or family poverty and outcomes in children have been investigated. These "ecological" models have roots in Bronfenbrenner's (1979) writings, that human development is based on support that ranges from the microsystem (school and family) to macrosystem (culture, economy, customs). Pettit et al. (1999) reported that parental monitoring played a particularly important role in preventing delinquency in adolescents living in violent and high-risk neighbourhoods but that similar levels of monitoring in low-risk environments had a less pronounced effect, showing that such external factors interact in significant ways with parenting and outcome in children.

Another factor that plays a role is the manner in which children affect the behaviour of their parents. One longitudinal follow-up of adopted children by Croft, O'Connor, Keaveney, and Groothues (2001), which observed the parent-child interactions when the children were age four, showed that child developmental status, indexed by lower cognitive ability, was linked with lower levels of parental positive interactions and higher levels of parental negative behaviour. Two years later, the study found that a significant improvement in a child's cognitive ability (not predicted by earlier parenting) predicted positive changes in the parent's behaviour between assessments.

Adoption brings up the additional consideration of whether children raised by their own biological parents fare better than those who are adopted. This was addressed in studies comparing adopted and nonadopted children. A meta-analyses of 62 studies (van Ijzendoorn, Juffer, & Poelhuis, 2005) concluded that there was a positive impact of adoption on the children's cognitive development and performance in school, compared to their nonadopted peers left behind in institutions without being adopted. Adopted children did not differ from children who remained with their biological parents in IQ, but their school performance and language abilities were subpar, and they developed more learning problems. These outcomes provide empirical support for the importance of parenting in general and being parented by one's biological parents in particular.

Given the range of factors that have been shown to be associated with outcomes in children, it is clear that there is more involved than just parental influence. Children's temperament and genetic makeup, along with ecological factors, are among the other

variables that also contribute to such outcomes. Notwithstanding the influence of these multiple dimensions, the quality of parent-child relationships, particularly at the extreme end of the continua from dysfunctional to adaptive parenting, especially children with temperaments that are highly susceptible to parental influence, can be expected to have significant effects on the individual, the family, and the society.

1.6 Brief Overview of Parenting Constructs in Research

Interest in parenting constructs and their effect on development outcomes in children began just over 70 years ago. In 1945, when research on the effects of parenting began, Baldwin, Kalhorn, and Breese (1945) identified only two parenting dimensions, autocratic and democratic. In the 1960s, Diana Baumrind (born 1927), using qualitative analysis, influenced by the earlier work of Baldwin et al. (1945), uncovered three parenting dimensions based on variations in warmth and control (Baumrind, 1967). Later Maccoby and Martin (1983) added a fourth dimension called Neglectful. These four dimensions were called Authoritative (high warmth-high control), Authoritarian (low warmth-high control), Permissive (high warmth-low control), and Neglectful (low warmth-low control). However, it was not until 20 years later, after Baumrind first conceptualised her parenting model, that Buri (1991) published the first widely used parenting instrument, called the Parenting Authority Questionnaire, which referenced Baumrind's three parenting styles, with one adaptive subscale labelled Authoritative, and two maladaptive ones called Authoritarian and Permissive. Hundreds of studies have been conducted since then, and these parenting constructs were found to be associated with developmental outcomes in children, such as their externalising problems and academic achievement (Pinquart, 2017). New parenting measures assessing past parenting behaviours also began to be developed during that period. Examples of the most widely used ones are: The s-EMBU (Swedish acronym for "My memories of upbringing") which has three subscales: Parental Rejection, Emotional Warmth, and Overprotection (Arrindell et al., 1999). Of these three, only one (Emotional Warmth) was adaptive. The Childhood Trauma Questionnaire (CTQ) which has five maladaptive subscales (Bernstein & Fink, 1998) and no adaptive subscales, but these were based on two broader constructs – Abuse and Neglect. The Parental Acceptance-Rejection Questionnaire (PARQ) Adult version, which has two broad constructs with one subscale representing Acceptance called Warmth, and three

maladaptive ones representing Rejection called Hostility, Indifferent and Undifferentiated (Rohner et al., 1978). The Parental Bonding Instrument (PBI) which has three parenting constructs, one adaptive subscale called Care, and the other two maladaptive ones called Overprotection and Authoritarianism (Kendler, 1996). The Alabama Parenting Questionnaire (Essau, Sasagawa, & Frick, 2006) which has five subscales with two adaptive constructs – Involvement, and Positive Parenting, and three other constructs involving Control called Poor Monitoring, Inconsistent Discipline and Corporal Punishment. The Parenting Style and Dimensions Questionnaire (PSDQ; Robinson, Mandleco, Roper, & Hart, 2001), also based on Baumrind's model, has three broad parenting styles – Authoritative, Authoritarian and Permissive (Baumrind, 1967, 1971) – with two maladaptive subscales and one adaptive. This one adaptive construct, Authoritative, is divided into four subdimensions (Warmth/Involvement, Reasoning/Induction, Democratic Participation, and Good Natured/Easy-going). The scoring defining these four subdimensions is based on the mean of the respective items, while the scoring of the broader dimension is based on the mean of the scores of the subdimensions. While this additional nuance is an important step forward in advancing our understanding of parenting patterns, most research on this questionnaire was still conducted on the basis of only the three broad dimensions (Authoritative, Authoritarian and Permissive).

Given the complexity of childhood development with the range of core emotional needs, variations in needs among children and different developmental phases, it seems likely that optimal parenting will be a complex, changing and nuanced dance, and it is unlikely that both maladaptive and adaptive parenting constructs can be reduced to only a few dimensions. It follows that parents and caretakers may be better helped by a model that goes beyond the few broad dimensions discussed above and provides a more complete and nuanced framework. Baumrind's parenting constructs were based on *normal variations* of parenting used to control and socialise children and did not include dimensions arising from deviant parenting such as those arising from abuse and neglect as stated by Darling (1999; Baumrind, 1991). This explains why Baumrind's parenting dimensions were centred only on warmth and control.

Further, I would argue that parenting constructs should include those that make up deviant parenting, not just the normal variations in parenting that Baumrind took into

account when she formulated her model. The more deviant parenting patterns have been found to contribute to the development of BPD, as highlighted by Agrawal, Gunderson, Holmes, and Lyons-Ruth (2004); Bandelow et al. (2005); Paris (2003); Schuppert, Albers, Minderaa, Emmelkamp, and Nauta (2014); and Zanarini et al. (1997). These include invalidation of children's emotions; being abusive, neglectful and overprotective, often accompanied by mothers who are too dependent on their children to meet their own needs; environment instability (frequent changes in housing and schooling); and high level of distress and frustration on the part of the parent. Therefore, such constructs in parenting must be included in order to encapsulate as much as possible the full spectrum of maladaptive parenting constructs, from normal variations in parenting to deviant ones. Thus it seems that children stand to benefit a great deal when their parents are able to (or can learn to) grasp the characteristics of deviant parenting patterns; because from the vantage point of ST, it is the parents who prevent the core emotional needs of the children from being met adequately.

From deviant and negative parenting constructs, we move on towards positive ones. As mentioned, one of the earliest empirically supported positive parenting constructs was introduced by Baumrind's model (1967), which consisted of only one construct known as Authoritative. This typology was made up of two dimensions, high warmth and high control; it drew criticism, as there were discrepancies between Baumrind's focus on high control and Attribution theory. Attribution theory deals with how the social perceiver uses information to form a causal judgment (Fiske & Taylor, 1991). In other words, it is about how people attach meaning to others' behaviour relative to their own. Heider (1958) put forward two ideas that became influential: Internal Attribution, where behavioural changes are attributed to something intrinsic such as personality, passion or beliefs; and External Attribution, where the attribution is somewhat outside a person's control such as situational or environment features. According to the Authoritative parenting construct of Baumrind, high control caused children's behaviour to be based very much on external attribution, which would prevent children's behaviour from being a result of their own internal desires. Ironically, Baumrind stated that Authoritative parents are those who "direct the child's activities but in a rational, issue-oriented manner" and who evaluate "both expressive and instrumental attribution, both autonomous self-will and disciplined conformity" (Baumrind, 1968, p. 261). However, this particular aspect of the definition, which

allowed for some form of autonomy, was not conveyed in her two-typology model (high warmth and high control). Robinson, Mandleco, Olsen and Hart (1995) created a new instrument improving on Baumrind's original two-typology model of warmth and control by adding items representing more positive constructs, four in total (warmth/involvement, reasoning/induction, democratic participation, good natured/easy-going). Despite this improvement, the two-typology model drew criticism for years. Grolnick (2003) stated that Baumrind placed too little emphasis on the context and specific child needs when parental control was being exercised and took her to task for ignoring the need for the child's independence in her definition of the Authoritative parenting construct. Greenspan (2006) later built on this two typology model of warmth and control and added a third one called Tolerance, where healthy parenting also allows for parents to know when to provide age-appropriate autonomy, when to set limits, and when to negotiate.

Notwithstanding the limitations of Baumrind's model described above, in the 1980s and 1990s, new measures of past parenting behaviour were developed. By examining the item content (face validity), it was clear that some of these constructs represented more deviant parenting patterns such as those found in the PARQ and CTQ. For example, "Hit me, even when I did not deserve it", "Went out of his/her way to hurt my feelings", "Frightened or threatened me when I did something wrong", "I had to wear dirty clothes", "I got hit so hard by someone in my family that I had to see a doctor or go to the hospital", "Someone tried to touch me in a sexual way, or tried to make me touch them". However, although deviant parenting patterns were represented in these instruments, the five constructs for CTQ were still based on only two broader constructs; Emotional Abuse and Neglect. The PARQ, which also measures more deviant parenting patterns, was still based on only two broader constructs: Acceptance and Rejection.

1.7 The Prevalence of Baumrind's Parenting Model

While measures to assess more deviant parenting are crucial, and new measures are meeting this need, much of the research that has been conducted to date has employed measures of parenting based on Baumrind's model. I will highlight two influential studies, each encompassing many other studies done over the years, to show the prevalence of Baumrind's parenting typology. The first is a study conducted by a team

at Oxford University using data from the British Household Survey, as well as data from a Nuffield project, to examine trends in Baumrind's two parenting dimensions– parental monitoring and control, and parental involvement. The focus was to examine studies in the UK from the 1970s till the early 2000s (Gardner, Collishaw, Maughan, & Scott, 2009). Their findings showed the following changes in families in recent decades: 1) that the childbearing trend has moved to smaller families; 2) that families have more variations such as single parent or cohabitation and, consequently, that the number of marriages have dropped; 3) that more children are now experiencing divorce than previously; 4) that maternal employment has increased; and 5) that there was greater inequality in household income, showing increased rates of child poverty.

Despite these changes, according to this study, parenting over the decades has improved in areas such as monitoring and supervision, except for meal times. Adolescents' behaviour problems have increased, but the team was not able to find reasons for the increase, even though the parenting quality has either not changed significantly or improved. Thus the research team stated, "… it is crucial that further research attention is given to the range of experiences that adolescents and their families go through." (Gardner et al., 2009, p. 13) The research is likely to have been limited by the narrow range of parenting dimensions used.

The second study that also highlighted the use of Baumrind's early parenting model was a meta-analysis conducted by Pinquart and Kauser (2018) that used 428 studies to determine if parenting styles, behaviour problems, academic achievement, and their interactions vary by culture. In this paper, they cited the following as one of their limitations:

> First, we limited our focus on the four parenting styles defined by Baumrind and successors (Baumrind, 1966; Maccoby & Martin, 1983). There were not enough studies available for regional comparisons of other parenting styles that may be particularly relevant in some non-western regions … (p. 11).

Given the hundreds of studies on parenting from the 1960s until the present time, it is impressive how many have relied on the four parenting styles defined by Baumrind (1966) and Maccoby and Martin (1983). Therefore, their model cannot be dismissed as out of date, even though this typology has been cited as a limitation in studies by Pinquart (2017) and others like Hudson and Rapee (2002). Power, who did a literature

and historical review of parenting research, pointed to some directions for the future, stating, “Given the complexity and cross-cultural variation of parent behaviour it is likely that additional parenting styles will be found” (Power, 2013, p.S-19).

Looking back, a likely reason for only two parenting dimensions being identified in the 1930s to 1960s was that these were the only parenting dimensions that were thought of at that time (Power, 2013). These observations may have been limited by the cultural paradigms within which these investigators were working, putting constraints on the range of variables included. It may very well be that better answers to the relationship between parenting patterns and behavioural problems in adolescence could be uncovered through the development of more nuanced parenting constructs. Since parenting constructs from the 1960s were very much centred on two broad dimensions, it will be important to re-evaluate this assumption to see if more nuanced dimensions can be developed that provide better answers to the rising problems among youth and their links to parenting patterns.

1.8 Model of Parenting Constructs Based on ST

We shall now examine a unique approach to measuring a potentially greater range of parenting constructs based on a theoretical model provided by ST. Since one of the core tenets of ST is that early maladaptive parenting patterns are believed to facilitate the development of early maladaptive schemas (EMSs), much emphasis is placed on understanding the nature of these early parenting patterns at the initial assessment as well as during the treatment phase. Most clinicians in ST rely on a past parenting inventory developed by Young known as the Young Parenting Inventory (YPI; see more detailed description of Young Parenting Inventory in Section 1.11). Young developed 17 different parenting constructs in the YPI, each believed to be associated with a specific EMS measured by the Young Schema Questionnaire 3 Short Form (YSQ-S3, see Section 1.11). Parenting patterns associated with the EMS of Social Isolation were not included, as Young hypothesised that the outside family environment was primarily responsible for its development.

A one-to-one mapping between each early family environment subscale in the YPI and a specific EMS in the YSQ-S3 was hypothesised. Working backwards, the EMSs were used as a starting point for the development of the parenting constructs. Each of the 17

EMSs were assumed to be a reflection of an unmet need by early primary caregivers. Items were developed operationalising the types of interactions on the part of parents that would lead to a need being thwarted. These items were grouped according to the theme associated with the EMS it was linked to. For example, one of the five sample items that represent the EMS of Defectiveness in the YSQ-S3 is, "No man or woman could love me once he/she saw my defects or flaws". The need reflected here was for unconditional acceptance of, and love for, one's private and public self, along with regular praise and the absence of ongoing criticism or rejection. Items for a maladaptive parenting construct that thwarted this need were created in the YPI such as, "Made me feel unloved or rejected". Using the same approach for all the other EMSs, a corresponding set of maladaptive parenting constructs for the YPI were devised. This was a unique theoretical model from which maladaptive parenting constructs were developed, where EMSs were used as a reference point. Since these EMSs, in turn, are reflections of underlying core emotional needs that were not met in these patients, it can be theoretically deduced that these unmet needs from the EMSs were used as the starting point for developing the maladaptive parenting constructs in the YPI. As a result, there are 17 theoretical parenting constructs in ST. Therefore, the YPI has the potential to contribute significantly to the range of normal and deviant variations in parenting, and thereby capture a fuller spectrum of parenting constructs. Even if half of these parenting constructs can form a reliable factor structure, it would still contain more maladaptive parenting constructs than are found in the other established parenting instruments or in Baumrind's parenting typology. This suggests that the clinical base from which the YPI item pool is derived can potentially provide a more nuanced and broader window into the universe of early toxic parenting patterns, both deviant and normal ones. Therefore the process of delving into unmet childhood needs, reflected in EMSs over the past several decades, has provided an especially clear vantage point from which to explore these parenting patterns. A measure that more fully captures the breadth and clinically relevant nuances that make up maladaptive parenting will be a helpful guide to parents and therapists. In addition, a measure that corresponds to the full set of EMSs will be helpful as a basis to further test the theory upon which ST is based and will be particularly helpful to schema therapists in developing a more precise and empirically grounded understanding of the origin of a patient's EMSs. While the YPI has the potential to provide more nuanced parenting constructs, it may be that these greater number of parenting constructs would fall under wider but fewer constructs.

This remains to be explored, however. It may also be the case that there will be a first (more nuanced) and second order structure and that each level of abstraction will be useful in different ways.

While there are just a few maladaptive parenting constructs represented in many of the established parenting measures available to date, the number of adaptive parenting constructs available in existing established measures is even fewer, with only one or two positive constructs. Families targeted for intervention, such as those with deviant parenting patterns, would be helped if they were empowered with positive parenting patterns. In fact, as mentioned earlier, a more nuanced and refined understanding of positive parenting patterns from the model of ST may be especially beneficial to infants and children with certain genetically based susceptibilities. Adaptive or positive parenting constructs have not seemed to have gained much traction; perhaps this is due to the assumption by many researchers that the *absence of maladaptive parenting constructs implies the presence of positive ones* – that if the severity of maladaptive parenting patterns can be reduced, it automatically implies an increase in positive parenting patterns. Is this really the case? Do positive and negative parenting patterns measure the same constructs, just on opposite ends of the same continuum? Should families targeted for intervention be taught only how to minimise maladaptive parenting concepts, or will they also benefit by being taught to increase positive or adaptive parenting patterns? More and more studies have shown that increases in adaptive constructs would contribute uniquely to well-being over and above increases made by reduction of maladaptive negative constructs (Wood & Johnson, 2016; Keyfitz, Lumley, Hennig, & Dozois, 2013; Wood & Tarrier, 2010; Dallaire et al., 2006), as called for by Positive Clinical Psychology (PCP). The theoretical model in ST has the potential to create more nuanced parenting dimensions, both negative and positive, which can deepen our understanding of early parenting patterns.

1.9 Positive Clinical Psychology

Abraham Maslow (1908-1970) stated over 50 years ago:

> The science of psychology has been far more successful on the negative than on the positive side. It has revealed to us much about man's shortcomings, his illness, his sins, but little about his potentialities, his virtues, his achievable

> aspirations, or his full psychological height. It is as if psychology has voluntarily restricted itself to only half its rightful jurisdiction, and that, the darker, meaner half. (Maslow, 1954, p. 354 as cited in Wood & Johnson, 2016).

The focus on distress and dysfunction became the target of enquiry right after the Second World War as there was a need to address the psychological distress and trauma the war had created (Gottman, Katz, & Hooven, 1997). The assumption at that time was that in order to foster optimal functioning in human behaviour, the negative aspects had to be made the target of enquiry. This thinking persisted in psychology and lasted for the next fifty years before concerns about the "positives" in psychology were addressed by then American Psychological Association President, Martin Seligman (Seligman & Csikszentmihalyi, 2000). This sparked huge interest, with thousands of articles generated, resulting in the creation of its own field within psychology. Although the initial cry was for the field to consider the positive as well as the negative, the pendulum swung and the movement began focusing exclusively on the positive side of psychology. The balance of both the positive and negative was not corrected and addressed properly. An effort to integrate both the positive and the negative aspects of psychology by tapping into the strengths of each gave birth to PCP.

PCP aims to provide equal attention to both the positive and negative aspects of psychology and to, thereby, be more balanced and holistic in its approach (Wood & Johnson, 2016). Thus adaptive aspects from positive psychology and maladaptive ones from clinical psychology are not separated. One is understood as influencing the other. The implication is not that all aspects of positive psychology relate to adaptive functioning only or that all aspects of negative psychology relate to dysfunction. Barbara Held (Wood & Johnson, 2016) rightly pointed out that some aspects of positive relate to dysfunction and some aspects of negative can also contribute to healthy functioning. For example, too much empathy and optimism can also be unrealistic and lead to dysfunction when applied inappropriately and likewise, some degree of pessimism can be constructive. Rather than labelling these positive and negative, she argued that each aspect should be tailored to the individual, and various aspects of both positive and negative should be used appropriately.

This research study sets out to provide a better balance of both adaptive and maladaptive constructs, as well as tools to measure them, than is currently available

within ST and the field of parenting. This will provide clinicians the tools to better integrate both adaptive and maladaptive constructs and processes for the betterment of their patients.

1.10 Concepts in ST for this Research

The following are several key concepts in ST to which this research refers:

Core Emotional Needs. One of the core tenets of ST is that maladaptive schemas arise from unmet basic emotional needs in children that were not met by primary caregivers. These needs do not get weaned as children become adults. Rather, these needs stay continuously present, often asserting themselves in inappropriate ways, only to cause harm in others and/or themselves. The idea of such needs in humans is not new, and various models of such needs have been put forward. Abraham Maslow, in his seminal papers (Maslow, 1943a, b) set forth a model known as Maslow's hierarchy of needs, which arranged human needs in order of priority, starting with the most basic physiological needs such as food, water, sleep in the bottom tier of a pyramid, and ending on the top tier with psychological needs such as self-actualization, self-esteem, achievement and respect. Although Maslow's theory was inspired by his clinical experience, little was done to create a formal, empirically based model of needs for all humans. John Bowlby's (1907-1990) attachment theory was formulated on the premise that all humans, starting from infancy, need to be attached to their primary caregivers and that healthy levels of attachment are associated with more functional life patterns later on in life (Bowlby, 1988). Beck also attempted to identify needs (Beck & Stein, 1961); however, his focus was more on correcting faulty thinking or maladaptive schemas. Beck's rationale was that if such negative thinking is changed, then the affect it is connected to would also change, and this would lead to more adaptive functioning. This approach became dominant in CT. Although there is empirical support for its efficacy, for many cases involving patients with personality disorders, it was short lived at best, as highlighted by Young et al. (2003).

Although Maslow's needs model (Maslow, 1954) was formulated from his study of the healthiest segment of populations, another model was formulated in ST, starting with cases of people trapped in emotional pain. These were linked to unmet core emotional needs early in life and subsequently to the development of maladaptive schemas. The basic core emotional needs are hypothesised to be universal and linked to the

development of emotional well-being (Lockwood & Perris, 2012; Young et al., 2003). A failure to meet these needs adequately by primary caregivers will give rise to the development of maladaptive schemas (see Appendix B). These 18 maladaptive schemas were a result of numerous clinical cases that were consolidated and categorised by Young and his colleagues (Young et al., 2003). These cases were seen from the point of view of what needs were not met, which were associated with their dysfunction. However, for these needs to be addressed, they have to be identified. Since maladaptive schemas are linked to unmet needs, the 18 maladaptive schemas identified so far were also expressions of 18 different ways in which these core emotional needs were not met (see Appendix B).

Lockwood and Perris (2012) set forth the criteria for these core emotional needs, particularly what it is about these needs that defines them as core emotional needs rather than mere human wants. For example, would a desire for a faster computer or the latest version of a smart phone qualify as a need or a want? Thus, a set of criteria was needed to make the important distinction on what constitutes a core emotional need. Drawing from criteria set out in Lockwood & Perris (2012, p.51), these are: 1) Meeting or not meeting the need should lead to an increase or decrease in well-being; 2) Each proposed need should make a contribution to well-being and not be derived from another need; 3) These needs should be evident universally; 4) Each need should be consistent with and supported by what is known about evolution, with evidence supporting their origins in early history. This set of criteria would aid in distinguishing wants from a core emotional need. No doubt there are other needs in humans, such as the need for open space and adventure, but in ST the focus is on core *emotional* needs. Thus, starting with numerous cases of people trapped in emotional pain, these needs, if identified, would provide a window into emotional needs that are broader and deeper than other contemporary models of emotional needs in humans. This was the platform used by Young and his colleagues to identify these needs and formulate their associated EMSs (Young et al., 2003).

These 18 maladaptive schemas that were identified from numerous clinical cases were also grouped into five larger domains hypothesised by Young et al. (2003); these were labelled Disconnection and Rejection, Impaired Autonomy and Performance, Impaired Limits, Other-Directedness, Overvigilance and Inhibition. These larger groups were

derived by conducting second order factorial work on the first order of EMSs that had emerged. Although other models such as a three-category domain also emerged from empirical studies, the most common model was a four-category one. A pilot study on these domains conducted by Louis et al. (2012) also supported this model, which also concurred with the findings of others (see Table 1.1). Labelled Disconnection and Rejection, Impaired Autonomy and Performance, Impaired Limits, and Exaggerated Expectations, these four categories result from unmet core emotional needs. They are hypothesised to run in parallel with their adaptive counterparts (see Appendix B), i.e., the core emotional needs: Connection and Acceptance, Healthy Autonomy and Performance, Reasonable Limits, and Realistic Expectations (Lockwood & Perris, 2012, Louis & Louis, 2015).

In the 1990s, around the same time as the beginnings of ST, two experts on intrinsic motivation, Deci and Ryan (2000) proposed a model known as the Self Determination Theory (SDT). Intrinsic motivation is about the pursuit of what one is naturally interested in, not coerced by others to do nor done for the sake of rewards or to avoid punishments. In SDT, three psychological needs are identified: Autonomy, Competence and Relatedness. In its genesis, SDT's model began with those who were healthy with intrinsic motivation, as opposed to ST, which started with people from clinical cases trapped in emotional pain; so in this sense both ST and SDT began at opposite ends. The three needs identified in SDT were compared with the four core emotional needs in ST (not withstanding that the definitions of similar constructs in SDT and ST also differed), and the models were found to overlap (except for the core emotional need for Reasonable Limits in ST): Autonomy (SDT) with Healthy Autonomy and Performance (ST), Relatedness (SDT) with Connection and Acceptance (ST), and Competence (SDT) with Realistic Expectations (ST). Meeting these core emotional needs is considered crucial to the healing process in ST therapeutic sessions. Although these needs are universal, according to Young et al. (2003), some people, based on their temperament, may have greater needs in certain areas, such as a particularly strong need for connection, autonomy or a sense of mastery. Primary caregivers who are reasonably healthy can adequately meet these needs and adapt to the normal variations in need strength (Young et al., 2003).

Table 1.1

Studies on Schema Domains (Second-Order Factors)

	Past Studies with Three Second-Order Factors		Past Studies with Four Second-Order Factors					
Type of Sample	Schmidt et al. (1995) Nonclinical Student	Cui et al. (2011) Nonclinical Student	Lee et al. (1999) Nonclinical Student	Cecero et al. (2004) Nonclinical Student	Hoffart et al. (2005) Clinical Patient	Samuel et al. (2012) Clinical Patient	Study (Louis, Sexton, Lockwood, Hoffart, 2012; Unpublished) Nonclinical, Community	First-Order Factors Appearing in 4 or More Studies with a Common Four Second-Order Factor
Country	USA	China	Australia	USA	Norway	USA	Singapore	
Schema Domains								
Disconnection and Rejection	Mistrust/Abuse Emotional Deprivation Emotional Inhibition Defectiveness Abandonment Fear of Losing Control	Mistrust/Abuse Emotional Deprivation Emotional Inhibition Defectiveness Social Isolation	Mistrust/Abuse Emotional Deprivation Defectiveness Social Isolation Abandonment Emotional Constriction	Mistrust/Abuse Emotional Deprivation Emotional Inhibition Social Isolation	Mistrust/Abuse Emotional Deprivation Emotional Inhibition Defectiveness Social Isolation	Mistrust/Abuse Emotional Deprivation Emotional Inhibition Defectiveness Social Isolation	Emotional Deprivation Emotional Inhibition Defectiveness Social Isolation	Mistrust/Abuse Emotional Deprivation Emotional Inhibition Defectiveness Social Isolation
Impaired Autonomy and Performance	Vulnerability Dependence Enmeshment Insufficient Self-Control Incompetence/ Inferiority	Failure Vulnerability Dependence Enmeshment Abandonment Insufficient Self-Control	Failure Vulnerability Dependence Enmeshment Subjugation	Failure Vulnerability Enmeshment Abandonment Subjugation	Failure Vulnerability Dependence Enmeshment Abandonment Subjugation Insufficient Self-Control	Failure Vulnerability Dependence Abandonment Subjugation	Failure Vulnerability-*Pessimism Dependence Enmeshment Abandonment	Failure Vulnerability Dependence Enmeshment Abandonment
Impaired Limits			Entitlement Fear of Losing Control	Entitlement	Entitlement Insufficient Self-Control	Entitlement Enmeshment	Entitlement Insufficient Self-Control *Approval-Seeking	Entitlement
Exaggerated Expectations	Unrelenting Standards Self-Sacrifice	Unrelenting Standards Self-Sacrifice Entitlement	Unrelenting Standards Self-Sacrifice	Unrelenting Standards Self-Sacrifice Dependence Insufficient Self-Control	Unrelenting Standards Self-Sacrifice	Unrelenting Standards Self-Sacrifice Insufficient Self-Control	Unrelenting Standards Self-Sacrifice *Punitiveness Mistrust/Abuse	Unrelenting Standards Self-Sacrifice

Note. *These three EMSs (Punitiveness, Approval Seeking and Pessimism) were measured with the newer version of the YSQ included in the current study, but not in others.

EMSs. As mentioned, the word schema has taken on various meanings in psychology due to influences from pioneers, among others, such as Bartlett, Piaget, Beck and Young. In ST, schemas function as filters through which people interpret events and people in order to better understand themselves and the world around them. However, some people, especially those with personality disorders, mostly see a very negative view of themselves or others. According to Young et al. (2003), maladaptive schemas develop during childhood or adolescence, are carried into adulthood, and lead to a significant level of maladaptive functioning, primarily due to parents falling short in adequately meeting the child's core emotional needs. Other factors seen as contributing to the development of these schemas include culture and the quality of the child's parents' marriage (Louis & Louis, 2015; Young et al., 2003). EMSs can also develop in later life, albeit more rarely, particularly following deeply distressing events. Since childhood experiences are a crucial contributing factor, Young has termed his definition of maladaptive schemas as Early Maladaptive Schemas. EMSs are defined as broad, pervasive themes that comprise emotions, cognitions, memories (both explicit and implicit), bodily sensations, and distorted beliefs about one's self and others (Lockwood & Perris, 2012; Young et al, 2003). The association with early family origins is one of the main distinctions between schemas as defined by Beck and Young. Furthermore, according to Young, early childhood experiences were crucial in the development of the EMSs, but in Beck's CT, early family experiences were not made a primary focus in therapy. Young, on the other hand, provided a reference to early maladaptive family patterns in one of the questionnaires he had developed known as the YPI. This definition of EMS was shaped by Bowlby attachment theory (Bowlby, 1988) regarding the importance of early attachment of infants to primary caregivers.

A person's temperament also seems to determine the manner in which they cope; this is why in some cases siblings or twins in the same family are not affected by the same unpleasant experiences (Slagt et al., 2016). Therefore, a person's temperament also plays a part in how these events are internalised. Young put forward three ways in which people generally cope when their EMSs are activated: *surrendering*, *avoiding* or *overcompensating*; or some combination of these three. The link between core emotional needs, the development of EMSs and EASs, as well as the associated coping styles, can be illustrated by the example of the need for belief, affirmation, warmth, and support. If the child's parent criticises and is constantly punitive towards the child, an

EMS known as Defectiveness will likely develop. This particular EMS falls under the Disconnection and Rejection category of unmet core emotional needs (Appendix B). Children with this EMS are more prone to developing insecure attachments, depression, low self-esteem, as well as other internalizing or externalizing problems (Gay, Harding, Jackson, Burns, & Baker, 2013; Schmidt, Joiner, Young, & Telch, 1995). The coping style that the child adopts will be based on his or her temperament (Young et al., 2003). The child may surrender to the message of this EMS that he or she is deeply flawed on the inside, or may not be liked by others if they really knew him or her; results of surrendering to this EMS may include feeling and behaving as if this is what he or she deserves. The child may also avoid this EMS by detaching him or herself from the accompanying painful feelings by being pre-occupied with other routines. The child may also, finally, overcompensate by fighting against the message of this EMS to gain approval or be noticed. Each of these three coping styles is unhealthy and ultimately serves to perpetuate EMSs. Both the coping style and EMS stay with the child until adulthood, according to Young (Young et al., 2003).

Apart from links between EMSs and personality disorders, research has also documented a link between EMSs and obsessive-compulsive disorders (Young et al., 2003), chronic depression and anxiety (Malogiannis et al., 2014; Schmidt et al., 1995), eating disorders (Leung, Waller, & Thomas, 1999; Simpson, Morrow, van Vreeswijk, & Reid, 2010), alcohol dependency (Decouvelaere, Graziani, Gackiere-Eraldi, Rusinek, & Hautekeete, 2002), romantic jealousy(Dobrenski, 2001), and depersonalization disorder (Braitman, 2002). This further underscores the point that EMSs are deeply entrenched beliefs that lead to thoughts and behavioural dysfunction, and therefore, not surprisingly, have a broad range of applicability.

EASs. EASs are defined in a similar way to EMSs, in that they are broad, pervasive themes comprising emotions, cognitions, memories, bodily sensations, and adaptive beliefs about one's self and others (Lockwood & Perris, 2012; Young et al., 2003). Like EMSs, it is hypothesised that EASs develop during childhood and adolescence and are carried into adulthood. Unlike EMSs, EASs lead to *healthy* functioning. Not surprisingly, in contrast to EMSs, which develop when core emotional needs are not met adequately in life, EASs develop when these needs *are sufficiently* met in childhood. Appendix B shows the theoretical links between early positive parenting

patterns and EASs. Since schemas are defined by distinct themes, a concept that is now widely accepted and studied within cognitive psychology (Free, 2007), it is reasonable to assume that positive and negative schemas are separate constructs, activated by different types of experiences. This means that a diminution in the intensity of a negative schema would not necessarily mean a corresponding increase in a positive one. This is consistent with the notion that people can hold multiple contradictory beliefs about themselves and the world. The same can be said for someone having multiple emotions at any given time. It is possible for a person to be happy and sad at the same time, for example, when watching a tear-jerker movie with a happy ending; so, too, some researchers have contended that a person can have varying degrees of both pessimism and optimism at the same time (Mahasneh, Al-Zoubi, & Batayeneh, 2013)—being pessimistic does not mean the absolute absence of optimism. Similarly, this suggests that positive and negative schemas (i.e., EASs and EMSs) are different constructs that should be explored and measured separately within ST if the clinician wants a holistic overview of that person on the themes that the therapeutic modality considers important. Although the YSQ-S3 measures negative schemas, there is currently no corresponding validated measure of positive schemas. As a result, these positive patterns cannot, as yet, be objectively and systematically assessed in a manner parallel to their counterparts, despite the increasing awareness of this imbalance within the ST community (Lockwood & Perris, 2012; Taylor & Arntz, 2016). The names and the core emotional need in relationships defined by these EASs and EMSs are shown in Appendix B.

1.11 Presently Used Measures in ST Relevant to this Research

Although several measures are used by clinicians in ST, only two of them have relevance to this research. Since two of the three core aims of this research were to develop new measures for adaptive schemas as well as adaptive parenting patterns, the counterparts to these instruments currently used in ST will be used as a reference to develop an initial item pool. These two instruments are highlighted below:

YSQ-S3. The YSQ is used routinely in the early stages of ST as a way of assessing the links between a patient's presenting problems and the EMSs that may perpetuate them. In the 1990s, Young developed his instrument to measure 15 EMSs with 205 items (Lee et al., 1999; Schmidt et al., 1995). Repeated factor analytical work done in various

parts of the world (e.g. Hoffart et al., 2005; Lee et al., 1999; Schmidt et al., 1995) helped refine this instrument further to its latest version, and eventually a shorter version was developed with 75 items. This earlier version of the YSQ (Young & Brown, 1994), which measures 15 EMSs, employs a 6-point Likert scale that ranges from a score of 1 (*Completely untrue of me*) to a score of 6 (*Describes me perfectly*). Item examples: For Mistrust / Abuse negative EMS, "I feel that people will take advantage of me"; Defectiveness / Shame EMS, "No man/woman I desire could love me once he/she saw my defects" (For a complete list of all 90 items measuring all 18 EMSs see Appendix B). These items were developed based on numerous clinical cases of Young and his colleagues where they explored the underlying core beliefs of patients and the specific need that was not met that related to their presenting problems. This earlier version measuring 15 EMSs has been validated by many studies around the world (Australia: Lee et al., 1999; China: Cui et al., 2011; Korea & Australia: Baranoff et al., 2006; Norway: Hoffart et al., 2005; Turkey: Soygüt et al. 2009; United Kingdom: Waller et al., 2001; USA: Cecero et al., 2004). The latest version of the YSQ, called the YSQ-S3 (Young, 2005), includes three additional EMSs (Pessimism, Approval Seeking and Punitiveness), thus measuring 18 EMSs comprising 90 items. It was recently validated in a Korean population (Lee, Choi, Rim, Won, & Lee, 2015) where all 18 EMSs showed robust positive correlations with depression and anxiety. The measures of depression and anxiety used in this study were subscales of the Symptom Checklist-90 (SCL-90-R; Derogatis, 1994). A confirmatory factor analysis (CFA) conducted on an independent group with the 18 EMSs in this study also showed a satisfactory fit. A study in Germany (Kriston, Schafer, Jacob, Harter, & Holzel, 2013) validated the YSQ-S3 in a community as well as a smaller clinical sample. The internal consistency of 17 subscales were >.70, except for the Entitlement EMS, which was .67. Factorial reliability was satisfactory (>.70) in all subscales except for EMS of Entitlement. Factor scale congruence was high (at least .95) for 17 subscales. Convergent validity with the SCL-K-9 (Klaghofer & Brahler, 2001) with significant positive associations was found between symptoms of personality disorder measured by the Standardized Assessment of Personality (Moran et al., 2003) on all the EMSs except for Unrelenting Standards. A final study validation of the YSQ-S3 was recently conducted by Bach, Simonsen, Christoffersen, and Kriston (2017). All 18 EMSs had a Cronbach's reliability value of >.70. All factor loadings and factor reliability coefficients exceeded the thresholds of .40 and .70 respectively. The EMSs of the YSQ-S3 were also meaningfully associated

with personality disorders.

YPI. The YPI measures perceived parenting experiences of an adult's father and mother separately. Participants rate statements about their parents, to which they indicate their agreement on a 6-point Likert scale that ranges from a score of 1 (*Completely untrue of me*) to a score of 6 (*Describes me perfectly*). Scores on each subscale are provided separately for ratings of fathers and mothers, or those whom the participants considered as having assumed a paternal or maternal role (grandparent, step mother or father, or much older sibling), as different patterns of correlations may emerge depending on the gender of the parent who is adopting a particular parenting style. This allows participants who grew up with only one parent or caregiver to also be included. Young hypothesised 17 subscales in the YPI, a one-to-one mapping where each subscale in the YPI is linked to an EMS in the YSQ-S3 (except for Social Isolation EMS, which he believed to be caused by outside family environment). The rationale for this was that since each of the 17 EMSs is a reflection of a past parenting pattern failing to meet a core emotional need adequately, then items representing such parenting patterns needed to be developed for each EMS and the factor structure (and coding) determined. For each of the 17 subscales of maladaptive parenting patterns of the YPI, about four to five items were created. The YPI comprises 72 items in total.

Subsequent empirical work suggested a different factor structure emerging from participant's responses (Sheffield, Waller, Emanuelli, Murray, & Meyer, 2005; Slenders, 2014). This study used the shorter 37-item version, constituting nine subscales that emerged. These subscales were labelled Emotionally Depriving, Overprotective, Belittling, Perfectionist, Pessimistic/Fearful, Controlling, Emotionally Inhibited, Punitive, and Conditional/Narcissistic. See Appendix B for item examples of the YPI. Cronbach's alpha for the subscales ranged from .67 to .92. All nine subscales demonstrated acceptable test-retest reliability, and correlations ranged from .53 to .85. Construct validity was shown with the YSQ's 15 measured EMSs. Contrary to Young's hypothesis of a one-to-one mapping, each of the subscales in the YPI was found to correlate with *multiple* EMSs in the study by Sheffield et al. (2005). Although there is a measure for negative parenting patterns in the YPI, it has no measure for positive parenting patterns to complement it.

1.12 How Measures are Used in Clinical Sessions in ST

In clinical sessions, the measures mentioned above assist in, among other things, the development of case conceptualizations and goals for treatment and guidance of the on-going course of ST. These measures help the therapist achieve several key outcomes described below.

1) Comprehensive case conceptualization: Using the YSQ-S3 to assist in assessing active as well as dormant schemas will help provide a thorough overview of all EMSs contributing to a patient's presenting problem. For example, a patient might talk about rejection and fear of failure but, unbeknownst to both patient and therapist, another underlying EMS such as Self-Sacrifice may also be an important source of dysfunction. This could eventually be discovered through the therapeutic process but would be discovered faster, and therefore in a more timely and economical fashion, with the use of the YSQ-S3 questionnaire. The YSQ can be an aid in determining the relative strength of the various EMSs, along with an initial focus of treatment and the overall scope. The most problematic EMSs create strong roadblocks to treatment; identifying these allows for reflection and constructive dialogue in therapy, rather than patients simply continuing to embody their dysfunction. Further, by going through the higher scores of the YSQ-S3, the patient will also be able to explore other aspects of his/her life, and perhaps the origins of his/her EMSs in childhood and adolescence. This will help the patient see whether there are patterns over the course of his/her life up to that point that are linked to the presenting problem in therapy. Since EMSs are deeply entrenched beliefs, these themes emerge in other aspects of the patient's life, which in turn can induce self-awareness about how these destructive themes have been contributing to the patient's negative thinking patterns and behavioural problems.

2) Enhanced collaboration and therapeutic relationships with patients: While they are all self-report measures, the results are discussed with the patients rather than used only for interpretation by the clinician. A collaborative, non-judgmental, and empathetic dialogue about these important aids strengthens the therapeutic relationship.

3) A more thorough understanding of the early patterns of parenting: High scores on the YPI, in combination with the use of the individual items that contribute to them,

can act as a spring board for a fuller exploration of the patient's experiences with caregivers. This allows for therapists and patients to further clarify and understand all the major parenting experiences and patterns that have contributed to the development of their EMSs. In this way, the scores from the YPI can be used to address important experiences that otherwise either would not have come to mind or would have been difficult to talk about. The YPI and the YSQ also draw the exploration to a level of abstraction, being neither too broad-brushed nor overly detailed, that often resonates deeply with patients, adding to the effectiveness of the therapy.

4) Linking Early Parenting Experiences with current EMSs: Sometimes the YPI and the YSQ-S3 can be used in tandem; for example, a patient with little self-awareness regarding his current EMSs may refer to items in the corresponding parenting pattern in the YPI. If there are high scores in the YPI and low scores in the YSQ-S3, this might be a sign the patient is adopting an avoidance strategy to block off their current painful maladaptive core beliefs about themselves. Most people are able to identify more clearly the way their parents treated them than their own emotions and core beliefs. Comparing scores is therefore a very useful exercise, especially for patients who tend to adopt avoidant strategies to cope when their EMSs get triggered.

5) Monitoring progress: Administering these questionnaires over the course of therapy can help substantiate decreases in the frequency and intensity of the negative patterns and increases in the positive ones and to explore the connections between specific areas of improvement and various treatment strategies and processes. It is also helpful to explore potential changes in patients' views of their past negative parenting experiences as treatment progresses.

1.13 Why New Measures are Needed in ST

Both the YSQ-S3 and the YPI are used widely in clinical sessions to explore maladaptive schemas and parenting patterns. However, there has been very little emphasis on the positive aspects of this therapy by leveraging the positive strengths of patients. Here are the following reasons why new measures, as well as improvements to the existing YPI, are needed:

1) **To Provide a Balance Between Maladaptive and Adaptive Measures of Schemas.** The efficacy of ST has been evident for patients with personality disorders and, by implication, the broad range of negative life patterns that make up the features that define these disorders (Giesen-Bloo et al., 2006; Sempertegui et al., 2013; Taylor & Arntz, 2016). However, the formal aspects of the assessment process have been devoid of any systematic attention to EASs. Expanding ST theory and assessment in these areas will lead to a more balanced and comprehensive approach that is likely to open up or enhance important new sources of leverage for treatment, thereby helping to amplify ST's already impressive outcomes. In support of PCP, Wood & Johnson (2016) and Wood & Tarrier (2010, as clarified in Johnson & Wood, 2017) have drawn the field's attention to the importance of considering the positive alongside the negative, pointing out that many characteristics highlighted by positive psychology are understudied (Peterson & Seligman, 2004). In addition, it has been shown that these positive constructs often have predictive validity in explaining psychopathology above and beyond the presence of the negative (Wood & Joseph, 2010; Wood, Joseph, & Maltby, 2009; Wood, Joseph, & Maltby, 2008). Interventions that focus on increasing the positive can be as successful at reducing psychopathology as those that focus on decreasing the negative (e.g., Geraghty, Wood, & Hyland, 2010). A scale to measure EASs can be used to complement the existing measures of EMSs (YSQ-S3). Creating a measure of EASs will also avoid sending the unintended and wrong message that negative schemas should be the sole focus of ST.

   Such measures will further allow researchers to explore how positive and negative patterns work together in distinct and unique ways to influence psychopathology and well-being. These positive and negative parenting experiences are likely to make distinct contributions to suffering and adaptation and therefore both need to be assessed in order to understand and take advantage of all the potential leverage for change. This will allow for the investigation of the full spectrum of these patterns in ST practice and research, which in turn, can lead to a broader and more holistic and integrative approach to assessment and treatment. Whereas patients sometimes feel overwhelmed with the number of active EMSs and become uncomfortable with the spotlight thrown exclusively on their problems and weaknesses (Louis, Wood, Lockwood, Ho, & Ferguson, 2017; in press), a more

holistic approach including assessment of the patient's strengths, such as their EASs, can enhance the quality of the therapeutic relationship. Psychologically healthy individuals tap into their adaptive cognitive and behavioural strategies, while psychologically unhealthy people rely on their negative, rigid EMSs. If measures for EASs are available, this will provide another angle to contribute to healthy functioning. Given that there are currently no adaptive measures available in ST, such measures need to be developed to help fill this gap.

2) **To Provide a More Nuanced Adaptive Measure of Past Parenting.** Baumrind's past parenting two model typology (warmth and control) has been used extensively since the 1960s till the present time, as attested by the hundreds of studies reviewed in the most recent meta-analysis by Pinquart (2017). Although new parenting measures have been developed over the decades, the number of negative parenting constructs have been limited to just a few, three or four at the most, for each instrument. Further, the number of positive parenting constructs is far fewer than the number of negative ones. Baumrind's parenting model itself has only one positive parenting construct, known as Authoritative. If positive parenting constructs make unique contributions to well-being in children, as demonstrated by Slagt et al. (2016), then positive constructs should be viewed as being as important as negative ones. The theoretical model of ST, using EMSs and EASs as a starting point, will allow for a greater exploration of positive constructs. This will also be a significant departure from previous models that resulted in small number of positive parenting constructs.

3) **To Establish a More Robust YPI Scale**. The factor structure of the widely used current version of the YPI needs to be properly established. Many of the studies on the YPI across the world have assumed that its 17 subscales have been validated. For example, studies in India (Nia, Sovani, & Forooshani, 2014), Iran (Jalali, Zargar, Salavati, & Kakavand, 2011), and Palestine (Alfasfos, 2009) were conducted on the basis that all 17 subscales had been validated. A study in Turkey assumed 10 factors (Koruk, Ozturk, & Kara, 2016) without explanation, whereas a study in Brazil, again without an established empirical basis, removed 23 items (Valentini, Alchieri, & Laros, 2013). In addition, the stability of the factor structure across various cultures needs to be determined. The YPI did not begin with a large

initial item pool like the YSQ-S3, which had an initial longer version with 205 items (Lee et al., 1999; Schmidt et al., 1995). This scale was refined over the years as it attracted more and more empirical research. Except for the work of Sheffield et al. (2005), the YPI has not gone through a process of scale refinement. It began with a pool of 72 items that were not refined from a larger set and were not further refined or developed. The work of Sheffield et al. (2005) on the YPI that reduced it to a shorter version was an important beginning, yet it is likely that additional and improved items will need to be developed to best capture all the relevant constructs defining negative patterns of parenting (Rolstad, Adler, & Ryden, 2011). The widely used measures of past negative parenting stemming from the ones developed by Baumrind (1967) focus on normal variations of parenting, not deviant ones (Darling, 1999). If measures for deviant parenting constructs are developed, these will provide an important foundation from which to better inform parents about precisely what these patterns are, how to avoid them, and how to become a more loving and effective parent. A family environment littered with severe maladaptive parent-child interactions should be targets for such intervention, and a validated measure of parenting that includes a broad-based measure of deviant parenting will help facilitate this process.

4) **To Provide a Better Balance Between Adaptive and Maladaptive Measures of Parenting.** Only recently has research begun to explore the processes and outcomes associated with positive parenting (Clark & Ladd, 2000; Dallaire et al., 2006; Kaiser, McBurnett, & Pfiffner, 2011). Somewhat surprisingly, these studies suggest that negative and positive parenting constructs are orthogonal, with each making its own unique contribution to a child's development (Dallaire et al., 2006; Keyfitz et al., 2013; MacLeod & Byrne, 1996). This further underscores the need for the inclusion of positive constructs, since their presence is not implied, as many have assumed, by the absence of negative constructs. Correcting for the long-standing overemphasis on the negative, given the far fewer positive constructs in established parenting measures, will lead to a greater understanding of the unique role that the positive constructs and processes may have. This will lead to a better balance of adaptive and maladaptive measures, as called for by PCP.

1.14 Research Primary Aims

The primary aim of Study 1, therefore, was to develop a validated measure of positive schemas or EASs, known as the Young Positive Schema Questionnaire (YPSQ), to complement the YSQ-S3 in clinical sessions in ST. This will be the first such measure for adults. Study 1 reports the development of such a measure.

The primary aim of Study 2 was to develop a measure of past positive parenting patterns known as the Positive Parenting Schema Inventory (PPSI). Research Study 2 reports the development of this measure to fulfil the need for a measure of positive parenting experiences to complement the YPI, the current measure of negative parenting experiences widely used in clinical settings within the ST community.

Finally, the primary aim of Study 3 was to make improvements on the current YPI and to further replicate its factor structure in other cultures. To date, globally conducted research has assumed that all 17 of the hypothesised constructs have been empirically validated, though some have even assumed a different factor structure without empirical justification. The global nature of the on-going research, and the shaky foundation upon which it is based, highlights the need to establish a firm factor structure for the YPI that has undergone stringent tests of validation. Study 3 reports a revised and improved alternative of the YPI scale.

While the development and improvement of these three scales was the primary aim of this research, there were also secondary aims set forth separately for Study 1, 2 and 3; these are reported in Chapters 3, 4 and 5 respectively.

Chapter 2 – Methodology and Ethical Considerations

Sir Karl Popper (1902-1994), arguably one of the greatest philosophers of science (Horgan, 1992), stated in his book, *The Logic of Scientific Discovery* (Popper, 1968), that when a hypothesis is formed, rather than trying to prove a hypothesis, we should disprove that the hypothesis is not true. Popper's idea about science is that you formulate a hypothesis, try to prove it wrong by assuming the null hypothesis is correct, and, based on your results, try to falsify it. The rationale of his approach is that it is easier to disprove a hypothesis as it would only take one observation to do so. But to prove a hypothesis is very difficult as it is impossible to test every possible outcome of one's hypothesis, because it will never be known if there is one more experiment that will prove it wrong. Science, according to Popper, advances only through disproof (Wilkinson, 2013).

In our three studies, this epistemology was adopted and hence the research adopts a quantitative approach with hypothesis testing through statistical analysis.

2.1 Samples

Samples for Study 1, 2 and 3 were made up of nonclinical, community participants gathered by an international charity and nongovernmental organisation (NGO) headquartered in the United States. Subjects were drawn from four major cities in Southeast Asia and one from South Asia: Bangalore (India), Manila (Philippines), Jakarta (Indonesia), Kuala Lumpur (Malaysia), and Singapore. The sixth sample was drawn from participants gathered by this NGO from three cities in the Eastern part of the United States (hereafter referred to as "USA East" in Study 1, and "USA" in Study 2 and 3): Fairfax and Stafford located in Northern Virginia, and Manchester in New Hampshire.

Invitations to take part were sent to many similar organisations in these cities with a snowball sampling procedure whereby volunteers were encouraged to reach out to friends. As a result, samples were drawn from a population made up of professionals, students, and parents. As an incentive for participation, workshops on the effects of past parenting behaviour and the development of schemas were conducted without charge.

In Singapore, as this workshop was previously conducted, the participants were given a free copy of a parenting book authored by the lead researcher, as an incentive for completing the questionnaires. No volunteers for this NGO in any city were excluded because of race, colour or religion. The only types of participants that were excluded were those below 18 years of age and those who did not have an adequate command of the English language. Sufficient grasp of the English language was determined by both polling members of the respective groups and consulting the lead researcher's familiarity with the leaders of these respective groups and their familiarity with the members of the respective NGOs. India, Philippines, Malaysia, and Singapore rely heavily on the use of English in school, beginning at the primary level (see Appendix A), and Indonesia has increased its emphasis on the English language over the years. It was therefore not difficult to find a sizeable number of English-speaking community volunteers from the respective affiliated NGOs. The questions asked regarding personal particulars of the participants (e.g., "highest qualification attained") were not uniform across all the samples, as the ethics committees used their discretion to include or remove questions that were deemed more relevant to future respective cross-sectional studies. For the Asian samples, the ethics committees in some of the NGOs felt that questions regarding educational qualifications were too sensitive and might come across as educationally biased; therefore, these were not included.

Table 2.1, Table 2.2, and Table 2.3 contain participant demographic details of all three studies. The mean age for the Manila sample was 43.47 years (*SD* = 17.24); the mean age of the Bangalore sample was 38.70 years (*SD* = 16.19); the mean age for the Singapore sample was 46.22 years (*SD* = 22.34); the mean age of the Jakarta sample was 38.28 years (*SD* = 15.95); the mean age for the Kuala Lumpur sample was 41.40 years (*SD* = 17.40); and the mean age of the USA East sample was 37.85 years (*SD* = 13.20). The general methodology and the type of sample used for Study 1, 2 and 3 are shown in Figure 2-A.

2.2 Procedures and Statistical Analyses

As the lead researcher, I led this research project and administered all the questionnaires personally to all the participants in all five Asian cities, namely Manila, Jakarta, Bangalore, Kuala Lumpur and Singapore. For the sixth city in the USA, I worked through an administrator whom I appointed ahead of time. I guided him and his

Table 2.1

Study 1, Positive Schema: Socio-Demographic Characteristics of the Participants in the Manila, Bangalore, Singapore, Kuala Lumpur, and the USA East Samples

Characteristic	Categories	Manila	Bangalore	Singapore	Kuala Lumpur	USA East
		Sample for EFA – Phase 1; *n* (%)	Sample for EFA – Phase 1; *n* (%)	Sample for EFA – Phase 2; *n* (%)	Sample for CFA – Phase 3; *n* (%)	Sample for CFA – Phase 3; *n* (%)
Gender	Men	245 (42.76)	170 (47.35)	260 (41.20)	83 (35.78)	87 (39.73)
	Women	320 (55.85)	175 (48.75)	371 (58.80)	149 (64.22)	132 (60.27)
	Did not specify	8 (1.40)	14 (3.90)	0 (0.00)	0 (0.00)	0 (0.00)
Age (years)	20-29	41 (7.16)	102 (28.41)	100 (15.85)	42 (18.10)	86 (39.27)
	30-39	231 (40.31)	97 (27.02)	167 (26.47)	81 (34.91)	42 (19.18)
	40-49	245 (42.76)	123 (34.26)	277 (43.90)	90 (38.79)	40 (18.26)
	>= 50	49 (8.55)	20 (5.57)	87 (13.79)	18 (7.79)	51 (23.29)
	Did not specify	7 (1.22)	17 (4.74)	0 (0.00)	1 (0.43)	0 (0.00)
Parenting Status	Non parent	106 (18.50)	84 (23.40)	260 (41.2)	106 (45.69)	N. A.
	Parent	454 (79.23)	226 (62.95)	370 (58.64)	121 (52.16)	N. A.
	Did not specify	13 (2.27)	49 (13.65)	1 (0.16)	5 (2.16)	N. A.
Race	Chinese	2 (0.35)	0 (0.0)	508 (80.51)	205 (88.36)	N. A.
	Indonesian	0 (0.0)	0 (0.0)	5 (0.79)	5 (2.16)	N. A.
	Indian	0 (0.0)	332 (92.48)	15 (2.38)	3 (1.29)	N. A.
	Filipino	559 (97.56)	0 (0.0)	91 (14.42)	9 (3.88)	N. A.
	Caucasian / White	1 (0.17)	2 (0.56)	2 (0.32)	2 (0.86)	92 (42.01)
	Black	N. A.	N. A.	N. A.	N. A.	88 (40.18)
	Latino	N. A.	N. A.	N. A.	N. A.	15 (6.85)
	Asian	N. A.	N. A.	N. A.	N. A.	9 (4.11)
	Others	4 (0.70)	12 (3.34)	9 (1.43)	8 (3.45)	13 (5.94)
	Did not specify	7 (1.22)	13 (3.62)	1 (0.16)	0 (0.00)	2 (0.91)
Educational Qualification	Masters Degree & above	N. A.	N. A.	N. A.	N. A.	54 (24.66)
	Postgraduate	N. A.	N. A.	N. A.	N. A.	11 (5.02)
	Bachelors Degree	N. A.	N. A.	N. A.	N. A.	90 (41.10)
	High School	N. A.	N. A.	N. A.	N. A.	45 (20.55)
	Others	N. A.	N. A.	N. A.	N. A.	17 (7.76)
	Did not specify	N. A.	N. A.	N. A.	N. A.	2 (0.91)
Nationality	Filipino	559 (97.56)	0 (0.0)	85 (13.47)	9 (3.88)	N. A.
	Singaporean	0 (0.0)	0 (0.0)	437 (69.26)	2 (0.86)	N. A.
	Malaysian	0 (0.0)	0 (0.0)	63 (9.98)	210 (90.52)	N. A.
	Indonesian	0 (0.0)	0 (0.0)	19 (3.01)	7 (3.02)	N. A.
	Indian	0 (0.0)	331 (92.20)	5 (0.79)	1 (0.43)	N. A.
	Others	2 (0.35)	13 (3.62)	21 (3.33)	3 (1.29)	N. A.
	Did not specify	12 (2.09)	15 (4.18)	1 (0.16)	0 (0.00)	N. A.
Total		573 (100)	359 (100)	631 (100)	232 (100)	219 (100)
Respondents with more than 10% missing values		14 (2.44)	9 (2.51)	3 (0.48)	3 (1.29)	5 (2.28)
Final Sample Size		559 (97.56)	350 (97.49)	628 (99.52)	229 (98.71)	214 (97.72)

Note. For each cell, data is presented as n (%). For the four Asian samples, participants were not asked about "Educational Qualification". For the USA East sample, "Parenting Status" and "Nationality" were not asked. "Race" selection was restricted to the most common ones found in the Asian and USA East samples respectively.

Table 2.2

Study 2, Positive Parenting: Socio-Demographic Characteristics of the Manila, Jakarta, and USA Samples

Characteristic	Categories	Manila Sample Phase 1 & 2; *n* (%)	Jakarta Sample – Phase 2; *n* (%)	USA Sample – Phase 2; *n* (%)
Gender	Men	222 (39.93)	154 (39.09)	85 (39.72)
	Women	327 (58.81)	225 (57.11)	129 (60.28)
	Did not specify	7 (1.26)	15 (3.81)	0 (0.00)
Age (years)	20-29	38 (6.83)	103 (26.14)	84 (39.25)
	30-39	235 (42.27)	142 (36.04)	42 (19.63)
	40-49	228 (41.01)	111 (28.17)	38 (17.76)
	>= 50	49 (8.81)	22 (5.58)	50 (23.36)
	Did not specify	6 (1.08)	16 (4.06)	0 (0.00)
Parenting Status	Non parent	106 (18.71)	143 (25.72)	N. A.
	Parent	437 (78.60)	216 (38.85)	N. A.
	Did not specify	15 (2.70)	35 (35.43)	N. A.
Educational Qualification	Master's Degree & Above	N. A.	N. A.	52 (24.30)
	Postgraduate	N. A.	N. A.	11 (5.14)
	Bachelor's Degree	N. A.	N. A.	87 (40.65)
	High School	N. A.	N. A.	45 (21.03)
	Others	N. A.	N. A.	17 (7.94)
	Did not specify	N. A.	N. A.	2 (0.93)
Race	Chinese	3 (0.54)	164 (80.51)	N. A.
	Indian	N.A.	2 (2.38)	N. A.
	Indonesian	N.A.	197 (0.79)	N. A.
	Filipino	540 (97.12)	4 (14.42)	N. A.
	Caucasian / White	1 (0.18)	1 (0.32)	91 (42.52)
	Black	N. A.	N. A.	85 (39.72)
	Latino	N. A.	N. A.	15 (7.01)
	Asian	N. A.	N. A.	9 (4.21)
	Others	3 (0.54)	6 (1.43)	13 (6.07)
	Did not specify	9 (1.62)	20 (0.16)	1 (0.47)
Nationality	Malaysian	N.A.	1 (0.25)	N. A.
	Indonesian	N.A.	366 (92.89)	N. A.
	Indian	1 (0.43)	N.A.	N. A.
	Filipino	546 (98.20)	5 (1.27)	N. A.
	Others	4 (0.72)	5 (1.27)	N. A.
	Did not specify	6 (1.08)	17 (4.31)	N. A.
Total		556 (100.0)	394 (100.0)	214 (100.0)
Final Sample Size*	Fathers	520 (93.53)	366 (92.89)	204 (95.33)
	Mothers	538 (96.76)	383 (97.21)	214 (100.0)

Note. For each cell, data is presented as *n* (%).
* Manila: Father sample removed 36 who did not grow up with a father, Mother sample removed 18 who did not grow up with a mother; Jakarta: Father sample removed 28 who did not grow up with a father, Mother sample removed 11 who did not grow up with a mother; USA: Father sample removed 10 who did not grow up with a father, no further participants were removed for the mother sample.

Table 2.3

Study 3, Negative Parenting: Socio-Demographic Characteristics of the Participants in the Singapore, Manila, Jakarta, and USA Samples

Characteristic	Categories	Singapore sample for EFA - Phase 1; *n* (%)	Manila sample for EFA - Phase 2 & 3; *n* (%)	Jakarta sample for CFA - Phase 3; *n* (%)	USA sample for CFA - Phase 3; *n* (%)
Gender	Men	252 (40.32)	222 (39.93)	154 (39.09)	85 (39.72)
	Women	371 (59.36)	327 (58.81)	225 (57.11)	129 (60.28)
	Did not specify	2 (0.32)	7 (1.26)	15 (3.81)	0 (0.00)
Age (years)	19	17 (2.72)	N. A.	N. A.	N. A.
	20-29	87 (13.92)	38 (6.83)	103 (26.14)	84 (39.25)
	30-39	271 (43.36)	235 (42.27)	142 (36.04)	42 (19.63)
	40-49	216 (34.40)	228 (41.01)	111 (28.17)	38 (17.76)
	>= 50	34 (5.44)	49 (8.81)	22 (5.58)	50 (23.36)
	Did not specify	1 (0.16)	6 (1.08)	16 (4.06)	0 (0.00)
Parenting Status	Non parent	260 (41.60)	106 (18.71)	143 (25.72)	N. A.
	Parent	328 (52.48)	437 (78.60)	216 (38.85)	N. A.
	Did not specify	37 (5.92)	15 (2.70)	35 (35.43)	N. A.
Race	Chinese	526 (84.16)	3 (0.54)	164 (80.51)	N. A.
	Malay	1 (0.16)	N. A.	N. A.	N. A.
	Indian	12 (1.92)	N.A.	2 (2.38)	N. A.
	Indonesian	N. A.	N.A.	197 (0.79)	N. A.
	Filipino	N. A.	540 (97.12)	4 (14.42)	N. A.
	Caucasian / White	N. A.	1 (0.18)	1 (0.32)	91 (42.52)
	Black	N. A.	N. A.	N. A.	85 (39.72)
	Latino	N. A.	N. A.	N. A.	15 (7.01)
	Asian	N. A.	N. A.	N. A.	9 (4.21)
	Others	83 (13.28)	3 (0.54)	6 (1.43)	13 (6.07)
	Did not specify	3 (0.48)	9 (1.62)	20 (0.16)	1 (0.47)
Educational Qualification	Masters Degree & above	N. A.	N. A.	N. A.	52 (24.30)
	Postgraduate	N. A.	N. A.	N. A.	11 (5.14)
	Bachelors Degree	N. A.	N. A.	N. A.	87 (40.65)
	High School	N. A.	N. A.	N. A.	45 (21.03)
	Others	N. A.	N. A.	N. A.	17 (7.94)
	Did not specify	N. A.	N. A.	N. A.	2 (0.93)
Nationality	Singaporean	425 (68.00)	N. A.	N. A.	N. A.
	Non-Singaporean	198 (31.68)	N. A.	N. A.	N. A.
	Malaysian	N. A.	N.A.	1 (0.25)	N. A.
	Indonesian	N. A.	N.A.	366 (92.89)	N. A.
	Indian	N. A.	1 (0.43)	N.A.	N. A.
	Filipino	N. A.	546 (98.20)	5 (1.27)	N. A.
	Others	N. A.	4 (0.72)	5 (1.27)	N. A.
	Did not specify	2 (0.32)	6 (1.08)	17 (4.31)	N. A.
Total		625 (100.0)	556 (100.0)	394 (100.0)	214 (100.0)
Final Sample Size*	Fathers	582 (93.12)	520 (93.53)	366 (92.89)	204 (95.33)
	Mothers	617 (98.72)	538 (96.76)	383 (97.21)	214 (100.0)

Note: for each cell, data is presented as n (%).

* Manila: Father sample removed 36 who did not grow up with a father, Mother sample removed 18 who did not grow up with a mother; Jakarta: Father sample removed 28 who did not grow up with a father, Mother sample removed 11 who did not grow up with a mother; USA: Father sample removed 10 who did not grow up with a father, no further participants were removed for the mother sample.

Figure 2-A

Flow Chart of Methodology for Study 1, 2 and 3

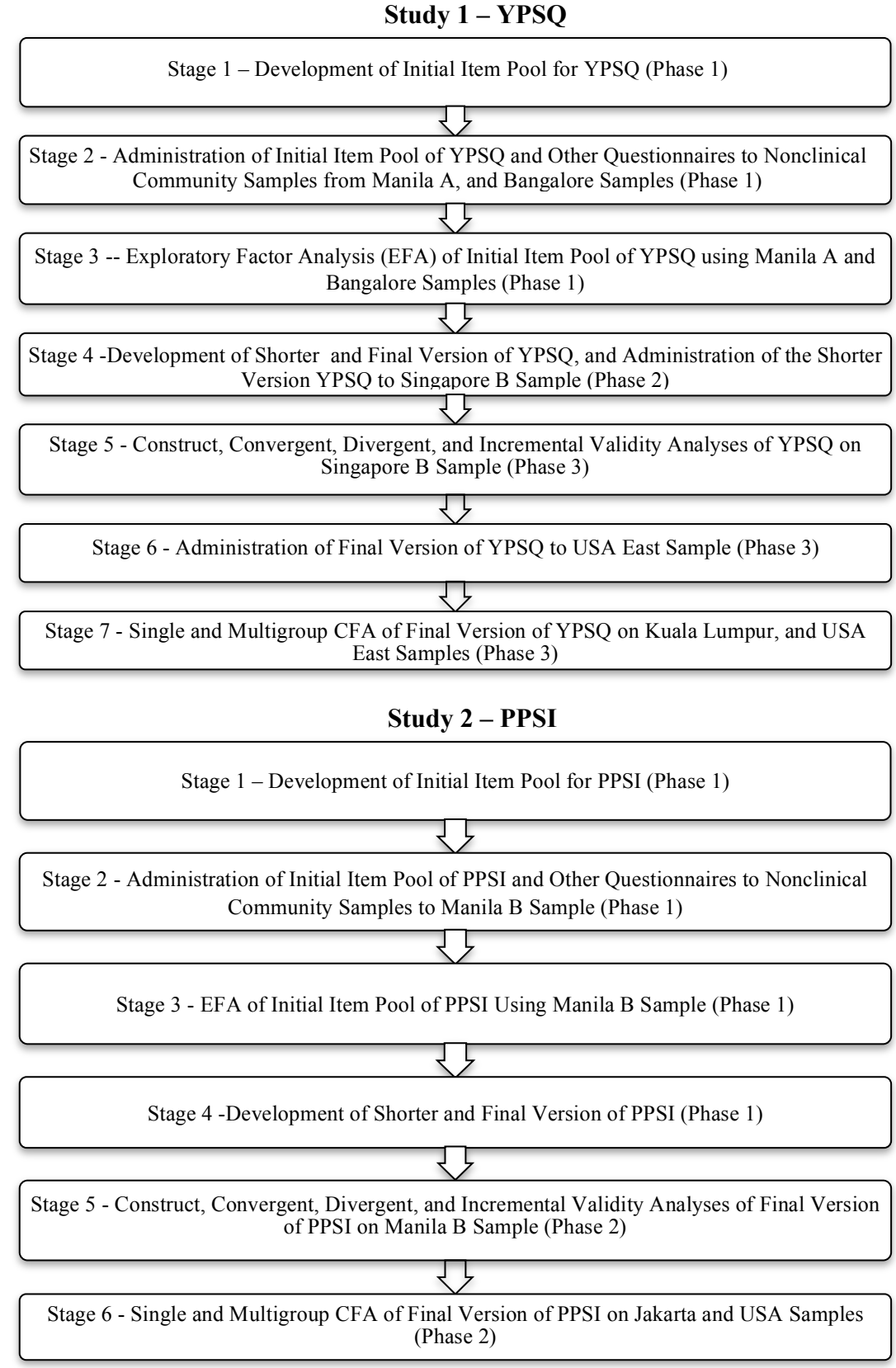
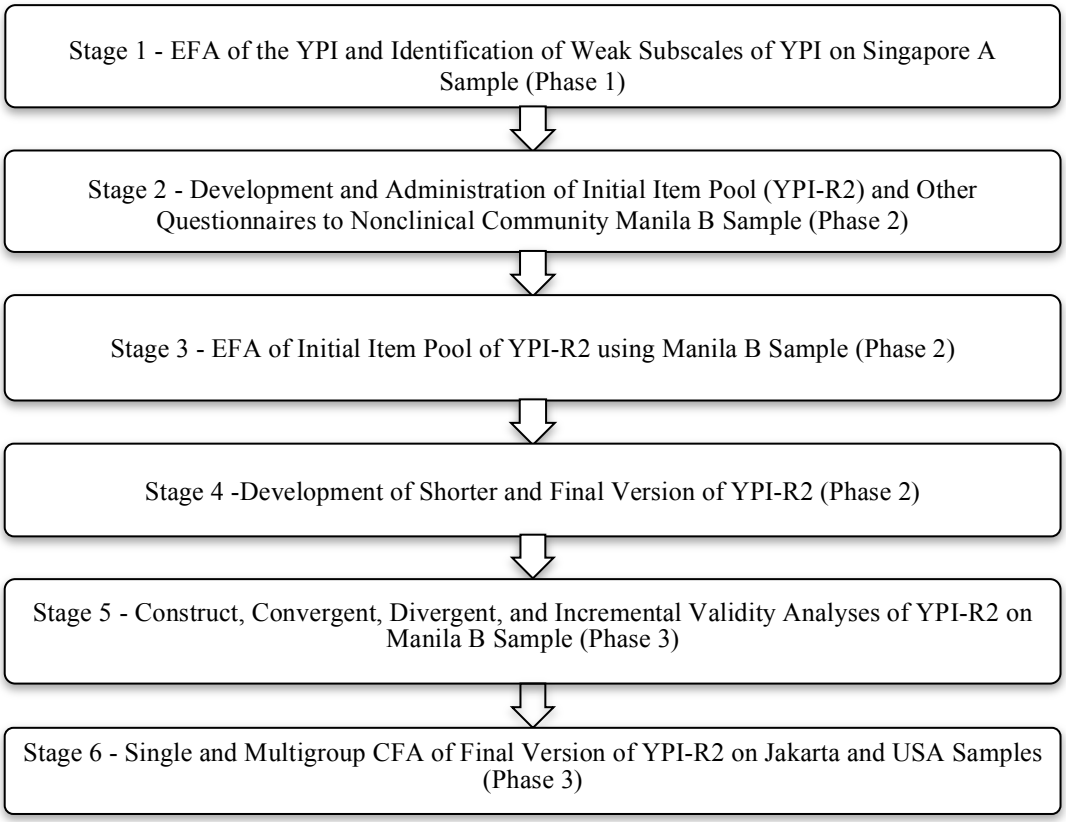


Figure 2-A (Continued)



group step by step on how to administer the project effectively. All hard copies of the responses of all participants from all six cities were brought to Singapore, where they were analysed.

The specific methodologies for studies 1, 2 and 3 are described in the "Procedures and Statistical Analyses" sections of Chapters 3, 4, & 5, respectively (sections 3.4, 4.34, and 5.4); a selected few are highlighted here in greater detail.

2.21 Suitability for Exploratory Factor Analysis

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) tests the suitability of the data for structure detection by indicating the proportion of variance that can be accounted for by underlying factors. A minimum value of .60 indicates that a high enough proportion of variance was caused by underlying factors.

2.22 Bartlett's Test of Sphericity

This method of assessing suitability of factor analysis is done by testing the hypothesis that the correlation matrix is an identity matrix, which would indicate that the variables

are unrelated and therefore unsuitable for factor analysis. Values of less than .05 of the significance value indicate that factor analysis would be useful for the data (Bartlett, 1937).

2.23 Use of Parallel Analysis for Factor Extraction

The number of common factors to be kept are commonly determined using the following methods: Kaiser's eigenvalue-greater-than-one rule, Scree plot examination, and Parallel Analysis (PA). Studies have showed that PA is the most accurate and reliable method for determining the number of factors to extract (Ledesma & Valero-Mora, 2007; Zwick & Velicer, 1986), so this technique was determined a priori to provide the default decision on how many factors to extract, and any deviation from this would have to be justified. PA strength lies in that it creates 1,000 datasets, each with the same number of variables and cases, fills each dataset with random numbers, and performs an exploratory factor analysis (EFA) on each dataset, recording the eigenvalues that respectively emerge. The number of factors to retain in the current dataset is determined by how many factors have eigenvalues greater than those that emerged in 95% of the analyses of the datasets of random numbers. Hence only substantive factors are retained, as they are larger than would be expected to have emerged through chance (O'Connor, 2000).

2.24 Identifying Underlying Latent Factors

After determining the number of factors using PA, an EFA known as Principal Axis Factoring (PAF) was used to uncover the type of underlying factor structure of the relatively large number of variables in each of the studies. Little was known about the factor structure, so PAF is used in these studies in preference to Principal Component Analysis (PCA), since it is better for identifying latent constructs (Floyd & Widaman, 1995). PAF estimates the communalities along the diagonal and does not assume these to have perfect relations (value of 1.0), since each item was assumed to have some unique variance (Floyd & Widaman, 1995). PCA generally is used when we want to reduce the number of variables to a smaller number of components. In summary, in PAF the latent variables determine the number of observed variables, whereas in PCA the observed variables are reduced into components. For all three studies, one of the primary aims was to uncover the underlying latent constructs in the data; therefore PAF was used.

2.3 Instruments

All measures used for Studies 1, 2 and 3, and their respective functions, are described in detail in Chapters 3, 4 and 5, respectively.

2.4 Ethical Considerations

For Studies 1, 2 and 3, the ethical considerations were in line with standards advocated by the British Psychological Society, as follows:

2.41 Transparency of the Research

Each NGO was contacted ahead of time and advised of the purpose of administering the questionnaires; the use of the results for the writing of scientific papers as part of the requirements for a PhD programme was made clear by the lead researcher.

Dr Jeffrey Young, the founder of ST, was also consulted to gain his support for this research on developing and improving measures for ST, as well as his consent to use his name in the new scale being developed (Study 1).

2.42 Ethics Approval

Ethical approval was given by the School of Research Ethics Committee, University of Stirling, Scotland (Reference Number: Application 13). Further, a favourable opinion of this research was obtained from each of the six NGOs; copies of their approval letters are available upon request.

2.43 Informed Consent and Confidentiality

Following an explanation of the procedures, the voluntary nature of their involvement, and the time requirements for participation, potential participants were walked through the consent document. All those wishing to participate signed the consent document and were provided the questionnaire set, and response sheets to complete. Two copies of the consent form were given to each participant—one was retained by the participant and the other submitted to the lead researcher. Participants returned the response sheets to the lead researcher, who immediately placed them in a secure folder to protect confidentiality.

2.44 Voluntary Nature of Participation

All potential participants were told that their participation in this research study would

be completely voluntary. The name and contact details of the lead researcher were distributed to all participants. The lead researcher also communicated clearly that participants could request for their data to be withdrawn from the research, should they change their mind upon further thought. Participants were also assured that, upon receiving their request, their data would be destroyed with absolutely no consequences to them, and that they would also be notified when their data had been destroyed. In addition, at the end of the exercise, the lead researcher, with the help of others, checked the answer response sheets to see if any questions had been accidentally left blank. When the blank spots were spotted, these participants were encouraged to review their questionnaires and make sure all questions were answered, unless they had left the questions blank on purpose. Participants were provided adequate space within a quiet hall to complete the questionnaires. They were allowed to take short breaks while completing the questionnaires and were advised to do so outside the hall so as to not distract others. A few participants took these questionnaires home and returned them completed just a few days later.

2.45 Storage of Data

The responses from these questionnaires were transferred efficiently by scanning the participants' response sheets. This prevented human error from unintentionally distorting the answers. The names of the participants were then encrypted, and only the lead researcher and his assistants were aware of links to individuals in the data. The scanner transferred the information into a new computer purchased for the lead researcher for the sole purpose of this research only. Hard copies of the responses were stored under lock and key in a storeroom at the address of the NGO in Singapore, and access was limited to only the lead researcher and his assistant.

2.46 Risk and Mitigation

There are no known major risks posed to participants. However, there was always the possibility that participants who previously experienced trauma with one or both parents might become upset by questions asking them to describe these relationships. To mitigate this risk, the following steps were taken: All participants (except those from USA) received a debriefing after the administration of the questionnaires by the lead researcher, a Singapore registered counsellor and schema therapist (accredited by the ISST) with extensive clinical and client experience. The lead researcher has appropriate

knowledge, expertise and experience with recognising signs of distress and the appropriate steps to ensure emotional safety; he was therefore well placed to intervene and support any participant who became distressed. Further, participants were assured they could stop at any point without being barred from attending the parenting workshop and that they could discuss any concerns with him immediately.

2.47 Value of Research for Participants and Community

Participants were informed that the knowledge gained from the study would be of value to the larger community, because all findings would hopefully be made known to the public and through scientific publications. This, in turn, would help parents improve their parenting, as well as help others improve their understanding of schemas as used in ST. Participants were also told that therapeutic patients would gain from the development of positive measures that could potentially be used in clinical sessions. As an additional token of appreciation for the participants' vital involvement in the research, the lead researcher committed to returning to the cities where the questionnaires were administered to present the findings of this survey, without charge, sometime in the near future.

Chapter 3 – Positive Clinical Psychology and Schema Therapy (ST): The Development of the Young Positive Schema Questionnaire (YPSQ) to Complement the Young Schema Questionnaire 3 Short Form (YSQ-S3)

(In Press, accepted on November 30, 2017, by *Psychological Assessment*, a journal of the American Psychological Association, for publication; Ref: PAS-2017-1543)

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Conflict of Interest: Eamonn Ferguson is coauthor on O'Connor, S., Ferguson, E., Terri, C., House, E., & O'Connor RC. (2016) The development and evaluation of the Paediatric Index of Emotional Distress (PI-ED). *Social Psychiatry and Psychiatric Epidemiology, 51*, 15–26. http://dx.doi.org/10.1007/s00127-015-1134-y, for which he receives royalties from GL Assessment in the United Kingdom. John P. Louis receives revenues from his parenting program that is taught, and books sold, worldwide. He is also a board member of one of the NGOs that participated in this research.

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3.1 Abstract

Negative schemas have been widely recognized as being linked to psychopathology and mental health, and they are central to the Schema Therapy (ST) model. This study is the first to report on the psychometric properties of the Young Positive Schema Questionnaire (YPSQ). In a combined community sample (Manila, Philippines, *n* = 559; Bangalore, India, *n* = 350; Singapore, *n* = 628), we identified a 56-item 14-factor solution for the YPSQ. Multigroup confirmatory factor analysis supported the 14-factor model using data from two other independent samples; an Eastern sample from Kuala Lumpur, Malaysia (*n* =229) and a Western sample from the United States (*n* = 214). Construct validity was demonstrated with the Young Schema Questionnaire 3 Short Form (YSQ-S3) that measures negative schemas and divergent validity was demonstrated for 11 of the YPSQ subscales with their respective negative schema counterparts. Convergent validity of the 14 subscales of YPSQ was demonstrated with measures of personality dispositions, emotional distress, well-being, trait gratitude, and humor styles. Positive schemas also showed incremental validity over and above negative schemas for these same measures thus demonstrating that both positive and negative schemas are separate constructs that relate in unique ways to mental health. Implications for using both the YPSQ and the YSQ-S3 scales in tandem in ST as well as cultural nuances from the use of Asian samples were discussed.

Keywords: positive schemas; schema therapy; incremental validity; culture.

3.2 Introduction

Schema Therapy (ST) has been shown to be successful in the treatment of a wide range of mental health conditions, including both affective disorders (Hawke, Provencher, & Parikh, 2013; Wang, Halvorsen, Eisemann, & Waterloo, 2010) and personality disorders (Bamelis, Evers, Spinhoven, & Arntz, 2014; Giesen-Bloo et al., 2006; Nadort et al., 2009; Sempertegui, Karreman, Arntz, & Bekker, 2013). Its central theoretical construct is an Early Maladaptive Schema (EMS or "negative schema"). A negative schema is made up of a specific pattern of thoughts, emotions, beliefs, bodily sensations, and neurobiological reactions, and is developed when a core emotional need such as that for connection and acceptance, autonomy, reasonable limits and/or realistic expectations is not adequately met during childhood (Lockwood & Perris, 2012;

Young, Klosko, & Weishaar, 2003). For example, the Emotional Deprivation Schema arises when the core emotional need for connection and acceptance is not met from a stable and predictable primary caregiver. Other secondary factors that also contribute to the development of schemas include culture, birth order, the quality of the parent's marriage, and a child's temperament (Louis & Louis, 2015; Young et al., 2003). Negative schemas can also, albeit more rarely, develop in later life, particularly following deeply distressing events. They have different degrees of strength and become organized around broad pervasive themes regarding oneself and one's relationship with others (Young et al., 2003).

Schemas are also a central theoretical construct in cognitive psychology and are defined as an interconnected memory structure of "nodes" that store thematic information (Free, 2007). When one node gets activated, other strongly connected nodes also become active. From this vantage point, severe negative schemas are seen as more rigid and impervious to disconfirming information because they are made up of more tightly interconnected nodes, the activation of one node quickly activating the entire schema. An activated negative schema then subsequently strongly shapes people's interpretations of their interpersonal world through selective attention and encoding of stimuli and selective retrieval of schema associated information. The theoretical framework of ST identifies the affective, cognitive and interpersonal patterns making up the schemas most relevant to psychopathology and well-being. Research on cognitive therapy has contributed to our understanding of how these schemas operate and why they can become so maladaptively ridged.

The positive counterpart of a negative schema is termed an Early Adaptive Schema (EAS or "positive schema"; Lockwood & Perris, 2012). Similar to negative schemas, positive schemas consist of memories, cognitions, beliefs, bodily sensations and neurobiological reactions, regarding oneself and one's relationship with others. However, these schemas are made up of positive functions and adaptive behavioral dispositions that emerge during childhood and adolescence when one's core emotional needs are adequately met by primary caregivers (Young et al., 2003). Appendix B shows the theoretical links between parenting patterns, core emotional needs, EASs, and EMSs (The terms 'positive', 'negative', 'adaptive', and 'maladaptive' are not intended to suggest that the schemas have this effect in every situation for every person,

but rather that this is their general impact. Clinicians are cautioned to recognize that all clients are different and that general statistical patterns may not apply to individuals; Held, 2016).

As it is widely accepted within cognitive psychology that schemas are defined by distinct themes (Free, 2007**)**, it is reasonable to assume that positive and negative schemas are separate constructs that get activated by different types of experiences. In other words, it is likely that positive schemas tend to cluster together and that negative schemas also cluster together, but that both negative and positive schemas would not be in the same cluster. This would occur as disconfirming evidence and experiences would not be admitted into the same schema cluster. Individuals may experience both positive and negative schemas simultaneously, although the presence and strength of a positive schema would be expected to negatively predict the strength of the corresponding negative schema (and vice versa). Whilst a person could be given a more global assessment of functioning ranging from positive to negative (Wood & Joseph, 2010), each positive schema is predicted to be a distinct dimension and not simply the polar opposites of its corresponding negative schema. This also means that a diminution in intensity of a negative schema would not mean there will necessarily be a corresponding increase in a positive one, thus recognizing that people can hold multiple contradictory beliefs about themselves and the world. In such a case, emotion and behavior would depend on which (if either) schema is active in a given moment. These expectations suggest that positive and negative schemas should be measured separately and that the relative strength of both assessed if the clinician wants a holistic overview of that person in terms of the themes that ST considers important.

There is currently an established measure of negative schemas, the Young Schema Questionnaire (YSQ; Young & Brown, 1994), that has been validated in many countries (Australia: Lee, Taylor, & Dunn, 1999; China: Cui, Lin, & Oei, 2011; Korea & Australia: Baranoff, Oei, Cho, & Kwon, 2006; Norway: Hoffart et al., 2005; Turkey: Soygüt, Karaosmanoğlu, & Cakir, 2009; United Kingdom: Waller, Meyer, & Ohanian, 2001; and the United States: Cecero, Nelson, & Gillie, 2004). The treatment process in ST focuses first on helping patients to identify the negative schemas that underlie their long-term problems, and second, on supporting patients in challenging and overcoming both their negative schemas and the maladaptive ways in which they cope with them

(Young et al., 2003). The YSQ is an integral part of ST practice, being given out routinely to patients to assist with the initial case conceptualization, and sometimes re-administered later in therapy to track and demonstrate a patient's progress. However, there is currently no corresponding validated measure of positive schemas. As a result these positive patterns cannot be objectively and systematically assessed in a manner parallel to their counterparts, despite the increasing awareness of this imbalance within the ST community (Lockwood & Perris, 2012; Taylor & Arntz, 2016).

The development of a measure of positive schemas is consistent with broader developments in the field of clinical psychology. Positive Clinical Psychology (PCP; Wood & Johnson, 2016; Wood & Tarrier, 2010, as clarified in Johnson & Wood, 2016) has drawn the field's attention to the importance of considering the positive alongside the negative since; (a) many characteristics highlighted by positive psychology are understudied (Peterson & Seligman, 2004), (b) these characteristics often have predictive validity in explaining psychopathology above and beyond the presence of the negative (Wood & Joseph, 2010; Wood, Joseph, & Maltby, 2009; Wood, Joseph, & Maltby, 2008) and; (c) interventions that focus on increasing the positive can be as successful at reducing psychopathology as those that focus on decreasing the negative (e.g., Geraghty, Wood, & Hyland, 2010).Thus an assessment of positive schemas would complement rather than replicate the existing measure of negative schemas allowing for a more balanced approach to the investigation of a broader spectrum of these patterns in ST and research, which in turn, can lead to a more holistic and broadly integrative approach to assessment and treatment. Creating a measure of positive schemas will also avoid sending the unintended and wrong message that negative schemas should be the sole focus within ST. Further, a more balanced focus on positive and negative schemas, consistent with the arguments for the need for PCP, would allow researchers to explore how both can work together in distinct and unique ways to influence psychopathology and well-being.

3.21 The Present Research

Given the importance of a comprehensive, systematic and empirically based examination of positive influences on mental health and the absence of such measures in the context of ST, the first aim was to develop an initial item pool for the Young Positive Schema Questionnaire (YPSQ) and establish its factor structure. The YPSQ is

the first psychometric scale designed to measure a set of hypothesized positive schemas in adults. If similar factor structures emerged in the YPSQ and the latest version of the YSQ, the YSQ-S3 (Young & Brown, 2005), then we would expect there to be a correlation between the corresponding counterparts. We would further expect this correlation to be larger than that between the noncounterpart subscales demonstrating divergent validity.

The second aim of this study was to explore the association of the YPSQ subscales with other established measures of personality dispositions, emotional distress, positive well-being, the trait of gratitude, and humor styles. Since negative schemas involve distorted views of oneself and/or others (Beck, Brown, Steer, Eidelson, & Riskind, 1987) and positive schemas are hypothesized to involve adaptive beliefs of oneself and/or others, negative correlations of moderate strength were expected with subscales of YPSQ and measures of depression and anxiety, and medium-sized positive correlations were expected with measures of positive well-being, such as gratitude, satisfaction with life and positive related subscales of humor.

The third aim of the project was to investigate the incremental validity of the YPSQ scale by demonstrating that positive schemas add predictive power over and above that provided by the assessment of negative schemas (Hunsley & Meyer, 2003). The fourth and final aim of this study was to examine the prevalence and structure of positive schemas in both the Eastern and Western samples. While the theoretical development of ST and the psychometric validation of the negative schema scale were largely conducted in the West, the 18 negative schemas that have been identified have been hypothesized to be present in all cultures (Young et al., 2003). Thus if no meaningful results were obtained from a study on positive schemas conducted in Asia, then a question about the universality of schemas would be raised. However, it was also important to show that our results hold in the West, where most ST is conducted. We therefore sourced four out of the five samples from Asian populations and one sample from the United States to establish the generalizability of the findings.

3.3 Method

3.31 Initial Item Pool Development

The development of an initial item pool for the YPSQ involved four individuals. Each

is an expert in his field. GL was an American schema therapist whose decades of experience included helping to develop the Early Adaptive Schema Questionnaire and collaborating with Young in developing ST. JPL was a Singapore-based schema therapist (the first author of this paper) and author of a book on parenting and CWL was a Professor of Psychology in Australia who has published research on the YSQ. Finally, AMW, a Professor of Psychology in Scotland, who has published over 100 papers in the field of well-being (the second author of this paper). Three of the team members (GL, JPL, & CWL) belong to the International Society of Schema Therapy (ISST), and two of them (GL & CWL) have served on the ISST Board. AMW was familiar with the therapeutic antecedents to ST, and therefore was able to serve as an external member with no association with the ISST or any prior training in ST.

It was theorized that each of the 18 negative schema subscales in the YSQ-S3 has a positive counterpart (Lockwood & Perris, 2012). Appendix B shows all the items for positive and negative schemas and their theoretical links with core emotional needs that were met and not met, respectively. As a result, there was some degree of 'mirroring' between the positive and negative schema items. Some involved straightforward transpositions from negative to positive while others were more complex. A 6-point Likert-type scale was used with scores ranging from 1 (*Completely untrue of me*) to 6 (*Describes me perfectly*). This resulted in an initial pool of 95 items designed to measure the 18 positive schemas that were theoretical counterparts to the 18 negative schemas in the YSQ-S3.

3.32 Samples

There were five different nonclinical English-speaking community samples used in this study. Four of them were drawn from four major cities in Southeast Asia and South Asia: Manila (Philippines), Bangalore (India), Singapore, and Kuala Lumpur (Malaysia). The fifth sample was drawn from populations in three cities in the Eastern part of the United States (heretofore referred to as "USA East"): Fairfax and Stafford located in Northern Virginia, and Manchester in New Hampshire. The host organization and the stakeholders of this research in each city are global affiliates of a nongovernmental organization (NGO) international charity headquartered in the United States. The objectives of this research have been made clear to the NGOs in each of the five cities ahead of time. Ethical considerations were in line with standards advocated

by the British Psychological Society; approval was given by the respective ethics committee of each NGO. Information such as the purpose of the research, the voluntary nature of their involvement, signing of a consent form, the estimated amount of the time required to complete the questionnaires and confidentiality of information were disseminated to all participants via email, by distribution of hard copies as well as on-line invitations through advertisements in their websites. Invitations to take part were also sent to all other types of organizations in these cities with a snowball sampling procedure whereby volunteers were encouraged to reach out to friends, and, as a result, samples were drawn from populations comprising professionals, students, and parents. As an incentive for participation, workshops on the effects of past parenting behaviour and the development of schemas were conducted without charge. In Singapore, where this workshop was previously conducted, the participants were given a free copy of the first author's book on parenting as an incentive for completing the questionnaires. No volunteers from this NGO in any city were excluded because of race, color or religion. The only type of participants that were excluded were those below 18 years of age and those who did not have an adequate command of the English language. Sufficient grasp of the English language was determined by both polling members of the respective groups and the head investigators familiarity with the leaders of these respective groups and their familiarity with the members of the respective NGOs. India, Philippines, Malaysia and Singapore rely heavily on the use of English beginning at the primary school levels (see Appendix A). It was therefore not difficult to find a sizeable number of English-speaking community volunteers from their respective affiliated NGOs. We chose a Southeast Asian sample and a South Asia sample, both from developing countries, for analysis in Phase 1 for variability in sample make up (For detailed differences of these populations see Appendix A) and another Southeast Asian sample from a developed country in Phase 2 (Singapore). This was judged preferable to two Southeast Asian samples in Phase 1. We also chose another Eastern (Kuala Lumpur) and Western (USA East) sample for Phase 3 to test for invariance between Western and Eastern samples. Table 2.1 contains participant demographic details. The mean age for the Manila sample was 43.47 years (SD = 17.24); the mean age of the Bangalore sample was 38.70 years (SD = 16.19); the mean age for the Singapore sample was 46.22 years (SD = 22.34); the mean age for the Kuala Lumpur sample was 41.40 years (SD = 17.40); and the mean age of the USA East sample was 37.85 years (SD = 13.2).

3.33 Instruments

YSQ-S3. This instrument measures 18 negative schemas. It has a 6-point Likert scale that ranges from a score of 1 (*Completely untrue of me*) to a score of 6 (*Describes me perfectly*). Item examples are: "I feel that people will take advantage of me" (Mistrust / Abuse schema) and, "No man/woman I desire could love me once he/she saw my defects" (Defectiveness / Shame schema). It was recently validated in a Korean population (Lee, Choi, Rim, Won, & Lee, 2015) where all 18 schemas were positively correlated with depression and anxiety, which were measured using the subscales of the Symptom Checklist (SCL-90-R; Derogatis, 1994). In addition, a confirmatory factor analysis (CFA) supported the factorial structure of the YSQ-S3 in the Korean study. A study in Germany (Kriston, Schafer, Jacob, Harter, & Holzel, 2013) also validated the YSQ-S3 in a community as well as a smaller clinical sample. The internal consistency of 17 subscales was > .70, except for the Entitlement schema which was .67. Factorial reliability was satisfactory (>.70) in all subscales except for Entitlement. Factor scale congruence was high (at least .95) for 17 subscales. Convergent validity with the SCL-K-9, a shorter version of the SCL-90-R (Klaghofer & Brähler, 2001; Sereda & Dembitskyi, 2016) was demonstrated with significant positive associations found between symptoms of personality disorder measured by The Standardized Assessment of Personality (Moran et al., 2003) and all the schemas except for Unrelenting Standards. A recent study validating the YSQ-S3 found that all the YSQ-S3 subscales had satisfactory internal consistency (alpha > .7; Bach, Simonsen, Christoffersen, & Kriston, 2017). It was expected that the construct validity of the final YPSQ subscales would be demonstrated through negative correlations with their respective counterparts in the YSQ-S3.

The Mini International Personality Item Pool (Mini-IPIP). The Mini-IPIP is a 20-item short form of its 50-item longer version, and measures the Big Five personality traits (Agreeableness, "Sympathize with others' feelings"; Conscientiousness, "Get chores done right away"; Extraversion, "Am the life of the party"; Intellectual Openness, "Have a vivid imagination"; and Neuroticism, "Have frequent mood swings"). Items are measured on a 5-point Likert scale that ranges from a score of 1 (*very inaccurate*) to a score of 5 (*very accurate*). The Mini-IPIP has been found to have high test-retest correlations in the short term (.62 to .87) and long term (.68 to .86; Donnellan, Oswald, Baird, & Lucas, 2006; Linley & Stoker, 2012). As a demonstration

of convergent validity, it is expected that the YPSQ subscales will show positive correlations with positive traits like conscientiousness and negative association with traits like neuroticism (Young et al., 2003). This expectation was supported by Thimm (2010) who found positive associations between negative schemas and negative personality traits like neuroticism since such traits are often represented by maladaptive coping styles used to avoid activation of negative schemas.

The Gratitude Questionnaire–6 (GQ-6). The GQ-6 with six-items measures the disposition to experience gratitude using a Likert scale, from 1 (*strongly disagree*) to a score of 7 (*strongly agree*). An item example is, "When I look at the world, I don't see much to be grateful for". The GQ-6 scale correlated significantly and negatively with several measures of impaired sleep quality (r = -.11 to -.29), positively with pre-sleep cognitions (r = .21; Wood, Joseph, Lloyd, & Atkins, 2009) and other measures of well-being (Wood & Joseph, 2010). The YPSQ subscales were therefore expected to correlate positively with this measure as evidence for convergent validity.

Depression, Anxiety, and Stress Subscales (DASS-21). The DASS-21 contains 21 items with three subscales of emotional distress: Depression, "I couldn't seem to experience any positive feeling at all"; Anxiety, "I experienced trembling (e.g. in the hands)"; and Stress, "I found it hard to wind down". Responses are measured on a 5-point Likert scale, from 0 (*did not apply to me at all*) to 4 (*applied to me very much or most of the time*). Antony, Bieling, Cox, Enns, and Swinson (1998) has demonstrated that the instrument has high concurrent validity (r> .50) with the Beck Depression Inventory, Beck Anxiety Inventory (Beck et al., 1987) and the State-Trait Anxiety Inventory -Trait version (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). Convergent validity was expected with the YPSQ since past studies (Thimm, 2010) revealed that EMSs correlated positively with depression and anxiety, with low to moderate effect sizes (r = .10 to .50).

Satisfaction with Life Scale (SWLS). The SWLS (Pavot & Diener, 2008) is a short five-item instrument designed to measure life satisfaction. Each item uses a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Item example, "In most ways my life is close to my ideal". Diener, Emmons, Larsen, and Griffin (1985) reported a two month test-retest stability coefficient of .82, and a strong negative correlation with the Beck Depression Inventory (Blais, Vallerand, Pelletier, & Briere,

1989). As evidence for convergent validity the YPSQ subscales were expected to show positive associations with this scale.

Humor Styles Questionnaire (HSQ). The HSQ consists of 32 items, each of which is a self-descriptive statement about particular uses of humor (Martin, Puhlik-Doris, Larsen, Gray, & Weir, 2003). Each item uses a 7-point Likert scale response format that ranges from 1 (*totally disagree*) to 7 (*totally agree*). The two positively related subscales are Affiliative and Self-Enhancing. The former involves the use of humor to amuse others and strengthen one's relationship with them (e.g. "I laugh and joke a lot with my closest friends"). The latter involves the use of humor to cope with stress and maintain a humorous outlook during times of difficulty (e.g. "If I am feeling depressed, I can usually cheer myself up with humor"). The two negatively related ones are Aggressive and Self Defeating. The former involves the use of sarcastic, or disparaging humor (e.g. "When telling jokes or saying funny things, I am usually not very concerned about how other people are taking it"). The latter involves the use of humor for self-disparagement (e.g. "I will often get carried away in putting myself down if it makes my family or friends laugh"). Statistically significant and moderately strong correlations were found between HSQ subscales and measures of depression, anxiety, hostility, aggression, self-esteem, optimism, and the Ryff's well-being scale (which consists of six subscales—positive relationships with others, autonomy, personal growth, environmental mastery, purpose in life and self-acceptance; van Dierendonck, 2004). The HSQ scale was chosen as a more distal measure of functioning in everyday life that has previously been linked to well-being (Martin et al., 2003) and so it was expected that the YPSQ subscales would correlate positively and negatively with the positive and negative related subscales of the HSQ respectively as evidence of convergent validity.

3.4 Procedures and Statistical Analyses

This study was divided into Phase 1, Phase 2 and Phase 3. In Phase 1, data from the Manila and Bangalore samples was used for an exploratory factor analysis (EFA) through principal axis factoring (PAF) with promax rotation of the initial 95-item pool. The results were used to develop a shorter item pool. In Phase 2, data from the Singapore sample was used for an EFA for further scale refinement of this shorter item pool. For samples in Phase 1 and Phase 2, Horn's (1965) Parallel Analysis (PA) was

used to determine the number of factors to be extracted from each sample. Finally, in Phase 3, data from an Eastern Kuala Lumpur sample as well as a Western USA East sample was used for a CFA of the final version of the YPSQ.

We used IBM SPSS Statistics 23 (IBM Corp, 2015) and M*Plus* 8 software (Muthén & Muthén, 2017) to conduct all analyses. Participants with more than 10% missing data were removed. Missing data analysis was initially carried out using Little's Missing Completely at Random (MCAR; Little, 1988) test to see if missing patterns were at random on samples from all five cities. Three methods to tackle the impact of missing data on analysis were carried out: (1) "Exclude case pairwise" feature in SPSS, (2) replacing missing data with the mean value of a particular variable for that sample, and (3) Multiple Imputation (MI). As a robustness check, these three methods were employed to investigate the effects of missing data on the EFA on one of the five samples and the results did not change. As a result mean values were used to impute missing data values. Distribution of normality was examined through inspecting values of kurtosis and skewness although both CFA and EFA appear to be robust against such violations (Floyd & Widaman, 1995) especially if the sample size is large (200 +; Tabachnick & Fidell, 2012), which was the case here for all the five samples.

The psychometric refinement process began by testing the reliability and stability of the factor structure of the initial item pool using EFA on two separate independent community samples in Phase 1 to see whether the same structure emerged. Multiple samples were used at this point for item selection, refinement, and confirmation, in order to ensure that the results were not unduly influenced by the characteristics of a single sample. This was preferable to CFA at this stage as we had no firm hypotheses about the number of factors to emerge. CFA might show a well-fitting model, but not necessarily the best fitting one that would have been suggested by a more exploratory analysis. For the EFAs in Phase 1 and 2, items that did not have a loading higher than .40 were excluded (Floyd & Widaman, 1995), and items that had significant loadings (>.40) on more than one factor were removed. Factors with one or no items would be rejected.

Criteria were established for selecting the most robust items from the two EFAs in Phase 1 for the shorter version of the scale. They were as follows: 1) items that had appeared strongly in both factor structures were given the highest priority and were

retained (Arrindell et al., 1999); 2) if a lower loading item did not capture the central theme as clearly as other higher loading items in the same factor then this item would be removed; 3) if a lower loading item was very similar in content to a higher loading item, then the lower loading item would be deemed redundant and removed. A lower loading item would be retained in place of a somewhat higher loading one if it had greater clinical significance and contributed variability in content; 4) if an item appeared under one factor in Manila but in a different factor in Bangalore then the item judged to have captured the construct of the factor more precisely would be chosen instead. Thus we tried to balance statistical rigor with a particular emphasis on clinical meaning and utility and therefore a certain degree of judgment-call was involved in this procedure (Matsunaga, 2010). Intercorrelations between factors were also monitored. Furthermore, we aimed to have three to five robust items per factor in the final YPSQ version as too many items in each factor would make subsequent CFA analysis difficult (Floyd & Widaman, 1995). Since at least three items were expected to be in each factor of the final version of the YPSQ, factors with four or fewer items in Phase 1 inherited at least one new item to maximize the chance of these potentially weaker constructs to be represented in a robust manner in the next EFA in Phase 2. These new items were worded in such a way as to capture their respective constructs more precisely (Martin et al., 2003). The reliability values were tested using Cronbach's alpha values, and according to Nunnally (1978), factors with values of, $\alpha \geq .65$for newly developed instruments, are acceptable. However, factors in Phase 1 with poor reliability values were not prematurely rejected since it was hoped that the new items added would improve these values in Phase 2.This shorter version of the YPSQ was then subjected to another EFA in Phase 2 using an independent sample to see if the same factor structure would replicate. No new items were developed and there was no item selection process in Phase 2. In Phase 3 both single group CFA and multigroup CFA (MGCFA) were conducted using a weighted least-squares means and variance adjusted estimation (WLSMV) algorithm to take into account the ordered-categorical nature of the response scales (Wirth & Edwards, 2007). These were conducted on two other independent samples from Kuala Lumpur and USA East. The report on the fit of each hypothesized model for the CFA was assessed using two absolute fit indices with values for an excellent fit as recommended by Browne and Cudeck (1993) and Kline (1998); the root mean square error of approximation (RMSEA < .05) and the normed chi-square. The

latter was derived by dividing the chi-square value by degrees of freedom ($X^2/df < 2$ to 3). One comparative fit index (CFI ≥ .95) and one nonnormed fit index known as the Tucker-Lewis (TLI ≥ .95) were also used. The following measurements of invariance (Milfont & Fischer, 2010) were used for the two samples: (1) configural invariance (same factor structure across groups); (2) metric invariance (same factor loadings across groups); (3) scalar invariance (same item intercepts across groups); (4) error invariance (same error variance across groups); (5) factor variance invariance (same factor variance across groups); (6) factor covariance (same factor covariance across groups), and (7) factor mean invariance (same factor mean across groups). If the model lacked an excellent fit and/or if items needed to be removed from factors with too many items (more than 5) in order to produce a more balanced YPSQ scale with three to five items per factor, the "Jackknife" approach of removing items recommended by Larwin and Harvey (2012) would be adopted. This item reduction procedure calls for calculating an estimate of the full model first and then removing one item at a time, starting with factors with the most number of items. Items with the lowest regression weights and/or those with high item-to-item correlation became targets for removal. After removal of items the model was re-estimated and the procedure repeated while observing the progress of the fit indices based on the CFI and RMSEA values under the following conditions when items were removed; 1) the original primary model must correlate with the reduced model at, $r \geq .95$ as recommended by Newcomb, Chou, Bentler, and Huba, (1988); 2) each original factor must continue to explain at least three observed variables (Floyd & Widaman, 1995); 3) the structural integrity of the model must not be violated (Bollen, 1989); and 4) a good fit was obtained by the reduced model (Bollen, 1989).

Convergent and construct validity were assessed on the Singapore sample (used in Phase 2) using the IPIP, DASS-21, GQ6, SWLS and HSQ for convergent validity; YSQ-S3 for construct validity. The threshold guidelines for what are considered small ($r = .10$), medium ($r = .30$), and large effect sizes ($r = .50$) were adopted from Cohen (1992). In determining a priori what strength correlations would be taken to be acceptable convergent validity and intercorrelation between factors, we were guided by the theoretical belief that positive and negative schemas are separate but related constructs and thus correlations would be expected to be of medium strength ($r = .30$ to .50; Hunsley & Meyer, 2003). A very high correlation (e.g. $|r| > .80$) would be more consistent with constructs being on the same continuum and suggesting a lack of

divergent validity. For a formal test of divergent validity, we used the z-test proposed by Steiger (1980) to show that correlations between non-counterparts of subscales in the YPSQ and YSQ-S3 were statistically and significantly lower than correlations with counterparts of both subscales. Finally, incremental validity was conducted using hierarchical multiple regression where a minimum value of $\Delta R^2 = .0225$ (or 2.25%) should be achieved from the second to the third step of a regression analysis (Hunsley & Meyer, 2003) to show that positive schemas would demonstrate sufficient incremental validity in predicting psychopathology, emotional distress, and well-being and other distal measures of functioning, namely trait of gratitude and humor styles, after controlling for gender, age and negative schemas. The predictor variables for each hierarchal multiple regression were entered in the following three steps: (1) gender and age; (2) all negative schemas subscales from the YSQ-S3; and (3) all positive schemas subscales of the final version of the YPSQ.

3.5 Results

3.51 Phase 1, Phase 2 and Phase 3 Data Analysis

Missing data and normality tests. Removal of participants with more than 10% missing data resulted in the following samples sizes**:** Manila (n = 559), Bangalore (n = 350), Singapore (n = 628), Kuala Lumpur sample (n = 229) and USA East (n =214; Table **2**.**1**). The percentages of missing values were very low (Manila = 0.97%; Bangalore = 1.11%; Singapore = 0.06%, Kuala Lumpur = 0.07% and USA East = 0.13%). MCAR tests that were carried out in Phase 1 for the Manila sample (Little's MCAR test X^2 = 147256.51, df = 165,555, p = 1.000), and the Bangalore sample (Little's MCAR test X^2 = 187.68, df = 116,566, p = 1.000) showed that they were MCAR. In Phase 3, results also showed that the Kuala Lumpur sample (Little's MCAR test X^2 = .000, df = 16,494, p = 1.000) and USA East (Little's MCAR test X^2 = 174.87, df = 12020, p = 1.000) were MCAR. However, for the Singapore sample in Phase 2 (Little's MCAR test X^2 = 50394.75, df = 48,588, $p < .001$) there was a pattern associated with the missing data, a phenomenon which can happen in larger samples. Inspection of skewness and kurtosis values showed departure from normality for some of the data in the samples although both CFA and EFA are robust against such violations since the sample size was large (≥ 200; Tabachnick & Fidell, 2012).

EFA in Phase 1 on Manila and Bangalore samples. An EFA was conducted on two

independent samples as this allowed us to explore common and unique factors across both samples. In both the Manila and Bangalore samples, the KMO (.92 and .86 respectively) and Bartlett's test of sphericity (X^2 = 20,590, df = 4,465, $p < .001$ & X^2 = 13191, df = 4,465, $p < .001$ respectively) indicated these data were suitable for EFA (Bartlett, 1937). PA suggested 19 factors be extracted from the Manila sample (accounting for 43.59% of the variance) and 12 factors from the Bangalore sample (accounting for 37.13% of the variance). Of the 19 Manila factors, seven factors had only one item and were rejected along with another factor with two items. This two-item factor was similar to constructs represented by two other factors. Thus 11 factors were accepted for further analysis. In the Bangalore 12 factor solution there were two factors with only one item each and these were rejected leaving 10 factors for further analysis (see Appendix C for loadings > .4).

When the EFA from both samples were compared, there were nine common factors with eight factors having at least three items and one factor with only two items (Empathic Consideration). There were two factors unique to the Manila sample - Healthy Self-Interest / Self-Care (3 items), and Self-Directedness (2 items). There was also one factor unique to the Bangalore sample: Stable Attachment (4 items). When combined, there were 12 factors with 62 items selected for the shorter version in Phase 1 using the established item selection criteria stated in the "Procedures and Statistical Analyses" section (See "Remarks" in Appendix C for rationale for item removal). Thus more factors resulted from the combined results than if the factor structure was based on either one of the two samples. The stability of these unique factors will be tested in Phase 2 with another independent sample to see if they replicate.

Among these 12 factors there were four factors that had four items or less and so eight new items were generated for these factors to ensure at least three robust items would emerge in the next EFA in Phase 2. These factors were Stable Attachment (one new item added), Healthy Self-Interest / Self-Care (one new item added), Self-Directedness (two new items added), Empathic Consideration (four new items). However, the positive schema factor of Realistic Expectation did not appear as a factor in the EFA in Phase 1. Thus four more new items that would better capture this construct were developed, since expert team believed that this factor was highly relevant clinically. In total there were 12 new items (see Appendix C) added to the 62 selected from Phase 1

resulting in a total of 74 items with the aim to further refine the YPSQ in the next EFA in Phase 2. Furthermore, the Cronbach's alpha reliability values for five out of the 12 subscales were poor (< .60), in at least one of the two samples (See Cronbach's alpha values in Appendix C), which further justified the addition of these new items.

EFA in Phase 2 on Singapore Sample. For the Singapore sample, the KMO of .964 and Bartlett's test of (X^2 = 31,902, df = 2,701, p < .001) indicated that these data were appropriate for EFA (Bartlett, 1937). PA recommended 15 factors, but the EFA results revealed that the 15th factor did not have any items. However, 11 items from the initial 74 that were initially administered did not emerge since their loadings were less than .40, leaving only 14 factors that consisted of 63 items that emerged from Phase 2. No items were removed, and no new items were developed in Phase 2 and there were no items that cross loaded > .4 in more than one factor. Incidentally, we carried out EFA in M*plus* using WLSVW and the resultant 15-20 factor model gave the same 14 factor solution as the EFA using SPSS and PA. Two additional factors appeared and were labeled Realistic Expectations (4 items) and Healthy Self-Reliance / Competence (3 items; See Appendix D for loadings > .4). When the EFA results of Phase 1 were compared to that of Phase 2, there was a significant refinement of the YPSQ seen in the following areas; 1) the EFA of the Singapore sample in Phase 2 revealed a 15 factor solution that accounted for 60.66 % of the variance which was higher than the values of both EFAs in Phase 1 (Manila = 43.59%; Bangalore = 37.13%); 2) the Cronbach's reliability values of the YPSQ subscales also improved substantially in Phase 2 in comparison to Phase 1 (compare Cronbach's alpha values from Appendix C with values in Appendix D); 3) the factor loadings for most of the items for the 12 factors that had appeared in Phase 1 were higher in Phase 2. As far as intercorrelation between factors are concerned from the EFAs, both Phase 1 and 2 for all three samples (Manila, Bangalore and Singapore), they were mostly low and moderate in strength, (.10 to .69), indicating absence of overlap between factors. The 14 factors with 63 items that emerged from Phase 2 were labeled as (number of items) Emotional Fulfillment (7), Success (5), Empathic Consideration (5), Basic Health and Safety / Optimism (8), Emotional Openness and Spontaneity (4), Self-Compassion (3), Healthy Boundaries / Developed Self (3), Social Belonging (5), Healthy Self-Control / Self-Discipline (4), Realistic Expectations (4), Self-Directedness (5), Healthy Self-Interest / Self-Care (3), Stable Attachment (4), and Healthy Self-Reliance / Competence (3).

CFA and validation of the final YPSQ in Phase 3. The 14 factor-63 item model obtained from Phase 2 was imbalanced as far as the number of items for each factor was concerned (ranging from 3 to 8). In Phase 3 CFA analysis, a more balanced factor structure of three to five items per factor were developed, without compromising on the integrity of the model. Using the Jackknife approach (Larwin & Harvey, 2012; see "Procedures and Statistical Analyses" section), a total of seven items (marked "×" in Appendix D) were removed; six, because they had the lowest regression weights of all items in that factor, and one, because it had a high item-to-item correlation (see "Remarks" column in Appendix D). The correlation between this reduced 56-item model with the original 63-item model was, $r = .998$, ($p < .01$), which showed that the integrity of the original model was not compromised. Excellent fit indices for the 14 factor-56 item model were obtained using two independent samples for CFA; Kuala Lumpur, an Eastern sample ($\chi^2 = 2137.13$, $df = 1393$, $\chi^2/df = 1.53$, RMSEA = .048 [0.044, 0.052], CFI = .96, TLI = .96), and USA East, a Western sample ($\chi^2 = 2016.88$, $df = 1393$, $\chi^2/df = 1.45$, RMSEA = .046 [0.041, 0.059], CFI = .96, TLI = .96). Excellent fit indices were also obtained for MGCFA for the reduced 56-item model with these two samples (see Table 3.1), using the common fit indices used in CFA (Hu & Bentler, 1999; other fit indices recommended by Milfont and Fischer (2010) for MGCFA were not available in M*plus*). When the Singapore sample was included in the MGCFA, excellent fit was also obtained (see Appendix E). Since the 56-item model had a more balanced factor structure, this reduced model was adopted in preference to the original 63-item model as the final version of the YPSQ (see Appendix D). The reliability values of the 14 factors from the 63-item model were compared with those from the 56-item model for both the Singapore (this was the sample in Phase 2 from which the factor structure was derived from) and Kuala Lumpur samples (The USA East sample was only administered with the 56-item questionnaire). They remained stable with the greatest difference being .036 for the Emotional Fulfillment factor. All were, $\alpha \geq .65$ except for one, with .62 in the Kuala Lumpur sample. Table 3.2 shows these values along with the mean and standard deviations.

3.52 Convergent, Construct, Divergent, and Incremental Validity

Convergent validity. Correlations between the 14 subscales (56 items) of the final YPSQ and the IPIP, GQ-6, DASS-21, SWLS, HSQ, and YSQ-S3 are shown in Table 3.3. As hypothesized, most subscales of the YPSQ had moderately high correlations

with similar subscales of the IPIP; the IPIP Agreeableness with the YPSQ subscales of Emotional Openness and Spontaneity, and Social Belonging; the IPIP Conscientiousness with the YPSQ subscales of Success, Healthy Self-Control / Self-Discipline, Healthy Self-Reliance / Competence, Self-Directedness, and Social Belonging; the IPIP Extraversion with the YPSQ subscales of Emotional Openness and Spontaneity, and Social Belonging. Consistent with past studies (Sava, 2009) the IPIP Neuroticism subscale correlated statistically significantly and negatively with many subscales of the YPSQ. As hypothesized, all the YPSQ subscales correlated negatively and significantly with all subscales of DASS-21. The SWLS scale, a measure of overall life satisfaction, correlated statistically significantly and positively with each YPSQ subscale. We hypothesized that the YPSQ subscales would correlate positively with measures of gratitude and the positive related subscales of the HSQ (Self-Enhancing and Affiliative) and negatively with the negative related subscales of the HSQ (Aggressive and Self-Defeating). In all, the YPSQ subscales demonstrated convergent validity with subscales of the IPIP, DASS-21, SWLS, GQ-6, and HSQ.

Construct and divergent validity. The YPSQ subscales were developed using the YSQ-S3 subscales as their theoretical counterparts, and so for a measure of construct validity we expected to see negative correlations between them. For the 14 YPSQ subscales we can summarize the statistically significant correlations with their hypothesized respective counterparts as follows: Abandonment – Stable Attachment (r = -.62); Approval Seeking – Self-Directedness (r = -.52); Dependence – Healthy Self-Reliance / Competence (r = -.60); Emotional Deprivation – Emotional Fulfillment (r = -.67); Emotional Inhibition – Emotional Openness and Spontaneity (r = -.61); Enmeshment – Healthy Boundaries / Developed Self (r = -.62); Entitlement – Empathic Consideration (r = -.32); Failure – Success (r = -.72); Insufficient Self-Control – Healthy Self-Control / Self-Discipline (r = -.66); Punitiveness – Self-Compassion (r = -.48); Self Sacrifice – Healthy Self-Interest / Self-Care (r = -.22); Social Isolation – Social Belonging (r = -.69); Unrelenting Standards – Realistic Expectations (r = -.37); Vulnerability – Basic Health and Safety / Optimism (r = -.66). Since there were 18 YSQ-S3 subscales and only 14 YPSQ subscales were validated, four of the YSQ-S3 subscales showed moderately high correlations with other YPSQ subscales. These were Defectiveness – Emotional Fulfillment (r = -.64); Mistrust – Stable Attachment (r = -.46); Pessimism – Basic Health and Safety / Optimism (r = -.59); Subjugation – Success (r = -.46).

Table 3.1

Fit indices from Multigroup CFA of Measurement and Structural Invariance Tests (14 Factors and 56 Items - WLSMV) Using Kuala Lumpur (n = 229), and USA East (n = 214) Samples

Model	Number of parameters	χ^2 ($\Delta\chi^2$)*	*df* (Δdf)*	*p*	χ^2/df	CFI (ΔCFI)	TLI (ΔTLI)	RMSEA [90% CI] (ΔRMSEA)	Comparison	Decision
Configural invariance	852	4180.69	2786	<0.001	1.50	0.96	0.96	0.048 [0.045, 0.050]	-	Accept
Metric invariance	810	4193.08 (64.08)	2828 (42)	<0.001 (0.016)	1.48	0.96 (-0.001)	0.96 (-0.001)	0.047 [0.044, 0.050] (-0.001)	Configural vs. Metric	Accept
Scalar invariance	601	4429.22 (349.33)	3037 (209)	<0.001 (<0.001)	1.46	0.96 (0.001)	0.96 (-0.003)	0.045 [0.043, 0.048] (-0.002)	Metric vs. Scalar	Accept
Error variance invariance	545	4496.51 (156.88)	3093 (56)	<0.001 (<0.001)	1.45	0.96 (<0.001)	0.96 (<0.001)	0.045 [0.042, 0.048] (<0.001)	Scalar vs. Error	Accept
Factor variance invariance	531	4577.12 (64.85)	3107 (14)	<0.001 (<0.001)	1.47	0.96 (0.002)	0.96 (0.002)	0.046 [0.043, 0.049] (0.001)	Error vs. Factor variance	Accept
Factor covariance invariance	440	4227.89 (149.99)	3198 (91)	<0.001 (<0.001)	1.32	0.97 (-0.012)	0.97 (-0.013)	0.038 [0.035, 0.041] (-0.008)	Factor variance vs. Factor covariance	Accept
Factor mean invariance	426	4313.09 (50.62)	3212 (14)	<0.001 (<0.001)	1.34	0.97 (0.002)	0.97 (0.001)	0.039 [0.036, 0.042] (0.001)	Factor covariance vs. Factor mean	Accept
Acceptance criteria for indices (differences)						>0.95 (<0.01)	>0.95 (<0.01)	<0.06 (<0.015)		

Note. *The chi-square difference test results of nested models using the scaled chi-square (Satorra & Bentler, 2010) are reported as results DIFFTEST command implemented in Mplus (Asparouhov & Muth´en, 2006).

Table 3.2

Reliability Coefficients (α), *Mean (M) and Standard Deviation (SD) for the 14 Factors (No. of Items) with 56 Items of the Final YPSQ Using Singapore (n = 628), Kuala Lumpur (n = 229), and USA East (n = 214) Samples*

	Singapore			Kuala Lumpur			USA East		
Factor Name	α	*M*	*SD*	α	*M*	*SD*	α	*M*	*SD*
Emotional Fulfillment (5)	0.85	4.18	1.03	0.83	4.12	0.98	0.86	4.19	1.19
Success (5)	0.93	3.93	1.14	0.91	3.90	1.06	0.93	4.35	1.17
Empathic Consideration (4)	0.81	4.34	0.89	0.79	4.10	0.89	0.78	4.31	0.87
Basic Health and Safety / Optimism (5)	0.87	3.97	1.06	0.86	3.75	1.02	0.86	3.88	1.14
Emotional Openness and Spontaneity (4)	0.87	4.13	1.06	0.83	4.00	0.98	0.88	4.27	1.14
Self-Compassion (3)	0.81	3.54	1.06	0.83	3.44	1.04	0.84	3.48	1.20
Healthy Boundaries / Developed Self (3)	0.78	4.65	1.06	0.62	4.67	0.87	0.71	5.02	1.06
Social Belonging (5)	0.92	3.96	1.06	0.92	3.83	1.02	0.91	3.82	1.12
Healthy Self-Control / Self-Discipline (4)	0.80	3.85	0.99	0.78	3.59	0.93	0.86	3.73	1.15
Realistic Expectations (4)	0.85	4.42	1.04	0.81	4.24	0.96	0.80	3.88	1.11
Self-Directedness (4)	0.82	4.11	1.00	0.80	3.92	0.97	0.79	3.94	1.03
Healthy Self-Interest / Self-Care (3)	0.76	4.25	0.95	0.68	4.15	0.90	0.79	3.99	1.11
Stable Attachment (4)	0.86	4.22	1.08	0.83	3.94	1.08	0.86	4.16	1.18
Healthy Self-Reliance / Competence (3)	0.85	4.67	0.97	0.81	4.45	1.02	0.85	4.91	1.02

Table 3.3

Pearson's Correlation Matrix of Final YPSQ with IPIP, GQ-6, DASS-21, SWLS, HSQ, & YSQ-S3 Using Singapore Sample (n = 628)

Scales / subscales	Stable Attachment	Self-Directedness	Healthy Self-Reliance/ Competence	Emotional Fulfillment	Emotional Openness and Spontaneity	Healthy Boundaries / Developed Self	Empathic Consideration	Success	Healthy Self-Control / Self-Discipline	Self-Compassion	Healthy Self-Interest / Self-Care	Social Belonging	Realistic Expectations	Basic Health and Safety / Optimism
IPIP Agreeableness	.19**	.13**	.18**	.27**	.39**	.18**	.29**	.14**	.13**	.11**	.17**	.32**	.14**	.15**
IPIP Conscientiousness	.26**	.35**	.38**	.28**	.19**	.23**	.23**	.35**	.50**	.20**	.23**	.31**	.29**	.23**
IPIP Extraversion	.16**	.12**	.16**	.28**	.41**	.15**	.05	.27**	.19**	.17**	.24**	.48**	.16**	.15**
IPIP Intellectual Openness	.13**	.12**	.14**	.09*	.24**	.05	.05	.26**	.08*	.12**	.20**	.17**	.02	.08*
IPIP Neuroticism	-.45**	-.34**	-.31**	-.33**	-.17**	-.25**	-.31**	-.32**	-.22**	-.30**	-.37**	-.37**	-.36**	-.47**
GQ-6 Gratitude	.34**	.27**	.34**	.47**	.34**	.28**	.28**	.29**	.27**	.20**	.32**	.38**	.26**	.32**
DASS-21 Depression	-.39**	-.37**	-.36**	-.44**	-.30**	-.27**	-.26**	-.40**	-.35**	-.31**	-.33**	-.45**	-.39**	-.45**
DASS-21 Anxiety	-.40**	-.20**	-.33**	-.28**	-.22**	-.27**	-.20**	-.27**	-.14**	-.24**	-.27**	-.30**	-.27**	-.40**
DASS-21 Stress	-.42**	-.36**	-.34**	-.33**	-.26**	-.26**	-.34**	-.34**	-.27**	-.34**	-.37**	-.39**	-.41**	-.48**
SWLS	.41**	.33**	.33**	.54**	.33**	.30**	.21**	.36**	.34**	.28**	.32**	.43**	.30**	.42**
HSQ Affiliative	.19**	.12**	.20**	.26**	.36**	.19**	.06	.23**	.06	.13**	.26**	.37**	.11**	.17**
HSQ Aggressive	-.12**	-.11**	-.11**	-.08*	-.14**	-.10**	-.27**	-.02	-.17**	-.10*	-.05	-.05	-.13**	-.08*
HSQ Self-Defeating	-.16**	-.19**	-.24**	-.14**	-.06	-.17**	-.17**	-.18**	-.17**	-.13**	-.11**	-.09*	-.13**	-.15**
HSQ Self-Enhancing	.19**	.32**	.16**	.21**	.24**	.11**	.14**	.26**	.21**	.24**	.28**	.30**	.21**	.28**

Table 3.3 (Continued)

Scales / subscales	Stable Attachment	Self-Directedness	Healthy Self-Reliance/ Competence	Emotional Fulfillment	Emotional Openness and Spontaneity	Healthy Boundaries / Developed Self	Empathic Consideration	Success	Healthy Self-Control / Self-Discipline	Self-Compassion	Healthy Self-Interest / Self-Care	Social Belonging	Realistic Expectations	Basic Health and Safety / Optimism
YSQ-S3:														
Abandonment	**-.62****	**-.47****	**-.42****	**-.37****	-.19**	**-.30****	**-.33****	**-.35****	**-.32****	**-.34****	**-.29****	**-.36****	**-.37****	**-.42****
Approval-Seeking	**-.28****	**-.52****	-.24**	-.24**	-.16**	-.12**	**-.34****	-.19**	**-.34****	**-.25****	-.12**	**-.28****	**-.36****	**-.27****
Dependence	**-.42****	**-.33****	**-.60****	**-.34****	**-.31****	**-.41****	-.19**	**-.55****	**-.39****	**-.26****	**-.36****	**-.37****	**-.27****	**-.39****
Emotional Deprivation	**-.39****	-.24**	-.24**	**-.67****	**-.34****	-.19**	-.16**	**-.27****	**-.25****	-.19**	**-.28****	**-.40****	-.19**	**-.27****
Emotional Inhibition	**-.26****	**-.25****	-.21**	**-.35****	**-.61****	-.20**	-.19**	**-.28****	-.18**	**-.27****	**-.32****	**-.44****	**-.32****	**-.29****
Enmeshment	**-.40****	**-.30****	**-.44****	**-.32****	**-.26****	**-.62****	**-.30****	**-.34****	**-.25****	-.22**	**-.26****	**-.27****	**-.31****	**-.34****
Entitlement	-.12**	-.08*	-.04	-.11**	-.12**	-.07	**-.32****	.03	-.11**	-.10*	.00	-.09*	-.17**	-.10*
Failure	**-.36****	**-.43****	**-.41****	**-.41****	**-.33****	-.24**	-.15**	**-.72****	**-.44****	**-.34****	**-.36****	**-.47****	**-.30****	**-.38****
Insufficient Self-Control	**-.26****	**-.34****	**-.32****	**-.27****	-.21**	-.22**	**-.28****	**-.39****	**-.66****	-.23**	-.18**	**-.31****	**-.27****	**-.27****
Punitiveness	**-.26****	**-.25****	-.20**	**-.25****	**-.25****	-.12**	-.13**	**-.28****	-.18**	**-.48****	-.20**	-.22**	**-.29****	**-.32****
Self-Sacrifice	-.08*	-.03	-.01	-.05	-.05	-.07	.11**	-.09*	-.01	-.13**	-.22**	-.03	-.04	-.09*
Social Isolation	**-.45****	**-.40****	**-.34****	**-.55****	**-.46****	-.24**	**-.30****	**-.36****	**-.36****	**-.35****	**-.33****	**-.69****	**-.42****	**-.40****
Unrelenting Standards	-.13**	-.15**	.03	-.12**	-.17**	-.03	-.13**	.02	.06	**-.33****	-.10*	-.14**	**-.37****	-.20**
Vulnerability	**-.44****	**-.31****	**-.41****	**-.38****	**-.31****	**-.27****	**-.27****	**-.37****	**-.31****	**-.34****	**-.28****	**-.33****	**-.31****	**-.66****
Defectiveness	**-.53****	**-.48****	**-.41****	**-.64****	**-.45****	**-.28****	**-.31****	**-.45****	**-.39****	**-.39****	**-.36****	**-.59****	**-.46****	**-.44****
Mistrust	**-.46****	**-.32****	**-.29****	**-.40****	**-.36****	-.22**	**-.33****	**-.25****	-.22**	**-.31****	-.21**	**-.38****	**-.32****	**-.43****
Pessimism	**-.43****	**-.36****	**-.35****	**-.36****	**-.32****	-.24**	**-.25****	**-.39****	**-.34****	**-.41****	**-.29****	**-.34****	**-.34****	**-.59****
Subjugation	**-.35****	**-.41****	**-.42****	**-.37****	**-.34****	**-.36****	-.12**	**-.46****	**-.39****	**-.30****	**-.38****	**-.39****	**-.31****	**-.36****

Note. **. Correlation is significant at the 0.01 level (2-tailed); *. Correlation is significant at the 0.05 level (2-tailed); Values of, $r \geq 0.25$ are in bold; IPIP: International Personality Item Pool (IPIP); GQ-6: Gratitude Questionnaire–6; DASS-21: Depression Anxiety Stress Scales–21; SWLS: Satisfaction With Life Scale; HSQ: Humor Styles Questionnaire; YSQ-S3: Young Schema Questionnaire 3 Short Form

Support for divergent validity was established through a comparison of the correlations between counterpart and non-counterpart subscales from the positive YPSQ and the negative YSQ-S3 were significance at, $p < .05$ level for 11 YPSQ subscales as shown in Appendix F.

Incremental validity. Since scores of YPSQ were not normally distributed WLSMV estimation was used during CFA. However, normality assumption in regression analysis is required for the dependent variable (DV), not for the independent variable (IV) / predictor.

In the regression analysis the YPSQ subscales were used as independent variable /predictor (IV). Hair et al. (2010) and Byrne (2010) argued that data can be considered to be normal if skewness is between -2 to +2 and kurtosis is between -7 to +7, which was the case here for the DVs. Further, inspection of the normal Q-Q plot also did not reveal any clear evidence of violation of normality. Using the steps outlined (See "Procedures and Statistical Analyses" section) the YPSQ subscales accounted for an additional 6.4%, 4.6%, 6.9%, 5.7%, and 10.2% respectively of statistically significant variance beyond that accounted for by gender, age and negative schemas (see Table 3.4). The total model accounted for 33.2%, 35%, 44%, 23.7%, and 41.6% of the variance for IPIP subscales scores of agreeableness, conscientiousness, extraversion, intellect, and neuroticism respectively. For gratitude, SWLS, depression, anxiety, stress the YPSQ subscales accounted for an additional 5.7%, 10.5%, 2.6%, 4.0%, and 6.8%, of statistically significant variance after controlling for gender, age and negative schemas subscales. The total model accounted for 31.3%, 39.9%, 49.3%, 41%, and 45.6% of the variance for the scales of gratitude, SWLS and DASS-21 respectively. Finally, for HSQ subscales, the YPSQ subscales accounted for an additional 4.2%, 3.7%, and 11.5% respectively after controlling for gender, age and negative schemas. The total model accounted for 33.1%, 22.1%, and 22.7% of statistically significant variance for the HSQ subscales of affiliative, aggressive and self-enhancing, respectively, beyond that accounted for by gender, age and negative schemas subscales. Results for one humor subscale of self-defeating did not emerge as statistically significant. The change in R square contributed by positive schemas for all the subscales mentioned above except self-defeating of the HSQ were above the recommended value of $\Delta R^2 = .0225$ (or 2.25%), thus demonstrating incremental validity

Table 3.4

Hierarchical Regression Analysis of Final YPSQ Predicting IPIP, GQ-6, SWLS, DASS-21, and HSQ Using Singapore Sample (n = 628)

Variables	R^2	ΔR^2	ΔF
IPIP Agreeableness			
Step 1: Gender, Age	.013	.013*	4.123
Step 2: All Negative Schema's Subscales	.269	.256***	11.801
Step 3: All Positive Schema's Subscales	.332	.064***	4.033
IPIP Conscientiousness			
Step 1: Gender, Age	.041	.041***	13.349
Step 2: All Negative Schema's Subscales	.304	.263***	12.751
Step 3: All Positive Schema's Subscales	.350	.046***	3.015
IPIP Extraversion			
Step 1: Gender, Age	.001	.001	.187
Step 2: All Negative Schema's Subscales	.371	.371***	19.882
Step 3: All Positive Schema's Subscales	.440	.069***	5.229
IPIP Intellectual Openness			
Step 1: Gender, Age	.038	.038***	12.378
Step 2: All Negative Schema's Subscales	.180	.142***	5.853
Step 3: All Positive Schema's Subscales	.237	.057***	3.153
IPIP Neuroticism			
Step 1: Gender, Age	.047	.047***	15.312
Step 2: All Negative Schema's Subscales	.313	.267***	13.101
Step 3: All Positive Schema's Subscales	.416	.102***	7.431
Gratitude			
Step 1: Gender, Age	.005	.005	1.417
Step 2: All Negative Schema's Subscales	.255	.251***	11.364
Step 3: All Positive Schema's Subscales	.313	.057***	3.542
SWLS			
Step 1: Gender, Age	.009	.009	2.881
Step 2: All Negative Schema's Subscales	.294	.285***	13.590
Step 3: All Positive Schema's Subscales	.399	.105***	7.413
DASS-21 Depression			
Step 1: Gender, Age	.046	.046***	15.141
Step 2: All Negative Schema's Subscales	.467	.420***	26.586
Step 3: All Positive Schema's Subscales	.493	.026**	2.158
DASS-21 Anxiety			
Step 1: Gender, Age	.031	.031***	9.950
Step 2: All Negative Schema's Subscales	.367	.336***	17.903
Step 3: All Positive Schema's Subscales	.410	.043***	3.070
DASS-21 Stress			
Step 1: Gender, Age	.037	.037***	11.945
Step 2: All Negative Schema's Subscales	.388	.351***	19.308
Step 3: All Positive Schema's Subscales	.456	.068***	5.311
Humor Affiliative			
Step 1: Gender, Age	.030	.030***	9.688
Step 2: All Negative Schema's Subscales	.288	.258***	12.221
Step 3: All Positive Schema's Subscales	.331	.042***	2.687
Humor Aggressive			
Step 1: Gender, Age	.049	.049***	16.069
All Negative Schema's Subscales	.184	.135***	5.567
Step 3: All Positive Schema's Subscales	.221	.037**	2.035
Humor Self Defeating			
Step 1: Gender, Age	.049	.049***	15.975
Step 2: All Negative Schema's Subscales	.205	.156***	6.627
Step 3: All Positive Schema's Subscales	.224	.019	1.039
Humor Self Enhancing			
Step 1: Gender, Age	.007	.007	2.219
Step 2: All Negative Schema's Subscales	.112	.105***	3.974
Step 3: All Positive Schema's Subscales	.227	.115***	6.327

* $p \leq .05$; ** $p < .01$; *** $p < .001$

for the YPSQ instrument. While the contribution of gender and age was small it was statistically significant in 10 out of the 14 dependent subscales.

3.6 Discussion

ST has grown considerably over the past two decades. From 1991 to 1996 there were 11,400 articles and/or books available online; from 1997 to 2002 they were 17,100; from 2003 to 2008 they were 24,500; and in 2015 they were 27,500. The success of ST has in part been due to the fact that patients find negative schemas extremely helpful in making sense of long standing difficulties and how they originated, understanding what keeps them going, and guiding the process of change (Young et al., 2003). The findings and validation of positive schemas from this study will allow for a more balanced approach to the therapeutic process that, in addition to a focus on weakening negative schemas, will also be focused on strengthening positive schemas. To our knowledge this was the first study of its kind on positive schemas in adults. The final version of 14 subscales with 56 items showed good factorial validity, cross-cultural stability and excellent reliability. As hypothesized, the 14 YPSQ subscales showed convergent validity with measures of personality dispositions, emotional distress, positive well-being, humor, and the positive trait of gratitude. Divergent validity was evident from the significantly lower correlations between the 11 subscales of the YPSQ with non-counterpart subscales of the YSQ-S3 than with counterpart subscales except for three YPSQ subscales—Realistic Expectations, Empathic Consideration and Healthy Self-Interest / Self-Care. The 14 subscales of the YPSQ also showed construct validity with subscales of the YSQ-S3 where there was a predictive trend between each scale in the YPSQ and its theoretical counterpart in the YSQ-S3, significantly, and in a negative direction. However, the higher correlations between subscales of the YPSQ and their counterparts in the YSQ-S3 should not be interpreted as the scales being on opposite sides of the same underlying construct. Rather, each scale and its counterpart in both instruments should be viewed in its own right even though they correlated the highest with each other negatively. The assumption held by many that the presence of negative implies the absence of positive construct or vice versa was not supported by the findings of this study. This was evidenced from the moderate strength of the correlations and the test for incremental validity where the 14 positive subscales of the YPSQ added additional significant variance on top of that contributed by gender, age, as well as the 18 negative YSQ-S3 subscales. This additional variance for all but one

scale (self-defeating of the HSQ) was statistically significant and above the recommended value for incremental validity of $\Delta R^2 = .0225$ (or 2.25%). These positive 14 subscales therefore contributed in unique ways that the 18 negative ones did not (Keyfitz et al., 2013; McArthur, Strother, & Schulte, 2017; Tomlinson, Keyfitz, Rawana, & Lumley, 2016).These results have provided evidence that the YPSQ is a reliable and valid instrument to measure positive schemas in adults. When the subscales of the YSQ-S3 were compared with the newly emerged subscales of the YPSQ, they were not exact parallels. While the initial item pool was developed with 18 counterpart subscales to the YSQ-S3, only 14 were empirically supported in this study. Four negative schema subscales from the YSQ-S3 that did not have a counterpart in the YPSQ shared moderately high correlations with the following subscales of the YPSQ: Defectiveness – Emotional Fulfillment; Mistrust – Stable Attachment; Pessimism – Basic Health and Safety / Optimism; Subjugation – Success. While the factor structure of both scales was similar in that the majority of the scales in the YSQ-S3 had counterparts in the YPSQ, there were also significant differences as four subscales had no counterparts; an outcome consistent with the notion that positive and negative schemas are separate constructs. The greater number of negative schemas is in line with extensive empirical evidence for a negativity bias reflected in the tendency to attend to, learn from, and use negative information far more than positive information (Vaish, Grossmann, & Woodward, 2008). Since this process has been shown to begin in early development in the context of infant social referencing and other domains, it is likely to play a role in negative schemas being more nuanced and numerous relative to positive. This bias also shows up in the loss aversion phenomenon in which people prefer avoiding losses to acquiring equivalent gains (Boyce, Wood, Banks, Clark & Brown, 2013). The role of this bias in schema development and the therapeutic process will be an important focus for future research.

3.61 Limitations

There are limitations in this study that should also be highlighted. First, the incentive to attend a workshop on the effects of past parenting behaviour and the development of schemas to draw participants may have attracted those who were more psychologically open and curious, possibly limiting generalizability to individuals with these traits. Secondly, although populations of the samples were drawn from Asian countries where English is taught at primary school levels, they also have their own respective native

languages but only the English version of these questionnaires were available and administered to all the participants.

3.62 Future Studies and Implications

While development of the negative schema scale from its infancy to its present validated form took place mostly in the West, the development and validation of the first positive schema scale with four samples in the East and one from the West was advantageous in that it provided support for the universality of ST defined schemas, both positive and negative. Future studies on positive schemas should focus more on Western and clinical samples as such cross-cultural validation of this instrument will only further support this claim. Since most of the samples for this study were drawn from Asia, there were some noteworthy cultural observations. Even though the YPSQ scale is a measure of positive schemas, it also provides a lens into the type of early parenting experienced since the development of schemas have significant links to the ability of early primary caregivers to meet a child's core emotional needs (Lockwood & Perris, 2012). One criticism that has emerged was that many scales are applicable to individualist Western cultures but not to those described as collectivistic, such as in China (Chao, 1994). According to Chao (1994), the high expectations of Chinese parents may be perceived by Western cultures as leading to harmful and authoritarian practices. However, she argues, it takes place in the context of a supportive mother-child relationship. Indeed, the Chinese character "guan" (管) means "to govern", "to love" and "to care for," illustrating the positive connotation of strict parenting in that society. Another example pertains to the notion of enmeshment between parent and child. In an Eastern collectivistic culture a highly enmeshed relationship is not discouraged since it is commonly viewed as healthy and very much part of normal family dynamics, unlike the Western culture. Son preference is another example that is prevalent and accepted as part of a cultural norm in the East but such a practice is likely to compromise the development of positive schemas such as Emotional Fulfillment in daughters. Results from this study in Asia showed that positive schemas such as Realistic Expectations, Healthy Boundaries / Developed Self, and Emotional Fulfillment, which are antitheses to strict expectations, an enmeshed parent-child relationship and son preference respectively, are prevalent in Asia and that these three positive schemas had negative correlations with measures of emotional distress such as Depression, Anxiety, Stress, and the IPIP measure of Neuroticism. These findings

support that of other studies done in Asia on the association between healthy family dynamics and psychological outcomes (Lin & Tsai, 2016), and the commonalities between the East and West from a neurobehavioral perspective (Tsai, Strong & Lin, 2015). Thus such cultural norms seem to interfere with the development of positive schemas through the deprivation of core emotional needs and may inadvertently inflict harm.

Going forward, the newly established and validated YPSQ scale, used in combination with the YSQ-S3, will provide therapists with a set of instruments to measure both patient's positive and negative schemas. The information from the YPSQ and YSQ-S3 scales can be helpful in understanding how best to leverage strengths in working on patients' problems. In addition, this line of investigation can help to elucidate how positive and negative constructs interact and influence adaptive functioning. Having an empirically based method to conceptualize and understand positive schemas can also provide a clearer vision of where one is headed beyond recovery from negative schemas. Correcting for the long standing over focus on negative measures as asserted by PCP (Wood & Tarrier, 2010) and more fully integrating positive schemas will also lead to a potentially more respectful and effective approach to the initial assessment process with a balanced interest in a patient's strengths and weaknesses.

Future studies on the YPSQ can also focus on whether positive and negative schemas are the driving force behind many personality dispositions such as those represented by the IPIP. From this vantage point, the patterns of personality largely manifested in outward behavior can be seen as expressions of negative schema activation. Having measures of both negative and positive schemas may prove useful in discovering which types of patterns (e.g. schemas or personality as assessed by measures like the IPIP) lie at the core of personality dispositions. In the area of exploring past parenting experiences, a validated YPSQ now provides a balanced exploration of the past with equal attention to positive and negative schemas and formative experiences. Previously, therapists have tended to emphasize the exploration of negative past experiences and many patients have emerged with a dimmer view of their parents' influence that they might otherwise have had. This balanced perspective can facilitate the development of both forgiveness and gratitude towards early primary caregivers.

CHAPTER 3 EXTENSION (Not submitted to *Psychological Assessment,* as this analysis was done after acceptance of publication)

The Case for Independence or Bipolarity for Positive and Negative Schemas

Positive Clinical Psychology (PCP; Wood & Johnson, 2016; Wood & Tarrier, 2010, as clarified in Johnson & Wood, 2016) has pointed out that positive and negative counterpart constructs generally lie on the same continuum and represent bipolarity, but has not indicated specifically which constructs would fit this model and which would not. Several analyses conducted by Louis et al. (2017; in press) on positive and negative schemas have provided some support that positive schemas (measured by YPSQ) were independent but related constructs to their counterpart negative schemas (measured by YSQ-S3). The first was the moderate but statistically significant correlations between counterpart subscales of both scales, as shown in Table 3.3. All correlations were < .85, with only one > .7, which was that between Failure (EMS) and Success (EAS), r = .72. A very high correlation (i.e., |r| > .85) would be more consistent with two constructs being the same or measuring opposite ends of the same continuum (Clark & Watson, 1995). Secondly, incremental validity of the 14 YPSQ subscales demonstrated that they accounted for an additional and statistically significant variance for 13 out of the 14 dependent subscales beyond that accounted for by gender, age, and all 18 negative schemas subscales. The dependent subscales in this study consisted of personality dispositions (IPIP), trait gratitude (GQ-6), emotional distress (DASS-21), and humour styles (HSQ).

To further test for independence or bipolarity between positive and negative schema constructs, CFA was conducted on three models. For illustration purposes, the EMS of Abandonment was used to compare with its positive schema counterpart, the EAS of Stable Attachment (see Figure 3-A, Figure 3-B and Figure 3-C). Model 1 was a two-factor model that represented independence of a positive schema subscale with its counterpart (see Figure 3-A, Model 1). Model 2 was a one-factor model that represented bipolarity, comprising items from positive schema subscales and the counterpart negative schema subscales along one continuum (see Figure 3-B, Model 2). Model 3, which also represented bipolarity, was a one-factor model with a method bias factor to take into account bias resulting from measurement errors (Podsakoff at al., 2003; Podsakoff at al., 2012). This involved adding a first order factor with separate links to all the positively worded items (see Figure 3-C, Model 3). Siddaway, Taylor,

and Wood (2017) added a method bias factor to ascertain if high anxiety and high calmness were on the same continuum. This factor was also used in a study that tested various CFA models for the General Health Questionnaire by Molina, Rodrigo, Losilla, and Vivas (2014), although in both these studies, positive and negative items were administered together in the same scale, which would justify the inclusion of a method bias factor. By contrast, the positive and negative schema items (YPSQ and YSQ-S3) were administered separately in the present study; so Model 2, without the method bias factor, could arguably be a more accurate representation of the scenario being tested. Further, Harman's single factor test (Podsakoff at al., 2003) revealed that the total variance resulting from one unrotated factor model was well below the 50% threshold value for all three samples. This indicated that the measurement error using this test may not be significant.

Notwithstanding the justification above for not including a method bias factor, CFA was conducted for the three models using all three samples made up of Eastern and Western samples – Singapore, Kuala Lumpur and USA East. All three models (Models 1-3) employed all 56 items of the 14 subscales of the final version of the YPSQ as well as the 70 items of the 14 counterpart negative schema subscales from the YSQ-S3 (14 * 5 = 70). WLSMV estimator from M*plus* was used for assessment fit of the models.

Comparison was first made between Model 1 and Model 2, representing the two-factor model and the one-factor model without method bias factor. Since these were nested models, the differences in chi square were used to see if they were statistically significant; results indicated this to be the case for most of the 14 models. Inspection of the CFA values clearly supported Model 1, the two-factor model.

However, both Models 1 and 3 could not be considered as nested models, so comparison could not be made by chi square test of significance, but through normal values of the CFA indices, namely CFI, TLI and RMSEA. Results in Table 3.5 showed that the CFA values of both Models 1 and 3 were very close for almost all the 14 subscales. Using criteria by Milfont and Fischer (2010), changes in CFI, TLI and RMSEA should not be greater than .01, .01, and .015 respectively for invariance to be demonstrated between two models. For most of the 14 positive schemas and their corresponding counterpart negative schema constructs in all three samples (Singapore, Kuala Lumpur and USA East), the differences in the three indices of CFA were not significant, except for Approval Seeking-Directedness for USA East and Singapore

samples, and Vulnerability-Basic Health and Safety Optimism for Kuala Lumpur and USA East samples. Even though the CFA results were very similar, the two-factor model was favoured because it was more parsimonious than the one factor model with method bias, given that the degrees of freedom of the former were higher than the latter. Again, this conclusion should be interpreted with caution since differences in values of CFA indices representing independence and bipolarity were not significant. The RMSEA values were > .1 in the majority of cases due to the relatively small number of degrees of freedom (Kenny, Kaniskan, & McCoach, 2015). However, both the CFI and TLI values were close or > .9, the minimum threshold value for a reasonable fit (Hu & Bentler, 1999).

Therefore, on balance, given that the two-factor model was more parsimonious (comparing Model 1 and Model 3) than the one-factor model with method bias, and since the two-factor model had better fit indices compared to the one-factor model without method bias (comparing Model 1 and Model 2), our results further support that positive and negative schemas are independent but related constructs.

Figure 3-A

Model 1: Two-factor Model (Using Abandonment – Stable Attachment as Example)

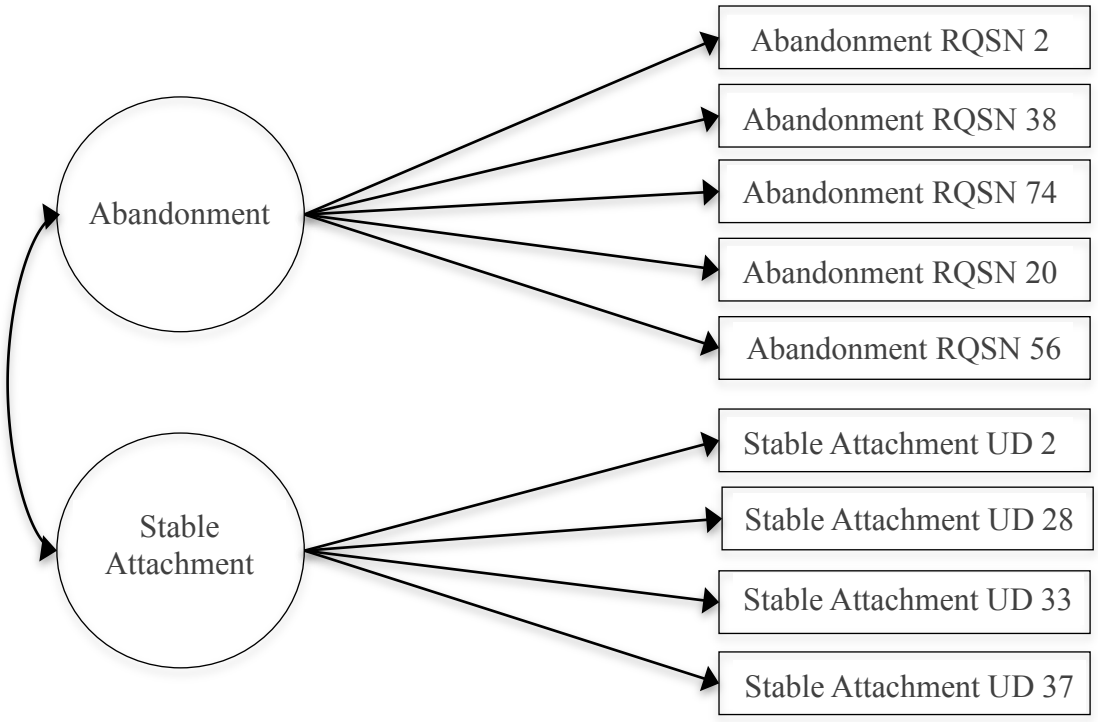

Figure 3-B

Model 2: One-factor Model

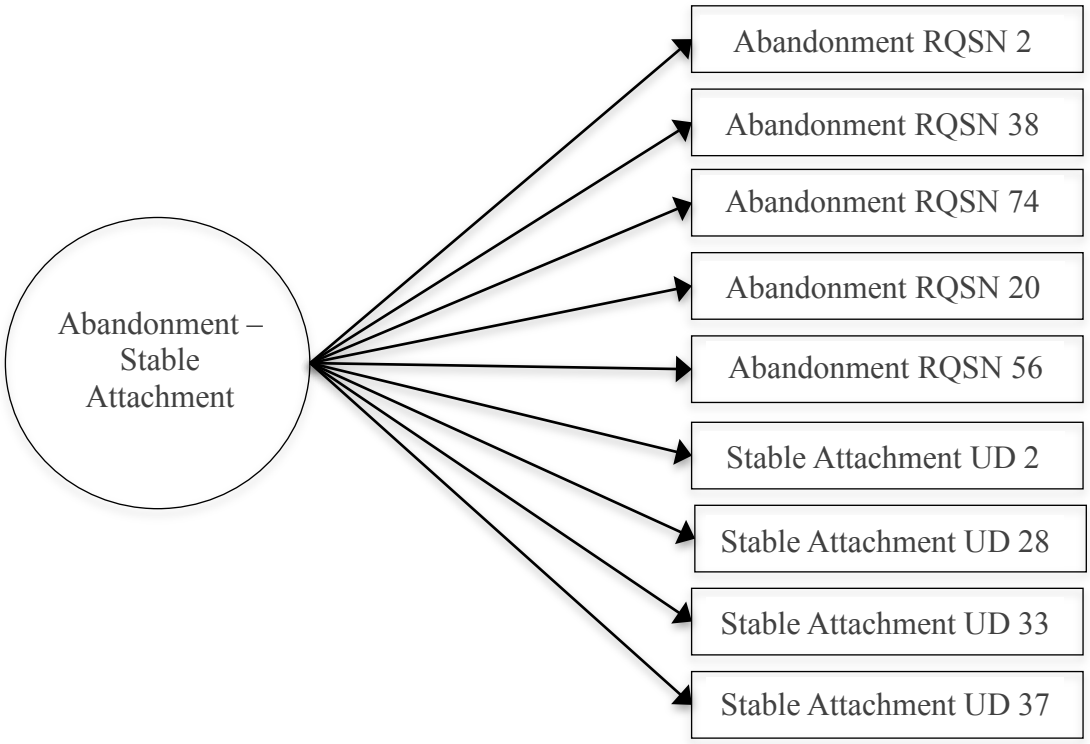

Figure 3-C

Model 3: One-factor with Method Bias Factor Model

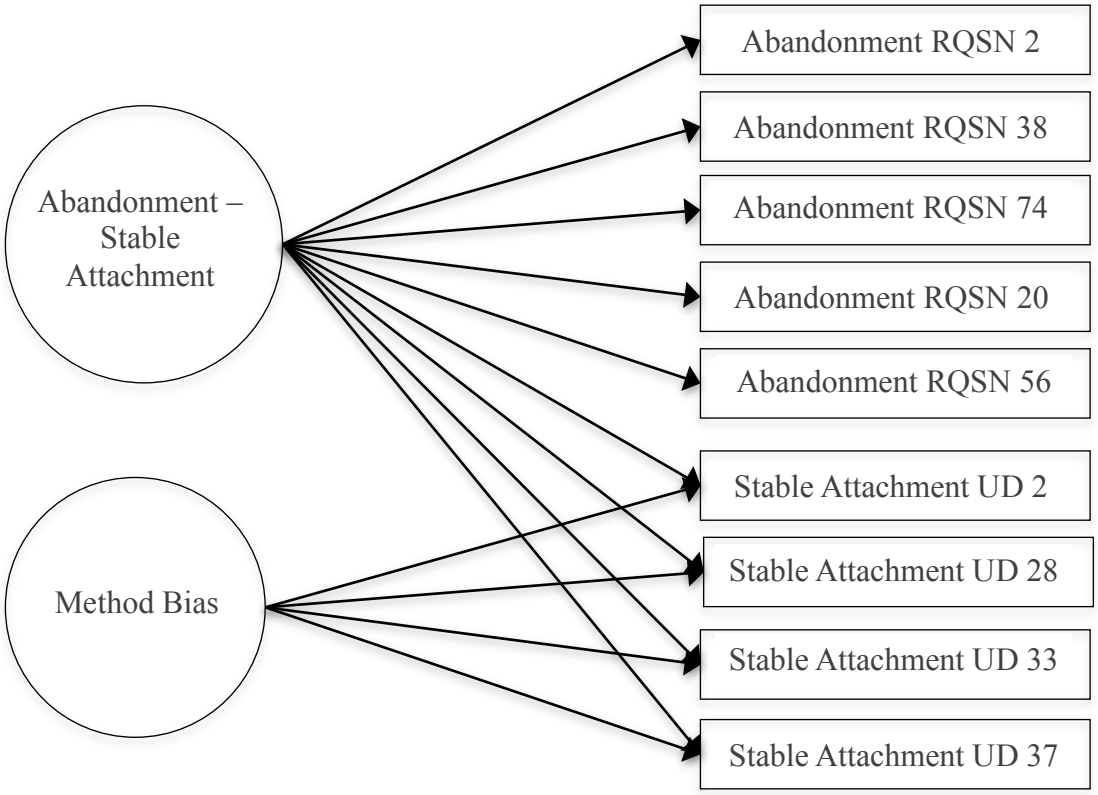

Table 3.5

Comparison of the Various Models of Positive and Negative Schemas Using Kuala Lumpur (n = 229), USA East (n = 214), and Singapore (n = 628) Samples

		Model 1: Two factors							Model 2: One factor							Model 3: One factor with method bias factor							Model comparisons Model 2 vs Model 1		Model comparisons Model3 vs Model1		
	n	χ2	df	χ2/df	RMSEA [90% CI]	CFI	TLI	WRMR	χ2	df	χ2/df	RMSEA [90% CI]	CFI	TLI	WRMR	χ2	df	χ2/df	RMSEA [90% CI]	CFI	TLI	WRMR	Δdf	Δχ2	ΔRMSEA	ΔCFI	ΔTLI
Abandonment - Stable Attachment																											
Kuala Lumpur	229	99.55	26	3.83	0.11 [0.089, 0.135]	0.98	0.97	0.71	275.55	27	10.21	0.200 [0.179, 0.222]	0.93	0.90	1.29	101.31	23	4.40	0.122 [0.098, 0.147]	0.98	0.97	0.64	1	66.71***	-0.011	-0.002	-0.006
USA East	214	89.43	26	3.44	0.107 [0.083, 0.131]	0.99	0.98	0.70	35.22	27	1.30	0.144 [0.122, 0.167]	0.97	0.97	0.92	77.60	23	3.37	0.105 [0.080, 0.132]	0.99	0.98	0.62	1	34.45***	0.002	0.002	0.001
Singapore	628	282.11	26	10.85	0.125 [0.112, 0.139]	0.97	0.96	1.32	752.75	27	27.88	0.207 [0.194, 0.220]	0.93	0.90	2.39	247.22	23	10.75	0.125 [0.111, 0.139]	0.98	0.96	1.16	1	184.96***	<0.001	0.003	0.001
Approval-Seeking - Self-Directedness																											
Kuala Lumpur	229	64.10	26	2.47	0.080 [0.055, 0.105]	0.98	0.97	0.68	302.25	27	11.19	0.211 [0.190, 0.233]	0.83	0.78	1.56	53.19	23	2.31	0.076 [0.049, 0.103]	0.98	0.97	0.59	1	84.28***	0.004	0.005	0.004
USA East	214	88.52	26	3.40	0.106 [0.082, 0.131]	0.96	0.94	0.74	124.67	27	4.62	0.130 [0.107, 0.154]	0.94	0.92	0.92	51.74	23	2.25	0.076 [0.049, 0.104]	0.98	0.97	0.54	1	19.62***	0.030	0.021	0.027
Singapore	628	209.78	26	8.07	0.106 [0.093, 0.120]	0.97	0.96	1.15	838.47	27	31.05	0.219 [0.206, 0.232]	0.86	0.82	2.50	139.89	23	6.08	0.090 [0.076, 0.105]	0.98	0.97	0.87	1	208.18***	0.016	0.011	0.012
Dependence - Healthy Self-Reliance/ Competence																											
Kuala Lumpur	229	56.43	19	2.97	0.093 [0.065, 0.121]	0.98	0.97	0.58	113.19	20	5.66	0.143 [0.118, 0.169]	0.96	0.94	0.85	58.05	17	3.41	0.103 [0.074, 0.132]	0.98	0.97	0.58	1	34.68***	0.01	-0.001	-0.006
USA East	214	97.89	19	5.15	0.139 [0.113, 0.167]	0.98	0.96	0.86	119.69	20	5.98	0.153 [0.127, 0.180]	0.97	0.96	0.98	94.15	17	5.54	0.146 [0.118, 0.175]	0.98	0.96	0.85	1	18.39***	-0.007	0.001	-0.004
Singapore	628	104.99	19	5.53	0.085 [0.069, 0.101]	0.99	0.98	0.85	298.04	20	14.90	0.149 [0.134, 0.164]	0.96	0.94	1.47	90.80	17	5.34	0.083 [0.067, 0.100]	0.99	0.98	0.80	1	133.36***	0.002	0.002	0.001
Emotional Deprivation - Emotional Fulfillment																											
Kuala Lumpur	229	112.90	34	3.32	0.101 [0.080, 0.122]	0.97	0.96	0.72	210.51	35	6.01	0.148 [0.129, 0.168]	0.94	0.92	1.08	108.49	30	3.62	0.107 [0.086, 0.129]	0.97	0.96	0.67	1	37.85***	-0.006	0	-0.004
USA East	214	196.04	34	5.77	0.149 [0.129, 0.170]	0.96	0.95	0.97	220.98	35	6.31	0.158 [0.138, 0.178]	0.95	0.94	1.05	164.37	30	5.48	0.145 [0.123, 0.167]	0.97	0.95	0.88	1	21.02***	0.004	0.007	0.003
Singapore	628	361.62	34	10.64	0.124 [0.113, 0.136]	0.96	0.95	1.39	600.55	35	17.16	0.160 [0.149, 0.172]	0.94	0.92	1.91	321.82	30	10.73	0.124 [0.149, 0.172]	0.97	0.95	1.22	1	101.88***	<0.001	0.004	-0.001
Emotional Inhibition - Emotional Openness and Spontaneity																											
Kuala Lumpur	229	108.62	26	4.18	0.118 [0.095, 0.141]	0.95	0.93	0.90	152.41	27	5.64	0.142 [0.121, 0.165]	0.93	0.90	1.10	107.58	23	4.68	0.127 [0.103, 0.151]	0.95	0.92	0.89	1	27.50***	-0.009	-0.001	-0.01
USA East	214	151.51	26	5.83	0.150 [0.128, 0.174]	0.96	0.94	1.00	185.08	27	6.85	0.165 [0.143, 0.188]	0.95	0.93	1.16	175.14	23	7.30	0.172 [0.148, 0.196]	0.95	0.92	1.13	1	25.28***	-0.022	-0.008	-0.018
Singapore	628	177.95	26	6.84	0.096 [0.083, 0.110]	0.98	0.97	0.97	548.55	27	20.32	0.175 [0.163, 0.188]	0.93	0.90	1.82	170.07	23	7.39	0.101 [0.087, 0.115]	0.98	0.97	0.93	1	141.38***	-0.005	0.001	-0.003
Enmeshment - Healthy Boundaries Developed Self																											
Kuala Lumpur	229	74.19	19	3.90	0.113 [0.086, 0.140]	0.94	0.92	0.85	76.48	20	3.82	0.111 [0.085, 0.138]	0.94	0.92	0.86	67.74	17	3.98	0.114 [0.086, 0.143]	0.95	0.92	0.86	1	3.31·	-0.001	0.005	-0.002
USA Easy	214	205.19	19	10.80	0.214 [0.188, 0.241]	0.87	0.80	1.43	205.43	20	10.27	0.208 [0.183, 0.234]	0.87	0.81	1.43	198.47	17	11.67	0.223 [0.196, 0.252]	0.87	0.79	1.43	1	0.002	0.006	0.003	-0.017
Singapore	628	159.51	19	8.40	0.109 [0.093, 0.124]	0.97	0.96	1.08	215.08	20	10.75	0.125 [0.110, 0.140]	0.96	0.94	1.26	128.76	17	7.57	0.102 [0.086, 0.119]	0.98	0.96	0.98	1	47.02***	0.007	0.006	0.005

Table 3.5 (Continued)

		Model 1: Two factors							Model 2: One factor							Model 3: One factor with method bias factor							Model comparisons Model 2 vs Model 1		Model comparisons Model3 vs Model1		
	n	χ2	df	χ2/df	RMSEA [90% CI]	CFI	TLI	WRMR	χ2	df	χ2/df	RMSEA [90% CI]	CFI	TLI	WRMR	χ2	df	χ2/df	RMSEA [90% CI]	CFI	TLI	WRMR	Δdf	χ2	ΔRMSEA	ΔCFI	ΔTLI
Entitlement - Empathic Consideration																											
Kuala Lumpur	229	201.71	26	7.76	0.172 [0.150, 0.194]	0.85	0.79	1.51	322.49	27	11.94	0.219 [0.198, 0.240]	0.75	0.66	1.84	192.11	23	8.35	0.179 [0.156, 0.203]	0.86	0.77	1.47	1	82.98***	-0.007	0.005	-0.018
USA East	214	100.63	26	3.87	0.116 [0.092, 0.140]	0.93	0.91	0.92	169.57	27	6.28	0.157 [0.135, 0.180]	0.87	0.83	1.29	100.27	23	4.36	0.125 [0.101, 0.151]	0.93	0.89	0.91	1	30.27***	-0.009	-0.003	-0.016
Singapore	628	363.65	26	13.99	0.144 [0.131, 0.157]	0.92	0.88	1.87	791.85	27	29.33	0.212 [0.200, 0.225]	0.81	0.75	2.71	279.96	23	12.17	0.133 [0.120, 0.148]	0.94	0.90	1.65	1	196.29***	0.011	0.020	0.016
Failure - Success																											
Kuala Lumpur	229	131.29	34	3.86	0.112 [0.092, 0.132]	0.99	0.98	0.73	298.01	35	8.51	0.181 [0.162, 0.200]	0.97	0.96	1.20	118.86	30	3.96	0.114 [0.093, 0.136]	0.99	0.98	0.64	1	67.17***	-0.002	0.001	-0.001
USA East	214	101.53	34	2.99	0.096 [0.075, 0.118]	0.99	0.99	0.63	275.85	35	7.88	0.179 [0.160, 0.199]	0.98	0.97	1.25				no convergence				1	49.36			
Singapore	628	204.58	34	6.02	0.089 [0.078, 0.101]	0.99	0.99	0.93	1083.65	35	30.96	0.218 [0.207, 0.230]	0.96	0.94	2.63	147.97	30	4.93	0.079 [0.067, 0.092]	1.00	0.99	0.72	1	224.60***	0.01	0.002	0.002
Insufficient Self Healthy- Self Control Self Discipline																											
Kuala Lumpur	229	210.5	26	8.09	0.176 [0.154, 0.198]	0.88	0.83	1.33	209.79	27	7.77	0.172 [0.151, 0.194]	0.88	0.84	1.35	192.51	23	8.37	0.179 [0.156, 0.203]	0.89	0.82	1.29	1	4.02*	-0.003	0.010	-0.007
USA East	214	203.7	26	7.84	0.179 [0.156, 0.202]	0.95	0.93	1.18	202.91	27	7.52	0.174 [0.152, 0.197]	0.95	0.93	1.18				no convergence				1	1.79			
Singapore	628	656.3	26	25.24	0.196 [0.184, 0.210]	0.87	0.82	2.16	636.53	27	23.58	0.190 [0.177, 0.203]	0.87	0.83	2.18	635.01	23	27.61	0.206 [0.192, 0.220]	0.87	0.80	2.10	1	7.61**	-0.01	0.004	-0.017
Punitiveness - Self Compassion																											
Kuala Lumpur	229	92.69	19	4.88	0.130 [0.104, 0.157]	0.96	0.94	0.88	276.66	20	13.83	0.237 [0.212, 0.262]	0.86	0.80	1.70	86.44	17	5.08	0.134 [0.106, 0.162]	0.96	0.94	0.82	1	68.86***	-0.004	0.003	-0.004
USA East	214	96.68	19	5.09	0.138 [0.112, 0.166]	0.98	0.97	0.87	157.66	20	7.88	0.179 [0.154, 0.206]	0.96	0.94	1.13	67.51	17	3.97	0.118 [0.089, 0.148]	0.99	0.98	0.71	1	50.07***	0.020	0.008	0.009
Singapore	628	122.02	19	6.42	0.093 [0.078, 0.109]	0.98	0.97	1.01	730.20	20	36.51	0.238 [0.223, 0.253]	0.84	0.78	2.66	108.13	17	6.36	0.092 [0.076, 0.109]	0.98	0.97	0.94	1	239.17***	0.001	0.003	0.001
Social Isolation - Social Belonging																											
Kuala Lumpur	229	202.40	34	5.95	0.147 [0.128, 0.167]	0.97	0.97	1.06	377.05	35	10.77	0.207 [0.188, 0.226]	0.95	0.93	1.61	107.54	30	3.58	0.106 [0.085, 0.128]	0.99	0.98	0.64	1	69.75***	0.031	0.015	0.017
USA East	214	132.41	34	3.89	0.116 [0.096, 0.138]	0.99	0.98	0.81	236.14	35	6.75	0.164 [0.144, 0.184]	0.97	0.97	1.14	97.49	30	3.25	0.103 [0.080, 0.126]	0.99	0.99	0.67	1	50.58***	0.013	0.004	0.004
Singapore	628	329.68	34	9.70	0.118 [0.106, 0.129]	0.98	0.98	1.22	1058.01	35	30.23	0.216 [0.205, 0.227]	0.94	0.92	2.45	289.41	30	9.65	0.117 [0.105, 0.130]	0.99	0.98	1.06	1	229.41***	0.001	0.002	0
Unrelenting Standards - Realistic Expectations																											
Kuala Lumpur	229	105.77	26	4.07	0.116 [0.093, 0.139]	0.94	0.92	1.02	353.82	27	13.10	0.230 [0.209, 0.252]	0.76	0.68	1.94	71.20	23	3.10	0.096 [0.071, 0.121]	0.97	0.95	0.79	1	118.52***	0.020	0.023	0.026
USA East	214	97.23	26	3.74	0.113 [0.090, 0.138]	0.95	0.93	0.93	231.25	27	8.56	0.188 [0.166, 0.211]	0.86	0.82	1.46	90.86	23	3.95	0.117 [0.093, 0.143]	0.96	0.93	0.87	1	65.54***	-0.004	0.003	-0.005
Singapore	628	399.24	26	15.36	0.151 [0.138, 0.164]	0.95	0.93	1.85	961.12	27	35.60	0.235 [0.222, 0.248]	0.87	0.83	2.99	352.33	23	15.32	0.151 [0.137, 0.165]	0.95	0.93	1.70	1	205.15***	<0.001	0.006	0.001

Table 3.5 (Continued)

		Model 1: Two factors							Model 2: One factor							Model 3: One factor with method bias factor							Model comparisons Model 2 vs Model 1		Model comparisons Model3 vs Model1		
	n	χ2	df	χ2/df	RMSEA [90% CI]	CFI	TLI	WRMR	χ2	df	χ2/df	RMSEA [90% CI]	CFI	TLI	WRMR	χ2	df	χ2/df	RMSEA [90% CI]	CFI	TLI	WRMR	Δdf	χ2	ΔRMSEA	ΔCFI	ΔTLI
Vulnerability - Basic Health Safety Optimism																											
Kuala-Lumpur	229	147.34	34	4.33	0.121 [0.101, 0.141]	0.96	0.95	0.95	268.11	35	7.66	0.171 [0.152, 0.190]	0.92	0.89	1.37	91.46	30	3.05	0.095 [0.073, 0.117]	0.98	0.97	0.68	1	56.61***	0.026	0.019	0.021
USA East	214	174.38	34	5.13	0.139 [0.119, 0.160]	0.95	0.93	1.04	196.45	35	5.61	0.147 [0.127, 0.167]	0.94	0.92	1.12	121.74	30	4.06	0.120 [0.098, 0.142]	0.97	0.95	0.82	1	20.04***	0.019	0.019	0.018
Singapore	628	364.97	34	10.73	0.125 [0.113, 0.136]	0.96	0.94	1.39	503.63	35	14.39	0.146 [0.135, 0.157]	0.94	0.92	1.70	275.83	30	9.19	0.114 [0.102, 0.127]	0.97	0.95	1.17	1	75.88***	0.011	0.011	0.009
Self Sacrifice - Healthy Self Interest Self Care																											
Kuala-Lumpur	229	62.65	19	3.30	0.100 [0.073, 0.128]	0.96	0.94	0.82	246.17	20	12.31	0.222 [0.198, 0.247]	0.78	0.69	1.71	65.28	17	3.84	0.111 [0.084, 0.141]	0.95	0.92	0.79	1	84.38***	-0.001	-0.004	-0.015
USA East	214	61.86	19	3.26	0.103 [0.075, 0.132]	0.97	0.96	0.74	236.99	20	11.85	0.225 [0.200, 0.251]	0.85	0.79	1.56	65.59	17	3.86	0.116 [0.087, 0.146]	0.97	0.94	0.73	1	77.25***	-0.013	-0.004	-0.012
Singapore	628	161.80	19	8.52	0.109 [0.094, 0.125]	0.95	0.92	1.31	822.30	20	41.11	0.253 [0.238, 0.268]	0.70	0.58	3.14	138.13	17	8.13	0.107 [0.090, 0.123]	0.96	0.93	1.18	1	259.16***	0.002	0.008	0.004
																							Acceptance criteria		(<0.015)	(<0.01)	(<0.01)

Note.$^{\cdot}p<0.1$, * $p<0.05$, ** $p<0.01$, *** $p<0.001$.

Chapter 4 – Development and Validation of the Positive Parenting Schema Inventory (PPSI) to Complement the Young Parenting Inventory (YPI) for Schema Therapy (ST)

4.1 Abstract

This study focused on the development of a new instrument to address the need for a more nuanced and comprehensive measure of positive parenting patterns based on a conceptualization from ST. In Phase 1, we investigated the factor structure of an initial item pool of 207 items on a sample from Manila (Philippines) using EFA on ratings for fathers and mothers separately (n = 520, n = 538). The selection process for these items led to its final shorter version. In Phase 2, MGCFAs were conducted on two additional independent samples, one from the East (Jakarta, n = 366, n = 383) and the other from the West (USA, n = 204, n = 214) using the factor structure derived from Phase 1. An adequate fit and invariance of the factor structure was demonstrated across both samples. Acceptable Cronbach's alpha reliability values (>.65) were also obtained. Construct validity was demonstrated with four other established parenting instruments, and convergent validity was demonstrated with measures of personality dispositions, emotional distress, trait gratitude and positive well-being. Positive and meaningful associations with positive schemas also emerged. Divergent validity with subscales of the Young Parenting Inventory (YPI) was also evident. An incremental validity test found that the PPSI contributes unique variance over and above that of four other parenting instruments. The findings also suggest that the positive parenting patterns revealed by this study transcend cultural differences. The measure may be used as part of case conceptualization in schema and other therapies, where detailed measurements of positive parenting styles are needed.

Keywords: positive parenting, schemas, core emotional needs, incremental validity, culture

4.2 Introduction

There is growing evidence that ST is a highly effective form of psychotherapy for patients with BPD (Giesen-Bloo et al., 2006; Hawke et al., 2013; Sempertegui et al., 2013; Taylor & Arntz, 2016). Young et al. (2003) hypothesised that EMSs are the driving force behind this disorder, and that they also play an important role in the origin and maintenance of a number of other disorders. Research has documented a link between EMSs and disorders such as obsessive-compulsive disorders (Young et al., 2003), chronic depression and anxiety (Malogiannis et al., 2014), eating disorders (Leung et al., 1999), alcohol dependency (Decouvelaere et al., 2002), romantic jealousy (Dobrenski, 2001), and depersonalization disorder (Braitman, 2002). Thus, ST and its underlying conceptualization of psychopathology increasingly demonstrate an explanatory value for clinical disorders, emotional distress, and general well-being.

Central to the initial phase of ST is an effort to clearly understand the links between early parenting experiences and the EMSs that make up these disorders. EMSs are defined as broad, pervasive themes comprising emotions, cognitions, memories, bodily sensations, and distorted beliefs about one's self and others. It is believed that as parents fall short in their effort to meet a child's core emotional needs, these experiences, in interaction with the child's temperament, are major factors in the development of these EMSs (Lockwood & Perris, 2012; Louis & Louis, 2015; Young et al., 2003). At the heart of the second change phase within ST practice is a process called "Limited Reparenting", in which a therapist helps a patient meet these core emotional needs. This involves the therapist, among other things, creating positive parent-like experiences, informed by an understanding of the negative ones from childhood, to serve as antidotes. A qualitative study found that a group of patients and their therapists considered this process to be a powerful aspect of the treatment (Giesen-Bloo et al., 2006).

The use of self-report measures of parenting is a core part of the treatment protocol for ST to aid case conceptualization and, later, Limited Reparenting attempts. These self-report measures need to assess the precise parenting conditions that relate to the EMSs, to be consistent with treatment protocols, and to aid the therapy as practiced. There is only currently one such measure, the YPI (Young et al., 2003), which focuses

exclusively on negative parenting experiences. This measure is already widely used in clinical settings within the ST community. However, the theory underlying ST, consistent with Positive Clinical Psychology (PCP; Taylor & Arntz. 2016), has recently been expanded to put as much importance on early positive parenting experiences as negative ones (Lockwood & Perris, 2012; Young et al., 2003). This has led to a need for a corresponding measure of positive parenting to complement the existing YPI. This paper reports on the development of such a measure, to be called the Positive Parenting Schema Inventory (PPSI).

4.21 Theoretical Basis of ST

Studies in multiple cultures have identified and validated the latest version of the Young Schema Questionnaire (YSQ-S3), which measures the 18 EMSs represented in the latest version of the theoretical model of functioning that underpins ST (e.g., Bach et al., 2017). These EMSs, through second order factor analyses, have been found to cluster into four broad categories, namely Disconnection and Rejection, Impaired Autonomy and Performance, Impaired Limits, and Exaggerated Expectations (Hoffart et al., 2005). These are viewed as four categories of unmet core emotional needs. These categories, and the patterns of parenting believed to be theoretically linked to them, are shown in Appendix B.

EASs, in contrast to EMSs, are hypothesised to develop when the core emotional needs of a child are met early in life by primary caregivers. As an outgrowth of this effort to introduce positive constructs, the theoretical specification has been published (Lockwood & Perris, 2012), and the Young Positive Schema Questionnaire (YPSQ), which measures EASs, has just been validated (Louis et al., 2017; in press). These EASs have also been hypothesised to fall under four broad positive categories, mirroring the four higher order categories for EMSs (e.g. Hoffart et al., 2005; see Table 1.1), and each is believed to define a category of core emotional need. These categories are termed Connection and Acceptance, Healthy Autonomy and Performance, Reasonable Limits, and Realistic Expectations (see Appendix B; Lockwood & Perris, 2012; Young et al., 2003).

The link between needs, parenting, and the development of EMSs and EASs can be illustrated through the example of the need for warmth, affection, guidance, and the mutual sharing of personal experience. If a child has a parent who is warm, affectionate

and attuned, this is believed to lead to the development of the EAS known as Emotional Fulfillment; a need making up the Connection and Acceptance category. If the child's parent is cold, distant, and lacks empathy, this is seen as leading to the development of the EMS known as Emotional Deprivation; a pattern falling within the Disconnection and Rejection category. The latter child is likely to be more prone to anxiety, depression, and feelings of loneliness or emptiness. The child is likely to cope with this EMS by surrendering, avoiding, or overcompensating, or some combination of these three. For example, s/he might surrender to this EMS by feeling and acting as if this is what s/he deserves. Avoidance of this EMS could take the form of distancing from the associated painful feelings by numbing or distraction or staying away from the depriving parent by, for example, spending time in his/her room or out with friends. Finally, overcompensating for this EMS could take the form of pushing to be noticed by the parent or denying any need for emotional nurturance. Children (and later adults) often alternate between surrender, avoidance, and overcompensation depending on internal processes and the environmental demands and potential for action. Each of these three coping styles, while often helping support the individual psychologically in the short run, ultimately serves to perpetuate the EMS into adulthood. The EMSs and their associated copying styles become pathological when they become fixed ways of viewing and acting within the world that are not amenable to later environmental changes or disconfirming evidence of the underlying beliefs. An interaction between the degree to which these core emotional needs are not met, a child's temperament, cultural influences, environment, and the quality of the parents' (or primary caregivers') relationships with each other are believed to determine the severity of the EMSs (Louis & Louis, 2015; Young et al., 2003). Early parenting patterns that either meet or do not meet these core emotional needs adequately are believed to contribute significantly to the development of a broad range of EASs and EMSs, respectively (Lockwood and Perris, 2012).

Although the negative parenting patterns, as measured by the YPI, are believed to contribute to the development of EMSs and presumably also impede the development of EASs, there is currently no measure for the positive parenting patterns that are believed (from the vantage point of ST) to help prevent the development of the EMSs and facilitate the development of EASs. In the 1960s, Baumrind (1966) developed a parenting model consisting of one positive parenting construct known as Authoritative

and two negative ones known as Authoritarian and Permissive. Maccoby and Martin (1983) later added a fourth negative construct called Neglectful. All four parenting constructs were based on the two dimensions of warmth and control. This model has been used extensively until today, evidenced from an influential meta-analysis conducted by Pinquart (2017) that used 1,435 studies on associations of parenting dimensions and styles with externalizing symptoms in children and adolescents. However, the restricted range of only four parenting styles was cited as a limitation in this study as well as in other crucial studies such as by Gardner et al. (2009), Hudson and Rapee (2002), and by Pinquart and Kauser (2018). Over the years Baumrind's model also drew criticisms from Grolnick (2003) and Greenspan (2006), who disagreed with her view that high control was part of her Authoritative parenting construct on the grounds of Attribution theory (Heider, 1958), which suggested that high control from parents would prevent children from experiencing their behaviour as being a result of their own internal desires. It seems that early observations may have been limited by the cultural paradigms within which these investigators operated and this, as a consequence, put constraints on the range of variables included in the Authoritative parenting construct. However, the Authoritative parenting construct has also evolved since its inception, and a number of other positive dimensions, such as autonomy, have since been included (Robinson et al., 1995).

4.22 Parenting Model from ST

In ST, rather than building on the work of previous parenting models, Young developed a unique framework of 17 theoretical negative parenting constructs in the YPI paralleling the 17 EMSs measured by the YSQ-S3. A one-to-one mapping between each subscale in the YPI and a specific EMS in the YSQ-S3 was hypothesised. Working backwards, the EMSs were used as a starting point for the development of the parenting constructs. Each of the 17 EMSs were assumed to be a reflection of an unmet need by early primary caregivers. Items were developed operationalising the types of interactions that would lead to a need being thwarted by parents. These items were grouped according to the theme associated with the EMS it was linked to. For example, one of the five sample items that represent the EMS of Defectiveness in the YSQ-S3 is: "No man or woman could love me once he/she saw my defects or flaws". The need reflected here was for unconditional acceptance of, and love for, one's private and public self, along with regular praise and the absence of ongoing criticism or rejection.

Items for a maladaptive parenting construct that thwarted this need were created in the YPI such as, "He and/or she made me feel unloved or rejected". Using the same approach for all the other EMSs, a corresponding set of maladaptive parenting constructs for the YPI were devised. For the purposes of developing a much more nuanced set of positive parenting constructs, as set out in this study, adaptive counterparts to these maladaptive parenting constructs were constructed which formed part of the initial item pool of the PPSI. This approach of constructing theoretical parenting constructs is unique and has the potential to contribute significantly to the range of positive parenting constructs over and above those represented by current established parenting measures. Even if half of these 17 parenting constructs can form a reliable factor structure, it would still contain more adaptive parenting constructs than are found in other established parenting instruments. For example, the s-EMBU (Swedish acronym for "My memories of upbringing") has three subscales: Parental Rejection, Emotional Warmth, and Overprotection (Aluja, Del Barrio, & Garcia, 2006). Of these three, only one (Emotional Warmth) is positive. The Childhood Trauma Questionnaire (CTQ) has five negative subscales (Bernstein & Fink, 1998) and no positive subscales. The Parental Acceptance-Rejection Questionnaire (PARQ) Adult version has one positive subscale called Warmth (Rohner & Khaleque, 2005). The Alabama Parenting Questionnaire (Essau et al., 2006) has two positive subscales out of five, Involvement, and Positive Parenting. The Parental Bonding Instrument (PBI) which has three parenting constructs, one adaptive subscale called Care, and the other two maladaptive ones called Overprotection and Authoritarianism (Kendler, 1996). The Parenting Authority Questionnaire based on Baumrind's (1967) model has three subscales with one positive subscale labelled Authoritative. The Parenting Style and Dimensions Questionnaire (Robinson et al., 2001) was a further elaboration on Baumrind's early model where the Authoritative construct was divided into four subdimensions (Warmth/Involvement, Reasoning/Induction, Democratic Participation, and Good Nature/Easygoing). However, the scoring of the subscale defining Authoritative is still based on the mean of these four subdimensions. In other words, these four subdimensions do not form separate positive constructs but are part of the one broad Authoritative construct.

The development of such additional positive nuances was an important step forward in advancing our understanding of a wider range of positive parenting patterns. However,

given the complexity of childhood development, it seems likely that parents and caretakers may be better helped with a model from the vantage point of ST as well, to provide a more complete and nuanced framework. A measure that corresponds to both the full set of EASs will be helpful as a basis to further test the theory upon which ST is based and particularly helpful to schema therapists in developing a more precise and empirically grounded understanding of the origin of a patient's EASs. Its utility can be tested empirically through incremental validity: If this measure assesses aspects of positive parenting not represented within current common measures, then it should be able to predict important outcomes above and beyond what can be predicted by those existing measures (Smith, Fischer, & Fister, 2003).

4.23 The Present Research

This paper reports on a two phase research program that aimed to develop and validate a scale measuring past positive parenting patterns using established psychometric principles (see, for example, Wood & Boyce, in press). The first aim (Phase 1) was to develop a comprehensive item pool measuring past positive parenting patterns and to investigate and establish its factor structure through EFA. From this EFA, only the most robust items were selected in order to form a shorter and final version of the PPSI. The second aim (Phase 2) was to investigate the stability of the factor structure of the final version of PPSI on two other independent samples, an Eastern and a Western one. The third aim (Phase 2) was to investigate the construct, convergent and divergent validity of the PPSI. Studies have shown that the quality of relationship between parents and offspring shape their personality development and contribute to emotional distress, and psychological well-being over time (Arrindell et al., 1999; Pomerantz & Wang, 2009; Rohner & Khaleque, 2005; Thimm, 2010). We, therefore, first assessed convergent validity by testing whether there were negative correlations of moderate strength between the positive parenting subscales of PPSI and negative personality dispositions as well as emotional distress. Since significant negative correlations of low to moderate strength have previously been found between measures of gratitude and psychological well-being with negative parenting patterns (Lavasani, Borhanzadeh, Afzali, & Hejazi, 2011; Lo, Kwok, Yeung, Low, & Tam, 2017), we expected that our PPSI measure of positive parenting patterns would correlate positively with these measures, and testing this completed our assessment of convergent validity.

With respect to the subscales of the parenting inventories used to test construct validity, although most were expected to show some association with the PPSI as a measure of parenting, some subscales of existing parenting inventories were determined a priori to be more strongly linked theoretically with the expected subscales of the PPSI. Specifically, for evidence of divergent validity, we tested whether the subscales of the PPSI that were less concordant with subscales of the YPI correlated significantly less strongly than those that were more concordant.

The fourth aim (Phase 2) was to conduct an incremental validity test, where the PPSI was expected to predict psychological well-being, emotional distress, personality disposition, and positive trait gratitude, above and beyond that predicted by all the other established parenting scales. A lack of incremental validity beyond these scales would not necessarily negate the need for the new scale, as the PPSI would still assess more precisely the aspects of parenting needed for case conceptualization within ST. However, such a lack of incremental validity would compromise the wider usefulness of the scale in parenting research, as the variance explained by the PPSI would overlap fully with that already covered by existing scales. Since the PPSI assesses a different theoretical conception than that covered by existing scales, and assesses several parenting dimensions with greater specificity, we expected that the new scale would show incremental validity over the four other parenting measures used in this study in predicting pathology and well-being.

The fifth and final aim (Phase 2) of this study was to investigate the links between the positive parenting constructs making up this newly developed PPSI scale and EASs as measured by the recently validated YPSQ (Louis et al., 2017; in press). Further, since the theory underpinning ST suggests that EMSs are related to negative parenting as well as the absence of positive parenting patterns to meet the core emotional needs, we expected positive correlations between the subscales of the PPSI with those from the YPSQ (Louis et al., 2017; in press). This would allow for a preliminary test of a central although often overlooked aspect of ST, namely that healthy patterns of parenting are linked to the development of positive life patterns. This would be an important addition to the associations that have been demonstrated between negative parenting patterns and EMSs (Sheffield et al., 2005; Thimm, 2010).

4.3 Method

4.31 Initial Item Pool Development

The development of an initial item pool for the PPSI involved four individuals who were experts in their respective fields. The first was an American schema therapist whose decades of experience included helping to develop the theoretical Early Adaptive Schema Questionnaire (Lockwood & Perris, 2012) and who collaborated with Young in developing ST. The second was a Singapore-based schema therapist and author of a parenting book. The third was a chaired professor of Psychology in Australia who has published research on the YSQ. Completing the team was a Chaired professor of Psychology in Scotland who has published over a hundred papers in the field of well-being, including several on scale development. Three of the team members belong to the ISST, and two of these have served on the ISST Board. The fourth team member was familiar with the therapeutic antecedents to ST but had no association with ISST or any prior training in ST and was, therefore, an external and independent member.

The item pool for the PPSI drew upon the original YPI with 72 items (Young et al., 2003) as a starting point. The YPI is a measure of 17 maladaptive parenting patterns, each of which is theoretically linked to an EMS to which it is believed to contribute. Positive counterparts for all 72 items were developed, involving varying degrees of transposition (see Appendix B). However, an additional 135 new items with clinical relevance were also added, totalling 207 items to safeguard the development of this instrument from becoming merely a reverse image of the YPI. These included 11 items for Social Alienation/Isolation EMS that were not part of the original YPI. The current team, drawing upon extensive clinical experience, conceptualised parenting patterns believed to be associated with this EMS and developed items to assess these patterns as well as its adaptive counterparts. Out of the 17 subscales of the YPI, the Emotional Depriving subscale was the only one that was worded positively, and was therefore a positive construct. Therefore, if such a construct were to appear again in the PPSI, it may comprise a more robust set of items from this initial item pool than its original set. Over the course of a month, 207 items were finalised. Each item employed the same Likert scale used in the YPI, ranging from 1 (*completely untrue*) to 6 (*describes him/her perfectly*).

4.32 Samples

English-speakers in five cities were sampled in this study: Jakarta, Indonesia; Manila, Philippines; Fairfax, North Virginia; Stafford North Virginia; and Manchester, New Hampshire. The latter three, all within the USA, formed what was labelled the USA sample, while former two were independent Southeast Asian samples. Table 2.2 presents the demographic details of the respondents by locale and gender.

Within each city, the research was hosted by a global affiliate of an international charity based in the USA that operates as an NGO in all three countries.

In keeping with the ethical standards of British Psychological Society, we sought and were granted approval from each NGO through its respective ethics committee. Prior to their decisions, these committees considered local cultural norms and other ethical issues. Researchers informed all participants in advance of the research purpose and the purely voluntary nature of their participation in the study. Invitations to participate were issued by email, paper, and an online invitation on the respective NGO website. Snow-ball sampling was used to reach potential participants in other types of organisations in the same city; each person who volunteered was urged to reach out to friends who might be willing to participate. The populations of the final samples included parents, single people, students, and professionals. Volunteers were offered an incentive for participating in the study: the opportunity to take a workshop from the lead researcher on the basics of ST, how parenting behaviour contributes to adaptive and maladaptive schemas in the child, and the potential repercussions of these schemas in later life. The only people excluded from participating in the study were those whose English was not sufficiently fluent and children (those under 18). Other than these two restrictions, participation was open to all, regardless of any demographic criteria, including that of race, colour, or creed. To determine potential fluency in English, these criteria were used: 1) the lead researcher was consulted based on his familiarity with the leaders of these groups; 2) the leaders of the NGOs in their respective cities were consulted based on their familiarity with the members of their groups; 3) members of the groups were polled. Due to the prevalence of English instruction in the Philippines and its increasing emphasis in Indonesia and parts of Southeast Asia generally (Kirkpatrick, 2014; see Appendix A), it was fairly easy to find sufficient numbers of English-speakers with the requisite fluency in both Asian cities.

Participants whose primary caregiver was not a biological parent were instructed to respond to items that referred to mother or father in terms of the individual who fulfilled that role such as a grandparent, stepmother, stepfather, or older sibling. The PPSI also allowed for participants who grew up with only one parent or caregiver to be included. Ratings of fathers and ratings of mothers therefore differed and had to be analyzed separately - Manila (fathers, n = 520; mothers, n = 538); Jakarta (fathers, n = 366; mothers, n = 383); and USA (fathers, n = 204; mothers, n = 214). For the Manila sample, the mean age was 43.48 years (SD = 17.48); for Jakarta, 38.28 years (SD = 15.95); and for the USA 37.85 years (SD = 13.20).

4.33 Instruments

s-EMBU(short EMBU). The EMBU is an acronym for "Egna Minnen Beträffande Uppfostran," which is Swedish for "My memories of upbringing". It comprises 23 items, each measuring past parenting experiences (Arrindell et al., 1999), organised into three subscales: Rejection (e.g., "It happened that my parents were sour or angry with me without letting me know the cause"), Warmth (e.g., "If things went badly for me, I then felt that my parents tried to comfort me and encourage me"), and (Over) Protection (e.g., "When I came home, I then had to account for what I had been doing to my parents"). Each item presented two 4-point scales ranging from 1 (*no, never*) to 4 (*yes, most of the time*), one regarding the mother and the other regarding the father. Reliability values have been reported to range from α = .72 to .85 for both parents (Arrindell et al., 1999). The correlation of at least one subscale of the s-EMBU with scales of the Eysenck Personality Questionnaire Revised-Abbreviated (Eysenck & Eysenck, 1991) was above r = .30. It was expected that the construct validity of the final PPSI subscales would be demonstrated through negative correlations with subscales of this instrument.

Childhood Trauma Questionnaire (CTQ). The CTQ is a self-reported inventory of 28 items measuring past parenting experiences. Each item presents a 5-point Likert scale ranging from 1 (*never true*) to 5 (*very often true*) with separate ratings for father and mother with five subscales: Emotional Abuse (e.g., "I thought my parents wished I had never been born"), Physical Abuse (e.g., "I got hit so hard by someone in my family that I had to see a doctor or go to the hospital"), and Sexual Abuse (e.g., "Someone molested me"), Emotional Neglect (reverse score example, "I felt loved"),

and Physical Neglect (e.g., "My parents were too drunk or high to take care of the family"), and an optional category called Minimization / Denial (e.g., "I had the perfect childhood). The CTQ scales have established reliability values ranging from α = .79 to .94, with good test-retest reliability over a two to six-month interval (intraclass correlation r = .88). This instrument has repeatedly been found to be psychometrically valid (Bernstein & Fink, 1998). Construct validity was expected to be demonstrated by negative correlations between subscales of the PPSI and those of this instrument.

Parental Acceptance-Rejection Questionnaire (Adult version PARQ). The PARQ is a self-reported inventory assessing perceptions of their parents' past behaviour (Rohner & Khaleque, 2005). Each item presents a 4-point Likert scale ranging from 1 (*almost always true*) to 4 (*almost never true*) with separate ratings for fathers and mothers with four subscales: Warmth / Affection (e.g., "Said nice things about me), Hostility / Aggression (e.g., "Said many unkind things to me"), Indifference / Neglect item, (e.g., "Was too busy to answer my questions"), Undifferentiated / Rejection item, (e.g., "Made me feel unloved if I misbehaved"). Reliability coefficients have been reported to range from α = .86 to .95. Significant correlations with three subscales of the Parent Behavior Inventory (Children's report) – those labelled Acceptance, Hostility and Rejection ($r \geq .81$) – established convergent validity (Schaefer, 1965). The PARQ is often used jointly with the PAQ to explore how parenting affects personality dispositions. The mean effect size of statistically significant correlations of maternal and paternal acceptance with at least one of the PAQ subscale was r = .39. The subscales of the PPSI were expected to demonstrate construct validity through negative correlations with subscales of this parenting instrument.

YPI. The psychometric properties of the YPI are described in Chapter 1, Section 1.11. The items of this instrument were used as a reference point to generate counterpart items (positive parenting items) for the PPSI. The subscales of PPSI were expected to demonstrate divergent validity with the nine subscales of the YPI that had emerged from Sheffield et al. (2005), known as YPI-R.

Adult version of the Personality Assessment Questionnaire (PAQ). The PAQ is a self-reported inventory of seven personality disposition subscales comprising 63 items. Each item presents a 4-point Likert scale ranging from 1 (*almost always true*) to 4 (*almost never true*). These subscales assess respondents' perceptions of themselves in

terms of the traits of seven personality dispositions: Hostility / Aggression item (e.g., "I feel resentment against people"), Dependency (e.g., "I like my friends to feel sorry for me when I am ill"), Negative Self-Esteem (e.g., "I get disgusted with myself"), Negative Self-Adequacy (e.g., "I am overcome by feelings of inadequacy"), Emotional Unresponsiveness (e.g., "I feel I have trouble making and keeping close, intimate friends"), Emotional Instability (e.g., "I get upset easily when I meet difficult problems"), Negative Worldview (e.g., "I see life, by its very nature, as being insecure and threatening"). The PAQ subscales constitute a measure of overall psychological adjustment that has been found to correspond with experiences of acceptance or rejection by parents as measured by the PARQ for Asian and Western samples (Munaf, Hussain, & Kamrani, 2012). Correlation with a number of other established scales measuring similar constructs ranged from r = -.50 to -.83 (Rohner & Khaleque, 2005). The subscales of the PPSI were expected to demonstrate convergent validity through negative correlations with subscales of the PAQ.

Ryff's Scales of Psychological Well-Being. This instrument is a self-report inventory measuring positive psychological well-being comprising 18 items (three items per scale), each of which presents a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Items are arranged into six subscales: Positive Relations with Others, (e.g., "People describe me as a giving person, willing to share my time with others"), Autonomy, (e.g., "I have confidence in my opinions, even if they are contrary to the general consensus"), Personal Growth (e.g., "For me, life has been a continuous process of learning, changing, and growth"), Environment Mastery, (e.g., "I am quite good at managing the many responsibilities of my daily life"), Purpose in Life, (e.g., "Some people wander aimlessly through life, but I am not one of them"), Self-Acceptance, (e.g., "I like most aspects of my personality"). The six-factor model showed factor validity and was recommended by van Dierendonck, Diaz, Rodriguez-Carvajal, Blanco, and Moreno-Jimenez (2008). Convergent and construct validity results demonstrated that psychological well-being and subjective well-being loaded separately as two independent but related factors that did not vary with gender, age or ethnicity (Linley, Maltby, Wood, Osborne, & Hurling, 2009), and reliability values ranged from α = .69 to .81. We expected the subscales of the PPSI to demonstrate convergent validity by positive correlations with subscales of this instrument.

Depression, Anxiety, Stress Scales (DASS-21). The psychometric properties of the DASS-21 are described in Chapter 3, Section 3.33. We expected convergent validity of the subscales of the PPSI through negative correlations with subscales of DASS-21.

Gratitude Questionnaire (GQ-6). The psychometric properties of the GQ-6 are described in Chapter 3, Section 3.33. It was expected for the subscales of the PPSI to demonstrate convergent validity by positive correlations with this instrument.

Young Positive Schema Questionnaire (YPSQ). The YPSQ measures EASs, or more colloquially, "positive schemas" in adults. It comprises 14 subscales and 56 items (see Appendix B for sample items). Each item presents a 6-point Likert-type scale that ranges from a score of 1 (*Completely untrue of me*) to a score of 6 (*Describes me perfectly*). The YPSQ was recently validated by Louis et al. (2017; in press). In this study the YPSQ demonstrated convergent validity as evidenced by significant correlations with the following measures: The Big Five personality traits measured by the Mini International Personality Item Pool ($|r|$ = .10 to .40; Linley & Stoker, 2012); measures of emotional distress such as the DASS-21 (r = -.14 to -.48; Antony et al., 1998); Satisfaction with Life Scale (SWLS; r = .28 to .54; Pavot & Diener, 2008); Humor Styles Questionnaire ($|r|$ = .10 to .37; Martin et al., 2003) and GQ-6 (r = .26 to .47; Wood, Joseph, Lloyd, & Atkins, 2009). Incremental validity was demonstrated by the 14 subscales of the YPSQ by accounting for additional significant variance over and above that contributed by the 18 negative YSQ-S3 scales with many of the outcome scales and subscales mentioned above. The reliability values were tested in two Eastern samples and one Western samples. For 12 out of the 14 scales, the values ranged from .76 to .93, and for two others the values ranged from .62 and .68. The subscales of the PPSI were expected to demonstrate convergent validity with subscales of the YPSQ.

To demonstrate incremental validity, the PPSI would be used to measure additional variance over and above those predicted by the other parenting scales used in this study, namely the s-EMBU, CTQ, PARQ and the YPI-R scales.

4.34 Procedures and Statistical Analyses

The sample from Manila was used for the EFA in Phase 1 (aim 1), and the validation and incremental tests in Phase 2 (aims 3 and 4). The samples from Jakarta and USA were used to test the invariance of the factor structure in Phase 2 (aim 2). The USA

sample was also used in Phase 2 to investigate the associations between EASs and the subscales of the PPSI (aim 5).

Missing data analysis was performed on all three samples to assess percentages of missing values as well as whether missing patterns were random, using the Missing Completely at Random (MCAR) test. To determine the impact of missing values on the data, a robustness check was done by conducting EFA using ratings of fathers from data of the Manila sample. The Exclude Case Pairwise option of the SPSS software was the first check. The second was the replacement of missing data values with the average value. The final check was Multiple Imputation, using the 5th imputed data set. If results from the EFA were identical, then the second test of using "average" values would be used. The normality of data was done by inspecting values of kurtosis and skewness, although for sample size > 200, CFA and EFA appear to be robust against such violations (200 +; Tabachnick & Fidell, 2012). For regression analysis, the primary concern was the distribution of non-normality of the dependent variables, not the independent variables, so the distributions of the former were also inspected. According to Hair, Black, Babin, and Anderson (2010), and Byrne (2010), data for the dependent variables can be considered to be normal if skewness is between -2 to +2 and kurtosis is between -7 to +7.

The Bartlett's test was then conducted to see if the data, based on this criterion, was suitable for EFA. Its suitability was assessed by whether the test was statistically significant ($p < .001$). The KMO measure was also taken to determine if data was adequate for this specific EFA analysis. The decision on how many factors to extract was based on PA, since studies have shown this to be the most effective procedure (Zwick & Velicer, 1986). The type of rotation method to be used was based on the recommendation of Tabachnick and Fidell (2012), in which an oblique method (promax) rather than an orthogonal rotation should be used if values of the factor correlations matrix are .32 and above. Factor correlations were also inspected to see if there was an overlap between factors. In EFA, items that did not have a loading higher than .40 were excluded (Floyd & Widaman, 1995).

The following item selection criteria were established for selecting the most robust items from the two EFAs (ratings for fathers and mothers) in Phase 1 for the development of a shorter version of the PPSI scale. First, a requirement was set for at

least three to eight robust items per factor, as recommended by Floyd and Widaman (1995). Factors with two items or fewer were rejected. Second, items with high loadings in both fathers and mothers factor structures were given the highest priority and were retained (Arrindell et al., 1999). Third, if a lower loading item was very similar in content to a higher loading item, then the lower loading item would be deemed redundant and removed. Fourth, a lower loading item would be retained in place of a somewhat higher loading one if it had greater clinical significance and contributed variability in content. Thus an effort was made to establish a set of criteria that balanced statistical rigor with clinical meaning and utility.

The internal consistency for each factor was assessed by Cronbach's alpha values. According to Nunnally (1978), factors with values of $\alpha \geq .65$ are acceptable for newly developed instruments, particularly where a broad construct is represented rather than a narrowly represented construct based on several similarly worded items. The final scales representing ratings for fathers and mothers were named PPSI (Fathers) and PPSI (Mothers), respectively, and the final combined validated scales formed the PPSI. To test for the stability of the PPSI factor structure in two other independent samples, goodness of fit was assessed in Phase 2 using both single group CFA and MGCFA. This was done using a weighted least-squares means and variance adjusted estimation (WLSMV) algorithm to take into account the ordered-categorical nature of the response scales (Wirth & Edwards, 2007). The single group CFA was conducted on the two independent samples from Jakarta and USA. Analyses followed the guidelines in which a close fit is indicated by the normed chi-square (X^2/df)< 4 (Kline, 2005); the root mean square error of approximation (RMSEA) <0.05, a reasonable fit by 0.05 <RMSEA <0.08, a mediocre fit by 0.08 <RMSEA <0.10, and an unacceptable fit by RMSEA >0.10 (Browne & Cudeck, 1993); one comparative fit index (CFI), and one nonnormed fit index, known as the Tucker-Lewis (TLI), with values ≥ .90 for a reasonable fit (Hu & Bentler, 1999).

For MGCFA, the following measurements of invariance (Milfont & Fischer, 2010) were used for the same two independent samples (Jakarta and USA): (1) configural invariance (same factor structure across groups); (2) metric invariance (same factor loadings across groups); (3) scalar invariance (same item intercepts across groups); (4) error invariance (same error variance across groups); (5) factor variance invariance

(same factor variance across groups); (6) factor covariance (same factor covariance across groups), and (7) factor mean invariance (same factor mean across groups).

Construct and convergent validity were assessed in the Manila sample in Phase 2 using Pearson's correlations. Conventional guidelines as to what are thresholds for small (r = .10), medium (r = .30), and large effect size (r = .50) were adopted (Cohen, 1992). Conventional effect size rules of thumb for zero-order correlations were developed with this in mind; hence effect sizes had to be of a certain magnitude to be considered meaningful. Given the theoretical belief that positive and negative parenting measures are separate but related constructs, it was expected that the correlations would be of medium strength, with a range consistent with there being an overlap between the subscales but each remaining multiply determined (r = .30 to .60; Cohen, 1992). A very high correlation (e.g., $|r| > .85$) would be more consistent with two scales being the same or measuring opposite ends of the same continuum and, hence, was not expected (Clark & Watson, 1995). The z-test proposed by Steiger (1980) was used to test for divergent validity between subscales of the PPSI that were most concordant with those of YPI-R and those that were less so. Finally, incremental validity of PPSI was done using hierarchical multiple regression with guidelines by Hunsley and Meyer (2003), where a minimum of, ΔR^2 = .0225 (or 2.25%, equivalent to r = .15) must be achieved from the second to the third step of a hierarchical regression analysis. The predictor variables for each hierarchal multiple regressions were entered in the following three steps: (1) gender; (2) the subscales of ratings of fathers from the three established parenting (i.e., the PARQ, s-EMBU and CTQ) instruments, as well as nine subscales of YPI-R; (3) the subscales of ratings of fathers of the PPSI. The same steps were repeated for the ratings of mothers of the PPSI subscales.

4.4 Results

4.41 Missing Data.

For the Manila, Jakarta and USA samples, the percentage of missing data was very low. For ratings of fathers, Manila = .63%, Jakarta = .80%, USA = .09%; ratings of mothers, Manila = .67%, Jakarta = 3.24%, USA = .11%. Results from MCAR test for ratings of fathers: Manila, Chi-Square = 93941.60, DF = 92353, p = .00; Jakarta, Chi Square = 53151.83, DF = 57157, p =1.00; USA, Chi-square = 1611.86, DF = 1479, p = .009. For ratings of mothers: Manila, Chi-Square = 106090, DF = 103911, p = .00; Jakarta, Chi

Square = 64794.25, DF = 67389, p =1.00; USA, Chi-square = 2010.44, DF = 1902, p = .04. This showed that some of the patterns of missing data were not at random. However, no variables had an unusually high number of missing values in comparison to the rest. All three methods for imputing missing data (see Procedures and Statistical Analyses, Section 4.34), using the Manila ratings of fathers sample, yielded almost identical EFA results with the same 10 factors, as well as almost identical items under each factor, thus showing impact of missing data was negligible. As a result, the average value of all responses from other subjects was chosen to impute the missing values in all the samples.

4.42 Phase 1 Exploratory Factor Analysis

EFA. Using the sample from Manila, for ratings of fathers, the KMO index was .97 and Bartlett's test of Sphericity was statistically significant, χ^2 (21321, n = 520) = 80639.49, $p < .001$. For the ratings of mothers, the KMO index was also .97, and Bartlett's test of Sphericity was also statistically significant, χ^2 (21321, n = 538) = 77914.94, $p < .001$. Based on these two criteria, the data was deemed suitable for factor analysis.

PA suggested ten factors each be extracted for the ratings of fathers and mothers. Results of the EFA of the ratings of fathers using oblique (promax) rotation resulted in a factor solution that accounted for 47.9% of the total variability. There were two items or fewer in the eighth, ninth and tenth factor, so these three factors were removed and the remaining seven subjected to further analysis. For the ratings of mothers, the ten factors accounted for 45.40% of the total variability. The fifth, eight, ninth and tenth factor had two items or fewer, so these four factors were rejected and the other six retained for further analysis. Results of both of these EFAs for Manila are shown in Appendix G. Inter-factor correlations revealed that the highest correlations for both ratings of fathers and mothers were .72 and .70, respectively. Since these values were < .85, there were no serious concerns about redundancy among these factors or problems associated with multicollinearity (Clark & Watson, 1995). The average statistically significant factor correlation was .47 and .54 for ratings of fathers and mothers, respectively (see Appendix H and Appendix I for inter-factor correlations of both samples).

The PPSI began with an initial item pool of 207 items. Since many items had high loadings on some of these factors, using the item selection criteria (see Section 4.34),

the more robust factors (with three to eight items) were selected for a shorter version of the PPSI for both fathers and mothers. This resulted in seven factors for the fathers' ratings, comprising 42 items. These factors were named Autonomy Granting, Autonomy Support, Dependability, Emotional Nurturance and Unconditional Love, Intrinsic Worth, Playfulness and Emotional Openness, and Confidence and Competence. The Cronbach's alpha values were also assessed for all the seven scales; their values were acceptable, with $\alpha \geq .65$ for all seven (Nunnally, 1978). These reliability values, along with the mean and standard deviation in all three samples, are shown in Appendix J.

For the ratings of the mothers, one of the six factors with four items, labelled Realistic Expectations, had a low Cronbach's alpha reliability value of .54 in the Jakarta sample, and was therefore rejected, leaving five factors with 32 items. These were labelled as Autonomy Support, Dependability, Emotional Nurturance and Unconditional Love, Intrinsic Worth, Playfulness and Emotional Openness. Thus from Phase 1, a final factor structure was established for the PPSI (Fathers) and PPSI (Mothers), and these were used for further analyses in Phase 2 (see Appendix G for EFA results with cut off points > .4).

4.43 Phase 2 Construct, Convergent, Divergent and Incremental Validity

Stability of factor structure and reliability values. The factor structure that had emerged from the Manila sample from Phase 1 consisted of seven factors comprising 42 items for ratings of fathers, and five factors comprising 32 items for ratings of mothers. A single group CFA was run using the same model for both the Jakarta and USA samples respectively. Results indicated that an adequate fit was obtained for the normed chi-squared, RMSEA, CFI and TLI. For the ratings of fathers: Jakarta (χ^2 = 1637.14, df = 798, χ^2/df = 2.05, RMSEA = .05, CFI = .94, TLI = .93) and USA East samples (χ^2 = 1844.77, df = 798, χ^2/df = 2.31, RMSEA = .08, CFI = .92, TLI = .91). For the ratings of mothers, an adequate fit was also achieved: Jakarta (χ^2 = 1152.64, df = 454, χ^2/df = 2.54, RMSEA = .06, CFI = .94, TLI = .93) and USA East samples (χ^2 = 1028.99, df = 454, χ^2/df = 2.27, RMSEA = .08, CFI = .94, TLI = .93). A MGCFA was also conducted, as shown in Table 4.1 and Table 4.2. In the MGCFA, models 1 to 4 (known as measurement invariance) were organised in a hierarchy with increasing constraints, with each model nested within the previous; so if invariance failed in model 1, it could not be assessed separately in models 2, 3 or 4. However, models 5 to 7

(known as structural invariance) were not hierarchical or sequential; so models 6 and 7 could be assessed independently, regardless of whether invariance was demonstrated in model 5 (Milfont & Fisher, 2010). Therefore, invariance was achieved in six out of the seven tests for both samples (an Eastern and a Western). When combined, the PPSI (Fathers) and PPSI (Mothers) scales formed a measure comprising seven adaptive parenting subscales with a total of 50 items.

Construct validity. The average statistically significant correlation values of the PPSI scale with the s-EMBU, CTQ and PARQ were .40, .31 and .47 respectively. As expected (see Table 4.3), subscales of Emotionally Nurturing and Unconditional Love from the ratings of both the fathers and mothers of the PPSI positively correlated with the Emotional Warmth scale of the s-EMBU, as well as negatively with the Warmth scale of the PARQ (reversed scored). Also as expected, the PPSI subscale of Autonomy Support that measures the dimension of "believe" had the highest negative correlations of moderate strength with subscales of Rejection and Warmth from the PARQ (reversed scored), and Emotional Neglect with the CTQ, but positively with Warmth from the s-EMBU scale. Similarly, the Overprotection subscale of the s-EMBU correlated the highest and negatively in moderate strength with its most concordant subscale of Autonomy Granting of the PPSI (Fathers). Negative correlations with the nine YPI-R subscales were also shown in Table 4.3. As expected, the PPSI subscale of Autonomy Granting (PPSI) correlated most strongly with its most corresponding subscale of Controlling in the YPI-R. Likewise, the most concordant subscales of the PPSI correlated the strongest with their corresponding subscales of the YPI-R. We expected positive correlations between the Emotionally Nurturing subscales of the PPSI with Emotionally Depriving subscale of the YPI-R, and for this correlation to be > .8, as items for the latter were positively worded in the YPI-R, which meant it was essentially measuring a very similar construct to Emotional Nurturance & Unconditional Love in the PPSI. Confirming the expectations mentioned above, strong evidence for construct validity was demonstrated by the PPSI (Fathers) and PPSI (Mothers) with these established parenting scales.

Convergent validity. The average correlation values of the PPSI with PAQ, GQ-6, DASS-21, and Ryff's scale were, $|r| = .26, .25, .21$, and .22, respectively. All scales of the PPSI (Fathers) and PPSI (Mothers) had significant positive correlations with the

GQ-6 and Ryff's subscales and, as expected, had significant negative correlations with a measure of psychopathology (Emotional distress of the DASS-21) and the Negative Personality Dispositions subscales of the PAQ (see Table 4.3). Effect sizes for established parenting scales with other measures, such as depression, self-esteem, or personality constructs, are usually small. For example, results from the study by Arrindell et al. (1999) that validated the s-EMBU resulted in average statistically significant effect sizes, $|r|$ = .20, .19 and .22, for measures of neuroticism, extraversion and self-esteem, respectively. A recent study correlating the PARQ with internalising measures in children (Putnick et al., 2015) again resulted in even smaller statistically significant effect sizes ranging from r = .06 to .14. Significant correlations between s-EMBU and measures of personality disorder symptoms and depression found by Thimm (2010) yielded r = .26, and .22, respectively. Even though the effect sizes obtained were small for the PPSI scale with PAQ, DASS-21 and GQ-6, these effect sizes were similar to those obtained from the established past parenting measures of the s-EMBU, CTQ and PARQ with these same scales.

Meaningful and significant positive correlations were found between the subscales of the PPSI (Fathers) and PPSI (Mothers) and EASs (positive schemas) measured by the YPSQ, with effect sizes from small to medium (see Table 4.4). For example, the PPSI Autonomy Granting subscale correlated most strongly with the EASs of Stable Attachment, Healthy Self-Reliance /Competence, Emotional Fulfillment, and Healthy Boundaries and Developed Self; the PPSI Autonomy Support subscale correlated most strongly with the EASs of Emotional Fulfillment, Stable Attachment, Social Belonging, Self-Directedness, Healthy Self-Reliance / Competence, and Self Compassion; the PPSI Dependability subscale correlated most strongly with the EASs of Stable Attachment, and Emotional Fulfillment; the PPSI Emotional Nurturance and Unconditional Love subscale correlated with the EASs of Emotional Fulfillment, and Social Belonging; the PPSI Intrinsic Worth subscale correlated most strongly with the EASs of Self Directedness, Stable Attachment, and Emotional Fulfillment; the PPSI Playfulness and Emotional Openness subscale correlated most strongly with the EAS of Emotional Openness and Spontaneity; and the PPSI Confidence and Competence subscale correlated most strongly with the EASs of Stable Attachment, Emotional Fulfillment, Basic Health and Safety / Optimism, and Healthy Self-Interest / Self-Care. Thus evidence for convergent validity of PPSI (Fathers) and PPSI (Mothers) was

Table 4.1

Fit Indices from Multigroup CFA for PPSI (Fathers) with 7 Factors 42 Items Using Jakarta (n = 366) and USA (n = 204) Samples

Model	Number of parameters	χ^2 ($\Delta\chi^2$)*	df (Δdf)*	*p*	χ^2/df	CFI (ΔCFI)	TLI (ΔTLI)	RMSEA [90% CI] (ΔRMSEA)	Comparison	Decision
Configural invariance	545	3503.27	1597	<0.001	2.19	0.93	0.92	0.065 [0.062, 0.068]	-	Accept
Metric invariance	510	3521.56 (70.80)	1632 (35)	<0.001 (<0.001)	2.16	0.93 (-0.001)	0.93 (-0.002)	0.064 [0.061, 0.067] (-0.001)	Configural vs. Metric	Accept
Scalar invariance	349	3980.04 (712.97)	1793 (161)	<0.001 (<0.001)	2.22	0.92 (0.011)	0.92 (0.004)	0.065 [0.063, 0.068] (0.001)	Metric vs. Scalar	Accept
Error variance invariance	307	4099.45 (243.02)	1835 (42)	<0.001 (<0.001)	2.23	0.92 (0.003)	0.92 (0.001)	0.066 [0.063, 0.068] (0.001)	Scalar vs. Error	Accept
Factor variance invariance	300	4539.08 (127.03)	1842 (7)	<0.001 (<0.001)	2.46	0.90 (0.017)	0.91 (0.015)	0.072 [0.069, 0.074] (0.006)	Error vs. Factor variance	Reject
Factor covariance invariance	279	3435.79 (48.72)	1863 (21)	<0.001 (<0.001)	1.84	0.94 (-0.043)	0.95 (-0.040)	0.054 [0.052, 0.057] (-0.018)	Factor variance vs. Factor covariance	Accept
Factor mean invariance	272	3613.78 (67.77)	1870 (7)	<0.001 (<0.001)	1.93	0.93 (0.007)	0.94 (0.005)	0.057 [0.054, 0.060] (0.003)	Factor covariance vs. Factor mean	Accept
Acceptance criteria for indices (differences)						>0.9 (<0.01)	>0.9 (<0.01)	<0.06 (<0.015)		

Note. *The chi-square difference test results of nested models using the scaled chi-square (Satorra & Bentler, 2010) are reported as results DIFFTEST command implemented in Mplus (Asparouhov & Muth´en, 2006).

Table 4.2

Fit Indices from Multigroup CFA for PPSI (Mothers) with 5 Factors 32 Items Using Jakarta (n = 383) and USA (n = 214) Samples

Model	Number of parameters	χ^2 ($\Delta\chi^2$)*	df (Δdf)*	*p*	χ^2/df	CFI (ΔCFI)	TLI (ΔTLI)	RMSEA [90% CI] (ΔRMSEA)	Comparison	Decision
Configural invariance	404	2176.31	908	(<0.001)	2.40	0.94	0.93	0.068 [0.065, 0.072]	-	Accept
Metric invariance	377	2168.99 (41.90)	935 (27)	(<0.001) (0.034)	2.32	0.94 (-0.002)	0.93 (-0.004)	0.066 [0.063, 0.070] (-0.002)	Configural vs. Metric	Accept
Scalar invariance	254	2469.78 (444.84)	1058 (123)	(<0.001) (<0.001)	2.33	0.93 (0.010)	0.93 (0.003)	0.067 [0.063, 0.070] (0.001)	Metric vs. Scalar	Accept
Error variance invariance	222	2408.24 (115.13)	1090 (32)	(<0.001) (<0.001)	2.21	0.93 -(0.005)	0.94 (-0.006)	0.064 [0.060, 0.067] (-0.003)	Scalar vs. Error	Accept
Factor variance invariance	217	2767.75 (86.86)	1095 (5)	(<0.001) (<0.001)	2.53	0.91 (0.018)	0.92 (0.016)	0.072 [0.068, 0.075] (0.009)	Error vs. Factor variance	Reject
Factor covariance invariance	207	2252.81 (53.04)	1105 (10)	(<0.001) (<0.001)	2.04	0.94 (-0.027)	0.95 (-0.025)	0.059 [0.056, 0.062] (-0.013)	Factor variance vs. Factor covariance	Accept
Factor mean invariance	202	2316.85 (34.95)	1110 (5)	(<0.001) (<0.001)	2.09	0.94 (0.003)	0.95 (0.002)	0.060 [0.057, 0.064] (0.001)	Factor covariance vs. Factor mean	Accept
Acceptance criteria for indices (differences)						>0.9 (<0.01)	>0.9 (<0.01)	<0.06 (<0.015)		

Note. *The chi-square difference test results of nested models using the scaled chi-square (Satorra & Bentler, 2010) are reported as results DIFFTEST command implemented in Mplus (Asparouhov & Muth´en, 2006).

Table 4.3

Pearson's Correlation Matrix of the PPSI (Fathers) and PPSI (Mothers) with s-EMBU, CTQ-28, PARQ, YPI-R, PAQ, GQ-6, DASS-21 and Ryff's Well-Being Using Manila Sample (n=520, 538)

	Autonomy Granting		Autonomy Support		Dependability		Emotional Nurturance & Unconditional Love		Intrinsic Worth		Playfulness & Emotional Openness		Confidence & Competence	
F: Fathers / M: Mothers	F	M	F	M	F	M	F	M	F	M	F	M	F	M
sEMBU - Rejection	-.30**	-	-.36**	-.38**	-.30**	-.37**	-.27**	-.43**	-.29**	-.38**	-.12**	-.17**	-.20**	-
sEMBU - Emotional Warmth	.23**	-	.56**	.54**	.54**	.54**	.64**	.64**	.36**	.45**	.47**	.47**	.44**	-
sEMBU - (Over)Protection	-.43**	-	-.21**	-.20**	-.06	-.07	-.07	-.14**	-.22**	-.21**	-.08	-.03	-.07	-
CTQ-28 - Emotional Abuse	-.19**	-	-.30**	-.38**	-.28**	-.40**	-.24**	-.41**	-.17**	-.36**	-.10*	-.20**	-.22**	-
CTQ-28 - Physical Abuse	-.20**	-	-.23**	-.28**	-.23**	-.35**	-.21**	-.32**	-.13**	-.27**	-.08	-.17**	-.19**	-
CTQ-28 - Sexual Abuse	-.06	-	-.09	-.11*	-.16**	-.20**	-.09*	-.14**	-.05	-.19**	.00	-.05	-.12**	-
CTQ-28 - Emotional Neglect	-.23**	-	-.48**	-.51**	-.44**	-.61**	-.47**	-.60**	-.34**	-.45**	-.37**	-.41**	-.42**	-
CTQ-28 - Physical Neglect	-.24**	-	-.40**	-.40**	-.39**	-.50**	-.32**	-.39**	-.30**	-.33**	-.23**	-.25**	-.38**	-
PARQ - Hostility/Aggression	-.40**	-	-.49**	-.51**	-.45**	-.51**	-.41**	-.56**	-.34**	-.44**	-.23**	-.26**	-.31**	-
PARQ - Indifference/Neglect	-.21**	-	-.51**	-.54**	-.61**	-.64**	-.61**	-.65**	-.36**	-.45**	-.38**	-.37**	-.41**	-
PARQ - Undifferentiated Rejection	-.37**	-	-.54**	-.55**	-.45**	-.55**	-.43**	-.52**	-.35**	-.42**	-.25**	-.29**	-.34**	-
PARQ - Warmth Affection (Reverse Scored)	-.31**	-	-.60**	-.59**	-.56**	-.61**	-.71**	-.74**	-.46**	-.53**	-.52**	-.50**	-.49**	-
YPI-R - Belittling	-.36**	-	-.59**	-.58**	-.50**	-.56**	-.42**	-.50**	-.39**	-.45**	-.21**	-.25**	-.33**	-
YPI-R - Conditional/Narcissistic	.02	-	.15**	.12**	.15**	.15**	.10*	.02	-.16**	-.04	.10*	.09*	.22**	-
YPI-R - Controlling	-.48**	-	-.33**	-.36**	-.25**	-.28**	-.29**	-.37**	-.32**	-.35**	-.15**	-.19**	-.13**	-
YPI-R - Overprotective	-.31**	-	-.05	-.05	.25**	.19**	.23**	.15**	-.01	.03	.14**	.15**	.11*	-
YPI-R - Perfectionist	-.00	-	.15**	.16**	.20**	.20**	.07	.08	-.07	.03	.15**	.18**	.34**	-
YPI-R - Emotionally Inhibited	-.08	-	-.28**	-.35**	-.37**	-.41**	-.62**	-.61**	-.31**	-.40**	-.55**	-.55**	-.34**	-
YPI-R - Emotionally Depriving (positively worded)	.32**	-	.54**	.56**	.69**	.73**	.81**	.80**	.48**	.62**	.55**	.53**	.58**	-
YPI-R - Pessimistic/Fearful	-.30**	-	-.33**	-.31**	-.34**	-.31**	-.34**	-.37**	-.37**	-.52**	-.16**	-.20**	-.39**	-
YPI-R - Punitive	-.33**	-	-.40**	-.35**	-.32**	-.35**	-.39**	-.46**	-.31**	-.40**	-.16**	-.14**	-.23**	-

Table 4.3 (Continued)

	Autonomy Granting		Autonomy Support		Dependability		Emotional Nurturance & Unconditional Love		Intrinsic Worth		Playfulness & Emotional Openness		Confidence & Competence	
F: Fathers / M: Mothers	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Autonomy Granting	1	-	.51**	-	.29**	-	.34**	-	.42**	-	.29**	-	.32**	-
Autonomy Support	.51**	-	1	1	.53**	.63**	.60**	.64**	.47**	.56**	.46**	.48**	.51**	-
Dependability	.29**	-	.53**	.63**	1	1	.67**	.67**	.49**	.59**	.42**	.42**	.61**	-
Emotional Nurturance & Unconditional Love	.34**	-	.60**	.64**	.67**	.67**	1	1	.51**	.65**	.61**	.62**	.57**	-
Intrinsic Worth	.42**	-	.47**	.56**	.49**	.59**	.51**	.65**	1	1	.42**	.47**	.45**	-
Playfulness & Emotional Openness	.29**	-	.46**	.48**	.42**	.42**	.61**	.62**	.42**	.47**	1	1	.47**	-
Confidence & Competence	.32**	-	.51**	-	.61**	-	.57**	-	.45**	-	.47**	-	1	-
PAQ- Hostility/Aggression	-.17**	-	-.31**	-.32**	-.21**	-.25**	-.21**	-.26**	-.19**	-.19**	-.09*	-.09*	-.17**	-
PAQ- Dependency	-.12**	-	-.01	.02	-.08	-.05	-.03	-.03	-.06	-.01	.01	.04	-.09*	-
PAQ- Negative Self-Esteem	-.27**	-	-.45**	-.43**	-.26**	-.29**	-.29**	-.25**	-.22**	-.20**	-.16**	-.19**	-.29**	-
PAQ- Negative Self-Adequacy	-.34**	-	-.47**	-.44**	-.24**	-.30**	-.25**	-.20**	-.24**	-.19**	-.20**	-.18**	-.32**	-
PAQ- Emotional Unresponsive	-.18**	-	-.35**	-.34**	-.16**	-.23**	-.22**	-.23**	-.23**	-.18**	-.14**	-.21**	-.16**	-
PAQ- Emotional Instability	-.25**	-	-.36**	-.35**	-.20**	-.22**	-.25**	-.24**	-.23**	-.18**	-.18**	-.15**	-.29**	-
PAQ- Negative Worldview	-.25**	-	-.40**	-.37**	-.29**	-.34**	-.30**	-.29**	-.29**	-.25**	-.17**	-.16**	-.29**	-
Gratitude (GQ-6)	.28**	-	.39**	.38**	.22**	.32**	.16**	.15**	.28**	.16**	.12**	.10*	.27**	-
DASS-21 - Anxiety	-.23**	-	-.21**	-.19**	-.09*	-.14**	-.09	-.07	-.19**	-.10*	-.02	-.04	-.15**	-
DASS-21 - Depression	-.29**	-	-.34**	-.33**	-.17**	-.26**	-.16**	-.15**	-.27**	-.17**	-.08	-.10*	-.26**	-
DASS-21 - Stress	-.19**	-	-.23**	-.22**	-.20**	-.23**	-.18**	-.18**	-.22**	-.21**	-.04	-.06	-.21**	-
Ryff– Autonomy	.20**	-	.25**	.23**	.09*	.17**	.13**	.11*	.19**	.11*	.11*	.05	.18**	-
Ryff– Environmental Mastery	.26**	-	.36**	.32**	.16**	.22**	.20**	.17**	.22**	.18**	.09	.08	.26**	-
Ryff– Personal Growth	.30**	-	.34**	.32**	.15**	.26**	.08	.12**	.21**	.14**	.12**	.13**	.19**	-
Ryff– Positive Relations with Others	.22**	-	.42**	.39**	.22**	.32**	.19**	.25**	.23**	.25**	.16**	.17**	.26**	-
Ryff– Purpose in Life	.21**	-	.20**	.18**	.07	.13**	.04	.05	.13**	.02	.12**	.12**	.10*	-
Ryff– Self-Acceptance	.17**	-	.40**	.40**	.19**	.29**	.23**	.24**	.21**	.22**	.13**	.14**	.28**	-

Note. **. Correlation is significant at the 0.01 level (2-tailed), in bold; *. Correlation is significant at 0.05 level (2-tailed).
s-EMBU – Swedish acronym for ('My memories of upbringing'); CTQ-28 – Childhood Trauma Questionnaire; GQ-6 – Gratitude Questionnaire;DASS-21 – Depression Anxiety Stress Scale; PAQ – Personality Assessment Questionnaire; PARQ –Parental Acceptance-Rejection Questionnaire (PARQ); Ryff – Ryff Scales of Psychological Well-Being.

Table 4.4

Pearson's Correlation Matrix of the PPSI (Fathers) and PPSI (Mothers) with YPSQ (Positive Schemas) Using USA Sample (n=204, 214)

	Autonomy Granting		Autonomy Support		Dependability		Emotional Nurturance & Unconditional Love		Intrinsic Worth		Playfulness & Emotional Openness		Confidence & Competence	
F: Fathers / M: Mothers	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Basic Health & Safety / Optimism	.19**	-	.22**	.36**	.24**	.29**	.11	.27**	.15*	.29**	.00	.16*	.28**	-
Empathic Consideration	.16*	-	.08	.14*	.10	.23**	.04	.16*	.15*	.15*	.05	.09	.14	-
Emotional Openness & Spontaneity	.13	-	.21**	.21**	.13	.09	.20**	.21**	.06	.12	.19**	.19**	.10	-
Emotional Fulfillment	.31**	-	.35**	.34**	.31**	.33**	.30**	.34**	.24**	.29**	.16*	.17*	.33**	-
Healthy Boundaries / Developed Self	.25**	-	.20**	.25**	.04	.06	-.05	.10	.06	.15*	-.06	.10	.02	-
Healthy Self-Control / Self-Discipline	.14*	-	.19**	.24**	.18*	.22**	.07	.10	.13	.16*	.08	.11	.20**	-
Healthy Self-Interest / Self-Care	.23**	-	.29**	.25**	.27**	.16*	.27**	.22**	.19**	.25**	.15*	.10	.25**	-
Healthy Self-Reliance / Competence	.27**	-	.30**	.43**	.10	.21**	.09	.20**	.06	.21**	-.01	.09	.14*	-
Realistic Expectations	.16*	-	.15*	.17*	.17*	.13	.15*	.18*	.21**	.24**	.07	.11	.22**	-
Success	.23**	-	.27**	.38**	.17*	.25**	.07	.18**	.18*	.21**	.08	.11	.24**	-
Stable Attachment	.34**	-	.32**	.35**	.36**	.37**	.22**	.33**	.26**	.34**	.11	.15*	.35**	-
Social Belonging	.19**	-	.28**	.31**	.20**	.28**	.22**	.25**	.18*	.22**	.10	.14*	.23**	-
Self-Compassion	.21**	-	.28**	.25**	.18*	.20**	.18**	.19**	.20**	.29**	.05	.17*	.24**	-
Self-Directedness	.23**	-	.25**	.26**	.22**	.21**	.19**	.17*	.25**	.27**	.11	.11	.26**	-

Note. **. Correlation is significant at the 0.01 level (2-tailed), in bold; *. Correlation is significant at 0.05 level (2-tailed).

demonstrated with EASs measured by the YPSQ, with effect sizes similar to those from previous studies of past parenting experiences and EMSs (Sheffield et al, 2005; Thimm, 2010). It is also noteworthy that each PPSI subscale was statistically and significantly associated with several EASs, as was the case with negative parenting subscales of the YPI-R and EMSs (Sheffield et al., 2005). No one-to-one mapping was evident between each EAS and a corresponding PPSI subscale as hypothesised by Young et al. (2005). Rather, several EASs were associated significantly with each subscale of the PPSI.

Divergent validity. For divergent validity, we chose to compare the PPSI with the YPI-R. Specifically, for evidence of divergent validity, subscales of the PPSI that were less concordant with the theoretically associated subscales of the YPI-R correlated significantly less strongly than the correlations between the *corresponding* PPSI with YPI-R subscales that were most concordant. Given that for the most part, the differences were statistically significant, sufficient evidence for divergent validity was demonstrated (see Appendix K and Appendix L). The average correlation (absolute values) for ratings of the fathers between subscales of the PPSI and those of the YPI-R2 were .58 for those that were most concordant and .24 for those that were less so. For the ratings of the mothers, the values were .65 and .26, respectively (see Appendix M).

Incremental validity. The values of skewness and kurtosis, and inspection of the Q-Q plot, showed that data for some of the dependent variables deviated from normality. However, given the large sample size over 200 (n = 520, 538 for this study) and a conservative p value ($p < .001$) for the regression models, the effects of non-normality were not particularly serious (Statistics Solutions, 2013). Incremental validity was tested with hierarchical multiple regression for 17 outcome variables: Gratitude, three subscales of DASS-21, all seven subscales of the PAQ, and all six subscales of the Ryff's Scale of Psychological Well-Being. Results of this multiple hierarchical regression are shown in Table 4.5. For the PPSI (Fathers) and PPSI (Mothers), out of the 17 dependent variables, incremental validity was demonstrated in 12 of them, since a minimum $\Delta R^2 = 0.0225$ (or 2.25%) that was statistically significant was achieved from the second to the third step of a regression analysis (Hunsley & Meyer, 2003). Out of the 12 dependent variables, eight were highly statistically significant for PPSI (Fathers) and nine for PPSI (Mothers).

Table 4.5

Hierarchical Regression Analysis of the PPSI (Fathers) and PPSI (Mothers) Scales Predicting GQ-6, DASS-21, PAQ and Ryff's Well-Being Using Manila Sample (n=520, 538)

	Fathers			Mothers		
	R^2	ΔR^2	ΔF	R^2	ΔR^2	ΔF
Gratitude (GQ-6)						
Step 1: Gender	.02	.02**	7.96	.01	.01**	7.58
Step 2: All s-EMBU, CTQ, PARQ Parenting, & nine YPI-R Subscales	.31	.29***	9.99	.25	.23***	7.58
Step 3: All PPSI Subscales	.33	.03*	2.66	.29	.05***	6.46
DASS-21 - Anxiety						
Step 1: Gender	.01	.01	3.42	.01	.01	3.10
Step 2: All s-EMBU, CTQ, PARQ Parenting, & nine YPI-R Subscales	.18	.18***	5.16	.16	.15***	4.34
Step 3: All PPSI Subscales	.20	.02	1.47	.16	.01	1.03
DASS 21 - Depression						
Step 1: Gender	.00	.00	.00	.00	.00	.02
Step 2: All s-EMBU, CTQ, PARQ Parenting, & nine YPI-R Subscales	.24	.24***	7.63	.21	.21***	6.33
Step 3: All PPSI Subscales	.28	.04***	3.76	.23	.02*	2.74
DASS 21 - Stress						
Step 1: Gender	.01	.01*	5.14	.01	.01*	4.27
Step 2: All s-EMBU, CTQ, PARQ Parenting, & nine YPI-R Subscales	.21	.20***	6.08	.19	.19***	5.67
Step 3: All PPSI Subscales	.23	.02	1.67	.20	.01	.74
PAQ Hostility/Aggression						
Step 1: Gender	.02	.02**	8.91	.01	.01**	7.94
Step 2: All s-EMBU, CTQ, PARQ Parenting, & nine YPI-R Subscales	.28	.26***	8.46	.28	.27***	9.07
Step 3: All PPSI Subscales	.29	.02	1.68	.29	.01	1.95
PAQ Dependency						
Step 1: Gender	.01	.01**	7.07	.01	.01**	8.00
Step 2: All s-EMBU, CTQ, PARQ Parenting, & nine YPI-R Subscales	.07	.06	1.57	.06	.04	1.09
Step 3: All PPSI Subscales	.09	.02	1.22	.06	.01	.73
PAQ Negative Self-Esteem						
Step 1: Gender	.00	.00	2.04	.00	.00	1.60
Step 2: All s-EMBU, CTQ, PARQ Parenting, & nine YPI-R Subscales	.28	.28***	9.15	.22	.21***	6.73
Step 3: All PPSI Subscales	.32	.04***	3.91	.27	.05***	7.59
PAQ Negative Self-Adequacy						
Step 1: Gender	.00	.00	.00	.00	.00	.09
Step 2: All s-EMBU, CTQ, PARQ Parenting, & nine YPI-R Subscales	.25	.25***	8.05	.20	.20***	6.29
Step 3: All PPSI Subscales	.32	.07***	7.38	.28	.07***	10.60
PAQ Emotional Unresponsive						
Step 1: Gender	.02	.02**	7.90	.01	.01**	6.70
Step 2: All s-EMBU, CTQ, PARQ Parenting, & nine YPI-R Subscales	.16	.15***	4.15	.17	.16***	4.78
Step 3: All PPSI Subscales	.21	.05***	4.40	.20	.03**	4.02
PAQ Emotional Instability						
Step 1: Gender	.00	.00	.76	.00	.00	1.48
Step 2: All s-EMBU, CTQ, PARQ Parenting, & nine YPI-R Subscales	.19	.18***	5.34	.17	.16***	4.85
Step 3: All PPSI Subscales	.23	.05***	4.23	.21	.04***	5.23
PAQ Negative World View						
Step 1: Gender	.00	.00	.32	.00	.00	.60
Step 2: All s-EMBU, CTQ, PARQ Parenting, & nine YPI-R Subscales	.31	.31***	10.45	.26	.26***	8.78
Step 3: All PPSI Subscales	.32	.02	1.80	.28	.01	1.90
Ryff Scales of Psychological Well-Being - Autonomy						
Step 1: Gender	.00	.00	.00	.00	.00	.26
Step 2: All s-EMBU, CTQ, PARQ Parenting, & nine YPI-R Subscales	.13	.13***	3.48	.07	.07**	1.97
Step 3: All PPSI Subscales	.16	.03*	2.67	.10	.03**	3.08
Ryff Scales of Psychological Well-Being - Environmental Mastery						
Step 1: Gender	.01	.01	2.77	.01	.01	2.90
Step 2: All s-EMBU, CTQ, PARQ Parenting, & nine YPI-R Subscales	.19	.18***	5.32	.18	.17***	5.20
Step 3: All PPSI Subscales	.24	.06***	5.14	.21	.03***	4.27
Ryff Scales of Psychological Well-Being - Personal Growth						
Step 1: Gender	.00	.00	.35	.00	.00	.18
Step 2: All s-EMBU, CTQ, PARQ Parenting, & nine YPI-R Subscales	.25	.25***	7.73	.21	.21***	6.52
Step 3: All PPSI Subscales	.27	.03**	2.70	.24	.03**	3.96

Table 4.5 (Continued)

	Fathers			Mothers		
	R^2	ΔR^2	ΔF	R^2	ΔR^2	ΔF
Ryff Scales of Psychological Well-Being - Positive Relations with Others						
Step 1: Gender	.01	.01*	3.90	.01	.01	3.61
Step 2: All s-EMBU, CTQ, PARQ Parenting, & nine YPI-R Subscales	.23	.23***	6.97	.21	.21***	6.43
Step 3: All PPSI Subscales	.29	.06***	5.93	.25	.03***	4.35
Ryff Scales of Psychological Well-Being - Purpose in Life						
Step 1: Gender	.00	.00	.31	.00	.00	.32
Step 2: All s-EMBU, CTQ, PARQ Parenting, & nine YPI-R Subscales	.12	.12***	3.20	.10	.10***	2.65
Step 3: All PPSI Subscales	.15	.03	2.29	.13	.04***	4.31
Ryff Scales of Psychological Well-Being - Self-Acceptance						
Step 1: Gender	.00	.00	1.32	.00	.00	.94
Step 2: All s-EMBU, CTQ, PARQ Parenting, & nine YPI-R Subscales	.22	.22***	6.77	.19	.19***	5.88
Step 3: All PPSI Subscales	.28	.06***	5.44	.25	.05***	6.87

Note. * $p \leq .05$; ** $p < .01$; *** $p < .001$

4.5 Discussion

The field of PCP has been developed to address both a longstanding imbalance within clinical psychology and a current lack of integration between the fields of clinical and positive psychology (Wood & Johnson, 2016; Wood & Tarrier, 2010). Clinical psychology has maintained a nearly exclusive focus on the amelioration of dysfunction. Although the field of positive psychology was developed as a counter to this, it has led to a discipline almost exclusively focused on the development of well-being for those who are functioning normally, or with relatively mild impairment, to the near exclusion of positive principles (Wood & Johnson, 2016). PCP makes an effort to draw equally and integratively from the vantage points of clinical and positive psychology in developing constructs and strategies that most effectively address suffering along the full spectrum of dysfunction (Johnson & Wood, 2016).

In line with the general focus of clinical psychology, numerous studies have shown the impact of negative parenting on children (e.g. Hasebe, Nucci, & Nucci, 2004; Pomerantz & Wang, 2009). It has only been more recently that research has begun to explore the processes and outcomes associated with positive parenting (Clark & Ladd, 2000; Dallaire et al., 2006). Somewhat surprisingly, these studies suggest that negative and positive parenting constructs are orthogonal, with each making its own unique contribution to a child's development (Dallaire et al., 2006; Keyfitz et al., 2013). This further underscores the need for inclusion of positive constructs, since their presence is not implied, as many have assumed, by the absence of negative constructs. Over the

past 70 years, positive parenting constructs in established instruments were generally centred on the dimensions of warmth and control. Although in later years, autonomy was further subdivided, only two to three positive constructs predominated. Rather than building on these, the development of the PPSI was based on a unique clinically based theoretical model from ST in which seven positive parenting constructs emerged to complement its counterpart, the YPI. Given the complexity of childhood development and variations in needs among children at different developmental phases, it seems likely that a model such as this that goes beyond the few broad dimensions, and provides a more complete and nuanced framework, would also help both therapists and parents.

The PPSI demonstrated construct validity with several other established parenting scales, with statistically significant moderate correlations. A moderate level of strength showed that although constructs were similar, they also measured different facets of the broader dimensions under consideration. For convergent validity, all of the scales of PPSI (Fathers) and PPSI (Mothers) correlated significantly and in the negative direction with three subscales of emotional distress (DASS-21) as well as with subscales measuring negative personality dispositions (PAQ). Most of the PPSI (Fathers) and PPSI (Mothers) also correlated positively with subscales measuring positive well-being (Ryff's Psychological Scale) and the positive trait of gratitude (GQ-6 scale). As expected, correlations were from low to moderate. Divergent validity was also demonstrated, for the most part, between subscales of PPSI (Fathers) and PPSI (Mothers) with subscales of YPI-R (Fathers) and YPI-R (Mothers), respectively, that correlated the highest with ones that correlated less strongly. The unique contribution of the PPSI, evident from the incremental validity test, was particularly pivotal, considering that the YPI-R with nine subscales was used, in addition to three other established parenting measures (s-EMBU, CTQ and PARQ). This also showed that the more nuanced PPSI subscales were able to measure statistically significant variance over and above that measured by the more broader parenting constructs from these established parenting measures. The now validated PPSI with seven subscales and 50 items can be used in tandem with the negative version of this scale, the YPI-R, to provide a means of measuring the full-spectrum of parenting behaviour, especially in clinical settings within ST.

Significant and meaningful correlations were also shown between positive schemas measured by the YPSQ and subscales of the PPSI for ratings of fathers and mothers in the USA sample. As with EMSs (Sheffield et al., 2005; Thimm, 2010), this association with EASs in adults suggests that past positive parenting patterns play a significant role. The findings from this study therefore provide preliminary support that healthy parenting patterns are associated with EASs. MGCFA analysis, considered the most powerful approach for testing invariance (Milfont & Fischer, 2010), showed invariance of the factor structure of the PPSI across Eastern and Western samples. This provided some support that schemas are universal (Young et al., 2003).

One limitation of this study is that the Realistic Expectations subscale had to be dropped. Based on clinical experience and relevance, it seems likely that this construct is an important one, so it is hoped that new and better items will be developed in future studies. Another limitation was that the incentive of providing free workshops for the participants may have drawn those that were curious about such matters, so generalisability of these results may be confined to this population. Further, the Autonomy Granting and Confidence and Competence subscales of PPSI, which only appeared robustly in the fathers scale (was weak in the mothers), have to be tested further to see if these constructs are, indeed, unique to fathers, or just in the samples used in this study. Also, although the sample size was large and most of the regression models were achieved with a conservative p value ($p < .001$), the non-normality of some of the data for the dependent variables in the regression analysis may have also been a limitation.

A measure of well-being is often thought of in terms of the reduction of unhealthy parent-child dynamics. While negative effects of unhealthy parenting patterns affects children in both Eastern and Western cultures (Hasebe et al., 2004; Pomerantz & Wang, 2009), results from this study showed that early positive parenting patterns, regardless of culture, are associated with positive outcomes that also carry into adulthood. Furthermore, results underscore that the absence of negative parenting patterns does not necessarily imply the presence of positive ones. The lack of positive patterns in families that are relatively void of negative ones can also inflict harm and impair healthy development, as seen by the correlations of the PPSI from this study with measures of emotional distress and well-being. These results show the need for positive parenting

patterns to be emphasised in families from both the West and the East. Many of the positive patterns that were identified in this study seem to transcend culture. Eastern cultures being less supportive of positive verbal expression and more supportive of silence than Western ones has often been viewed as culturally relative to the point that this practice could be seen as serving a child well in the East but not in the West. Although there may be ways in which this is true, from the vantage point of the measures used in this study, parenting that encourages affection, warmth, and openness, and that does not discourage freedom of expression, correlates positively to developmental outcomes in both cultures. Another important emphasis is the contribution made by fathers. For many years mothers were seen as the most crucial primary caregiver, and fathers took a back seat when it came to parenting. The need for fathers' involvement is an ongoing issue and has been the target for intervention by many initiatives. The results of this present study confirm that of others (e.g., Yogman et al., 2016) in underscoring the role of fathers, as subscales derived from the PPSI for the ratings of fathers correlated with psychopathology just as they did for mothers. This suggests that the role of fathers is as important as that of mothers. The PPSI scale is therefore an important step towards increasing the depth and breadth of our understanding of aspects of adaptive parenting that may prove to be universal and holds promise as a significant contribution to the repertoire of available positive parenting measures.

Chapter 5 –Psychometric Validation of the Young Parenting Inventory - Revised (YPI-R2): Replication and Extension of a Commonly Used Parenting Scale in Schema Therapy (ST) Research and Practice

5.1 Abstract

This study aimed at developing a revised validated version of the Young Parenting Inventory (YPI) known as YPI-R2. Phase 1 tested the factor structure of the YPI with 17 theoretical subscales, as well as that of a previously established one by Sheffield et al. (2005) with nine subscales, but these did not result in a good fit. An EFA was therefore conducted on a Singapore sample with ratings for fathers and mothers done separately (n = 582, 617), from which weak and robust factors of the YPI were identified. In Phase 2, an item pool of 204 items of the YPI was developed and a second EFA was conducted on a sample from Manila (n = 520, 538). This resulted in five factors for fathers and six for mothers. The 17 theoretical subscales were not supported. In Phase 3, validity tests with other established measures of past parenting experiences, personality disposition, emotional distress, psychological well-being and gratitude were conducted. The stringent incremental validity test showed that the YPI-R2 accounted for additional statistically significant variance over and above that contributed by gender and three other established parenting instruments in predicting clinically relevant outcomes. Invariance of its factor structure was demonstrated through MGCFA with an independent Eastern sample in Jakarta (n = 366, 383) and a Western sample from the USA (n = 204, 214). Finally, significant correlations with the 18 EMSs supported a central tenet of schema therapy that early negative parenting patterns are associated with EMSs.

Keywords: negative parenting; early maladaptive schemas; schema therapy; incremental validity

5.2 Introduction

ST evolved out of decades of clinical experience with helping patients overcome a broad range of deeply entrenched negative core beliefs known as EMSs (Taylor, Bee, & Haddock, 2017). It is rapidly evolving and attracting empirical tests, initially from within the clinical psychology community; these EMSs have been found to be associated with a variety of psychopathologies, including personality disorders such as BPD (Bamelis et al., 2014; Hawke et al., 2013; Sempertegui et al., 2013; Thimm, 2010; van Vreeswijk, Broersen, & Nadort, 2012). EMSs are broad, pervasive themes comprising emotions, cognitions, memories, bodily sensations, and distorted beliefs about one's self and others (Young et al., 2003). The theory underlying ST postulates that EMSs develop when the core emotional needs of a child are not met adequately through specific early negative parenting patterns of the caregivers (Lockwood & Perris, 2012; Young et al., 2003). This tenet of ST is supported by studies showing that EMSs are linked to early negative parenting experiences (Cecero et al., 2004; Fischer et al., 2016; Haugh et al., 2016; Lumley & Harkness, 2007; Simard et al., 2011; Wright et al., 2009). To date, 18 EMSs have been identified (Young, 2005); their hypothesised relationships with early parenting patterns and core emotional needs are shown in Appendix B (Lockwood & Perris, 2012).

The degree and pervasiveness of these unmet needs, in interaction with secondary factors such as quality of the parents' marriage, culture, and a child's own temperament (Louis & Louis, 2015; Young et al., 2003), determine the severity and strength of these EMSs. For example, a child whose need for warmth, affection and understanding (a specific need within the Connection and Acceptance category) is not adequately met through a nurturing caregiver, is likely to develop, among other EMSs, an EMS labelled Emotional Deprivation (Sheffield et al., 2005). This child would likely be more prone to experience sadness, depression, anxiety, and/or anger and to cope with this deprivation and associated emotional pain by passively submitting to the mistreatment, fighting back against it, numbing or disconnecting from people and the painful feelings, or a combination of all of these responses. These three main types of coping strategies end up perpetuating EMSs. Usually several EMSs are involved in clinical disorders and, in the case of BPD, almost all of them. ST's core theory is that these disorders can be successfully treated through, among other things, identifying the associated EMSs,

as well as understanding the early negative parenting patterns. These early patterns, which had thwarted their core emotional needs from being met, can now be explored and corrected within the therapeutic relationship, and eventually, with the significant people in their lives (Hawke et al., 2013; Young et al., 2003).

Since recollections of early negative childhood experiences are central to the healing process in ST (Young et al., 2003), it is essential for clinicians to have a validated instrument measuring early patterns of parenting that revolve around core emotional needs (Appendix B). To address this issue, Young et al. (2003) developed the Young Parenting Inventory (YPI). The development of this measure was based on the hypothesis that each EMS measured by the Young Schema Questionnaire (YSQ; Young & Brown, 1990) corresponds to a negative pattern of parenting (measured by a subscale in the YPI; see Appendix B) that led to a specific core emotional need not being met. Therefore, each EMS measured in the YSQ scale can be mapped one-to-one with its corresponding pattern of negative parenting measured in the YPI scale. To date, 18 EMSs (in the latest version of the YSQ, the YSQ-S3) have been identified, but the hypothesised negative parenting pattern associated with the EMS of Social Isolation was not included in the YPI by Young et al. (2003) due to the belief that Social Isolation EMS was primarily attributable to external environmental factors rather than negative parenting experiences. Therefore, according to Young et al. (2003), there are 17 negative parenting patterns, each believed to be associated to the development of a specific EMS in the YSQ-S3. However, the results from Sheffield et al. (2005) did not support this one-to-one mapping of the 17 subscales, finding that the factor structure from the YPI consisted of only nine factors. The aim of this replication paper is to test whether the hypothesis of Young et al. (2003) of the 17 one-on-one mapping or the nine factor model from Sheffield et al. (2005) can be supported, and if not, to develop a new factor structure that will stand up to full psychometric scrutiny in both Eastern and Western cultures. This replication is important given the emerging use of this scale in ST practice and personality research; as predictions from these fields are tested, such tests must be based on psychometrically reliable and valid measurements.

Several other measures for the assessment of past parenting patterns are widely utilised outside ST. The s-EMBU (Swedish acronym for “My memories of upbringing”; Perris, Jacobsson, Lindstrom, von Knorring, & Perris, 1980) is one of the most widely used

and has a strong base of empirical support. These patterns have consistently been grouped into three main subscales on the basis of factor analyses of the s-EMBU. The subscales are named Rejection, Emotional Warmth, and Overprotection. Similarly, the adult version of the Parental Acceptance-Rejection Questionnaire (PARQ; Rohner & Khaleque, 2005) has four subscales; the Parental Authority Questionnaire (Buri, 1991) has three subscales; and the Childhood Trauma Questionnaire (CTQ; Bernstein et al., 1994) has five subscales. While these broad parenting constructs have proven to be extremely valuable, it is possible that, based on the distinctions that form the basis of clinical work in ST, parenting constructs can be more precisely delineated. For example, a construct referring to "rejection" is commonly found in these established subscales. However, rejection from the vantage point of the framework of parenting patterns that failed to meet the core emotional needs, as outlined in Appendix B, could be linked to several different parenting patterns. Thus, a child may feel rejected due to a parent not supporting age-appropriate autonomy, criticising the child for not living up to academic standards, punishing a child whenever s/he made a mistake, or being absent and inattentive. If these kinds of distinctions prove to have an empirical basis, this will be an important step towards identifying more specific forms of negative parenting patterns which, in turn, will provide a better base for exploring the links between specific parenting patterns and EMSs. It is also likely to lead to an increase in therapeutic leverage and provide a more effective guide for training parents about how they may inadvertently convey a broader theme such as rejection to children.

5.21 Overview of the YPI

The YPI was developed to assess parenting patterns that are hypothesised to lead to the development of EMSs. Rather than the three to five subscales from other established parenting instruments, it hypothesised 17 such subscales, each linked to an EMS measured by the YSQ (see Appendix B). Even if half of these hypothesised subscales can form a reliable factor structure, it would still contain more negative parenting constructs than are found in these other established parenting instruments. This would suggest that the clinical base from which the YPI item pool is derived is providing a more nuanced and potentially broader window into the universe of early toxic parenting patterns, and that by using EMSs, ST can potentially provide a clear vantage point to explore them.

While the YPI has the potential to reveal more negative parenting patterns than other established instruments, only preliminary validation of this instrument was demonstrated by Sheffield et al. (2005). Although this investigation was a significant step forward, it had several important limitations. First, the critical decision of how many factors to extract from the YPI items was based on those with eigenvalues >1.0 rather than PA, which has been shown to more correctly and robustly identify factor structure (Zwick & Velicer, 1986). Second, the factor structure was never replicated on another independent sample, or tested through CFA. Third, the ability of factor analyses to detect valid and reliable factors depends on the initial item pool having enough good quality items to allow a potential factor to emerge (Clark & Watson, 1995). Unlike the related YSQ, which began with 205 items (Hoffart et al., 2005; Schmidt et al., 1995) and was then shortened as the scale was refined into the latest version (YSQ-S3) comprising 90 items, the YPI began and ended with the same number of items and never went through a process of scale refinement. Given these reasons there is high risk that the factor structure will not replicate, nor will the evidence of reliability and validity. The only other study that investigated the factor structure of the YPI was a European study that found seven subscales (This study was not translated into English except for the abstract; Slenders, 2014). This is a danger to the emerging research area, as this scale is being used, and research is being conducted globally, with the assumption that all 17 YPI subscales have been validated (e.g. India: Nia, Sovani, & Forooshani, 2014; Iran: Jalali, Zagar, Salavati, & Kakavand, 2011; Palestine: Alfasfos, 2009). Furthermore, a study in Turkey assumed 10 factors (Koruk, Ozturk, & Kara, 2016) without explanation, and a study in Brazil removed 23 items (Valentini, Alchieri, & Laros, 2013) without any empirical support. Such ongoing research raises further concern about whether the properties of the YPI will replicate across cultures.

One probable reason why the factor structure of the YPI has been assumed to be 17 is due to the theoretical assumption of ST of the one-to-one correspondence between the subscales making up the YPI and the YSQ-S3 subscales measuring the 17 EMSs, because each EMS is assumed to emerge from a negative parenting style. This assumption possibly demotivated a more thorough development of the YPI and, as a result, the factor structure upon which the YPI should be based was never properly developed and established. Further, the early negative parenting pattern associated with

the EMS of Social Isolation/Alienation was not included in the YPI subscales because it was not believed to be a result of early interactions with parents but, rather, of later outside-family experiences during adolescence (Young et al., 2003). This was, however, something that should have been shown empirically rather than just assumed.

5.22 The Present Research

This paper comprises three phases that attempt to replicate Young et al's (2003) hypothesised 17-factor model, as well as Sheffield et al. (2005) nine-factor model, labelled as YPI-R, and in finding them to be inadequate, revises the YPI from the item development stage onwards in line with established psychometric principles (Wood & Boyce, in press). In Phase 1 the aim was to investigate the factor structure of the YPI, using PA in determining the number of factors to be retained. A reliable factor structure was identified, but one that neither replicated Sheffield et al. (2005) nor conformed to the theoretical model of Young et al. (2003). The factor structure consisted of both strong and weak subscales, with the latter defined by lower-loading items of two or less. To determine whether the failure to replicate emerged from a small item pool, new items were developed by an experienced team. Phase 2 developed a new, shorter revised scale of the YPI, known as YPI-R2, which represents the core EMS-related parenting styles. In Phase 3 this new factor structure was established and tested on both an Eastern and Western sample. The scale also demonstrated convergent, divergent, construct validity and incremental validity above other parenting scales in predicting clinically relevant outcomes. For evidence of construct validity, established parenting subscales were compared with those of YPI-R2. Positive correlations of moderate strength (r = .3 to .6) were expected between subscales from these established measures of negative parenting patterns with subscales of the YPI-R2 that shared similar constructs. For example, subscales that measure various facets of Rejection would have the highest positive correlations with a subscale of the YPI-R2 that most represents this construct. Likewise, the positive construct of Warmth from other established parenting scales was expected to correlate the highest but negatively with the most nonconcordant construct of Warmth in the YPI-R2. For convergent validity, since studies have shown that the quality of relationship between parents and child shape their personality development, and is linked to emotional distress and psychological well-being over time, we expected positive correlations of moderate strength between subscales of YPI-R2 with negative personality dispositions and emotional distress (Arrindell et al., 1999;

Lazarus et al., 2016; Rohner & Khaleque, 2005; Thimm, 2010). Conversely, we expected negative correlations of the same strength with the positive measures gratitude and psychological well-being (Lavasani et al., 2011; Lo et al., 2017).

Divergent validity was tested based on the a priori assumption that the subscales of the YPI-R2 that were less concordant with subscales of other established parenting measures would be less strongly correlated (since they are capturing a less common construct) than those that were more so. The YPI-R2 was also subjected to a test of incremental validity in order to show that this newly developed scale was not yet another addition to the proliferation of negative parenting scales that measure the same constructs, but that it would contribute uniquely and separately to the prediction of psychological well-being, emotional distress, personality disposition, and positive traits, above and beyond what can be predicted by these other established parenting scales. Finally, this scale also showed convergent validity through statistically significant associations with EMSs, lending support for the tenet of ST that negative parenting patterns are associated with the development of EMSs. Out of failure to support the expected 17- and nine-factor structure, a unique new scale emerges for use within ST practice.

5.3 Method

5.31 Samples

Nonclinical community samples made up of English speaking singles, students, and parents were drawn from a pool of volunteers from NGOs located in three Southeast Asian cities (Eastern samples); Singapore, Manila (Philippines), Jakarta (Indonesia), as well as from three cities in the East coast of the United States (Western sample); Fairfax and Stafford located in Northern Virginia, and Manchester located in New Hampshire. These NGOs were part of an international charity headquartered in the USA, and approval was obtained by the ethics committee of each NGO, and by the Stirling Management School ethics committee. Ethical considerations were in accordance with the British Psychological Society. The purpose of the research, the voluntary nature of their involvement and other information were sent to all participants via email, by distribution of hard copies, as well as online invitations through advertisements in their websites. Invitations to take part were also sent to other organisations in these cities, whereby volunteers were encouraged to reach out to

friends. As a result, samples were drawn from populations consisting of professionals, students, and parents. Workshops on the effects of past parenting behaviour and the development of schemas were conducted without charge as incentive for all participants. No volunteers from this NGO in any city were excluded because of race, colour or religion. The only types of participants that were excluded were those below 18 years of age and those who did not have an adequate command of the English language. Sufficient grasp of the English language was determined by both polling members of the respective groups and the lead researcher's familiarity with the leaders of these respective groups and their familiarity with the members of the respective NGOs. The mean age of the Singapore sample was 36.99 years (*SD* = 7.87); of the Manila sample, 43.48 years (*SD* = 17.48); the Jakarta sample, 38.28 years (*SD* = 15.95); and the USA sample, 37.85 years (*SD* = 13.20). Analyses for fathers and mothers were conducted separately, for which the values of *n* were as follows: Singapore ratings of fathers (*n* = 582) and mothers (*n* = 617); Manila ratings of fathers (*n* = 520) and mothers (*n* = 538); Jakarta ratings of fathers (*n* = 366) and mothers (*n* = 383) and; USA ratings of fathers (*n* = 204) and mothers (*n* = 214). The demographic characteristics of these samples are presented in Table 2.3.

5.32 Instruments

YPI. The properties of the YPI and the preliminary psychometric validation of the nine subscales that had emerged from Sheffield et al (2005) are described in Chapter 1, Section 1.11. The goodness of fit of Young's 17-factor model as well as this nine-factor model was investigated in this study.

YSQ-S3. The psychometric properties of the YSQ-S3 are also described in Chapter 1, Section 1.11. It was expected that the convergent validity of the final YPI-R2 (Fathers) and YPI-R2 (Mothers) subscales would be demonstrated through positive correlations with the YSQ-S3 subscales, with positive correlations ranging from *r* = .20 to .40, since similar results had emerged between EMSs and a parenting scale in a study by Thimm (2010).

Convergent validity of the YPI-R2 (Fathers) and YPI-R2 (Mothers) was expected to be demonstrated using the PAQ, Ryff's scale of Psychological Well-Being, DASS-21, and the GQ-6. These are the same measures used in Study 2, and their respective psychometric properties are described in Chapter 4, Section 4.33.

Construct validity of the YPI-R2 (Fathers) and YPI-R2 (Mothers) was expected to be demonstrated using s-EMBU, PARQ, and CTQ, which were also the same measures used in Study 2, and their respective psychometric properties are likewise described in Chapter 4, Section 4.33. Divergent validity was expected to be shown by subscales of the YPI-R2 (Fathers) and YPI-R2 (Mothers) with subscales of the s-EMBU instrument.

For demonstration of incremental validity, the YPI-R2 (Fathers) and YPI-R2 (Mothers) was used to measure additional variance over and above that predicted by the three parenting scales used in this study, namely the s-EMBU, CTQ, and PARQ scales.

5.4 Procedures and Statistical Analyses

IBM SPSS Statistics 23 (IBM Corp, 2015) was used to conduct EFA, compute Pearson's correlations and Cronbach's alpha reliability values, and run hierarchical regression analyses. A missing data analysis was initially carried out using Little's Missing Completely at Random test (MCAR; Little, 1988) to see if missing patterns were at random. A robustness check was carried out on the analysis based on ratings of the fathers to determine the impact of missing values on the data. Three methods were employed to investigate this – Exclude case pairwise feature in SPSS, replacing missing data with the mean value, and Multiple Imputation, using the 5th imputed data set. If no differences emerged from the factor structure from all three methods, then the mean of all responses from other subjects was used to impute the missing values.

Initially, a CFA was conducted to test the goodness of fit of the 17-factor model of Young's (Young et al., 2003) hypothesis, as well as the nine-factor model from Sheffield et al. (2005). If these factor structures could not be replicated in this sample, an EFA using PAF was to be conducted to investigate its factor structure. The suitability of the sample data for EFA was determined using the KMO and Bartlett's test of Sphericity. The number of factors to be extracted from the data was determined using PA, because this method is more accurate at detecting the true number of factors in data than other commonly used methods (Zwick & Velicer, 1986). Based on a recommendation by Tabachnick and Fidell (2007; 2012), we determined to use an oblique method (promax) rather than an orthogonal rotation if values of the factor correlations matrix were .32 and above. Factor correlations were also inspected to see if there was an overlap between factors. The item selection criteria used to select the most

robust items to form the shorter form of YPI-R2 were as follows: Items with factor loadings < .40 were dropped (Floyd & Widaman, 1995; Pallant, 2013). Items that had the highest loading were given priority (Arrindell et al., 1999). Based on recommendation by Floyd and Widaman (1995), three to eight items per subscale were selected in order to make it easier for factor structures to be confirmed with CFA. From the EFA results in Phase 2, items with high item-to-item correlations were also removed to ensure that fit indices values were not compromised in subsequent CFA in Phase 3. For Cronbach's alpha reliability values, according to Clark and Watson (1995), only subscales with values above .60 can be viewed as adequate.

M*Plus* version 8 software (Muthén & Muthén, 2017), using Weighted Least-Squares Mean and Variance (WLSMV) adjusted estimations, was used to conduct a CFA, since we modelled these data to account for the ordered-categorical nature of the response scales (Wirth & Edwards, 2007). These analyses followed the guidelines in which a close fit is indicated by $X^2/df < 4$ (Kline, 2005; Wan, 2002); a reasonable fit by 0.06 <RMSEA <0.08, a mediocre fit by 0.08 <RMSEA <0.10, and an unacceptable fit by RMSEA >0.10 (Browne & Cudeck, 1993); and, CFI and TLI by values ≥ .95 for a good fit and ≥ .90 for an adequate fit (Hu & Bentler, 1999). Each model under examination needed to be further evaluated for acceptable fit based on prior findings. Floyd and Widaman (1995) found that scales with high numbers of items and factors generally lead to a poorer fit. This was evident from three studies; Bach et al., (2017), Baranoff et al., (2006), and Kriston et al., (2013), where the YSQ-S3 (90 items) were subjected to CFA, in which the CFI obtained was below the .9 threshold with values of .84, .87, and .85, respectively (the values of X^2/df and RMSEA in these studies were above the recommended minimum threshold). Thus more relaxed values for indices may be considered an acceptable fit for such scales; for example, a value for CFI and TLI that is slightly less than .90 can be viewed as a moderate fit in studies with a large number of items. Equally, for scales with a small number of items, it would be appropriate to adopt more stringent fit criteria (Floyd & Widaman, 1995). Given the number of factors and items, we determined a priori to accept the lower bound of fit values as well fitting in the context. For MGCFA the following measurements of invariance (Milfont & Fischer, 2010) were used for the two independent samples (Jakarta and USA): (1) configural invariance (same factor structure across groups); (2) metric invariance (same factor loadings across groups); (3) scalar invariance (same item intercepts across

groups); (4) error invariance (same error variance across groups); (5) factor variance invariance (same factor variance across groups); (6) factor covariance (same factor covariance across groups), and (7) factor mean invariance (same factor mean across groups). The above seven models address full measurement invariance because each of the above components should be equal in both independent samples (Jakarta and USA). Byrne, Shavelson, and Muthén (1989) introduced the concept of partial invariance, and for this to be achieved, according to Vandenberg and Lance (2000), at least configural and metric invariance need to be established.

Construct and convergent validity were assessed on the Manila sample in Phase 3 using Pearson's correlations. We adopted conventional guidelines as to what is considered a small (r = .10), medium (r = .30), and large effect size (r = .50; Cohen, 1992). Rules of thumb were developed for conventional effect sizes for zero-order correlations on the assumption that the relationships would be confounded at least somewhat by third variables; hence effect sizes had to be of a certain magnitude to be considered meaningful. To test divergent validity, we chose the s-EMBU scale as comparison, because it has three varied constructs (Rejection, Warmth and Overprotection) as opposed to the CTQ with only two broad constructs (Emotional and Physical Neglect, and Abuse) each being somewhat concordant, or the PARQ, again, with only two broad constructs (Acceptance and Rejection). The z-test proposed by Steiger (1980) was used to show, as evidence for divergent validity, that differences in correlations between most concordant subscales in the YPI-R2 and s-EMBU were statistically and significantly higher than differences in correlations with less concordant subscales of both measures.

Finally, incremental validity was determined using hierarchical multiple regression with guidelines from Hunsley and Meyer (2003) who emphasised that rules of thumb (in this case for effect sizes) must be used relative to the context. With good tests of incremental validity, much of the third variable's effect has been removed. Hence, a minimum of 2.25% (equivalent to r = .15) should be considered a "reasonable contribution" (Hunsley & Meyer, 2003, pp. 451) and must be achieved from the second to third step of a regression analysis. One of the conditions for regression analysis is that the distribution of data of the dependent variables has to be normal, although both CFA and EFA appear to be robust against violations of this requirement (Floyd &

Widaman, 1995) if sample size is ≥ 200 (Tabachnick & Fidell, 2012), which was the case in this study. The normality of the distribution was confirmed by inspecting values of kurtosis and skewness. According to Hair et al. (2010) and Byrne (2010), data for the dependent variables can be considered to be normal if skewness is between -2 to +2 and kurtosis is between -7 to +7.

5.5 Results

5.51 Missing Data

For the Singapore, Manila, Jakarta and USA samples, the percentage of missing data was very low: for ratings of fathers, Singapore = .012%, Manila = .63%, Jakarta = .85%, USA = .10%; ratings of mothers, Singapore = .02%, Manila = .67%, Jakarta = 3.27%, USA = .09%. Results from a MCAR test for ratings of fathers: Singapore, Chi-Square = 193.37, DF = 284, p = 1.00; Manila, Chi-Square = 86423.57, DF = 84668, p = .00; Jakarta, Chi Square = 55811.28, DF = 60342, p =1.00; USA, Chi-square = 2862.74, DF = 2911, p = .74. For ratings of mothers: Singapore, Chi-Square = 664.18, DF = 639, p = .24, Manila, Chi-Square = 99601.58, DF = 97712, p = .00; Jakarta, Chi Square = 66412.72, DF = 68973, p =1.00; USA, Chi-square = 2500.18, DF = 2619, p = .95. These patterns of missing data were random except for the Manila sample. However, no variables had an unusually high number of missing values in comparison to the rest. All three methods for imputing missing data (see Section 5.4, Procedures and Statistical Analyses) yielded almost identical EFA results using the Manila ratings of fathers sample, with the same 14 factors (as suggested by PA) and almost the same items under each factor, showing that the impact of missing data was negligible. As a result, the average value of all responses from other subjects was chosen to impute the missing values in all the samples.

5.52 Phase 1 Confirmatory Factor Analysis and Exploratory Factor Analysis of the YPI

A CFA was conducted to test the goodness of fit of the 17-factor model of Young's hypothesis (Young et al., 2003), as well as the nine-factor model from Sheffield et al. (2005). For Fathers, χ^2= 14993.9, df = 2348, p <0.001, χ^2/df = 6.386, RMSEA = 0.096, CFI = 0.668, TLI = 0.639; For Mothers, χ^2= 2348.17, df = 2348, p <0.001, χ^2/df = 5.549, RMSEA = 0.086, CFI = 0.731, TLI = 0.707). For the Sheffield et al. (2005) nine-factor model, the CFA indices were: for Fathers, χ^2= 5645.53, df = 593, p <0.001, χ^2/df

= 9.520, RMSEA = 0.121, CFI = 0.697, TLI = 0.660; For Mothers, χ^2= 4695.51, *df* = 593, p <0.001, χ^2/df = 7.918, RMSEA = 0.106, CFI = 0.768, TLI = 0.739. Since neither factor structures could be replicated, an EFA was conducted. For the ratings of the fathers, the KMO index was .94, and Bartlett's test of Sphericity was statistically significant, χ^2 (2556, n = 582) = 22500.69, p < .001, showing that two basic assumptions of factor analysis were met. Similarly, for the ratings of the mothers, the KMO index was .94, and Bartlett's test of Sphericity was statistically significant, χ^2 (2556, n = 617) = 23710.89, p < .001, again showing the suitability of factor analysis. PAF with oblique (promax) rotation was used, since many values in the factor correlation matrix were greater than .32 (Tabachnick & Fidell, 2007). PA recommended 13 factors to be extracted from both the father and mother samples. For the fathers, this accounted for 52.29% of total variance. The 10th factor had two items but one of them cross loaded heavily (>.30) with another more robust factor; the 11th factor had only one item; the 12th factor had two items that cross loaded heavily with another more robust factor; the 13th factor had no items that loaded more than .40. Thus these four factors were rejected, leaving only nine factors in the ratings of the fathers that could be considered for further analysis. For the mother sample, 13 factors accounted for 51.64% of the total variance. The 11th factor had two items, both of which shared very similar constructs with a more robust factor; the 12th factor had only one item; the13th factor had no items at all with factor loadings more than .40. As a result these three factors were rejected, and only 10 factors were considered for further analysis. The average factor correlations were .23 and .26 for ratings of fathers and mothers, respectively.

Based on the item selection criteria (see Section 5.4, Procedures and Statistical Analyses), six factors were considered weak because their Cronbach's Alpha values were below .60 (Clark & Watson, 1995) and/or because they had fewer than three items with loadings > .40 (Floyd & Widaman, 1995). These were labelled Pessimism (father and mother), Undependability and Irresponsibility (mother), Fear of Harm and Illness (father and mother), Overindulgence (mother), Unstable (father), and Dependent and Worrisome (mother). Four robust subscales were common to both the ratings of the fathers and those of the mothers: Competitiveness and Status Seeking, Emotional Inhibition and Deprivation, Degradation and Rejection, and Overprotection. Two additional robust subscales from just the ratings of the fathers were Undependability and Irresponsibility, and Overindulgence; and one additional scale, labelled

Punitiveness, was unique to ratings of the mothers. These robust subscales had reliability values that ranged from .70 to .92.

Thus in Phase 1, the factor structure of Young's 17-factor model (Young et al., 2003), as well as the nine-factor model from Sheffield et al. (2005), could not be replicated. This justified conducting an EFA of the YPI, yet results did not yield a robust factor structure, as there were six weak factors. Therefore, Phase 2 had two aims. The first was to expand the YPI item pool with new items to strengthen the weaker subscales from Phase 1, augment the stronger subscales, and measure the one missing subscale (Social Isolation). The second was to refine this initial item pool through factor analytical work, followed by an item selection process (see Section 5.4, Procedures and Statistical Analyses) of the most robust items for each subscale (Arrindell et al., 1999; Floyd & Widaman, 1995), as emerging scales should contain only the most representative items.

5.53 Phase 2 Initial Item Pool Development

To develop a larger initial item pool of the YPI, a competent team of four individuals was formed, each an expert in his field. The first (based in the US) was a highly experienced schema therapist who collaborated with Young over several decades in the development of ST. The second (based in Singapore) was another schema therapist who wrote a book on parenting, and the third (based in the Australia) was a Professor (Chair) of Psychology who had previously published on the YSQ and related research. The fourth (based in the UK) was a Professor (Chair) of Psychology with over 100 published papers on well-being and related topics (including scale development). The first three of the four are members of the ISST. Two had held board positions in the ISST, whilst the fourth was fully independent and prior to this project had no knowledge of ST or the underlying theory (although he is an expert in other therapeutic approaches that were antecedent to ST). The process of development included forming consensus, which took about one month. Through this process, an initial item pool of 204 negative parenting items (72 items from the original YPI, and 132 new items) representing 18 EMSs were formed, including those representing the EMS of Social Isolation. Each item followed the same Likert scale as in the original YPI. Item examples for the construct of Social Isolation are, "Was (seemed to be) jealous of my friends"; "Discouraged me from inviting friends to our house".

5.54 Phase 2 Exploratory Factor Analysis of Initial Item Pool of the YPI

EFA was performed on the Manila data for the father and mother samples separately. For the ratings of the fathers, the KMO index was .92, and Bartlett's test of Sphericity was statistically significant, χ^2 (20706, n = 520) = 59483.38, $p < .001$. For the ratings of the mothers, the KMO index was .92, and Bartlett's test of Sphericity was statistically significant, χ^2 (20706, n = 538) = 59045.18, $p < .001$. Therefore, data from both samples were suitable for factor analysis. Results of PA and EFA of the ratings of fathers using the oblique (promax) rotation produced a 14-factor solution that accounted for 39.46% of the total variability. Out of the 14 factors, five had only 1 or 2 items. One factor had three items, but these items represented very similar constructs as another more robust factor. Therefore, six factors were removed, leaving eight factors for further analysis. The PA and EFA for the ratings of mothers produced a 13-factor solution that accounted for 37.67% of the total variability. Of these, five factors had two or fewer items. These five factors were rejected, leaving eight factors for further analysis. When results for ratings of fathers and mothers were compared, each had eight factors; six were common factors (Degradation and Rejection, Competitiveness and Status Seeking, Emotional Inhibition and Deprivation, Overprotection and Overindulgence, Punitiveness, and Undependability and Irresponsibility). Two additional factors were unique to the fathers (Dependency and Social Isolation, and Intrusiveness and Exploitation), and two to mothers (Fear of Harm and Illness, and Controlling; see Appendix N for EFA results with cut off points of >.4). Before this factor structure could be tested for goodness of fit on the Jakarta sample, the Cronbach's alpha reliability values for these eight factors were tested on both the Manila and Jakarta samples. All subscales had values > .6 except for two subscales in the Jakarta sample: Intrusiveness and Exploitation for the fathers, and Undependability and Irresponsibility for the mothers, which were .55 and .54, respectively, both below the .6 mark. Both these subscales were therefore rejected, leaving seven subscales for ratings of fathers and mothers. Factor correlations were mostly low to moderate, and the highest in both samples were .60 and .64 for ratings of fathers and mothers, respectively, indicating absence of overlap between factors (Clark & Watson, 1995; see Appendix O & Appendix P) or problems associated with multicollinearity. The average factor correlation was .32 and .35 for ratings of fathers and mothers, respectively. Thus in Phase 2, seven robust factors emerged from the initial item pool of 204 items for

ratings of both fathers and mothers; in Phase 3, this factor structure was tested using CFA with an independent sample from Jakarta.

5.55 Phase 3 Confirmatory Factor Analysis and Psychometric Testing

The seven factors for the ratings of the fathers that were tested on the Jakarta sample did not secure the minimum CFA fit indices values. As such, items from the EFA with high item-to-item correlations that were statistically significant were also identified, 12 such items (labelled "R") for the ratings of fathers and three for the mothers, as shown in Appendix N. These items caused correlated measurement errors and problems in obtaining an adequate fit in the CFA (Floyd & Widaman, 1995; Netemeyer, Bearden & Sharma, 2003) and were therefore removed. While removing these items improved the fit indices, the values of the CFA fit indices were still not within the minimum cut off values for a good fit. Therefore, the factor structure was further modified by the removal of one subscale at a time until adequate fit index values were secured. The CFA process was therefore used as a tool not just to confirm a factor structure but also to trim items from a scale, as recommended by Netemeyer et al. (2003). For ratings of fathers, three factors with generally the lowest loadings were targeted for removal – Intrusiveness and Exploitation, Undependability and Irresponsibility, and Dependency and Alienation. For ratings of mothers, three factors were targeted for removal – Undependability and Irresponsibility, Fear of Harm and Illness, and Controlling (see factor loadings in Appendix N). For ratings of fathers, adequate fit indices were obtained from a model with five subscales and 20 items. Likewise for the ratings of the mothers, an adequate fit was obtained from a model with six subscales and 33 items (see Table 5.1). Both Young's theoretical 17-factor model (Young et al., 2003) and Sheffield's nine-factor model (Sheffield et al., 2005) were tested again on this Jakarta sample as a reference point for the other more robust models under consideration. Not surprisingly, a poor fit resulted, as it did in Phase 1. The items selected for the ratings of fathers and mothers to form the final shorter version known as YPI-R2 (Fathers) and YPI-R2 (Mothers) and were marked "✓" as indicated in Appendix N. Both these factor structures were then tested on another independent sample, USA, when it became available at a later time, and again, a reasonable fit was obtained (YPI-R2 (Fathers) USA, $\chi^2 = 311.71$, $df = 160$, $\chi^2/df = 1.95$, RMSEA = .068 [0.057, 0.079], CFI = .94, TLI = .93; and YPI-R2 (Mothers) USA, $\chi^2 = 941.34$, $df = 480$, $\chi^2/df = 1.96$, RMSEA = .067 [0.061, 0.073], CFI = .93, TLI = .92). MGCFA of these reduced models for fathers and

mothers was then conducted on the Jakarta (Eastern) and USA (Western) samples, and partial invariance (Configural, and Metric; Milfont & Fischer, 2011) was demonstrated by both the ratings of fathers and mothers (see Table 5.2). Thus new factor structures, known as YPI-R2 (Fathers) and YPI-R2 (Mothers), were established, with five subscales common to both scales (Degradation and Rejection, Competitiveness and Status Seeking, Emotional Inhibition and Deprivation, Overprotection and Overindulgence, and Punitiveness). The additional subscale that had emerged only from the ratings of mothers was Controlling (see Appendix N). The reliability values of these subscales for the ratings of fathers and mothers in all three samples (Manila, Jakarta and USA) exceeded the value of .60. The reliability, mean and SD values for YPI-R2 (Fathers) and YPI-R2 (Mothers) from all three samples are shown in Appendix Q. These two scales were then subjected to psychometric scrutiny using the Manila sample that was used for EFA in Phase 2, and from which the factor structure was originally derived.

5.56 Construct Validity

The average statistically significant correlation values of the YPI-R2 (ratings of fathers and mothers combined) with the s-EMBU, CTQ and PARQ were .33, .31, and .36, respectively. Specifically, the subscales of YPI-R2 (Fathers) and YPI-R2 (Mothers) correlated significantly with the closest theoretically linked construct of the other parenting subscales (see Table 5.3). For example, the Degradation and Rejection of the YPI-R2 correlated the highest in moderate strength with Rejection subscale of the s-EMBU. All subscales of the CTQ contained facets of Abuse and Neglect, while all the PARQ subscales contained facets of Acceptance-Rejection constructs. Not surprisingly, their highest correlation in moderate strength was also with YPI-R of Degradation and Rejection, and Punitiveness. Similarly, the YPI-R2 for Emotional Inhibition and Deprivation correlated the highest with the subscale for Warmth (negative direction) of the s-EMBU, Emotional Abuse (mothers), and Emotional Neglect of the CTQ, Warmth, and Indifference / Neglect (score reversed) of the PARQ. The Controlling subscale of the YPI-R2 also correlated mostly with the s-EMBU subscales of Rejection, and Overprotection. Other meaningful and moderate correlations were seen with subscales of YPI-R2 and these parenting instruments, thereby demonstrating construct validity.

Table 5.1

Comparison of Fit Indices of Various Models Using Jakarta Sample (Fathers, n = 366; Mothers, n = 383)

Sample/model	χ^2	*df*	*p*	χ^2/df	CFI	TLI	RMSEA
Fathers							
Young's model	6290.46	2348	<0.001	2.68	0.68	0.65	0.07
Sheffield	1924.02	593	<0.001	3.24	0.77	0.75	0.08
7 factors Removal of Intrusiveness and Exploitation only	798.78	329	<0.001	2.43	0.87	0.85	0.06
6 Factors - Removal of Intrusiveness and Exploitation and Undependability and Irresponsibility	617.05	237	<0.001	2.60	0.89	0.87	0.07
6 Factors - Removal of Intrusiveness and Exploitation, and Dependency and Alienation	555.17	237	<0.001	2.34	0.90	0.88	0.06
5 factors - Removal of Dependency and Alienation, Intrusiveness and Exploitation, and Undependability and Irresponsibility	387.83	160	<0.001	2.42	0.92	0.90	0.06
Mothers							
Young's model	5191.38	2348	<0.001	2.21	0.78	0.77	0.06
Sheffield	1881.43	593	<0.001	3.17	0.80	0.78	0.08
7 factors - Removal of Undependability and Irresponsibility only	1587.93	644	<0.001	2.47	0.89	0.88	0.06
6 factors - Removal Undependability and Irresponsibility, and Controlling	1321.95	512	<0.001	2.58	0.88	0.87	0.06
6 factors - Removal Undependability and Irresponsibility, and Fear of Harm and Illness	1278.39	480	<0.001	2.66	0.90	0.89	0.07
5 factors (only strong scales) without Undependability and Irresponsibility, Controlling, and Fear of Harm and Illness	1024.85	367	<0.001	2.79	0.90	0.89	0.07

Table 5.2

Fit Indices from Multigroup CFA for YPI-R2 (Fathers) and YPI-R2 (Mothers) Using Jakarta (n = 366, 383) and USA (n = 204, 214) Samples

Model	Number of parameters	χ^2 ($\Delta\chi^2$)*	*df* (Δdf)*	*p*	χ^2/df	CFI (ΔCFI)	TLI (ΔTLI)	RMSEA [90% CI] (ΔRMSEA)	Comparison	Decision
Fathers (5 factors 20 items)										
Configural invariance	260	714.31	320	(<.001)	2.23	0.93	0.91	0.066 [0.059, 0.072]	-	Accepted
Metric invariance	245	794.41 (104.37)	335 (15)	(<.001) (<.001)	2.37	0.91 (0.012)	0.90 (0.009)	0.069 [0.063, 0.076] (0.003)	Configural vs. Metric	Accepted
Scalar invariance	170	1156.33 (456.56)	410 (75)	(<.001) (<.001)	2.82	0.86 (0.054)	0.87 (0.032)	0.080 [0.075, 0.085] (0.011)	Metric vs. Scalar	Rejected
Mothers (6 factors 33 items)										
Configural invariance	426	2206.88	960	(<.001)	2.30	0.92	0.91	0.066 [0.062, 0.070]	-	Accepted
Metric invariance	399	2414.06 (281.79)	987 (27)	(<.001) (<.001)	2.45	0.90 (0.013)	0.90 (0.010)	0.070 [0.066, 0.073] (0.001)	Configural vs. Metric	Accepted
Scalar invariance	273	3036.51 (870.24)	1113 (126)	(<.001) (<.001)	2.73	0.87 (0.035)	0.88 (0.021)	0.076 [0.073, 0.079] (0.006)	Metric vs. Scalar	Rejected
Acceptance criteria for indices (differences)						>0.9 (<0.01)	>0.9 (<0.01)	<0.06 (<0.015)		

Note. *The chi-square difference test results of nested models using the scaled chi-square (Satorra & Bentler, 2010) are reported as results DIFFTEST command implemented in Mplus (Asparouhov & Muth´en, 2006).

5.57 Convergent and Divergent Validity.

The average statistically significant correlation values of the YPI-R2 with measures of PAQ, DASS-21, GQ-6, and Ryff's scale (see Table 5.3) were .21, .19, .19, and .18, respectively. These correlations were low in strength but significant; the other established parenting scales of s-EMBU, CTQ and PARQ also showed similar strengths of correlations, as did the YPI-R2. Small effect sizes of .20, .19 and .22 were also evident in the psychometric testing of the established s-EMBU (Arrindell et al., 1999) with measures of neuroticism, extraversion and self esteem, respectively. A study by Thimm (2010) showed further significant correlations between s-EMBU with measures of personality disorder symptoms and depression, with values of r = .26 and .22, respectively. A work by Putnick et al. (2015) also showed small but statistically significant correlation values of the PARQ with measures of child adjustment ranging from .06 to .14. Thus it is not unusual for measures of past parenting patterns to result in small effect sizes with other measures such as emotional distress, personality dispositions, and well-being. The subscale of Degradation and Rejection of the YPI-R2 showed the highest positive correlations with all three subscales of DASS-21, revealing the susceptibility of people with this negative parenting pattern of the YPI-R2 to emotional distress. YPI-R2 subscales also showed meaningful negative correlations with a measure of positive well-being (Ryff's scale of Psychological Well-Being) and the positive trait of Gratitude (GQ-6), as shown in Table 5.3.

For further evidence of convergent validity, the YPI-R2 (Fathers) and YPI-R2 (Mothers) scales correlated statistically significantly with the 18 EMSs in the USA sample in the same direction (see Table 5.4). It was clear that many of the EMSs had meaningful statistically significant associations with more than one subscale in the YPI-R2. The EMS of Social Isolation had significant correlations with the subscale of Degradation and Rejection in the YPI-R2 as well as with the Controlling subscale of YPI-R2 (Mothers). This showed that negative parenting patterns are associated with the EMS of Social Isolation, contrary to the hypothesis of Young et al. (2003) that this EMS was associated only with external family environment.

As evidence for divergent validity, the z-test proposed by Steiger (1980) showed that differences in correlations between most concordant subscales in the YPI-R2 and s-EMBU were statistically and significantly higher than differences in correlations with

less concordant subscales of both measures (see Appendix R & Appendix S). The average statistically significant correlation value for the ratings of the fathers with subscales of the YPI-R2 that were most concordant with subscales of the s-EMBU, and those less so, were .45 and .23, respectively. For the ratings of the mothers, these values were .47 and .26, respectively (see Appendix T).

5.58 Incremental Validity

The values of skewness and kurtosis and inspection of Q-Q plot showed that the distribution of data for some of the dependent variables deviated from normality, but given the large sample size > 200 (n = 520, 538) and the use of a conservative p value (p <0.001), the effects of non-normality were minimised (Statistics Solutions, 2013). Hierarchical multiple regression was conducted in the following steps: Step 1, Gender; Step 2, the subscales from three established parenting instruments (i.e., PARQ, s-EMBU and CTQ); and Step 3, the subscales of YPI-R2 (Fathers). The same steps were repeated for the YPI-R2 (Mothers) subscales. Significant evidence for incremental validity was demonstrated in tests in which the combined effects of both the YPI-R (Fathers) and YPI-R (Mothers) accounted for additional highly statistically significant variance greater than the minimum recommended by Hunsley and Meyer (2003) of ΔR^2 = .0225 (or 2.25%), over and above that contributed by gender and the three established parenting scales, in 12 out of 17 of the dependent variables (see Table 5.5).

5.6 Discussion

In ST practise, the YSQ is used to identify the EMSs linked to a patient's presenting problems. The YPI is used along with the YSQ-S3 to help identify the likely origin of these EMSs. The YPI was developed based on the assumption that each EMS originated from a corresponding unmet core emotional need resulting from a pattern of dysfunctional parenting. While the identification of the origin of EMSs plays a central role in both the conceptualization and treatment phases of ST, unlike the YSQ, the YPI did not meet current standards for development and validation.

The aim of this research study was to first investigate the factor structure of two previous models, one by Young et al. (2003) and the other by Sheffield et al. (2015), on a sample from Singapore. Following poor fit for both models, a strong initial item pool

Table 5.3

Phase 3 – Pearson's Correlation Matrix of the YPI-R2 (Fathers) and YPI-R2 (Mothers) with s-EMBU, CTQ-28, PARQ, PAQ, DASS-21, Ryff's Well-Being, GQ-6 Using Manila Sample (n=520, 538)

	Competitiveness & Status Seeking		Degradation & Rejection		Emotional Inhibition & Deprivation		Overprotection & Overindulgence		Punitiveness		Controlling	
F: Father / M: Mother	F	M	F	M	F	M	F	M	F	M	F	M
sEMBU - Rejection	.09*	.09*	.53**	.62**	.03	.28**	.13**	.05	.56**	.62**	-	.51**
sEMBU - Emotional Warmth	.18**	.19**	-.36**	-.46**	-.24**	-.34**	.20**	.15**	-.32**	-.35**	-	-.29**
sEMBU - (Over)Protection	.24**	.26**	.33**	.33**	-.04	.15**	.36**	.27**	.37**	.31**	-	.45**
CTQ-28 - Emotional Abuse	.01	.03	.42**	.58**	.07	.30**	.02	.03	.42**	.54**	-	.43**
CTQ-28 - Physical Abuse	.01	.04	.34**	.47**	-.00	.24**	.03	.04	.53**	.58**	-	.37**
CTQ-28 - Sexual Abuse	-.07	-.04	.13**	.23**	.02	.18**	-.02	-.00	.19**	.25**	-	.20**
CTQ-28 - Emotional Neglect	-.09*	-.13**	.35**	.44**	.15**	.33**	-.13**	-.13**	.29**	.34**	-	.26**
CTQ-28 - Physical Neglect	-.02	-.11**	.36**	.38**	.00	.18**	-.07	-.09*	.34**	.32**	-	.30**
PARQ - Hostility/Aggression	.08	.05	.59**	.69**	.06	.33**	.03	-.03	.68**	.68**	-	.49**
PARQ - Indifference/Neglect	-.07	-.08	.47**	.57**	.23**	.35**	-.18**	-.15**	.46**	.47**	-	.42**
PARQ - Undifferentiated Rejection	.08	-.02	.60**	.68**	.08	.29**	.02	-.07	.55**	.52**	-	.45**
PARQ - Warmth Affection	-.10*	-.17**	.40**	.58**	.25**	.42**	-.20**	-.19**	.40**	.49**	-	.37**
PAQ- Hostility/Aggression	.06	.03	.35**	.38**	.07	.13**	.05	.07	.28**	.30**	-	.24**
PAQ- Dependency	.04	.02	.03	.01	-.02	.00	.08	.03	.14**	.06	-	.03
PAQ- Negative Self-Esteem	-.07	-.12**	.39**	.31**	.01	.14**	.12**	.10*	.22**	.17**	-	.16**
PAQ- Negative Self-Adequacy	-.08	-.18**	.37**	.26**	-.01	.13**	.18**	.11*	.19**	.15**	-	.11**
PAQ- Emotional Unresponsive	.00	-.06	.27**	.20**	.04	.20**	.10*	.05	.09	.07	-	.12**
PAQ- Emotional Instability	-.03	-.02	.25**	.22**	.02	.15**	.10*	.09*	.16**	.15**	-	.15**
PAQ- Negative Worldview	.03	-.06	.37**	.33**	.03	.15**	.09*	.08	.19**	.15**	-	.19**

Table 5.3 (Continued)

	Competitiveness & Status Seeking		Degradation & Rejection		Emotional Inhibition & Deprivation		Overprotection & Overindulgence		Punitiveness		Controlling	
F: Father / M: Mother	F	M	F	M	F	M	F	M	F	M	F	M
DASS-21 – Anxiety	.03	.01	.27**	.21**	-.06	.07	.21**	.14**	.19**	.15**	-	.19**
DASS-21 – Depression	-.01	-.10*	.36**	.25**	-.04	.12**	.21**	.16**	.16**	.13**	-	.16**
DASS-21 – Stress	.04	.02	.27**	.26**	.01	.15**	.14**	.13**	.20**	.20**	-	.21**
Ryff– Autonomy	.01	.10*	-.17**	-.12**	-.02	-.03	-.13**	-.05	-.07	-.05	-	-.02
Ryff– Environmental Mastery	.06	.07	-.23**	-.17**	.03	-.05	-.11*	-.16**	-.12**	-.06	-	-.13**
Ryff– Personal Growth	.05	.12**	-.32**	-.24**	.10*	-.07	-.16**	-.06	-.14**	-.07	-	-.10*
Ryff– Positive Relations with Others	.02	.08	-.32**	-.29**	.01	-.15**	-.10*	-.07	-.12**	-.13**	-	-.18**
Ryff– Purpose in Life	.05	.05	-.17**	-.11*	-.03	-.05	-.16**	-.10*	-.06	-.07	-	-.09*
Ryff– Self-Acceptance	.09	.14**	-.30**	-.25**	-.04	-.14**	-.07	-.02	-.12**	-.11**	-	-.17**
Gratitude (GQ-6)	.02	.11**	-.36**	-.25**	.02	-.10*	-.15**	-.10*	-.20**	-.11**	-	-.16**
Competitiveness & Status Seeking	1	1	.14**	.06	.13**	.11*	.29**	.24**	.16**	.09*	-	.28**
Degradation & Rejection	.14**	.06	1	1	.12**	.40**	.14**	.03	.47**	.67**	-	.63**
Emotional Inhibition & Deprivation	.13**	.11*	.12**	.40**	1	1	-.10*	.01	.09*	.38**	-	.40**
Overprotection & Overindulgence	.29**	.24**	.14**	.03	-.10*	.01	1	1	.03	-.05	-	.13**
Punitiveness	.16**	.09*	.47**	.67**	.09*	.38**	.03	-.05	1	1	-	.50**
Controlling	-	.28**	-	.63**	-	.40**	-	.13**	-	.50**	-	1

Note. **. Correlation is significant at the 0.01 level (2-tailed), in bold; *. Correlation is significant at the 0.05 level (2-tailed).
s-EMBU – Swedish acronym for ('My memories of upbringing'); CTQ-28 – Childhood Trauma Questionnaire; PARQ – Parental Acceptance-Rejection Questionnaire (PARQ); PARQ – Personality Assessment Questionnaire; DASS-21 – Depression Anxiety Stress Scale; Ryff – Ryff Scales of Psychological Well-Being; GQ-6 – Gratitude Questionnaire.

Table 5.4

Phase 3– Pearson's Correlation Matrix of the YPI-R2 (Fathers) and YPI-R2 (Mothers) with YSQ-S3 Using USA Sample (n=204, 214)

	Competitiveness & Status Seeking		Degradation & Rejection		Emotional Inhibition & Deprivation		Overprotection & Overindulgence		Punitiveness		Controlling	
F: Father / M: Mother	F	M	F	M	F	M	F	M	F	M	F	M
Abandonment / Instability	.03	.01	**.19****	**.26****	.12	**.19****	.18*	**.18****	.15*	**.20****	-	**.33****
Approval-Seeking / Recognition-Seeking	.15*	.03	.09	.10	.03	.12	.18*	**.21****	.15*	.05	-	.17*
Defectiveness / Shame	-.02	-.04	.11	**.28****	.15*	**.20****	.02	.06	.01	**.18****	-	**.23****
Dependence / Incompetence	.00	-.02	**.21****	.15*	.00	.04	.14*	**.23****	.05	.17*	-	.09
Emotional Deprivation	-.01	.01	.10	.17*	.15*	**.20****	.11	.12	.00	.08	-	**.18****
Emotional Inhibition	.04	.01	.05	.10	.16*	**.18****	.09	.07	.02	.04	-	.11
Enmeshment / Undeveloped Self	.12	.14*	.07	.09	.01	.04	**.38****	**.42****	.06	.12	-	**.23****
Entitlement / Grandiosity	.02	.09	.01	.07	.14*	.14*	.15*	**.18****	.08	.04	-	.16*
Failure	.08	-.12	**.22****	.11	.04	.09	.03	**.18****	.01	.07	-	.10
Insufficient Self-Control / Self-Discipline	.05	-.09	.08	.02	.01	.09	**.21****	**.26****	.02	.06	-	.03
Mistrust / Abuse	.06	.08	.11	**.21****	.11	.07	.16*	.03	**.19****	**.24****	-	**.29****
Negativity / Pessimism	.08	.13	.09	**.24****	.10	.18*	**.20****	.16*	.02	**.18****	-	**.31****
Punitiveness	.12	.14*	**.20****	**.21****	.09	.17*	.12	.10	**.20****	**.22****	-	.16*
Self-Sacrifice	.15*	.13	**.26****	.17*	.12	.09	.12	.02	**.20****	**.25****	-	**.22****
Social Isolation / Alienation	.02	-.05	.16*	**.19****	.07	.11	.07	.03	.07	.13	-	**.19****
Subjugation	.13	.03	**.20****	**.20****	.03	.14*	.17*	.16*	.10	**.19****	-	**.18****
Unrelenting Standards / Hypercriticalness	**.19****	**.27****	**.18****	**.22****	**.19****	**.19****	.17*	.05	**.20****	**.20****	-	**.28****
Vulnerability to Harm or Illness	-.07	.06	.05	.15*	-.06	.10	.11	.14*	.05	.17*	-	**.25****

Note. **. Correlation is significant at the 0.01 level (2-tailed), in bold; *. Correlation is significant at the 0.05 level (2-tailed). *YSQ-S3 – Young Schema Questionnaire 3 Short form*.

Table 5.5

Phase 3 – Hierarchical Regression Analysis of YPI-R2 Predicting GQ-6, DASS-21, PAQ and Ryff's Well-Being Using Manila Sample (n=520, 538)

	Fathers			Mothers		
	R^2	ΔR^2	ΔF	R^2	ΔR^2	ΔF
Gratitude (GQ-6)						
Step 1: Gender	.02	.02**	7.96	.01	.01**	7.58
Step 2: All s-EMBU, CTQ and PARQ Parenting Subscales	.23	.21***	11.56	.19	.18***	9.70
Step 3: All YPI-R (Negative) Subscales	.27	.05***	6.50	.24	.04***	4.71
DASS-21 - Anxiety						
Step 1: Gender	.01	.01	3.42	.01	.01	3.10
Step 2: All s-EMBU, CTQ and PARQ Parenting Subscales	.14	.14***	6.81	.11	.11***	5.34
Step 3: All YPI-R (Negative) Subscales	.18	.04***	4.83	.13	.02	2.01
DASS-21 - Depression						
Step 1: Gender	.00	.00	.00	.00	.00	.02
Step 2: All s-EMBU, CTQ and PARQ Parenting Subscales	.18	.18***	8.96	.14	.14***	7.08
Step 3: All YPI-R (Negative) Subscales	.25	.08***	10.18	.19	.05***	5.46
DASS-21 - Stress						
Step 1: Gender	.01	.01*	5.14	.01	.01*	4.27
Step 2: All s-EMBU, CTQ and PARQ Parenting Subscales	.18	.17***	8.97	.16	.15***	7.99
Step 3: All YPI-R (Negative) Subscales	.20	.02	2.01	.18	.02	1.73
PAQ Hostility/Aggression						
Step 1: Gender	.02	.02**	8.91	.01	.01**	7.94
Step 2: All s-EMBU, CTQ and PARQ Parenting Subscales	.26	.25***	14.17	.27	.25***	14.89
Step 3: All YPI-R (Negative) Subscales	.27	.01	.90	.28	.01	1.27
PAQ Dependency						
Step 1: Gender	.01	.01**	7.07	.01	.01**	8.00
Step 2: All s-EMBU, CTQ and PARQ Parenting Subscales	.06	.04*	1.96	.04	.03	1.25
Step 3: All YPI-R (Negative) Subscales	.07	.01	1.54	.05	.01	.72
PAQ Negative Self-Esteem						
Step 1: Gender	.00	.00	2.04	.00	.00	1.60
Step 2: All s-EMBU, CTQ and PARQ Parenting Subscales	.23	.23***	12.33	.17	.17***	8.98
Step 3: All YPI-R (Negative) Subscales	.29	.06***	7.91	.22	.04***	4.81
PAQ Negative Self-Adequacy						
Step 1: Gender	.00	.00	.00	.00	.00	.09
Step 2: All s-EMBU, CTQ and PARQ Parenting Subscales	.19	.19***	9.87	.15	.15***	7.42
Step 3: All YPI-R (Negative) Subscales	.27	.08***	11.71	.21	.06***	6.63

Table 5.5 (Continued)

	Fathers			Mothers		
	R^2	ΔR^2	ΔF	R^2	ΔR^2	ΔF
PAQ Emotional Unresponsive						
Step 1: Gender	.02	.02**	7.90	.01	.01**	6.70
Step 2: All s-EMBU, CTQ and PARQ Parenting Subscales	.13	.12***	5.60	.12	.11***	5.49
Step 3: All YPI-R (Negative) Subscales	.18	.05***	5.55	.15	.03*	2.78
PAQ Emotional Instability						
Step 1: Gender	.00	.00	.76	.00	.00	1.48
Step 2: All s-EMBU, CTQ and PARQ Parenting Subscales	.16	.16***	8.02	.15	.15***	7.43
Step 3: All YPI-R (Negative) Subscales	.18	.02*	2.40	.17	.02	1.92
PAQ Negative World View						
Step 1: Gender	.00	.00	.32	.00	.00	.60
Step 2: All s-EMBU, CTQ and PARQ Parenting Subscales	.28	.27***	15.99	.24	.24***	13.67
Step 3: All YPI-R (Negative) Subscales	.31	.04***	5.75	.27	.03**	3.53
Ryff- Autonomy						
Step 1: Gender	.00	.00	.00	.00	.00	.26
Step 2: All s-EMBU, CTQ and PARQ Parenting Subscales	.08	.08***	3.47	.05	.05**	2.47
Step 3: All YPI-R (Negative) Subscales	.11	.04**	4.13	.08	.02	2.01
Ryff- Environmental Mastery						
Step 1: Gender	.01	.01	2.77	.01	.01	2.90
Step 2: All s-EMBU, CTQ and PARQ Parenting Subscales	.15	.14***	6.94	.13	.12***	6.11
Step 3: All YPI-R (Negative) Subscales	.19	.04***	4.92	.18	.05***	5.54
Ryff- Personal Growth						
Step 1: Gender	.00	.00	.35	.00	.00	.18
Step 2: All s-EMBU, CTQ and PARQ Parenting Subscales	.19	.19***	9.62	.14	.14***	7.28
Step 3: All YPI-R (Negative) Subscales	.24	.06***	7.35	.19	.04***	4.50
Ryff- Positive Relations with Others						
Step 1: Gender	.01	.01*	3.90	.01	.01	3.61
Step 2: All s-EMBU, CTQ and PARQ Parenting Subscales	.18	.17***	8.69	.17	.16***	8.51
Step 3: All YPI-R (Negative) Subscales	.23	.05***	7.01	.20	.03**	3.71
Ryff- Purpose in Life						
Step 1: Gender	.00	.00	.31	.00	.00	.32
Step 2: All s-EMBU, CTQ and PARQ Parenting Subscales	.07	.07***	2.95	.06	.06***	2.82
Step 3: All YPI-R (Negative) Subscales	.11	.05***	5.10	.08	.02	1.62
Ryff- Self-Acceptance						
Step 1: Gender	.00	.00	1.32	.00	.00	.94
Step 2: All s-EMBU, CTQ and PARQ Parenting Subscales	.19	.18***	9.55	.17	.17***	8.85
Step 3: All YPI-R (Negative) Subscales	.23	.04***	5.54	.20	.03**	2.99

Note. * $p \leq .05$; ** $p < .01$; *** $p < .001$

was developed for the YPI with the aim to derive a shorter and validated version of the instrument, to be called YPI-R2 (Fathers) and YPI-R2 (Mothers) for the ratings of fathers and mothers, respectively.

This process was conducted through the course of three separate phases. Phase 1 identified robust and weak subscales in the YPI through EFA on a Singapore sample. Based on this EFA result, in Phase 2, a significantly expanded item pool of 204 items was developed for the YPI to strengthen the weak subscales and include other parenting constructs that have emerged in clinical sessions but were not represented in the original YPI. This longer version of YPI was then subjected to EFA on an independent sample from Manila, Philippines, where the most salient items were selected for each factor. In Phase 3, the updated and shorter item pool was then subject to CFA on an Eastern sample from Jakarta, Indonesia. This factor structure was modified during CFA in order to obtain adequate fit indices, resulting in five factors comprising 20 items for the ratings of fathers, and six factors comprising 33 items for the mothers. These final structures were then tested on a USA sample when it became available, and again, adequate fit was obtained. Results from MGCFA also showed partial invariance for support of the factor structure across these two separate and independent samples, an Eastern (Jakarta), and a Western (USA). The scales were then tested for construct, convergent and incremental validity as well as its relationship with EMSs in the USA sample.

Construct validity was shown through significant correlations between subscales of the YPI-R2 (Fathers) and YPI-R2 (Mothers) with similar subscales of the three established parenting instruments: the s-EMBU, CTQ and PARQ. Evidence for convergent validity is seen from statistically significant negative correlations between the subscales of YPI-R2 (Fathers) and YPI-R2 (Mothers) with the positive trait of gratitude (GQ-6), measures of well-being (Ryff's Psychological Scale of Well Being), and positive correlations with measures of emotional distress, and negative personality dispositions (PAQ). Incremental validity for the YPI-R2 (Fathers) and YPI-R2 (Mothers) were also demonstrated, as delineated by Hunsley and Meyer (2003), for most of the dependent subscales ($p < .001$).

ST has postulated a link between the development of EMSs and the nature of the relationship between a child and caregivers. This link is supported by the results of this

study, as seen from the significant correlations between the subscales of the YPI-R2 (Fathers) and YPI-R2 (Mothers) and the 18 EMSs in the USA sample (see Table 5.4). The EMS of Social Isolation had clear associations with the parenting patterns of Degradation and Rejection, and Controlling, contrary to the hypothesis by Young et al. (2003) that the development of this EMS was primarily due to external environment outside the family. Since each EMS was linked with several parenting patterns, it can be deduced that there was not a one-to-one correspondence between a specific type of negative parenting pattern and a specific EMS, as hypothesised by Young (Young, 1999; Young et al., 2003). The final combined scales of YPI-R2 (Fathers) and YPI-R2 (Mothers), known as YPI-R2, consisted of six subscales and 36 items, compared to the original YPI with 72 items. Of the 72 items making up the original YPI, only 15 were robust enough to be retained in the final YPI-R2 scale. The remaining 21 items were new and/or revised. The reduced number of items in the YPI-R2, the good psychometric validation, and invariance of the factor structure across Eastern and Western samples indicated significant improvements to the original YPI.

Findings from other research for decades have shown that negative parenting patterns across cultures are linked to negative developmental outcomes (Piko & Balaz, 2012; Abar, Carter & Winsler, 2009; Steinberg et al., 1994). However, some of these receive more emphasis due to differing cultural norms. For example, literature has highlighted that Eastern parents are more likely to be less expressive and connected, and to value the opinion of others in the society more than their counterparts in the West (Wu et al., 2002; Wang & Leichtman, 2000). This pattern is partly reflected by constructs found in this study such as Emotional Inhibition and Deprivation as well as Disconnection and Rejection. By contrast, Western parents are more likely to protect and support children's self-expression (Wu et al., 2002; Wang & Leichtman, 2000). According to some experts, effective discipline regardless of culture helps children to get themselves organised, internalise healthy rules and develop appropriate patterns of behaviour (Canadian Paediatric Society, 2004). Failure to do this may lead to overprotection and difficulty introducing healthy limits, which in turn is reflected by the scale Overprotection and Overindulgence. It may be that culturally influenced parenting patterns viewed as normative may influence parenting both in the East and the West, as seen by the negative and positive correlations of these scales with measures of well-being and ill-being, respectively (Table 5.3).

The invariant factor structure of the YPI-R2 in both a Western and Eastern sample also shows the cross-cultural relevance of the YPI-R2. Therefore, these results show that parenting patterns that are harmful to both cultures should become important targets for parenting interventions.

There were limitations in this study, the first being that it was based solely based on nonclinical samples. It will therefore be important to test this instrument on clinical samples. The second was that the sample was based on those who were drawn to the workshop on parenting, possibly limiting generalisability of the results to individuals with these traits.

Whilst most of the subscales exhibited high internal consistency, one or two had lower values in two Asian samples, and this may attenuate correlation size if replicated (hence, results may be an under-estimate). However, low internal consistencies would count against our hypotheses that the scale has good psychometric properties, as the added error would decrease, not increase values, in the tests of reliability and validity (and hence lead to Type II, not Type I, error). Our YPI-R2 scale consistently showed good psychometric properties. The non-normality of some of the data for the dependent variables in the regression analysis may also have been a limitation, though the sample size was large, and a very conservative p value (<.001) was achieved in most of the regression models.

The contribution of the YPI-R2 is a significant step towards uncovering more nuanced past negative parenting experiences, given that most established and validated past parenting measures have only three or four subscales. Since it is unlikely that complicated parenting patterns can be adequately assessed by only a few subscales, an instrument such as the YPI-R2 with six subscales would be able to provide fresh insights into the nature of negative parenting, and to be used hand in hand with the YSQ-S3 in ST practice and research.

Chapter 6 – Extended Discussion

6.1 Study 1

6.11 Findings of Study 1

Five different nonclinical community samples were used for this study, consisting of four Eastern samples (Manila, Philippines, *n* = 559; Bangalore, India, *n* = 350; Singapore, *n* = 628, and Kuala Lumpur, Malaysia, *n* =229), to form the final factor structure of the YPSQ. One Western sample (USA East, *n* = 214) was used to replicate the findings. It was theorised that each of the 18 negative schema subscales in the YSQ-S3 has a positive counterpart; so for each negative schema item, a positive counterpart was constructed. Some involved straightforward transpositions from negative to positive, while others were more complex. Using PA to determine the number of factors, an EFA was conducted using PAF of the initial item pool for the Manila and Bangalore samples. When the EFA from both samples were compared, they had nine factors in common, but two factors were unique to the Manila sample and one to the Bangalore sample. When combined, there were 12 factors in total. The unique factors that emerged from both these samples justified conducting separate EFAs for each sample. More items were added to the slightly weaker factors to strengthen the YPSQ; these were then administered to another sample in Singapore, where another EFA was conducted in which 14 factors comprising 63 items emerged. An EFA in M*plus* using WLSVW for a 15-20 factor model resulted in the same 14-factor solution as the EFA using SPSS and PA. To provide for a more balanced factor structure, seven items were removed without compromising the factor structure. This resulted in a final factor structure of 14 factors and 56 items, despite our expectation that the 18 EASs would mirror the 18 EMSs.

Although EASs and EMSs are related constructs, the incremental validity tests supported that positive and negative schemas are separate constructs and contribute uniquely to mental well-being and ill-being. The predictive power of EASs was also demonstrated by the negative correlations found between EASs and measures of personality dispositions (IPIP) and emotional distress (DASS-21), and positive correlations with a measure of well-being (SWLS). Positive correlations were also found with more distal measures of functioning in everyday life, such as trait gratitude (GQ-6) and humour styles (HSQ), constructs that have previously been linked to well-

being (Martin et al., 2003). Construct validity was evident from the statistically significant correlations of the 14 subscales of the YPSQ with their respective counterparts. However, since there were 18 EMSs, four EMSs had more than one EAS counterpart, an outcome consistent with the notion that positive and negative schemas are, to a significant degree, separate constructs. Divergent validity was also demonstrated by a comparison of the correlations between counterpart and non-counterpart subscales from the positive YPSQ and the negative YSQ-S3; they were significant at $p < 0.05$ level for 11 YPSQ subscales. The results for incremental validity were especially significant, since they showed that EASs add predictive power over and above that provided by the assessment of EMSs. The invariance of the factor structure of the YPSQ was also tested in both Eastern and Western samples, using single group CFA as well as the most stringent test of invariance, MGCFA (Milfont & Fischer, 2010). Results demonstrated invariance for two independent samples (Kuala Lumpur and USA East) for all seven models, thus supporting Young's hypothesis that schemas are universal (Young et al., 2003).

With the emergence of positive schemas from Study 1 (measured by the YPSQ) to complement the negative schemas (measured by YSQ-S3), the question of whether these positive and negative constructs are bipolar and lie on the same continuum, or whether they are independent but related constructs, was also investigated. Several models representing bipolarity and independence (on the subscale level) were tested. Results from CFA showed that fit indices of a two factor model, depicting positive and negative schemas as separate constructs, had much better fit indices than the model representing them as being bipolar. However, when a method bias factor was introduced to take error measurement into account, results showed that fit for both models was very close, and differences were not significant. On the other hand, the two factor model was more parsimonious and was therefore favoured. Other results from this study that support the idea that positive and negative schemas are separate are, firstly, the moderate but statistically significant correlations between counterpart subscales of both positive and negative schema scales. Secondly, incremental validity of the 14 YPSQ subscales demonstrating that they accounted for an additional and statistically significant variance, beyond that accounted for by gender, and age, and all 18 negative schemas subscales, for 13 out of the 14 dependent subscales. Notwithstanding this, more studies in the future need to be conducted before definitive

conclusions can be drawn on whether positive and negative schemas are independent constructs or whether they lie on a bipolar continuum.

The YPSQ therefore demonstrated good factorial, construct, convergent, divergent, and incremental validity, with a factor structure that was invariant across Eastern and Western samples. Thus both the primary and secondary aims of Study 1 were achieved.

6.12 Clinical Implications

The development of the validated YPSQ can have a significant impact clinically in ST in the following ways:

1) Provide a more balanced approach in ST. At present the focus in the ST assessment process, at least with respect to systematic and empirically derived methods, is solely on what is *wrong* with the patient. This skews the process towards a less respectful and optimistic tone than one that also formally assesses all that is going well. Patients with personality disorders such as BPD, a population that is a frequent focus of ST, are especially prone to having an adverse reaction when an exclusively negative spotlight is thrown upon them. In the case of individuals suffering from BPD, the process can often feel traumatising, since they may be suffering from all 18 of the EMSs. A more balanced approach would likely contribute to both therapeutic rapport, feelings of hopefulness and a sense of manageability of the therapeutic process; factors that have been shown to have a strong correlation with therapeutic outcome. With the introduction of the YPSQ in ST, it may also be of some assistance in reducing the risk of premature termination.

2) Increase the number of adaptive schema modes. One of the goals in ST sessions is to identify the EMSs and schema modes that are driving the maladaptive thoughts and behaviours. Schema modes represent the moment-to-moment emotional and cognitive states and coping responses active at a given point in time. Schema modes are measured by the Schema Mode Inventory (SMI) (Lobbestael, van Vreeswijk, Spinhoven, Schouten, & Arntz, 2010). The SMI comprises 14 schema modes, of which only three are adaptive: the happy child, healthy adult, and vulnerable child modes. It seems likely that there are more than just three adaptive modes. With the development of the YPSQ, a framework is now available for the investigation of a broader range of adaptive modes that may be linked to the 14 adaptive EASs in the

same way that the 11 maladaptive modes are linked to the 18 EMSs. Thus, this new framework may lead to a more balanced view of schema modes and a more balanced assessment process.

3) Broadening our understanding of healthy functioning. In ST, healthy functioning has been viewed from the point of view of weakening active EMSs and maladaptive schema modes. From the findings of this research, we now know that the absence of negative EMSs does not necessarily mean the presence of EASs. Since EASs have been shown to make unique contributions to well-being, it will be important for clinicians to also help patients increase adaptive functioning by strengthening their EASs, rather than focusing solely on weakening EMSs.

4) Create a more balanced view of their early primary caregivers. While most schema therapists will work during sessions to understand both what went wrong and what went right in a patient's experiences with primary caregivers, the sole focus of objective, formal assessments would be on all the things that went *wrong* and all the subsequent negative life patterns that resulted. This introduces a not so subtle bias towards the negative and, among other things, suggests that what went wrong is what matters most for treatment. It may also subtly (or not so subtly) lead patients towards a more negative view of their parents. Some clients feel conflicted between the part of them that needs to understand what went wrong and the part of them that also loves their parents and feels gratitude towards them. Both informally and formally looking at the EASs and their healthy contributions, as well as the EMSs and their shortcomings, both of which the caregivers had a hand in, can be much more balanced and fair. Thus gratitude for what went right and forgiveness for what went wrong towards early caregivers can work together hand in hand. This will also indicate that treatment involves both working on the things that went wrong and appreciating and building upon what went right.

6.2 Study 2

6.21 Findings of Study 2

For this study three different samples were used. In Phase 1, we investigated the factor structure of an initial item pool of 207 items on a sample from Manila (Philippines) using EFA on ratings for fathers and mothers separately (n = 520, n = 538). The item

pool for the PPSI drew upon the original YPI's with 72 items (Young et al., 2003) as a starting point. The YPI is a measure of 17 maladaptive parenting patterns, each of which is theoretically linked to an EMS to which it is believed to contribute. Positive counterparts for all 72 items were developed, involving varying degrees of transposition (see Appendix B). However, an additional 135 items with clinical relevance were also added, totalling 207 items. These included items for the Social Alienation/Isolation EMS that were not part of the original YPI. The current team, drawing upon extensive clinical experience, conceptualised a parenting pattern believed to be associated with it and developed items to assess this pattern as well as its adaptive counterpart. Based on EFA results, the most robust items were selected, leading to its final shorter version and validated factor structure. Using this final factor structure from Phase 1, in Phase 2, MGCFAs were conducted on two additional independent samples, one from the East (Jakarta, n = 366, n = 383) and the other from the West (USA, n = 204, n = 214). An adequate fit and invariance (six out of the seven models of invariance) of the factor structure was demonstrated across both samples. Acceptable Cronbach's alpha reliability values (>.65) were also obtained. Construct validity was demonstrated with four other parenting instruments, and convergent validity was demonstrated with measures of personality dispositions, emotional distress, trait gratitude, and positive well-being. Positive and meaningful associations with positive schemas also emerged. Divergent validity of the PPSI subscales with the nine subscales from Sheffield's factor structure, known as the YPI-R, was also evident between the most concordant subscales and those that were less concordant from both instruments. These positive patterns were not merely a positive version of the negative parenting patterns measured by the YPI, given that results from incremental validity powerfully demonstrated that positive parenting measures add predictive power over and above that provided by the assessment of four other negative parenting measures. Having demonstrated good factorial, construct, convergent, divergent, and incremental validity, both the primary and secondary aims of this study were achieved.

6.22 Clinical Implications

The development of the validated PPSI can have a significant impact clinically in ST in the following ways:

1) Since the PPSI demonstrated positive correlations with measures of well-being

(Ryff's Psychological Well-Being) and gratitude (GQ-6) in samples from both the East and the West, cultural norms that are the antithesis of these positive parenting patterns should be a target for intervention. Therefore, where appropriate, the definition of what is considered to be a healthy dynamic between parent and child should be modified. In some family homes, healthy parenting is viewed in terms of the absence of negative parent-child interactions. While there is much validity to this, it is only half the story. It is of equal importance that positive interactions are being focused on and built upon. With the development of the PPSI, there is now a broad and empirically based platform with which to better understand what these patterns are and which are most central. This can be helpful to clinicians who are helping parents learn and apply these patterns, both in terms of areas of weakness and building upon existing strengths. The PPSI can be adapted to this purpose by having a spouse, older adolescent child or independent rater assess a parent's functioning with their child in terms of the PPSI scales. In this case, the items would have to be reworded to apply to the present rather than the past. Such feedback will be most useful when used in a context where the parent can receive help in addressing any of their own EMSs that may impact the process. Working on the development of these positive patterns while both parents and children are involved in the therapeutic process is likely to be especially effective. Families in which parents have shown progress in minimising negative interactions with their children, as is usually the focus in treatment, can also be guided in the development of positive interactions that convey clear positive messages. Each subscale in the PPSI conveys such a message. For example, messages of belief in children's capacity for effective functioning make up the Autonomy Support subscale; conveying unconditional affection and love relates to the Emotional Nurturance and Unconditional Love subscale; showing trust and helping children develop an age-appropriate sense that they are the author of their own life is associated with the Autonomy Granting subscale; seeing all people as equal and not just from the lens of their social standing is associated with the Intrinsic Values subscale; processing emotions and being playful and spontaneous, which contributes to a pleasant atmosphere, is associated with the Playfulness and Emotional Openness subscale; and a sense of direction and limit setting is associated with the Dependability, and the Confidence and Competence subscales. Parents who think that it is the cultural norm to be inhibited and whose understanding of having a healthy relationship

involves only avoiding negative interactions will certainly benefit from this kind of guidance, not just in clinical settings but also in parenting workshops, especially when they see ways in which the parenting patterns measured by the PPSI contribute to well-being and reduce emotional distress. In a parallel way, the PPSI will also be very helpful in teaching schema therapists how to more effectively apply Limited Reparenting as they partially adopt the role of a patient's parent.

2) The use of the PPSI in clinical sessions will also help clinicians in ST to make links with EASs; this in turn will help patients see the kind of early family atmosphere that contributed to the development of these positive life patterns. Ways of utilising these strengths can be clarified and developed in the process of reducing the strength of EMSs and increasing the strength of weaker EASs.

3) Adults can gain a clearer understanding of the positive parenting they experienced, and the positive life patterns that developed from them may also help to enrich and enhance these dynamics in the process of parenting their own children.

4) The PPSI, with seven subscales, provides a more comprehensive view of adaptive parenting than is currently available. As mentioned, the number of positive parenting subscales are far fewer than the negatives, with at most two positive constructs in almost all the established parenting scales. The seven distinct subscales in the PPSI represent a significant improvement on this. Parents and therapists can gain a better understanding of the full scope of interactions and attitudes that make up positive parenting and positive Limited Reparenting. This can also help to correct a wide range of incorrect assumptions about what kinds of parenting practices lead to adaptive functioning than would be the case if only one or two more broadly based positive parenting scales were utilised.

5) The PPSI can also be used as a framework from which older children, adolescents and spouses can give positive feedback to parents in their efforts to develop adaptive parenting patterns, with an eye towards the development of EASs. A clear, comprehensive, and empirically based framework for positive parenting and life patterns has been unavailable until now. Therefore, the development of the PPSI represents a significant step forward in helping parents optimise their interactions with their children and schema therapists, and therapists more generally, to optimise

their interactions with their patients. This will be particularly helpful given that many of the aspects of therapy recapitulate the interactions between parent and child. The introduction of the PPSI to complement the YPI can help provide the much-needed balance between a focus on positive and negative patterns, respectively.

6.3 Study 3

6.31 Findings of Study 3

The YPI measures past parenting experiences through 17 theoretical subscales. However, the factor structure was not properly established, as only one study was conducted by Sheffield et al. (2005). The factor structure of the 17 theoretical subscales, as well as the nine from Sheffield et al. (2005), were tested in Phase 1 on a Singapore sample using EFA on ratings for fathers and mothers separately (n = 582, 617). Both factor structures resulted in a poor fit. An EFA was therefore carried out using the current YPI, and both robust and weak factors of the YPI were identified. This led to a question about the adequacy of the original items of the YPI and a decision to create a larger, more comprehensive pool of negative parenting items to establish a stronger basis from which to identify a factor structure for the YPI, one that could then be tested for invariance in Eastern and Western samples. In Phase 2, an item pool of 204 negative parenting items was developed to strengthen these weak factors and to represent other constructs not found in the original YPI. An EFA was conducted using this item pool on another Eastern sample from Manila (n = 520, 538). Several factors and items had to be removed in order to improve the fit in a separate sample from Jakarta (n =366, 383). The factor structure was finally tested on two independent samples – an Eastern sample from Jakarta (n = 366, 383), and a Western sample from the USA (n = 204, 214) – in a MGCFA where partial invariance was demonstrated. In Phase 3, the final version, known as YPI-R2 for ratings of fathers and mothers, demonstrated construct, convergent, and divergent validity through tests with other established measures of past parenting experiences, personality disposition, emotional distress, psychological well-being, and trait gratitude. The stringent incremental validity test showed that the YPI-R2 accounted for additional statistically significant variance over and above that contributed by gender and three other established parenting instruments in predicting clinically relevant outcomes. Finally, the YPI-R2 showed significant correlations with

the 18 EMSs, supporting the central tenet of ST that early negative parenting patterns are associated with the development of EMSs. Thus both primary and secondary aims were achieved.

6.32 Clinical Implications

The development of an improved and validated YPI-R2 can have a significant impact clinically in ST in the following ways:

1) Firstly, the common practice of assuming all 17 subscales to be validated was not supported empirically. The YPI has often been used as a guide, and while this helped draw out the negative painful experiences, a validated scale is needed. An improved and validated version will offer a clearer and more empirically grounded framework for understanding the pertinent dysfunctional patterns of parenting.

2) When used in tandem with the YSQ-S3, the YPI-R2 can be of help in understanding the potential links between the patterns of parenting that a patient experienced in childhood and the EMSs that are the focus of treatment.

3) Cultural norms that inadvertently promote such negative parenting patterns can now be challenged from a stronger empirical basis. For example, some parents pressure their children to excel at school or in sports, and some demand that their children seek to get accepted only to top-ranked schools or coveted jobs. These parents can now be challenged from the vantage point of the Competitiveness and Status Seeking subscale. Some parents openly favour sons over daughters (prevalent in Asia), and/or withdraw love when their children's performance at school or in sports falls short of their expectations. These behaviours can be challenged from the vantage point of the Degradation and Rejection subscale. Some parents discourage their children from processing their feelings—this happens especially with boys in both Western and Eastern cultures—which can be addressed from the vantage point of the Emotional Inhibition and Deprivation subscale. Some parents allow their children to throw tantrums and are afraid of or confused about imposing boundaries and giving reasonable limits; some parents disagree with granting healthy autonomy. All of these issues can be addressed from the vantage point of the Overprotection and Overindulgence subscale. Some parents feel they should punish their children frequently for making trivial mistakes; this can be addressed from the vantage point

of the Punitiveness subscale. Parents who are consistently controlling and micromanaging can be addressed using the Controlling subscale. Rather than accepting these as the expressions of variations in cultural norms, they can be understood in terms of their influence on maladaptive functioning and more effectively addressed in the context of ST, or therapy in general, as well as in parent training workshops.

4) Valuable feedback can be given to a parent from a spouse or older child who uses the YPI-R2 as a framework to evaluate the current negative parenting environment. Further, such feedback is likely to be most helpful in a therapeutic environment in which parents can receive help in understanding the EMSs that lead to their negative parenting patterns and how dysfunctional parenting patterns contribute to the development of EMSs in children. Such feedback should be provided in a safe, compassionate and enlightening setting.

6.4 Limitations

There were limitations in all three studies that should be highlighted. First, using a free parenting workshop as an incentive to fill out the questionnaires, particularly since the workshop was advertised as being about the effects of past parenting behaviour and the development of schemas, may have attracted those who were more psychologically open and curious, possibly limiting generalisability to these type of populations. Secondly, although populations of the samples were drawn from Asian countries where English is taught at primary school levels, for many of the participants, English was not their “mother tongue”, and only the English version of these questionnaires was available and administered to the participants. Thirdly, although it is possible that 18 EMSs may not exist in parallel with 18 EASs, future studies need to test this again to see if indeed that there are indeed only 14 EASs. It is possible that more robust items could be created that might result in 18 EASs mirroring the 18 EMSs. For the YPI-R2, although only seven and six parenting subscales emerged, respectively, it may be that better parenting items could capture the constructs more precisely, resulting in the emergence of more constructs.

6.5 Future Research

The development of the YPSQ, PPSI and YPI-R2 were done using nonclinical

community samples, and therefore the generalisability of these results may be confined to these samples. It should therefore also be tested on clinical samples, from which we may see different results. One of the consistent patterns that has emerged in clinical sessions for patients with personality disorders is the weakness of their EASs or positive schemas, which often are not able to combat the negative ones driving their unhealthy negative thinking and behaviour patterns (Young et al., 2003). It is therefore likely that for clinical populations, we will see lower score values for these positive constructs, namely those in the YPSQ and PPSI, compared to the nonclinical populations used in this study. If this is the case, it will show a distinct delineation between patients with personality disorders and those without. This could be an important area to explore with further studies. The YPSQ should also be tested among younger populations as well to see if schemas indeed stay relatively stable over time with no therapeutic intervention.

The validity of the YPSQ, PPSI and YPI-R2 should also be tested among European, African, and Middle East populations to further support its claim for universality. It may be that some YPSQ subscales will emerge more strongly in certain parts of the world than others. For example, the investigation of EMSs from several studies done in Asia (China: Cui, Lin, & Oei, 2011; Korea: Baranoff, Oei, Cho, & Kwon, 2006; Singapore: Louis et al., 2012) revealed that the EMS of Subjugation did not appear robustly. It is likely that for such populations, Subjugation in a more collectivist and hierarchical society is the norm and so awareness that this can be dysfunctional is limited. The same could be true for the YPSQ constructs, but only future studies will be able to confirm this. With the advent of the YPSQ, this measure can become a platform to develop positive schema modes, and future research can then study the relationship between certain EASs / PPSI constructs and positive schema modes, similarly to how this was done between EMSs / YPI and negative schema modes.

For both the PPSI and YPI-R2, the number of constructs related to ratings of fathers and mothers was different. There were five negative ones for fathers, but six for mothers. The unique one for mothers was Controlling. For the PPSI there were seven subscales for ratings of the fathers but five for the mothers. The two unique ones for the fathers were Autonomy Granting, and Confidence and Competence. Future research needs to test if these parenting constructs are unique to gender. Both the maladaptive

parenting constructs in the YPI-R2 and the positive parenting constructs in the PPSI correlated significantly with certain EMSs in the YSQ-S3 and EASs in the YPSQ respectively. These EMSs and EASs, in turn, were shown to be associated with outcomes of personality traits, emotional distress, well-being, humour styles and gratitude. Further studies can be done to show which type of EMSs or EASs would mediate between parenting styles and these outcomes.

Conclusion

Given that the YPSQ is the first instrument validated to measure EASs in adults, it is able to help fill in the gap in the current literature about schemas, especially in the research and practice of ST. To date, the number of established positive parenting patterns are very few. The seven positive subscales of the PPSI instrument will therefore be able to also help fill in gap in the current literature about positive parenting, as well as in the research and practice of ST. The improved and cross validated YPI-R2 will also add to current practice the use of such a measure to explore the origin of EMSs. To conclude, the findings from Study 1, Study 2, and Study 3 provide empirical support for the YPSQ, PPSI, and YPI-R2, respectively, and suggest the utility of these measures in ST and, more broadly, within parental education and training and other forms of psychotherapy.

Appendices

Appendix A: Religion, History and Economy in Southeast Asia and South Asia

An overview of the differences (similarity in the English language as medium of instruction) in religion, history and economy in the countries from Southeast Asia and South Asia, namely Philippines, Malaysian, Singapore, and India, from which the samples were drawn for this study:

- Religion – The religious demographics in these countries are as follows (percentages are for main religions only): India[1]– Hinduism (79.8%), Islam (14.2%), Christianity (2.3%); Singapore[2] – Buddhism (33.2%), Taoism (10%), None (18.5%), Christianity (18.8%), Islam (14%), and Hinduism (5%); Malaysia[3]– Islam (61.3%), Buddhism (19.8%); Christianity (9.2%), and Hinduism (6.3%); Philippines[4]– Christians (93%), and Islam (5%). All these religions continue to have a profound influence on the populations of these countries in their general philosophy as well as outlook in life. These cultures are also more collective and relationship oriented than Western cultures, value interdependence over independence and identify themselves in relation to significant others rather than just themselves[5].
- Colonial History – The Philippines has been heavily influenced by America and Spain and has made it distinctly more "Western-oriented" in comparison with its neighbours in Southeast Asia[6]. For countries like India, Malaysia and Singapore, the British influence can still be felt strongly in the education and legal systems, and style of government.
- Medium of Instruction – The countries from which the samples were drawn in Asia (India, Philippines, Malaysia and Singapore) have made English a, if not the, medium of instruction in primary schools[7], and therefore it was not difficult to find English speaking populations in these countries. Emphasis of English in Indonesia has been increasing over the years.
- Economic Development – Some parts are completely urban like Singapore, a developed world with one of the highest Gross Domestic Product (GDP) per capita in the world. Malaysia, after Brunei has the third highest income per capita in Southeast Asia and is regarded as a middle income country[8]. India and the Philippines have substantially lower GDP by comparison.

Footnotes

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Appendix B

Theoretical Links Between Core Emotional Needs, Parenting Patterns, EASs, and EMSs

Experiences of Child from Unmet Core Emotional Need by Primary Caregiver	Early Maladaptive Schemas (EMSs)	Negative Schema Items (YSQ-S3, 90 Items)	Negative Parenting Sample Items from the YPI	Experiences of Child from Core Emotional Need met by Primary Caregiver	Early Adaptive Schemas (EASs)	Positive Schema Items (Initial Item pool of YPSQ, 95 Items)	Positive Parenting Sample Items from Initial Item Pool of PPSI
Disconnection and Rejection	Mistrust / Abuse	I feel that people will take advantage of me.	Lied to me, deceived me, or betrayed me.	Connection and Acceptance	Basic Trust	I usually trust that other people will treat me fairly.	Was honest, fair and good to me.
		I feel that I cannot let my guard down in the presence of other people, or else they will intentionally hurt me.	Abused me physically, emotionally, or sexually.			I usually feel relaxed and safe around other people, because I trust that they will not intentionally hurt me.	Could be firm at times but was always loving and focused on what was best for me.
		It is only a matter of time before someone betrays me.	Used me to satisfy his/her needs.			I am confident that most people I know will be loyal and not betray me.	
		I am quite suspicious of other people's motives.	Seemed to get pleasure from hurting people.			I usually trust that other people have good motives.	
		I'm usually on the lookout for people's ulterior motives.				I usually believe that other people are being honest with me and have good intentions.	
	Defectiveness / Shame	No man/woman I desire could love me once he or she saw my defects or flaws.	Criticized me a lot.		Self-Acceptance / Lovability	I'm confident that there is a man/woman I desire who would continue to love me, even if he/she saw my weaknesses.	Expected me to be a success in life.
		No one I desire would want to stay close to me if he/she knew the real me.	Made me feel unloved or rejected.			There are people I desire who will want to stay close to me when they get to know the real me.	Wanted me to succeed.
		I'm unworthy of the love, attention, and respect of others.	Treated me as if there was something wrong with me.			I'm worthy of love, attention and respect from others.	
		I feel that I'm not lovable.				I feel that I'm a lovable person.	
		I am too unacceptable in very basic ways to reveal myself to other people.	Made me feel ashamed of myself in important respects.			I feel confident that, when I open up about myself on a deeper level with people I like, they will accept me as I am.	
	*Emotional Deprivation	I haven't had someone to nurture me, share him/herself with me, or care deeply about everything that happens to me.	Listened to me, understood me, shared feelings with me.		Emotional Fulfillment	Most of the time, I have had someone to nurture me, share him/herself with me, and care deeply about everything that happens to me.	Listened to me, understood me and was tuned into my true needs and feelings.
		I don't have people to give me warmth, holding, and affection.	Loved me, treated me as someone special.			In general, people have been there to give me warmth, holding, and affection.	Loved me, treated me as someone special.
		I haven't felt that I am special to someone.	Spent time with and paid attention to me.			For much of my life, I have felt that I am special to someone.	
		I have not had someone who really listens to me, understands me, or is tuned into my true needs and feelings.	Was warm and physically affectionate.			For the most part, I have had someone who really listens to me, understands me, or is tuned into my true needs and feelings.	
		I haven't had a strong or wise person to give me sound advice or direction when I'm not sure what to do.	Gave me helpful guidance and direction.			I have usually had someone to be strong for me, and to give me sound advice and direction when I'm not sure what to do.	

Appendix B (Continued)

Experiences of Child from Unmet Core Emotional Need by Primary Caregiver	Early Maladaptive Schemas (EMSs)	Negative Schema Items (YSQ-S3, 90 Items)	Negative Parenting Sample Items from the YPI	Experiences of Child from Core Emotional Need met by Primary Caregiver	Early Adaptive Schemas (EASs)	Positive Schema Items (Initial Item pool of YPSQ, 95 Items)	Positive Parenting Sample Items from Initial Item Pool of PPSI
Disconnection and Rejection (Continued)	**Social Isolation / Alienation	I don't fit in.		Connection and Acceptance (Continued)	Social Belonging	I usually fit in with others.	Was happy for me to have friends.
		I'm fundamentally different from other people.				I have a lot in common with other people.	Helped me to become part of a larger group beyond the family.
		I don't belong; I'm a loner.				I feel a sense of belonging with other people.	
		I feel alienated from other people.				I generally feel accepted when I'm around other people.	
		I always feel on the outside of groups.				I usually feel included in groups.	
					(Additional Non-extroversion biased Social Belonging Items)	I have all the friends I need or want.	
						I feel as connected as I want to be with other people.	
						I feel as included in groups as I want to be.	
						I generally feel as accepted by others as I want to be when I am around other people.	
						I feel as much a part of groups as I want to be.	
	Emotional Inhibition	I am too self-conscious to show positive feelings to others (e.g., affection, showing I care).	Was uncomfortable expressing affection or vulnerability.		Emotional Openness / Spontaneity	I'm usually comfortable showing my positive feelings to others (e.g., physical affection, telling people I care about them) when I want to.	Expressed positive feelings towards others freely when s/he wanted to.
		I find it embarrassing to express my feelings to others.	Was private; rarely discussed his/her feelings.			I'm usually comfortable expressing my feelings to others when I want to.	Was willing to be open and share his/her feelings with me in a way that felt helpful or made us closer.
		I find it hard to be free-spirited and spontaneous around other people.	Had to have everything under control.			With most people I like, it's easy for me to be warm and spontaneous when I feel like doing so.	
		I control myself so much that people think I am unemotional.	Was structured and organized; preferred the familiar over change.			The people who matter to me see me as capable of being open and comfortable showing my emotions.	
		People see me as uptight emotionally.	Rarely expressed anger.			When it comes to showing my emotions, the people I care about see me as capable of being expressive and spontaneous.	
	Failure	Almost nothing I do at work (or school) is as good as other people can do.	Never taught me the discipline necessary to succeed in school.		Success	When it comes to work (or school), I usually do as well as, or better than, other people.	Taught me the discipline I needed to succeed in school.
		I'm incompetent when it comes to achievement.	Treated me as if I was stupid or untalented.			When it comes to achievement, I consider myself a competent person.	Treated me as intelligent and having talents.
		Most other people are more capable than I am in areas of work and achievement.	Expected me to be a failure in life.			I am as capable as most other people in areas of work and achievement.	
		I'm not as talented as most people are at their work.	Didn't really want me to succeed.			I'm as talented as most people are at their work.	
		I'm not as intelligent as most people when it comes to work (or school).				I'm as intelligent as most people when it comes to work (or school).	

Appendix B (Continued)

Experiences of Child from Unmet Core Emotional Need by Primary Caregiver	Early Maladaptive Schemas (EMSs)	Negative Schema Items (YSQ-S3, 90 Items)	Negative Parenting Sample Items from the YPI	Experiences of Child from Core Emotional Need met by Primary Caregiver	Early Adaptive Schemas (EASs)	Positive Schema Items (Initial Item pool of YPSQ, 95 Items)	Positive Parenting Sample Items from Initial Item Pool of PPSI
Impaired Autonomy and Performance	Vulnerability to Harm or Illness	I can't seem to escape the feeling that something bad is about to happen.	Worried excessively that I would get hurt.	Healthy Autonomy and Performane	Basic Health & Safety	I usually feel that I'm not in any danger and that things will be OK.	Was concerned about my safety but did not worry excessively about it.
		I feel that a disaster (natural, criminal, financial, or medical) could strike at any moment.	Worried excessively that I would get sick.			I generally feel safe and secure – that nothing bad is going to happen to me (such as serious financial problems, illnesses, strangers hurting me, or catastrophic events).	Took care of me so I would stay healthy but did not worry excessively about my getting sick.
		I worry about being physically attacked by people.	Was a fearful or phobic person.			I usually feel safe when I'm out in public or in crowds – I don't worry that I'll be attacked.	
		I worry that I'll lose all my money and become destitute or very poor.	Overprotected me.			I feel confident that I will have enough money to get by in the future and don't worry about losing everything.	
		I worry that I'm developing a serious illness, even though nothing serious has been diagnosed by a doctor.				I usually feel physically healthy and don't worry about my health, unless a doctor has diagnosed me with a serious medical problem.	
	Dependence / Incompetence	I do not feel capable of getting by on my own in everyday life.	Treated me as if I were younger than I really was.		Self-Reliance / Competence	I feel capable of getting by on my own in everyday life.	Saw me as capable as others my age.
		I think of myself as a dependent person, when it comes to everyday functioning.	Did too many things for me instead of letting me do things on my own.			I think of myself as an independent, self-reliant person, when it comes to everyday functioning.	Gave me the freedom to do things on my own when I wanted to.
		I lack common sense.	Made me feel I couldn't rely on my decisions or judgment.			I have good common sense.	
		My judgment cannot be relied upon in everyday situations.				I usually trust my own judgment in everyday situations.	
		I don't feel confident about my ability to solve everyday problems that come up.				I feel confident about my ability to solve most everyday problems that come up.	
	Enmeshment / Undeveloped Self	I have not been able to separate myself from my parent(s), the way other people my age seem to.	I felt that I didn't have enough individuality or sense of self separate from him/her.		Healthy Boundaries / Developed Self	I have been able to separate from my parent(s) and become an independent person, as much as most other people my age.	Allowed me to be an individual separate from him/her.
		My parent(s) and I tend to be over-involved in each other's lives and problems.	I felt that I didn't have my own sense of direction while I was growing up because he/she was such a strong person.			I have been able to establish a life of my own, and am not overly involved with my parent(s) and their problems.	Wanted me to follow my own dreams even if different from his/hers.
		It is very difficult for my parent(s) and me to keep intimate details from each other, without feeling betrayed or guilty.	We were so close that we understood each other almost perfectly.			My parent(s) and I have healthy boundaries: we have privacy from each other when we want it, without feeling guilty about not sharing everything.	
		I often feel as if my parent(s) are living through me – that I don't have a life of my own.	I felt that we would hurt each other if either of us went away from the other.			I don't feel that my parent(s) are trying to live through me – they let me have a life of my own.	
		I often feel that I do not have a separate identity from my parent(s) or partner.				I have my own sense of identity, separate from my parent(s) or partner.	

Appendix B (Continued)

Experiences of Child from Unmet Core Emotional Need by Primary Caregiver	Early Maladaptive Schemas (EMSs)	Negative Schema Items (YSQ-S3, 90 Items)	Negative Parenting Sample Items from the YPI	Experiences of Child from Core Emotional Need met by Primary Caregiver	Early Adaptive Schemas (EASs)	Positive Schema Items (Initial Item pool of YPSQ, 95 Items)	Positive Parenting Sample Items from Initial Item Pool of PPSI
Impaired Autonomy and Performance (Continued)	Abandonment / Instability	I find myself clinging to people I'm close to, because I'm afraid they'll leave me.	Withdrew or left me alone for extended periods.	Healthy Autonomy and Performance (Continued)	Stable Attachment	I don't cling to the people I'm close to because I'm confident that they won't leave me.	Was available to me when I needed him/her.
		I need other people so much that I worry about losing them.	Was moody, unpredictable, or an alcoholic.			I rarely worry about losing the people I'm close to; I know I can get by on my own if I have to.	Was emotionally strong, steady and predictable.
		I worry that people I feel close to will leave me or abandon me.	Died or left the house permanently when I was a child.			I feel confident that the people I'm close to won't leave or abandon me.	
		When someone I care for seems to be pulling away or withdrawing from me, I feel desperate.	Preferred my brother(s) or sister(s) to me.			When I feel someone I care for pulling away from me, I don't panic or feel desperate.	
		Sometimes I am so worried about people leaving me that I drive them away.				I trust that people won't leave me, so I don't act needy and drive them away.	
	Subjugation	I think that if I do what I want, I'm only asking for trouble.	Everything had to be on his/her terms.		Assertiveness / Self-Expression	When I do what I think is fair, I usually don't worry that it will upset other people.	Respected my opinions and ideas even when they were different from his/hers.
		I feel that I have no choice but to give in to other people's wishes, or else they will retaliate or reject me in some way.	Treated me as if my opinions or desires didn't count.			I don't worry that people will retaliate or reject me if I don't give in to their wishes.	Respected my wishes even when s/he disagreed with them.
		In relationships, I let the other person have the upper hand.	Did what he/she wanted, regardless of my needs.			In relationships, I usually share control over decisions – I don't automatically give in to the other person.	
		I've always let others make choices for me, so I really don't know what I want for myself.	Controlled my life so that I had little freedom of choice.			I have generally made my own choices regarding major decisions in my life; I usually know what I want for myself, instead of relying mostly on what other people think I should do.	
		I have a lot of trouble demanding that my rights be respected and that my feelings be taken into account.				I usually stand up for my rights when I feel that other people are not taking my feelings into account or are not showing respect for my needs – in the same way that I try to be considerate of others.	
	Negativity / Pessimism	Even when things seem to be going well, I feel that it is only temporary.	Focused on the negative aspects of life or things going wrong.		Optimism / Hopefulness	When things are going well in my life, I usually feel happy and optimistic about the future.	Focused more about the positive aspects of life or what was going well than the negative aspects of life.
		If something good happens, I worry that something bad is likely to follow.	Had a pessimistic outlook; often expected the worst outcome.			When something good happens, I can usually enjoy it, without expecting something bad to follow.	Usually was confident that things would turn out well in the end.
		You can't be too careful; something will almost always go wrong.	Worried a lot about the family's financial problems.			There's no need to worry all the time; things generally work out pretty well.	
		No matter how hard I work, I worry that I could be wiped out financially and lose almost everything.	Made me feel that If I made even a small mistake, something bad might happen.			In good economic times, I'm usually optimistic about the future when it comes to my finances; I don't worry any more than most other people I know.	
		I worry that a wrong decision could lead to disaster.				I'm usually relaxed about making decisions; I don't worry that something terrible will happen if I'm wrong.	

Appendix B (Continued)

Experiences of Child from Unmet Core Emotional Need by Primary Caregiver	Early Maladaptive Schemas (EMSs)	Negative Schema Items (YSQ-S3, 90 Items)	Negative Parenting Sample Items from the YPI	Experiences of Child from Core Emotional Need met by Primary Caregiver	Early Adaptive Schemas (EASs)	Positive Schema Items (Initial Item pool of YPSQ, 95 Items)	Positive Parenting Sample Items from Initial Item Pool of PPSI
Impaired Limits	Entitlement / Grandiosity	I have a lot of trouble accepting "no" for an answer when I want something from other people.	Was demanding; expected to get things his/her way.	Reasonable Limits	Empathic Consideration / Respect for Others	When I ask someone for something and the answer is "no," I'm usually comfortable accepting it without pushing to get my own way.	Was sometimes willing to compromise between getting things his/her way and what I wanted.
		I'm special and shouldn't have to accept many of the restrictions placed on other people.	Didn't teach me that I had responsibilities to other people.			I feel that I should have to follow the same rules and restrictions as everyone else – I don't expect special treatment.	Taught me I had responsibilities to other people.
		I hate to be constrained or kept from doing what I want.	Spoiled me, or was overindulgent, in many respects.			I can accept most situations in which I'm not allowed to do what I want to do and have to go along with what others decide.	
		I feel that I shouldn't have to follow the normal rules and conventions other people do.	Made me feel I was special, better than most other people.			I feel that I should follow most of the normal rules and conventions other people do.	
		I feel that what I have to offer is of greater value than the contributions of others.				Most of the time, I feel that what other people have to offer is as valuable as my own contribution.	
	Insufficient Self-Control / Self-Discipline	I can't seem to discipline myself to complete routine or boring tasks.	Set few rules or responsibilities for me.		Healthy Self-Control / Self-Discipline	I'm usually able to discipline myself to complete routine or boring tasks.	Set rules and responsibilities s/he expected me to live up to.
		If I can't reach a goal, I become easily frustrated and give up.	Allowed me to get very angry or lose control.			If I can't reach a goal, I'm usually persistent and don't easily give up.	Helped me to learn to express my anger in respectful ways.
		I have a very difficult time sacrificing immediate gratification to achieve a long-range goal.	Provided very little discipline or structure for me.			I'm usually able to sacrifice immediate gratification or pleasure in order to achieve a long-range goal.	
		I can't force myself to do things I don't enjoy, even when I know it's for my own good.	Was an undisciplined person.			I'm usually able to get myself to do things I don't enjoy when I know it's for my own good.	
		I have rarely been able to stick to my resolutions.				I usually stick to my resolutions.	
	Approval-Seeking / Recognition-Seeking	Unless I get a lot of attention from others, I feel less important.	Was concerned with social status and appearance.		Self-Directedness	I feel that I'm important to people, even when they aren't paying a lot of attention to me.	Was more focused on what was best for me and the family than social status and appearance.
		If I make remarks at a meeting or am introduced at a gathering, I look forward to recognition and admiration.	Placed strong emphasis on success and competition.			When I speak up at a meeting or am introduced in a social situation, getting recognition and admiration from others is not that important to me.	Did not put success and competition ahead of getting along with others.
		Lots of praise and compliments make me feel like a worthwhile person.	Was concerned with how my behavior would reflect on him/her in the eyes of others.			I don't need a lot of praise or compliments from others to feel that I'm a worthwhile person.	
		Accomplishments are most valuable to me if other people notice them.	Seemed to love me more or pay more attention to me when I excelled.			I value my own accomplishments even when other people don't notice them.	
		Having money and knowing important people make me feel worthwhile.				I feel that I'm a worthwhile person, whether or not I have a lot of money or know important people.	

Appendix B (Continued)

Experiences of Child from Unmet Core Emotional Need by Primary Caregiver	Early Maladaptive Schemas (EMSs)	Negative Schema Items (YSQ-S3, 90 Items)	Negative Parenting Sample Items from the YPI	Experiences of Child from Core Emotional Need met by Primary Caregiver	Early Adaptive Schemas (EASs)	Positive Schema Items (Initial Item pool of YPSQ, 95 Items)	Positive Parenting Sample Items from Initial Item Pool of PPSI
Exaggerated Expectations	Unrelenting Standards / Hypercriticalness	I must be the best at most of what I do; I can't accept second best.	Had very high expectations for him/herself.	Healthy & Realistic Standards	Realistic Expectations	I'm usually realistic when it comes to expectations for myself; I don't have to be among the best to be satisfied with what I've done.	Had realistic expectations of him/herself.
		I try to do my best; I can't settle for "good enough."	Made me feel that almost nothing I did was quite good enough.			I don't have to be perfect; I can usually accept "good enough".	If I did very well at something, s/he would focus on that and did not feel the need to point out mistakes or flaws.
		I must meet all my responsibilities.	Expected me to do my best at all times.			I'm generally a responsible person, but I'm comfortable letting some things go and not worrying about them.	
		I feel there is constant pressure for me to achieve and get things done.	Had strict, rigid rules of right and wrong.			I try to get things done, but I usually leave plenty of time for relaxation and fun, without worrying about the things I didn't have time to finish.	
		I can't let myself off the hook easily or make excuses for my mistakes.	Was a perfectionist in many areas; things had to be "just so".			When I make mistakes, I usually go easy on myself and try to give myself the benefit of the doubt.	
	Punitiveness	If I make a mistake, I deserve to be punished.	Would become angry or harshly critical when I did something wrong.		Forgiveness / Self-Compassion	If I make a mistake, I can usually forgive myself; I don't feel that I deserve to be punished.	Did not become harshly critical when I did something wrong.
		If I don't try my hardest, I should expect to lose out.	Would call me names (like "stupid" or "idiot") when I made mistakes.			Even when I don't try my hardest, I feel OK about it. I don't expect to lose out.	Treated me with respect even when I did something wrong.
		If I don't do the job, I should suffer the consequences.	Would punish me when I did something wrong.			Even when I fail at something, I don't feel that I should be made to suffer for it.	
		It doesn't matter why I make a mistake; when I do something wrong, I should pay the price.	Blamed people when things went wrong.			If I do something wrong, but there are good reasons to explain why, I don't think I should be made to feel that I'm bad.	
		I'm a bad person who deserves to be punished.				I feel that I'm basically a good person.	
	Self-Sacrifice	I'm the one who usually ends up taking care of the people I'm close to.	Was unhappy a lot and relied on me for support and understanding.		Healthy Self-Interest / Self-Care	I take care of the people I'm close to, but I'm also comfortable letting them take care of me.	Could be relied on for support and understanding.
		I am a good person because I think of others more than of myself.	Was unable to handle many daily responsibilities, so I had to do more than my share.			I can be a good person and, at the same time, consider my own needs to be as important as those of others.	Made me feel that my needs were just as important as everyone else's.
		I'm so busy doing for the people that I care about, that I have little time for myself.	Sacrificed his/her own needs for the sake of the family.			While I enjoy doing things for the people I care about, I make sure I have time for myself too.	
		I've always been the one who listens to everyone else's problems.	Made me feel that I was strong, and should take care of other people.			I'm most comfortable in relationships where I listen to other people's problems, and they're just as interested in hearing mine.	
		Other people see me as doing too much for others and not enough for myself.				Other people see me as doing a lot to help them, but they know that I expect them to take my needs into account too.	

Note. * All parenting items associated with the Emotional Deprivation EMS in the YPI were worded positively; ** There were no parenting items associated with the Social Isolation EMS in the YPI.

Appendix C

Study 1 – EFA of the Initial Item Pool for Development of the Shorter Version of YPSQ Using Manila (n = 559), and Bangalore (n = 350) Samples

Item	Manila Loading	Bangalore Loading	Items Selected for Shorter version	Remarks	New Items
Emotional Fulfillment					
Cronbach's Alpha Values for all items [95% CI]	**.69 [.65, .73]**	**.74 [.69, .78]**			
RQA63 / RQSP46 For the most part, I have had someone who really listens to me, understands me, or is tuned into my true needs and feelings.	.71	.67	✓		
RQA1 / RQSP1 Most of the time, I have had someone to nurture me, share him/herself with me, and care deeply about everything that happens to me.	.65	.63	✓		
RQA85 / RQSP63 I have usually had someone to be strong for me, and to give me sound advice and direction when I'm not sure what to do.		.56	✓		
RQA46 / RQSP41 For much of my life, I have felt that I am special to someone.	.55	.44	✓		
RQA208 / RQSP73 In general, people have been there to give me warmth, holding, and affection.		.47	✓		
RQA5 / RQSP4 I'm confident that there is a man/woman I desire who would continue to love me, even if he/she saw my weaknesses.	.49		✓		
RQA11 I take care of the people I'm close to, but I'm also comfortable letting them take care of me.	.41		×	Did not load as strongly and does not capture the central theme as clearly as the above items. The above items are also what resonate most strongly in a clinical context.	
Success					
Cronbach's Alpha Values for all items [95% CI]	**.84 [.82, .86]**	**.85 [.83, .87]**			
RQA101 / RQSP65 I'm as intelligent as most people when it comes to work (or school).	.80	.72	✓		
RQA150 / RQSP71 I'm as talented as most people are at their work.	.84	.61	✓		
RQA54 / RQSP52 I am as capable as most other people in areas of work and achievement.	.67	.77	✓		
RQA6 / RQSP5 When it comes to work (or school), I usually do as well as, or better than, other people.	.52	.62	✓		
RQA29 / RQSP25 When it comes to achievement, I consider myself a competent person.	.52		✓		
RQA118 / RQSP68 I feel confident about my ability to solve most everyday problems that come up.	.43	.41	✓		
RQA55 / RQSP62 I think of myself as an independent, self-reliant person, when it comes to everyday functioning.		.63	✓		
RQA53 / RQSP48 I'm worthy of love, attention and respect from others.		.59	✓		
RQA49 I feel that I'm basically a good person.		.46	×	Did not load as strongly and does not capture the central theme as clearly as the above items. The above items are also what resonate most strongly in a clinical context.	
RQA7 / RQSP6 I feel capable of getting by on my own in everyday life.		.46	×	Already have enough high loading items. This item was selected under the Healthy Boundaries / Developed Self factor (Manila) as it captured that construct more precisely.	

Appendix C (Continued)

Item	Manila Loading	Bangalore Loading	Items Selected for Shorter version	Remarks	New Items
Empathic Consideration					
Cronbach's Alpha Values for all items [95% CI]	**.46 [.37, .55]**	**.48 [.36, .58]**			
RQA14 / RQSP17 When I ask someone for something and the answer is "no," I'm usually comfortable accepting it without pushing to get my own way.	.55	.52	✓		
RQA15 / RQSP13 I'm usually able to discipline myself to complete routine or boring tasks.	.41		×	This item was selected under the Healthy Self-Control / Self-discipline (Bangalore) as it captured that construct more precisely.	
RQA13 / RQSP10 I'm usually realistic when it comes to expectations for myself; I don't have to be among the best to be satisfied with what I've done.		.42	✓		
New Item RQSP74 When I have to go along with what others decide and can't do what I want, I can accept it without continuing to try to get my way.					✓
New Item RQSP20 I am usually OK with not getting my way in a group decision.					✓
New Item RQSP36 I respect others wishes even when they are different from mine.					✓
New Item RQSP30 I don't believe I am better or more deserving than others.					✓
Basic Health and Safety / Optimism					
Cronbach's Alpha Values for all items [95% CI]	**.79 [.76, .81]**	**.76 [.72, .80]**			
RQA56 / RQSP45 I generally feel safe and secure – that nothing bad is going to happen to me (such as serious financial problems, illnesses, strangers hurting me, or catastrophic events).	.80	.44	✓		
RQA8 / RQSP7 I usually feel that I'm not in any danger and that things will be OK.	.48	.62	✓		
RQA91 / RQSP51 I feel confident that I will have enough money to get by in the future and don't worry about losing everything.	.62		✓		
RQA37 / RQSP33 In good economic times, I'm usually optimistic about the future when it comes to my finances; I don't worry any more than most other people I know.	.61		✓		
RQA31 / RQSP26 There's no need to worry all the time; things generally work out pretty well.	.43	.72	✓		
RQA23 / RQSP15 When something good happens, I can usually enjoy it, without expecting something bad to follow.	.42		✓		
RQA48 / RQSP43 I'm usually relaxed about making decisions; I don't worry that something terrible will happen if I'm wrong.	.42	.55	✓		
RQA79 / RQSP49 I usually feel safe when I'm out in public or in crowds – I don't worry that I'll be attacked.	.71		✓		
RQA92 I try to get things done, but I usually leave plenty of time for relaxation and fun, without worrying about the things I didn't have time to finish.	.41		×	Did not load as strongly and does not capture the central theme as clearly as the above items. The above items are also what resonate most strongly in a clinical context.	
RQA47 / RQSP42 I don't need a lot of praise or compliments from others to feel that I'm a worthwhile person.		.43	×	Did not load as strongly and does not capture the central theme as clearly as the above items. The above items are also what resonate most strongly in a clinical context.	
RQA3 I usually trust that other people will treat me fairly.		.42	×	Did not load as strongly and does not capture the central theme as clearly as the above items. The above items are also what resonate most strongly in a clinical context.	

Appendix C (Continued)

Item	Manila Loading	Bangalore Loading	Items Selected for Shorter version	Remarks	New Items
Emotional Openness and Spontaneity					
Cronbach's Alpha Values for all items [95% CI]	**.77 [.74, .80]**	**.71 [.66, .75]**			
RQA138 / RQSP61 When it comes to showing my emotions, the people I care about see me as capable of being expressive and spontaneous.	.80	.75	✓		
RQA123 / RQSP69 The people who matter to me see me as capable of being open and comfortable showing my emotions.	.56	.68	✓		
RQA42 / RQSP38 I'm usually comfortable expressing my feelings to others when I want to.	.83	.55	✓		
RQA12 / RQSP9 I'm usually comfortable showing my positive feelings to others (e.g., physical affection, telling people I care about them) when I want to.	.60		✓		
RQA122 / RQSP55 I'm most comfortable in relationships where I listen to other people's problems, and they're just as interested in hearing mine.		.52	✓		
RQA140 I feel confident that, when I open up about myself on a deeper level with people I like, they will accept me as I am.		.50	×	Did not load as strongly and does not capture the central theme as clearly as the above items. The above items are also what resonate most strongly in a clinical context.	
RQA107 With most people I like, it's easy for me to be warm and spontaneous when I feel like doing so.		.43	×	This is very similar in content to RQA138, which captures the theme more clearly as evident by its higher loading.	
Self-Compassion					
Cronbach's Alpha Values for all items [95% CI]	**.66 [.61, .70]**	**.52 [.43, .60)**			
RQA18 / RQSP14 If I make a mistake, I can usually forgive myself; I don't feel that I deserve to be punished.	.59		✓		
RQA108 / RQSP59 When I make mistakes, I usually go easy on myself and try to give myself the benefit of the doubt.	.46		✓		
RQA32 / RQSP27 Even when I fail at something, I don't feel that I should be made to suffer for it.	.57		✓		
RQA24 / RQSP23 Even when I don't try my hardest, I feel OK about it. I don't expect to lose out.	.58		✓		
RQA36 / RQSP37 If I do something wrong, but there are good reasons to explain why, I don't think I should be made to feel that I'm bad.		.69	✓		
RQA35 / RQSP32 I don't have to be perfect; I can usually accept "good enough".		.55	✓		
RQA43 / RQSP39 I can be a good person and, at the same time, consider my own needs to be as important as those of others.		.42	×	This item was selected under the Healthy Self-Interest / Self-care (Manila) as it captured that construct more precisely.	

Appendix C (Continued)

Item	Manila Loading	Bangalore Loading	Items Selected for Shorter version	Remarks	New Items
Healthy Boundaries / Developed Self					
Cronbach's Alpha Values for all items [95% CI]	**.63 [.58, .68]**	**.50 [.40, .59]**			
RQA45 / RQSP40 I have been able to establish a life of my own, and am not overly involved with my parent(s) and their problems.	.45		✓		
RQA104 / RQSP53 I don't feel that my parent(s) are trying to live through me – they let me have a life of my own.		.42	✓		
RQA9 / RQSP8 I have been able to separate from my parent(s) and become an independent person, as much as most other people my age.	.67		✓		
RQA7 / RQSP6 I feel capable of getting by on my own in everyday life.	.58		✓		
RQA55 / RQSP62 I think of myself as an independent, self-reliant person, when it comes to everyday functioning.	.47		×	This was not chosen because it is almost identical in content to RQA7 which had a higher loading, and it cross also loaded (>0.4) with a rejected factor. However, this item also appeared under Success factor in Bangalore, and it captured that construct more precisely.	
RQA78 / RQSP56 My parent(s) and I have healthy boundaries: we have privacy from each other when we want it, without feeling guilty about not sharing everything.		.52	✓		
RQA105 / RQSP58 In relationships, I usually share control over decisions – I don't automatically give in to the other person.		.46	×	Did not load as strongly and does not capture the central theme as clearly as the above items. Also, this item was selected under the Healthy Self-Interest / Self-care scale (Manila) as it captured that construct more precisely.	
Social Belonging					
Cronbach's Alpha Values for all items [95% CI]	**.89 [.88, .91]**	**.85 [.83, .88]**			
RQA88 / RQSP57 I usually feel included in groups.	1.11	.70	✓		
RQA4 / RQSP3 I usually fit in with others.	.65	.46	✓		
RQA144 / RQSP70 I feel as much a part of groups as I want to be.	.67	.68	✓		
RQA114 / RQSP67 I generally feel as accepted by others as I want to be when I am around other people.	.65	.63	✓		
RQA201 / RQSP72 I feel as connected as I want to be with other people.	.54	.50	✓		
RQA67 I feel as included in groups as I want to be.	.84	.48	×	This is very similar in content to RQA144 and RQA88 which capture the theme more clearly as evident by its higher loading.	
RQA52 I generally feel accepted when I'm around other people.	.63	.41	×	This is very similar in content to RQA114 which capture the theme more clearly as evident by its higher loading. RQA114 was judged to be less biased towards extraversion and more clinically relevant.	
RQA89 / RQSP64 I feel that I'm a lovable person.	.51	.41	✓	This was chosen because variability of content, and feeling of lovability is often a central clinical theme and would assess a core private experience relative to the more public experience of social belonging that are tapped by the other items.	
RQA19 I have all the friends I need or want.	.49		×	Did not load as strongly and does not capture the central theme as clearly as the above items.	

Appendix C (Continued)

Item	Manila Loading	Bangalore Loading	Items Selected for Shorter version	Remarks	New Items
Social Belonging (Continued)					
RQA27 I feel a sense of belonging with other people.	.47	.58	×	This is very similar in content to other higher loading items which capture the theme more clearly, as evidenced by their higher loading values.	
RQA87 / RQSP54 I am confident that most people I know will be loyal and not betray me.	.42		×	Did not load as strongly and does not capture the central theme as clearly as the above items.	
RQA3 I usually trust that other people will treat me fairly.	.40		×	Did not load as strongly and does not capture the central theme as clearly as the above items.	
RQA26 I usually feel relaxed and safe around other people, because I trust that they will not intentionally hurt me.		.60	×	Did not load as strongly and does not capture the central theme as clearly as the above items.	
Healthy Self-Control / Self-Discipline					
Cronbach's Alpha Values for all items [95% CI]	**.66 [.61, .71]**	**.70 [.64, .74]**			
RQA69 / RQSP47 I usually stick to my resolutions.		.62	✓		
RQA15 / RQSP13 I'm usually able to discipline myself to complete routine or boring tasks.		.46	✓		
RQA33 / RQSP28 If I can't reach a goal, I'm usually persistent and don't easily give up.	.68	.56	✓		
RQA39 / RQSP35 I'm usually able to sacrifice immediate gratification or pleasure in order to achieve a long-range goal.	.52	.54	✓		
RQA25 / RQSP24 I value my own accomplishments even when other people don't notice them.	.56		✓		
RQA28 / RQSP31 There are people I desire who will want to stay close to me when they get to know the real me.	.42		✓		
RQA38 / RQSP34 When I speak up at a meeting or am introduced in a social situation, getting recognition and admiration from others is not that important to me.		.53	×	Did not load as strongly and does not capture the central theme as clearly as the above items. Also, this item was selected under the Self-Directedness scale (Manila) as it captured that construct more precisely.	
Self-Directedness					
Cronbach's Alpha Values for all items [95% CI]	**.58 [.50, .64]**				
RQA47 / RQSP42 I don't need a lot of praise or compliments from others to feel that I'm a worthwhile person.	.71		✓		
RQA38 / RQSP34 When I speak up at a meeting or am introduced in a social situation, getting recognition and admiration from others is not that important to me.	.69		✓		
New Item RQSP12 What I think of myself matters more to me than what others think of me.					✓
New Item RQSP18 I am more focused on doing what matters most than getting people to think well of me.					✓

Appendix C (Continued)

Item	Manila Loading	Bangalore Loading	Items Selected for Shorter version	Remarks	New Items
Healthy Self-Interest / Self-Care					
Cronbach's Alpha Values for all items	**.52**				
[95% CI]	**[.45, .59]**				
RQA106 / RQSP66 While I enjoy doing things for the people I care about, I make sure I have time for myself too.	.74		✓		
RQA43 / RQSP39 I can be a good person and, at the same time, consider my own needs to be as important as those of others.	.46		✓		
RQA105 / RQSP58 In relationships, I usually share control over decisions – I don't automatically give in to the other person.	.44		✓		
New Item RQSP19 I am willing to confront someone if I need to so that I don't get taken advantage of.					✓
Stable Attachment					
Cronbach's Alpha Values for all items		**.74**			
[95% CI]		**[.69, .78]**			
RQA51 / RQSP44 I feel confident that the people I'm close to won't leave or abandon me.		.64	✓		
RQA86 / RQSP50 I trust that people won't leave me, so I don't act needy and drive them away.		.50	✓		
RQA2 / RQSP2 I don't cling to the people I'm close to because I'm confident that they won't leave me.		.46	✓		
RQA87 / RQSP54 I am confident that most people I know will be loyal and not betray me.		.60	✓		
New RQSP21 – I know I can depend on the people closest to me to always be there for me.					✓
Realistic Expectations					
New Item RQSP16 I like to do well but don't have to be the best.					✓
New Item RQSP11 I have realistic expectations of myself and usually feel OK about how I am doing.					✓
New Item RQSP22 I work hard and also leave time for relaxation and fun.					✓
New Item RQSP29 I usually get chores done but can let them go at times if something special comes up.					✓
Rejected Two-Item Factor					
RQA110 I can accept most situations in which I'm not allowed to do what I want to do and have to go along with what others decide.	.50		✓	This factor was rejected but the item was selected for the Empathic Consideration factor since it captured that construct well.	
RQA120 I'm usually able to get myself to do things I don't enjoy when I know it's for my own good.	.42			This item was similar to items in Healthy Self-Control-Self Discipline factor.	
Rejected One-Item Factor				This factor was rejected because it had only one item.	
RQA200 I feel that I'm important to people, even when they aren't paying a lot of attention to me.		.49			
Rejected One-Item Factor				This factor was rejected because it had only one item.	
RQA204 I feel that I should follow most of the normal rules and conventions other people do.		.44			
Total Number of Items			**62**		**12**

Notes. "Research Question A" (RQA) denotes item from the initial YPSQ item pool subjected to EFA in Phase 1; "Research Question Schema Positive" (RQSP) denotes item selected from Phase 1 for Phase 2 and Phase 3; 95% CI denotes 95% Confidence Interval.

Total number of items selected from EFA in Phase 1 = 62

Total number of new items = 12

Total number of items administered for EFA in Phase 2 (Singapore sample) = 74

Appendix D

Study 1 – EFA of the Shorter Version of the YPSQ and Selection of Final Items in Phase 3 CFA Using Singapore (n = 628) Sample

Items Selected for Shorter version	Singapore Loading (Phase 2)	Items selected for final YPSQ based on CFA (Phase 3)	Remarks
Emotional Fulfillment			
Cronbach's Alpha Values for all items	**.87**		
[95% CI]	**[.86, .89]**		
RQA63 / RQSP46 For the most part, I have had someone who really listens to me, understands me, or is tuned into my true needs and feelings.	.94	✓	
RQA1 / RQSP1 Most of the time, I have had someone to nurture me, share him/herself with me, and care deeply about everything that happens to me.	.92	×	Removed because it had the lowest regression weight of all items in this factor (.55)
RQA85 / RQSP63 I have usually had someone to be strong for me, and to give me sound advice and direction when I'm not sure what to do.	.73	×	Removed because it had the second lowest regression weight of all items in this factor (.65)
RQA46 / RQSP41 For much of my life, I have felt that I am special to someone.	.62	✓	
RQA208 / RQSP73 In general, people have been there to give me warmth, holding, and affection.	.55	✓	
RQA5 / RQSP4 I'm confident that there is a man/woman I desire who would continue to love me, even if he/she saw my weaknesses.	.50	✓	
New Item RQSP21 (Originally constructed for Stable Attachment Scale) – I know I can depend on the people closest to me to always be there for me.	.41	✓	
Success			
Cronbach's Alpha Values for all items	**.93**		
[95% CI]	**[.92, .94]**		
RQA101 / RQSP65 I'm as intelligent as most people when it comes to work (or school).	.98	✓	
RQA150 / RQSP71 I'm as talented as most people are at their work.	.91	✓	
RQA54 / RQSP52 I am as capable as most other people in areas of work and achievement.	.87	✓	
RQA6 / RQSP5 When it comes to work (or school), I usually do as well as, or better than, other people.	.84	✓	
RQA29 / RQSP25 When it comes to achievement, I consider myself a competent person.	.62	✓	
RQA118 / RQSP68 I feel confident about my ability to solve most everyday problems that come up.			
RQA55 / RQSP62 I think of myself as an independent, self-reliant person, when it comes to everyday functioning.			
RQA53 / RQSP48 I'm worthy of love, attention and respect from others.			
Empathic Consideration			
Cronbach's Alpha Values for all items	**.84**		
[95% CI]	**[.82, .86]**		
New Item RQSP74 – When I have to go along with what others decide and can't do what I want, I can accept it without continuing to try to get my way.	.87	✓	
RQA110 / RQSP60 I can accept most situations in which I'm not allowed to do what I want to do and have to go along with what others decide. (Introduce the weak factor at the end and write comments there)	.72	×	This item was taken from the rejected two-item factor in Phase 1. In Phase 2, it was removed because it had the lowest regression weight of all items in this factor (.67).
New Item RQSP20 – I am usually OK with not getting my way in a group decision.	.72	✓	
RQA14 / RQSP17 When I ask someone for something and the answer is "no," I'm usually comfortable accepting it without pushing to get my own way.	.61	✓	
New Item RQSP36 – I respect others wishes even when they are different from mine.	.61	✓	
RQA13 / RQSP10 I'm usually realistic when it comes to expectations for myself; I don't have to be among the best to be satisfied with what I've done.			

Appendix D (Continued)

Items Selected for Shorter version	Singapore Loading (Phase 2)	Items selected for final YPSQ based on CFA (Phase 3)	Remarks
Basic Health and Safety / Optimism			
Cronbach's Alpha Values for all items	**.90**		
[95% CI]	**[.88, .91]**		
RQA56 / RQSP45 I generally feel safe and secure – that nothing bad is going to happen to me (such as serious financial problems, illnesses, strangers hurting me, or catastrophic events).	.90	✓	
RQA8 / RQSP7 I usually feel that I'm not in any danger and that things will be OK.	.85	✓	
RQA91 / RQSP51 I feel confident that I will have enough money to get by in the future and don't worry about losing everything.	.71	✓	
RQA37 / RQSP33 In good economic times, I'm usually optimistic about the future when it comes to my finances; I don't worry any more than most other people I know.	.63	×	Removed because it had the second lowest regression weight of all items in this factor (.73)
RQA31 / RQSP26 There's no need to worry all the time; things generally work out pretty well.	.61	✓	
RQA23 / RQSP15 When something good happens, I can usually enjoy it, without expecting something bad to follow.	.56	×	Removed because it had a high correlation of 0.6 with item RQSP45
RQA48 / RQSP43 I'm usually relaxed about making decisions; I don't worry that something terrible will happen if I'm wrong.	.50	✓	
RQA79 / RQSP49 I usually feel safe when I'm out in public or in crowds – I don't worry that I'll be attacked.	.45	×	Removed because it had the lowest regression weight of all items in this factor (.65)
Emotional Openness and Spontaneity			
Cronbach's Alpha Values for all items	**.87**		
[95% CI]	**[.86, .89]**		
RQA138 / RQSP61 When it comes to showing my emotions, the people I care about see me as capable of being expressive and spontaneous.	.90	✓	
RQA123 / RQSP69 The people who matter to me see me as capable of being open and comfortable showing my emotions.	.82	✓	
RQA42 / RQSP38 I'm usually comfortable expressing my feelings to others when I want to.	.80	✓	
RQA12 / RQSP9 I'm usually comfortable showing my positive feelings to others (e.g., physical affection, telling people I care about them) when I want to.	.76	✓	
RQA122 / RQSP55 I'm most comfortable in relationships where I listen to other people's problems, and they're just as interested in hearing mine.			
Self-Compassion			
Cronbach's Alpha Values for all items	**.81**		
[95% CI]	**[.79, .84]**		
RQA18 / RQSP14 If I make a mistake, I can usually forgive myself; I don't feel that I deserve to be punished.	.81	✓	
RQA108 / RQSP59 When I make mistakes, I usually go easy on myself and try to give myself the benefit of the doubt.	.72	✓	
RQA32 / RQSP27 Even when I fail at something, I don't feel that I should be made to suffer for it.	.57	✓	
RQA24 / RQSP23 Even when I don't try my hardest, I feel OK about it. I don't expect to lose out.			
RQA36 / RQSP37 If I do something wrong, but there are good reasons to explain why, I don't think I should be made to feel that I'm bad.			
RQA35 / RQSP32 I don't have to be perfect; I can usually accept "good enough".			

Appendix D (Continued)

Items Selected for Shorter version	Singapore Loading (Phase 2)	Items selected for final YPSQ based on CFA (Phase 3)	Remarks
Healthy Boundaries / Developed Self			
Cronbach's Alpha Values for all items	**.78**		
[95% CI]	**[.75, .81]**		
RQA45 / RQSP40 I have been able to establish a life of my own, and am not overly involved with my parent(s) and their problems.	.70	✓	
RQA104 / RQSP53 I don't feel that my parent(s) are trying to live through me – they let me have a life of my own.	.70	✓	
RQA9 / RQSP8 I have been able to separate from my parent(s) and become an independent person, as much as most other people my age.	.60	✓	
RQA7 / RQSP6 I feel capable of getting by on my own in everyday life.			
RQA78 / RQSP56 My parent(s) and I have healthy boundaries: we have privacy from each other when we want it, without feeling guilty about not sharing everything.			
Social Belonging			
Cronbach's Alpha Values for all items	**.92**		
[95% CI]	**[.91, .93]**		
RQA88 / RQSP57 I usually feel included in groups.	.92	✓	
RQA4 / RQSP3 I usually fit in with others.	.87	✓	
RQA144 / RQSP70 I feel as much a part of groups as I want to be.	.71	✓	
RQA114 / RQSP67 I generally feel as accepted by others as I want to be when I am around other people.	.60	✓	
RQA201 / RQSP72 I feel as connected as I want to be with other people.	.44	✓	
RQA89 / RQSP64 I feel that I'm a lovable person.			
Healthy Self-Control / Self-Discipline			
Cronbach's Alpha Values for all items	**.801**		
[95% CI]	**[.774, .825]**		
RQA69 / RQSP47 I usually stick to my resolutions.	.644	✓	
RQA15 / RQSP13 I'm usually able to discipline myself to complete routine or boring tasks.	.622	✓	
RQA33 / RQSP28 If I can't reach a goal, I'm usually persistent and don't easily give up.	.600	✓	
RQA39 / RQSP35 I'm usually able to sacrifice immediate gratification or pleasure in order to achieve a long-range goal.	.594	✓	
RQA25 / RQSP24 I value my own accomplishments even when other people don't notice them.			
RQA28 / RQSP31 There are people I desire who will want to stay close to me when they get to know the real me.			
Realistic Expectations			
Cronbach's Alpha Values for all items	**.854**		
[95% CI]	**[.835, .872]**		
RQA13 / RQSP10 I'm usually realistic when it comes to expectations for myself; I don't have to be among the best to be satisfied with what I've done.	.716	✓	
New Item RQSP16 – I like to do well but don't have to be the best.	.670	✓	
RQA35 / RQSP32 I don't have to be perfect; I can usually accept "good enough".	.652	✓	
New Item RQSP11 – I have realistic expectations of myself and usually feel OK about how I am doing.	.598	✓	
Self-Directedness			
Cronbach's Alpha Values for all items	**.84**		
[95% CI]	**[.82, .86]**		
New Item RQSP12 – What I think of myself matters more to me than what others think of me.	.75	✓	
RQA47 / RQSP42 I don't need a lot of praise or compliments from others to feel that I'm a worthwhile person.	.62	✓	
New Item RQSP18 – I am more focused on doing what matters most than getting people to think well of me.	.57	✓	
RQA38 / RQSP34 When I speak up at a meeting or am introduced in a social situation, getting recognition and admiration from others is not that important to me.	.52	×	Removed because it had the lowest regression weight of all items in this factor (.73)
RQA25 / RQSP24 I value my own accomplishments even when other people don't notice them.	.48	✓	

Appendix D (Continued)

Items Selected for Shorter version	Singapore Loading (Phase 2)	Items selected for final YPSQ based on CFA (Phase 3)	Remarks
Healthy Self-Interest / Self-Care			
Cronbach's Alpha Values for all items	**.76**		
[95% CI]	**[.72, .79]**		
New Item RQSP22 Originally constructed for the Realistic Expectations scale – I work hard and also leave time for relaxation and fun.	.80	✓	
RQA106 / RQSP66 While I enjoy doing things for the people I care about, I make sure I have time for myself too.	.77	✓	
RQA43 / RQSP39 I can be a good person and, at the same time, consider my own needs to be as important as those of others.	.60	✓	
RQA105 / RQSP58 In relationships, I usually share control over decisions – I don't automatically give in to the other person.			
Stable Attachment			
Cronbach's Alpha Values for all items	**.86**		
[95% CI]	**[.84, .88]**		
RQA51 / RQSP44 I feel confident that the people I'm close to won't leave or abandon me.	.69	✓	
RQA86 / RQSP50 I trust that people won't leave me, so I don't act needy and drive them away.	.68	✓	
RQA2 / RQSP2 I don't cling to the people I'm close to because I'm confident that they won't leave me.	.55	✓	
RQA87 / RQSP54 I am confident that most people I know will be loyal and not betray me.	.43	✓	
Healthy Self-Reliance / Competence			
Cronbach's Alpha Values for all items	**.85**		
[95% CI]	**[.83, .87]**		
RQA55 / RQSP62 I think of myself as an independent, self-reliant person, when it comes to everyday functioning.	.63	✓	
RQA118 / RQSP68 I feel confident about my ability to solve most everyday problems that come up.	.51	✓	
RQA7 / RQSP6 I feel capable of getting by on my own in everyday life.	.45	✓	
	63	**56**	

Notes. "Research Question A" (RQA) denotes item from the initial YPSQ item pool subjected to EFA in Phase 1; "Research Question Schema Positive" (RQSP) denotes item selected from Phase 1 for Phase 2 and Phase 3; 95% CI denotes 95% Confidence Interval.

Total number of items emerged from EFA in Phase 2	= 63 (Total items administered = 74)
Total number of items removed from CFA in Phase 3	= 7
Total number accepted in final reduced model	= 56

Appendix E

Fit indices from Multigroup CFA of Measurement and Structural Invariance Tests (14 Factors and 56 Items – WLSMV) Using Singapore (n = 628), Kuala Lumpur (n = 229), and USA East (n = 214) Samples

Model	Number of parameters	χ^2 ($\Delta\chi^2$)*	*df* (Δdf)*	*p*	χ^2/df	CFI (ΔCFI)	TLI (ΔTLI)	RMSEA [90% CI] (ΔRMSEA)	Comparison	Decision
Configural invariance	1278	7361.33	4179	<.001	1.76	0.97	0.96	0.046 [0.044, 0.048]	-	Accept
Metric invariance	1194	7304.68 (101.50)	4263 (84)	<.001 (.094)	1.71 (-0.048)	0.97 (0.005)	0.97 (0.006)	0.042 [0.040, 0.044] (-0.004)	Configural vs Metric	Accept
Scalar invariance	776	7697.84 (630.21)	4681 (418)	<.001 (<.001)	1.64 (-0.069)	0.97 (-0.001)	0.97 (0.002)	0.040 [0.039, 0.042] (-0.002)	Metric vs Scalar	Accept
Error variance invariance	664	7544.49 (259.27)	4793 (112)	<.001 (<.001)	1.57 (-0.070)	0.97 (0.001)	0.97 (0.001)	0.040 [0.038, 0.042] <0.001	Scalar vs Error variance	Accept
Factor variance invariance	636	7564.64 (85.42)	4821 (28)	<.001 (<.001)	1.57 (-0.005)	0.97 (-0.003)	0.97 (-0.003)	0.042 [0.040, 0.044] (0.002)	Error variance vs Factor variance	Accept
Factor covariance invariance	454	6644.91 (276.51)	5003 (182	<.001 (<.001)	1.33 (-0.241)	0.98 (0.015)	0.98 (0.015)	0.030 [0.028, 0.032] (-0.012)	Factor variance vs Factor covariance	Accept
Factor mean invariance	426	6806.97 (104.43)	5031 (28)	<.001 (<.001)	1.35 (0.025)	0.98 (-0.002)	0.98 (-0.001)	0.031 [0.030, 0.033] (0.001)	Factor covariance vs Factor mean	Accept
Acceptance criteria for indices (differences)						>0.95 (<0.01)	>0.95 (<0.01)	<0.06 (<0.015)		

Note. *The chi-square difference test results of nested models using the scaled chi-square (Satorra & Bentler, 2010) are reported as results DIFFTEST command implemented in M*plus* (Asparouhov & Muthén, 2006).

Appendix F

Divergent Validity of the YPSQ Subscales with YSQ-S3 Using Singapore Sample (n = 628)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_jk)	Correlation between Scale j and scale h (r_jh)	z-test for testing if H0: r_jk – r_jh = 0	2-tailed p
Stable Attachment	Abandonment	Approval-Seeking	-.62	-.28	-10.61	<.01
Stable Attachment	Abandonment	Defectiveness	-.62	-.53	-3.12	<.01
Stable Attachment	Abandonment	Dependence	-.62	-.42	-6.05	<.01
Stable Attachment	Abandonment	Emotional Deprivation	-.62	-.39	-6.38	<.01
Stable Attachment	Abandonment	Emotional Inhibition	-.62	-.26	-9.34	<.01
Stable Attachment	Abandonment	Enmeshment	-.62	-.40	-6.55	<.01
Stable Attachment	Abandonment	Entitlement	-.62	-.12	-12.91	<.01
Stable Attachment	Abandonment	Failure	-.62	-.36	-7.54	<.01
Stable Attachment	Abandonment	Insufficient Self-Control	-.62	-.26	-10.09	<.01
Stable Attachment	Abandonment	Mistrust	-.62	-.46	-5.10	<.01
Stable Attachment	Abandonment	Pessimism	-.62	-.43	-6.21	<.01
Stable Attachment	Abandonment	Punitiveness	-.62	-.26	-10.09	<.01
Stable Attachment	Abandonment	Self-Sacrifice	-.62	-.08	-13.14	<.01
Stable Attachment	Abandonment	Social Isolation	-.62	-.45	-5.31	<.01
Stable Attachment	Abandonment	Subjugation	-.62	-.35	-8.25	<.01
Stable Attachment	Abandonment	Unrelenting Standards	-.62	-.13	-12.39	<.01
Stable Attachment	Abandonment	Vulnerability	-.62	-.44	-5.72	<.01

Appendix F (Continued)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_{jk})	Correlation between Scale j and scale h (r_{jh})	z-test for testing if H0: $r_{jk} - r_{jh} = 0$	2-tailed p
Self-Directedness	Approval-Seeking	Abandonment	-.52	-.47	-1.75	.08
Self-Directedness	Approval-Seeking	Defectiveness	-.52	-.48	-1.27	.20
Self-Directedness	Approval-Seeking	Dependence	-.52	-.33	-4.77	<.01
Self-Directedness	Approval-Seeking	Emotional Deprivation	-.52	-.24	-6.81	<.01
Self-Directedness	Approval-Seeking	Emotional Inhibition	-.52	-.25	-6.51	<.01
Self-Directedness	Approval-Seeking	Enmeshment	-.52	-.30	-5.41	<.01
Self-Directedness	Approval-Seeking	Entitlement	-.52	-.08	-11.88	<.01
Self-Directedness	Approval-Seeking	Failure	-.52	-.43	-2.54	<.01
Self-Directedness	Approval-Seeking	Insufficient Self-Control	-.52	-.34	-5.31	<.01
Self-Directedness	Approval-Seeking	Mistrust	-.52	-.32	-5.44	<.01
Self-Directedness	Approval-Seeking	Pessimism	-.52	-.36	-4.68	<.01
Self-Directedness	Approval-Seeking	Punitiveness	-.52	-.25	-7.15	<.01
Self-Directedness	Approval-Seeking	Self-Sacrifice	-.52	-.03	-10.67	<.01
Self-Directedness	Approval-Seeking	Social Isolation	-.52	-.40	-3.42	<.01
Self-Directedness	Approval-Seeking	Subjugation	-.52	-.41	-2.98	<.01
Self-Directedness	Approval-Seeking	Unrelenting Standards	-.52	-.15	-9.39	<.01
Self-Directedness	Approval-Seeking	Vulnerability	-.52	-.31	-5.39	<.01

Appendix F (Continued)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_jk)	Correlation between Scale j and scale h (r_jh)	z-test for testing if H0: r_jk – r_jh = 0	2-tailed p
Healthy Self-Reliance / Competence	Dependence	Abandonment	-.60	-.42	-5.35	<.01
Healthy Self-Reliance / Competence	Dependence	Approval-Seeking	-.60	-.24	-9.09	<.01
Healthy Self-Reliance / Competence	Dependence	Defectiveness	-.60	-.41	-5.96	<.01
Healthy Self-Reliance / Competence	Dependence	Emotional Deprivation	-.60	-.24	-9.71	<.01
Healthy Self-Reliance / Competence	Dependence	Emotional Inhibition	-.60	-.21	-10.23	<.01
Healthy Self-Reliance / Competence	Dependence	Enmeshment	-.60	-.44	-4.76	<.01
Healthy Self-Reliance / Competence	Dependence	Entitlement	-.60	-.04	-12.72	<.01
Healthy Self-Reliance / Competence	Dependence	Failure	-.60	-.41	-6.60	<.01
Healthy Self-Reliance / Competence	Dependence	Insufficient Self-Control	-.60	-.32	-8.36	<.01
Healthy Self-Reliance / Competence	Dependence	Mistrust	-.60	-.29	-8.37	<.01
Healthy Self-Reliance / Competence	Dependence	Pessimism	-.60	-.35	-7.56	<.01
Healthy Self-Reliance / Competence	Dependence	Punitiveness	-.60	-.20	-10.83	<.01
Healthy Self-Reliance / Competence	Dependence	Self-Sacrifice	-.60	-.01	-13.93	<.01
Healthy Self-Reliance / Competence	Dependence	Social Isolation	-.60	-.34	-7.59	<.01
Healthy Self-Reliance / Competence	Dependence	Subjugation	-.60	-.42	-6.09	<.01
Healthy Self-Reliance / Competence	Dependence	Unrelenting Standards	-.60	.03	-13.79	<.01
Healthy Self-Reliance / Competence	Dependence	Vulnerability	-.60	-.41	-5.94	<.01

Appendix F (Continued)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_jk)	Correlation between Scale j and scale h (r_jh)	z-test for testing if H0: r_jk – r_jh = 0	2-tailed p
Emotional Fulfillment	Emotional Deprivation	Abandonment	-.67	-.37	-8.46	<.01
Emotional Fulfillment	Emotional Deprivation	Approval-Seeking	-.67	-.24	-11.34	<.01
Emotional Fulfillment	Emotional Deprivation	Defectiveness	-.67	-.64	-1.23	.22
Emotional Fulfillment	Emotional Deprivation	Dependence	-.67	-.34	-9.34	<.01
Emotional Fulfillment	Emotional Deprivation	Emotional Inhibition	-.67	-.35	-9.32	<.01
Emotional Fulfillment	Emotional Deprivation	Enmeshment	-.67	-.32	-9.66	<.01
Emotional Fulfillment	Emotional Deprivation	Entitlement	-.67	-.11	-13.90	<.01
Emotional Fulfillment	Emotional Deprivation	Failure	-.67	-.41	-7.83	<.01
Emotional Fulfillment	Emotional Deprivation	Insufficient Self-Control	-.67	-.27	-10.73	<.01
Emotional Fulfillment	Emotional Deprivation	Mistrust	-.67	-.40	-8.08	<.01
Emotional Fulfillment	Emotional Deprivation	Pessimism	-.67	-.36	-8.88	<.01
Emotional Fulfillment	Emotional Deprivation	Punitiveness	-.67	-.25	-11.25	<.01
Emotional Fulfillment	Emotional Deprivation	Self-Sacrifice	-.67	-.05	-14.70	<.01
Emotional Fulfillment	Emotional Deprivation	Social Isolation	-.67	-.55	-4.25	<.01
Emotional Fulfillment	Emotional Deprivation	Subjugation	-.67	-.37	-8.85	<.01
Emotional Fulfillment	Emotional Deprivation	Unrelenting Standards	-.67	-.12	-13.07	<.01
Emotional Fulfillment	Emotional Deprivation	Vulnerability	-.67	-.38	-8.11	<.01

Appendix F (Continued)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_jk)	Correlation between Scale j and scale h (r_jh)	z-test for testing if H0: r_jk – r_jh = 0	2-tailed p
Emotional Openness and Spontaneity	Emotional Inhibition	Abandonment	-.61	-.19	-10.67	<.01
Emotional Openness and Spontaneity	Emotional Inhibition	Approval-Seeking	-.61	-.16	-11.18	<.01
Emotional Openness and Spontaneity	Emotional Inhibition	Defectiveness	-.61	-.45	-5.32	<.01
Emotional Openness and Spontaneity	Emotional Inhibition	Dependence	-.61	-.31	-8.05	<.01
Emotional Openness and Spontaneity	Emotional Inhibition	Emotional Deprivation	-.61	-.34	-7.36	<.01
Emotional Openness and Spontaneity	Emotional Inhibition	Enmeshment	-.61	-.26	-8.82	<.01
Emotional Openness and Spontaneity	Emotional Inhibition	Entitlement	-.61	-.12	-12.03	<.01
Emotional Openness and Spontaneity	Emotional Inhibition	Failure	-.61	-.33	-7.92	<.01
Emotional Openness and Spontaneity	Emotional Inhibition	Insufficient Self-Control	-.61	-.21	-10.36	<.01
Emotional Openness and Spontaneity	Emotional Inhibition	Mistrust	-.61	-.36	-7.31	<.01
Emotional Openness and Spontaneity	Emotional Inhibition	Pessimism	-.61	-.32	-8.43	<.01
Emotional Openness and Spontaneity	Emotional Inhibition	Punitiveness	-.61	-.25	-10.23	<.01
Emotional Openness and Spontaneity	Emotional Inhibition	Self-Sacrifice	-.61	-.05	-14.03	<.01
Emotional Openness and Spontaneity	Emotional Inhibition	Social Isolation	-.61	-.46	-5.12	<.01
Emotional Openness and Spontaneity	Emotional Inhibition	Subjugation	-.61	-.34	-8.08	<.01
Emotional Openness and Spontaneity	Emotional Inhibition	Unrelenting Standards	-.61	-.17	-12.17	<.01
Emotional Openness and Spontaneity	Emotional Inhibition	Vulnerability	-.61	-.31	-8.08	<.01

Appendix F (Continued)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_jk)	Correlation between Scale j and scale h (r_jh)	z-test for testing if H0: r_jk – r_jh = 0	2-tailed p
Healthy Boundaries / Developed Self	Enmeshment	Abandonment	-.62	-.30	-9.01	<.01
Healthy Boundaries / Developed Self	Enmeshment	Approval-Seeking	-.62	-.12	-12.55	<.01
Healthy Boundaries / Developed Self	Enmeshment	Defectiveness	-.62	-.28	-9.34	<.01
Healthy Boundaries / Developed Self	Enmeshment	Dependence	-.62	-.41	-6.35	<.01
Healthy Boundaries / Developed Self	Enmeshment	Emotional Deprivation	-.62	-.19	-11.21	<.01
Healthy Boundaries / Developed Self	Enmeshment	Emotional Inhibition	-.62	-.20	-10.82	<.01
Healthy Boundaries / Developed Self	Enmeshment	Entitlement	-.62	-.07	-13.66	<.01
Healthy Boundaries / Developed Self	Enmeshment	Failure	-.62	-.24	-10.04	<.01
Healthy Boundaries / Developed Self	Enmeshment	Insufficient Self-Control	-.62	-.22	-10.53	<.01
Healthy Boundaries / Developed Self	Enmeshment	Mistrust	-.62	-.22	-10.55	<.01
Healthy Boundaries / Developed Self	Enmeshment	Pessimism	-.62	-.24	-10.60	<.01
Healthy Boundaries / Developed Self	Enmeshment	Punitiveness	-.62	-.12	-12.21	<.01
Healthy Boundaries / Developed Self	Enmeshment	Self-Sacrifice	-.62	-.07	-12.66	<.01
Healthy Boundaries / Developed Self	Enmeshment	Social Isolation	-.62	-.24	-9.94	<.01
Healthy Boundaries / Developed Self	Enmeshment	Subjugation	-.62	-.36	-7.72	<.01
Healthy Boundaries / Developed Self	Enmeshment	Unrelenting Standards	-.62	-.03	-13.73	<.01
Healthy Boundaries / Developed Self	Enmeshment	Vulnerability	-.62	-.27	-9.77	<.01

Appendix F (Continued)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_jk)	Correlation between Scale j and scale h (r_jh)	z-test for testing if H0: r_jk – r_jh = 0	2-tailed p
Empathic Consideration	Entitlement	Abandonment	-.32	-.33	0.23	.81
Empathic Consideration	Entitlement	Approval-Seeking	-.32	-.34	0.47	.64
Empathic Consideration	Entitlement	Defectiveness	-.32	-.31	-0.40	.69
Empathic Consideration	Entitlement	Dependence	-.32	-.19	-2.82	<.01
Empathic Consideration	Entitlement	Emotional Deprivation	-.32	-.16	-3.49	<.01
Empathic Consideration	Entitlement	Emotional Inhibition	-.32	-.19	-3.05	<.01
Empathic Consideration	Entitlement	Enmeshment	-.32	-.30	-0.64	.52
Empathic Consideration	Entitlement	Failure	-.32	-.15	-3.57	<.01
Empathic Consideration	Entitlement	Insufficient Self-Control	-.32	-.28	-1.17	.24
Empathic Consideration	Entitlement	Mistrust	-.32	-.33	0.20	.85
Empathic Consideration	Entitlement	Pessimism	-.32	-.25	-1.76	.08
Empathic Consideration	Entitlement	Punitiveness	-.32	-.13	-4.50	<.01
Empathic Consideration	Entitlement	Self-Sacrifice	-.32	.11	-4.30	<.01
Empathic Consideration	Entitlement	Social Isolation	-.32	-.30	-0.54	.59
Empathic Consideration	Entitlement	Subjugation	-.32	-.12	-4.26	<.01
Empathic Consideration	Entitlement	Unrelenting Standards	-.32	-.13	-4.62	<.01
Empathic Consideration	Entitlement	Vulnerability	-.32	-.27	-1.12	.26

Appendix F (Continued)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_jk)	Correlation between Scale j and scale h (r_jh)	z-test for testing if H0: r_jk – r_jh = 0	2-tailed p
Success	Failure	Abandonment	-.72	-.35	-11.73	<.01
Success	Failure	Approval-Seeking	-.72	-.19	-15.54	<.01
Success	Failure	Defectiveness	-.72	-.45	-10.97	<.01
Success	Failure	Dependence	-.72	-.55	-6.84	<.01
Success	Failure	Emotional Deprivation	-.72	-.27	-13.77	<.01
Success	Failure	Emotional Inhibition	-.72	-.28	-13.73	<.01
Success	Failure	Enmeshment	-.72	-.34	-11.34	<.01
Success	Failure	Entitlement	-.72	.03	-16.91	<.01
Success	Failure	Insufficient Self-Control	-.72	-.39	-11.34	<.01
Success	Failure	Mistrust	-.72	-.25	-14.13	<.01
Success	Failure	Pessimism	-.72	-.39	-11.80	<.01
Success	Failure	Punitiveness	-.72	-.28	-14.26	<.01
Success	Failure	Self-Sacrifice	-.72	-.09	-15.93	<.01
Success	Failure	Social Isolation	-.72	-.36	-13.00	<.01
Success	Failure	Subjugation	-.72	-.46	-10.13	<.01
Success	Failure	Unrelenting Standards	-.72	.02	-17.40	<.01
Success	Failure	Vulnerability	-.72	-.37	-11.20	<.01

Appendix F (Continued)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_jk)	Correlation between Scale j and scale h (r_jh)	z-test for testing if H0: r_jk – r_jh = 0	2-tailed p
Healthy Self-Control / Self-Discipline	Insufficient Self Control	Abandonment	-.66	-.32	-9.87	<.01
Healthy Self-Control / Self-Discipline	Insufficient Self Control	Approval-Seeking	-.66	-.34	-10.01	<.01
Healthy Self-Control / Self-Discipline	Insufficient Self Control	Defectiveness	-.66	-.39	-8.59	<.01
Healthy Self-Control / Self-Discipline	Insufficient Self Control	Dependence	-.66	-.39	-8.69	<.01
Healthy Self-Control / Self-Discipline	Insufficient Self Control	Emotional Deprivation	-.66	-.25	-11.11	<.01
Healthy Self-Control / Self-Discipline	Insufficient Self Control	Emotional Inhibition	-.66	-.18	-12.98	<.01
Healthy Self-Control / Self-Discipline	Insufficient Self Control	Enmeshment	-.66	-.25	-11.41	<.01
Healthy Self-Control / Self-Discipline	Insufficient Self Control	Entitlement	-.66	-.11	-15.55	<.01
Healthy Self-Control / Self-Discipline	Insufficient Self Control	Failure	-.66	-.44	-7.48	<.01
Healthy Self-Control / Self-Discipline	Insufficient Self Control	Mistrust	-.66	-.22	-12.03	<.01
Healthy Self-Control / Self-Discipline	Insufficient Self Control	Pessimism	-.66	-.34	-10.12	<.01
Healthy Self-Control / Self-Discipline	Insufficient Self Control	Punitiveness	-.66	-.18	-13.38	<.01
Healthy Self-Control / Self-Discipline	Insufficient Self Control	Self-Sacrifice	-.66	-.01	-15.40	<.01
Healthy Self-Control / Self-Discipline	Insufficient Self Control	Social Isolation	-.66	-.36	-9.41	<.01
Healthy Self-Control / Self-Discipline	Insufficient Self Control	Subjugation	-.66	-.39	-8.53	<.01
Healthy Self-Control / Self-Discipline	Insufficient Self Control	Unrelenting Standards	-.66	.06	-14.25	<.01
Healthy Self-Control / Self-Discipline	Insufficient Self Control	Vulnerability	-.66	-.31	-10.05	<.01

Appendix F (Continued)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_jk)	Correlation between Scale j and scale h (r_jh)	z-test for testing if H0: r_jk – r_jh = 0	2-tailed p
Self-Compassion	Punitiveness	Abandonment	-.48	-.34	-3.64	<.01
Self-Compassion	Punitiveness	Approval-Seeking	-.48	-.25	-5.94	<.01
Self-Compassion	Punitiveness	Defectiveness	-.48	-.39	-2.59	.01
Self-Compassion	Punitiveness	Dependence	-.48	-.26	-5.54	<.01
Self-Compassion	Punitiveness	Emotional Deprivation	-.48	-.19	-7.05	<.01
Self-Compassion	Punitiveness	Emotional Inhibition	-.48	-.27	-5.51	<.01
Self-Compassion	Punitiveness	Enmeshment	-.48	-.22	-6.01	<.01
Self-Compassion	Punitiveness	Entitlement	-.48	-.10	-9.35	<.01
Self-Compassion	Punitiveness	Failure	-.48	-.34	-3.81	<.01
Self-Compassion	Punitiveness	Insufficient Self-Control	-.48	-.23	-6.42	<.01
Self-Compassion	Punitiveness	Mistrust	-.48	-.31	-4.60	<.01
Self-Compassion	Punitiveness	Pessimism	-.48	-.41	-2.13	.03
Self-Compassion	Punitiveness	Self-Sacrifice	-.48	-.13	-8.31	<.01
Self-Compassion	Punitiveness	Social Isolation	-.48	-.35	-3.51	<.01
Self-Compassion	Punitiveness	Subjugation	-.48	-.30	-4.80	<.01
Self-Compassion	Punitiveness	Unrelenting Standards	-.48	-.33	-4.32	<.01
Self-Compassion	Punitiveness	Vulnerability	-.48	-.34	-3.68	<.01

Appendix F (Continued)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_jk)	Correlation between Scale j and scale h (r_jh)	z-test for testing if H0: r_jk – r_jh = 0	2-tailed p
Healthy Self-Interest / Self-Care	Self Sacrifice	Abandonment	-.22	-.29	1.51	.13
Healthy Self-Interest / Self-Care	Self Sacrifice	Approval-Seeking	-.22	-.12	-2.00	.05
Healthy Self-Interest / Self-Care	Self Sacrifice	Defectiveness	-.22	-.36	2.86	<.01
Healthy Self-Interest / Self-Care	Self Sacrifice	Dependence	-.22	-.36	2.88	<.01
Healthy Self-Interest / Self-Care	Self Sacrifice	Emotional Deprivation	-.22	-.28	1.04	.30
Healthy Self-Interest / Self-Care	Self Sacrifice	Emotional Inhibition	-.22	-.32	2.12	.03
Healthy Self-Interest / Self-Care	Self Sacrifice	Enmeshment	-.22	-.26	0.72	.47
Healthy Self-Interest / Self-Care	Self Sacrifice	Entitlement	-.22	.00	-4.53	<.01
Healthy Self-Interest / Self-Care	Self Sacrifice	Failure	-.22	-.36	-12.48	<.01
Healthy Self-Interest / Self-Care	Self Sacrifice	Insufficient Self-Control	-.22	-.18	-0.87	.39
Healthy Self-Interest / Self-Care	Self Sacrifice	Mistrust	-.22	-.21	-0.34	.73
Healthy Self-Interest / Self-Care	Self Sacrifice	Pessimism	-.22	-.29	1.34	.18
Healthy Self-Interest / Self-Care	Self Sacrifice	Punitiveness	-.22	-.20	-0.46	.64
Healthy Self-Interest / Self-Care	Self Sacrifice	Social Isolation	-.22	-.33	2.26	.02
Healthy Self-Interest / Self-Care	Self Sacrifice	Subjugation	-.22	-.38	3.85	<.01
Healthy Self-Interest / Self-Care	Self Sacrifice	Unrelenting Standards	-.22	-.10	-2.77	.01
Healthy Self-Interest / Self-Care	Self Sacrifice	Vulnerability	-.22	-.28	1.27	.21

Appendix F (Continued)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_jk)	Correlation between Scale j and scale h (r_jh)	z-test for testing if H0: r_jk – r_jh = 0	2-tailed p
Social Belonging	Social Isolation	Abandonment	-.69	-.36	-10.11	<.01
Social Belonging	Social Isolation	Approval-Seeking	-.69	-.28	-11.99	<.01
Social Belonging	Social Isolation	Defectiveness	-.69	-.59	-4.67	<.01
Social Belonging	Social Isolation	Dependence	-.69	-.37	-9.70	<.01
Social Belonging	Social Isolation	Emotional Deprivation	-.69	-.40	-9.62	<.01
Social Belonging	Social Isolation	Emotional Inhibition	-.69	-.44	-8.84	<.01
Social Belonging	Social Isolation	Enmeshment	-.69	-.27	-11.41	<.01
Social Belonging	Social Isolation	Entitlement	-.69	-.09	-15.88	<.01
Social Belonging	Social Isolation	Failure	-.69	-.47	-7.92	<.01
Social Belonging	Social Isolation	Insufficient Self-Control	-.69	-.31	-11.67	<.01
Social Belonging	Social Isolation	Mistrust	-.69	-.38	-10.54	<.01
Social Belonging	Social Isolation	Pessimism	-.69	-.34	-11.41	<.01
Social Belonging	Social Isolation	Punitiveness	-.69	-.22	-14.00	<.01
Social Belonging	Social Isolation	Self-Sacrifice	-.69	-.03	-15.72	<.01
Social Belonging	Social Isolation	Subjugation	-.69	-.39	-10.19	<.01
Social Belonging	Social Isolation	Unrelenting Standards	-.69	-.14	-14.84	<.01
Social Belonging	Social Isolation	Vulnerability	-.69	-.33	-11.17	<.01

Appendix F (Continued)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_jk)	Correlation between Scale j and scale h (r_jh)	z-test for testing if H0: r_jk – r_jh = 0	2-tailed p
Realistic Expectations	Unrelenting Standards	Abandonment	-.37	-.37	0.09	.93
Realistic Expectations	Unrelenting Standards	Approval-Seeking	-.37	-.36	-0.20	.84
Realistic Expectations	Unrelenting Standards	Defectiveness	-.37	-.46	2.09	.04
Realistic Expectations	Unrelenting Standards	Dependence	-.37	-.27	-2.15	.03
Realistic Expectations	Unrelenting Standards	Emotional Deprivation	-.37	-.19	-3.75	<.01
Realistic Expectations	Unrelenting Standards	Emotional Inhibition	-.37	-.32	-1.37	.17
Realistic Expectations	Unrelenting Standards	Enmeshment	-.37	-.31	-1.30	.19
Realistic Expectations	Unrelenting Standards	Entitlement	-.37	-.17	-4.98	<.01
Realistic Expectations	Unrelenting Standards	Failure	-.37	-.30	-1.48	.14
Realistic Expectations	Unrelenting Standards	Insufficient Self-Control	-.37	-.27	-2.03	.04
Realistic Expectations	Unrelenting Standards	Mistrust	-.37	-.32	-1.10	.27
Realistic Expectations	Unrelenting Standards	Pessimism	-.37	-.34	-0.85	.39
Realistic Expectations	Unrelenting Standards	Punitiveness	-.37	-.29	-2.24	.02
Realistic Expectations	Unrelenting Standards	Self-Sacrifice	-.37	-.03	-7.59	<.01
Realistic Expectations	Unrelenting Standards	Social Isolation	-.37	-.42	1.15	.25
Realistic Expectations	Unrelenting Standards	Subjugation	-.37	-.31	-1.33	.18
Realistic Expectations	Unrelenting Standards	Vulnerability	-.37	-.31	-1.41	.16

Appendix F (Continued)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_jk)	Correlation between Scale j and scale h (r_jh)	z-test for testing if H0: r_jk – r_jh = 0	2-tailed p
Basic Health and Safety / Optimism	Vulnerability	Abandonment	-.66	-.42	-7.71	<.01
Basic Health and Safety / Optimism	Vulnerability	Approval-Seeking	-.66	-.27	-10.80	<.01
Basic Health and Safety / Optimism	Vulnerability	Defectiveness	-.66	-.44	-7.21	<.01
Basic Health and Safety / Optimism	Vulnerability	Dependence	-.66	-.39	-8.72	<.01
Basic Health and Safety / Optimism	Vulnerability	Emotional Deprivation	-.66	-.27	-10.56	<.01
Basic Health and Safety / Optimism	Vulnerability	Emotional Inhibition	-.66	-.29	-10.36	<.01
Basic Health and Safety / Optimism	Vulnerability	Enmeshment	-.66	-.34	-9.42	<.01
Basic Health and Safety / Optimism	Vulnerability	Entitlement	-.66	-.10	-13.77	<.01
Basic Health and Safety / Optimism	Vulnerability	Failure	-.66	-.38	-8.55	<.01
Basic Health and Safety / Optimism	Vulnerability	Insufficient Self-Control	-.66	-.27	-11.04	<.01
Basic Health and Safety / Optimism	Vulnerability	Mistrust	-.66	-.43	-8.00	<.01
Basic Health and Safety / Optimism	Vulnerability	Pessimism	-.66	-.59	-3.18	<.01
Basic Health and Safety / Optimism	Vulnerability	Punitiveness	-.66	-.32	-10.17	<.01
Basic Health and Safety / Optimism	Vulnerability	Self-Sacrifice	-.66	-.09	-13.88	<.01
Basic Health and Safety / Optimism	Vulnerability	Social Isolation	-.66	-.40	-8.21	<.01
Basic Health and Safety / Optimism	Vulnerability	Subjugation	-.66	-.36	-9.16	<.01
Basic Health and Safety / Optimism	Vulnerability	Unrelenting Standards	-.66	-.20	-11.72	<.01

Note: Scale j and scale k below are the counterpart scales, scale j and scale h are the non-counterpart scales from the positive YPSQ and negative YSQ-S3.

Appendix G

Study 2 - EFA of the Initial Item Pool of the PPSI with 207 Items Using Manila Sample (Father, n = 520; Mother, n = 538)

RQ1 Item No.	Item Description	Fathers Loading	Fathers Selected for PPSI	Mothers Loading	Mothers Selected for PPSI	Remarks
	Emotional Nurturance & Unconditional Love					
238	We were very close and understood each other on a deep level.	0.98	✓	0.80	✓	
113	When I was upset s/he knew what to do and say to comfort me.	0.83	✓	0.64	✓	
258	Was very close and at the same time, able to see me as my own person.	0.80	✓	0.72	✓	
89	Was available at times to just talk and hang out together.	0.79	✓	0.54	✓	
67	If I had an important personal question s/he was the one I would always go to; I felt free to talk to him/her about anything.	0.78	✓	0.46	✓	
375	Was patient even when things weren't done properly or quickly enough.	0.62	✓	0.79	✓	Item was included because it had greater clinical relevance
92	Always spoke to me in a respectful way, even when s/he was angry with me.	0.57	✓	0.79	✓	Item was included because it had greater clinical relevance
400	When we disagreed, she/he usually took time to understand my thoughts and feelings.	0.74	✓	0.82	✓	
175	Was always there to comfort and reassure me if I got scared during the night.	0.77		0.68		Items not selected because it was not as clinically relevant as items below
144	Helped me to set goals and follow through on tasks.	0.76		0.46		Items not selected because it was not as clinically relevant as items below
206	Would cuddle with me when I needed or wanted it.	0.71		0.71		Items not selected because it was not as clinically relevant as items below
22	Was always there for me when I needed him/her; day or night.	0.75				
320	Was willing to be open and share his/her feelings with me in a way that felt helpful or made us closer.	0.76		0.56		
43	Liked to spend time with and pay attention to me.	0.72		0.56		
21	Could be strong for me and give me sounds advice and direction when I was not sure what to do.	0.70				
51	Was supportive and encouraging when I faced a challenge.	0.71				
1	Listened to me, understood me and was tuned into my true needs and feelings	0.72		0.50		
403	Was very close and, at the same time, supported my having a life of my own.	0.71		0.62		
135	Was warm and physically affectionate.	0.71		0.62		

Appendix G (Continued)

RQ1 Item No.	Item Description	Fathers Loading	Fathers Selected for PPSI	Mothers Loading	Mothers Selected for PPSI	Remarks
	Emotional Nurturance & Unconditional Love (Continued)					
23	Even when s/he needed to discipline me, it was usually done in a respectful and caring way.	0.69		0.75		
100	I felt close to him/her and, at the same time, that I could be my own person with my own ideas, feelings and wishes.	0.69		0.58		
312	Helped me to learn to control my anger.	0.68		0.67		
292	Could be emotionally open.	0.69				
286	Helped me to learn to express my anger in respectful ways.	0.67		0.69		
332	Was available to me when I needed him/her.	0.65		0.47		
61	Would help me find friends, if I needed it.	0.62				
102	Helped me to think through the consequences of my choices when I needed it.	0.61				
36	Treated me in a way that made me feel loved and special.	0.59		0.55		
30	Could be relied on for support and understanding.	0.58				
381	Was patient and understanding even when I was angry with him/her.	0.61		0.76		
60	Was patient and understanding when I did something wrong	0.60		0.63		
174	Told me that s/he loved me.	0.61		0.69		
33	Taught me the discipline I needed to succeed in school.	0.56				
226	Being at home and available to me was a priority to him/her; s/he was there as much as s/he could be.	0.57				
83	Made me feel loved and worthwhile even when I made mistakes and would help me learn from them.	0.57		0.62		
337	S/he cared about my feelings and didn't expect me to justify them.	0.57		0.59		
304	Would readily admit and take responsibility for her/her mistakes.	0.57		0.61		
106	Made me feel loved and worthwhile even when I did something bad and helped me learn how to do better.	0.55		0.65		
404	Made me feel accepted and loved even when I did something bad.	0.55		0.71		
276	Was willing to show his/her vulnerability at times.	0.54				
354	Helped me to be active enough and get enough exercise.	0.53				
367	Made me feel loved and accepted even when I failed at something.	0.51		0.66		
409	Put more energy into learning from things going wrong than blaming and punishing.	0.51		0.42		
122	Was usually confident and assured and could be relied on for support and reassurance when I needed it.	0.49				
362	Made me feel like I was one of the most important things in his/her life.	0.50		0.59		
173	I looked up to him/her and wanted to be like him/her when I grew up.	0.47		0.60		

Appendix G (Continued)

RQ1 Item No.	Item Description	Fathers Loading	Fathers Selected for PPSI	Mothers Loading	Mothers Selected for PPSI	Remarks
	Emotional Nurturance & Unconditional Love (Continued)					
382	I could count on him/her responding to me when I reached out to him/her.	0.48		0.40		
268	Saw him/herself as an equal and made decisions collaboratively	0.48		0.45		
189	S/he relied more on praise and rewards than punishment.	0.50		0.48		
270	Liked getting to know my friends.	0.47				
234	Would freely join me in expressing joy and exuberance.	0.46		0.44		
289	I felt his/her love even when I did not perform well or failed.	0.46		0.54		
249	Talked with me about my future and what I wanted to do with my life.			0.41		
251	Took an interest in who I spent time with outside or the family.	0.44				
191	Liked to joke around with me.	0.43				
162	Protected me and helped me feel safe and cared for without overprotecting me.	0.42		0.50		
183	S/he could be flexible and willing to compromise when we disagreed.	0.42				
34	Focused more about the positive aspects of life or what was going well than the negative aspects of life.	0.41				
323	Taught me to not worry that much about small decisions.	0.42		0.43		
374	I could count on him/her being happy to see me and be with me when I got up each morning.	0.42		0.51		
107	Interfered with my trying to find friends.	0.43				
378	Generally respected my wishes even if it meant others might be disappointed.	0.41		0.48		
108	Expressed positive feelings towards others freely when s/he wanted to.	0.40				
246	Respected my wishes even when s/he disagreed with them.	0.40		0.45		
37	Did not become harshly critical when I did something wrong.			0.49		
137	Always treated me with dignity and respect.			0.61		
199	Respected my opinions and ideas even when they were different from his/hers.			0.45		
224	When disagreed s/he was open to being proven wrong.			0.45		
232	Did not punish me when I did something wrong.			0.55		
266	Helped me to be comfortable making decisions and not worry that something terrible would happen if I was wrong.			0.44		
269	Made me feel that things would still be OK even when I made mistakes.			0.43		
317	Treated me with respect even when I did something wrong.			0.60		
348	Made me feel loved and accepted for who I am.			0.62		
401	Was careful to not embarrass me in front of others; would discuss problems in a respectful way at a discreet time or place if needed.			0.67		

Appendix G (Continued)

RQ1 Item No.	Item Description	Fathers Loading	Fathers Selected for PPSI	Mothers Loading	Mothers Selected for PPSI	Remarks
	Autonomy Support					
300	Treated me as intelligent and having talents.	0.99	✓	0.80	✓	
361	Believed in my ability to succeed at challenging goals.	0.97	✓	0.84	✓	
365	Was confident in my ability to complete tasks successfully that other children my age could.	0.92	✓	0.72	✓	
308	Saw me as strong and resilient.	0.89	✓	0.73	✓	
343	Was proud of me when I succeeded at something important.	0.86	✓	0.73	✓	
339	Treated me as if I was able to cope with things on my own as well as other children my age could.	0.86		0.62		Item not selected as it was similar to item RQ1_365 which loaded higher
329	Was confident in my ability to solve problems that came up that other children my age could.	0.83	✓	0.74	✓	
279	Treated me as capable.	0.79	✓	0.62	✓	
321	Saw me as having good common sense and trusted my ability to judge situations.	0.78	✓	0.74	✓	
291	Saw me as capable as others my age.	0.76		0.66		
402	Saw me as having good ideas and knowing how to get things done at least as well as other children my age.	0.79		0.65		
208	S/he was confident I would be OK dealing with the risks of everyday life.	0.62		0.56		
309	If I did very well at something, s/he would focus on that and did not feel the need to point out mistakes or flaws.	0.61		0.44		
280	Allowed me to make my own decisions so that I had a chance to learn from my own mistakes.	0.60		0.54		
391	Would be happy for me when I got enthusiastic about something and did not become overly focused on what could go wrong.	0.55				
301	Was not afraid to let me do things myself and believed I could learn from my mistakes.	0.54		0.57		
159	Expressed his/her pride for me when I did something well.	0.52		0.43		
348	Made me feel loved and accepted for who I am.	0.48				
328	S/he generally supported me in making my own choices.	0.47				
260	Celebrated my successes.	0.47				
342	Saw each member of the family as having their own special strengths and abilities.	0.46		0.41		
368	Had reasonable expectations of me when it came to meeting my responsibilities.	0.46				
262	Was fine with my being second best as long as I put in a reasonable effort.	0.46				
134	S/he saw me as able to come up with good solutions to problems.	0.44		0.54		
317	Treated me with respect even when I did something wrong.	0.43				
97	Wanted me to succeed.	0.42				
334	Supported me in doing my best at important tasks but was not focused on my excelling.	0.41				
318	Was accepting of my friends.	0.41				

Appendix G (Continued)

RQ1 Item No.	Item Description	Fathers Loading	Fathers Selected for PPSI	Mothers Loading	Mothers Selected for PPSI	Remarks
	Playfulness & Emotional Openness					
217	Could act child-like and be silly with me when s/he felt like it.	0.62	✓	0.62	✓	
358	Was able to be free and expressive when s/he wanted to be.	0.42	✓	0.41	✓	
191	Liked to joke around with me.			0.46	✓	
150	Was able to be open with others about his/her feelings when s/he wanted to.	0.40	✓	0.46	✓	
62	It was easy for him/her to be playful when s/he wanted to be.	0.42	✓			
108	Expressed positive feelings towards others freely when s/he wanted to.			0.44	✓	
	Autonomy Granting					
55	Often allowed me the freedom to make my own decisions so that I felt like I had a good amount of control over my own life.	0.74	✓	0.56		This subscale not selected for mothers since there were only two items, and Cronbach's alpha was too low in Jakarta sample (.56)
31	Gave me the freedom to do things on my own when I wanted to.	0.61	✓	0.45		
77	Allowed me to be an individual separate from him/her.	0.55	✓			
73	Was more focused on my living my own life rather than living through me.	0.44	✓			
27	Respected my wanting to keep certain things to myself.	0.47	✓			
143	Did not overprotect me.	0.45	✓			
101	Made me feel I could rely on my own decisions and judgment.	0.49				
47	Respected my personal space and privacy.	0.47				
180	Respected my having personal information or things I choose not to share with him/her.	0.45				
	Confidence & Competence					
237	S/he was assured and confident.	0.69	✓	0.46		This subscale not selected for mothers since there were only two items, and Cronbach's alpha was too low in Jakarta sample (.42)
350	Was a secure and confident person.	0.59	✓			
42	S/he completed school and was successful in his/her job (career).	0.52	✓	0.52		
136	Was emotionally strong, steady and predictable.	0.48	✓			
205	S/he knew how to get things done.	0.47	✓			
29	Had realistic expectations of him/herself.	0.43	✓			
241	Felt confident that we had enough money to get by in the future and that we didn't have to worry about losing everything.	0.41				
410	Saved enough money for the future and helped me learn to do the same.	0.47				

Appendix G (Continued)

RQ1 Item No.	Item Description	Fathers Loading	Fathers Selected for PPSI	Mothers Loading	Mothers Selected for PPSI	Remarks
	Intrinsic Worth					
34	Focused more about the positive aspects of life or what was going well than the negative aspects of life.			0.52	✓	
40	Put more focus on my being true to myself than impressing others			0.43	✓	
57	Focused more on what we could be grateful for than on our misfortunes.			0.46	✓	
133	Believed that there are more important things than winning and losing.	0.59	✓			
132	Did not believe that if someone had a lot of money and status that they would be happier than those who didn't.	0.58	✓			
141	Did not put success and competition ahead of getting along with others.	0.57	✓			
41	Saw all people have equal value.	0.55	✓			
379	Did not believe that having more wealth and status made us (would make us) better than other people.	0.54	✓			
376	Saw him/herself as having a lot in common with most other people.	0.43				
13	It took a lot to make him/her angry.	0.42				
87	Saw all people as being special and of value in their own way.	0.41				
	Dependability					
68	I knew s/he would never leave or abandon me.	0.56	✓	0.70	✓	
76	Was reliable and responsible.	0.48	✓	0.74	✓	
245	Would often sacrifice his/her own needs for the sake of the family.	0.45	✓	0.49	✓	
69	Would stand up for and protected me when I needed it.	0.42	✓	0.65	✓	
81	Kept his/her promises to me.	0.42	✓	0.53	✓	
33	Taught me the discipline I needed to succeed in school.			0.62	✓	
22	Was always there for me when I needed him/her; day or night.			0.60	✓	
97	Wanted me to succeed.			0.58	✓	
79	Provided enough discipline and structure for me.			0.57		
35	Had a reasonable amount of discipline.			0.56		
30	Could be relied on for support and understanding.			0.54		
116	Helped me avoid getting into or stay out of bad or dangerous situations.			0.53		
51	Was supportive and encouraging when I faced a challenge.			0.53		
88	I respected and admired him/her.			0.51		
21	Could be strong for me and give me sounds advice and direction when I was not sure what to do.			0.50		
28	Expected me to be a success in life.			0.50		
75	Was more focused on what was best for me and the family than social status and appearance.			0.49		
38	Was happy for me to have friends.			0.47		
117	Gave the feeling that we were safe and that things would be OK.			0.47		
205	S/he knew how to get things done.			0.46		
127	Was dependable and followed through on plans we made.			0.41		

Appendix G (Continued)

RQ1 Item No.	Item Description	Fathers Loading	Fathers Selected for PPSI	Mothers Loading	Mothers Selected for PPSI	Remarks
	Realistic Expectations					
347	Has kept his/her problems from interfering with my living my own life.			0.45		This subscale was rejected since the Cronbach's alpha value for the Jakarta sample was too low (.54)
296	Was sometimes willing to compromise between getting things his/her way and what I wanted.			0.43		
285	Could accept him/her not having everything under control.			0.42		
141	Did not put success and competition ahead of getting along with others.			0.41		
	Total number of accepted factors		7		5	
	Total number of accepted items		42		32	

Appendix H

Inter-factor correlations for PPSI (Fathers) Using Manila Sample (n = 520)

Factor	Emotionally Nurturing & Unconditional Love	Autonomy Support	Confidence & Competence	Autonomy Granting	Intrinsic Worth	Dependability	Playfulness & Emotional Openness
Emotional Nurturance & Unconditional Love	1.00						
Autonomy Support	.69	1.00					
Confidence & Competence	.57	.51	1.00				
Autonomy Granting	.48	.56	.40	1.00			
Intrinsic Worth	.69	.72	.58	.59	1.00		
Dependability	.56	.58	.44	.37	.49	1.00	
Playfulness & Emotional Openness	.29	.37	.27	.21	.29	.31	1.00

Note. Extraction Method: Principal Axis Factoring; Rotation Method: Promax with Kaiser Normalization.
The average factor correlation was .47 for ratings of fathers.

Appendix I

Inter-factor correlations for PPSI (Mothers) Using Manila Sample (n = 538)

Factor	Emotionally Nurturing & Unconditional Love	Autonomy Support	Dependability	Playfulness & Emotional Openness	Intrinsic Worth
Emotional Nurturance & Unconditional Love	1				
Autonomy Support	.69	1			
Dependability	.70	.62	1		
Playfulness & Emotional Openness	.54	.46	.52	1	
Intrinsic Worth	.55	.53	.40	.35	1

Note. Extraction Method: Principal Axis Factoring;Rotation Method: Promax with Kaiser Normalization.
The average factor correlation was .54 for ratings of mothers.

Appendix J

Reliability Coefficients (α), *Mean (M) and Standard Deviation (SD) of the PPSI (Fathers) and PPSI (Mothers) Using Manila (n=520, 538), Jakarta (n=366, 383), and USA (n=204, 214) Samples*

	Manila Sample						Jakarta Sample						USA Sample					
	Fathers			Mothers			Fathers			Mothers			Fathers			Mothers		
Factors	α	*M*	*SD*	α	*M*	*SD*	α	*M*	*SD*	α	*M*	*SD*	α	*M*	*SD*	α	*M*	*SD*
Autonomy Support	.93	4.28	1.02	.92	4.40	0.95	.91	4.06	1.03	.90	4.21	0.97	.93	4.45	1.14	.92	4.62	1.06
Emotional Nurturance & Unconditional Love	.91	3.24	1.08	.89	3.60	1.09	.88	3.06	1.04	.85	3.58	0.99	.91	3.05	1.22	.92	3.70	1.25
Dependability	.85	4.27	1.17	.86	4.59	0.93	.85	4.29	1.19	.80	4.64	0.80	.89	4.34	1.44	.89	4.91	1.03
Playfulness & Emotional Openness	.72	3.11	1.03	.72	3.37	0.90	.67	3.00	1.00	.73	3.42	0.94	.88	3.47	1.38	.84	3.88	1.17
Intrinsic Worth	.70	3.55	0.94	.75	3.83	1.06	.74	3.38	1.03	.70	3.82	1.13	.83	4.19	1.21	.79	3.86	1.25
Autonomy Granting	.73	3.88	0.94	N. A.	N.A.	N.A.	.69	3.94	0.88	N. A.	N. A.	N. A.	.80	4.35	1.07	N. A.	N. A.	N. A.
Confidence & Competence	.78	3.75	0.96	N. A.	N. A.	N. A.	.79	3.89	1.01	N. A.	N. A.	N. A.	.83	4.26	1.13	N. A.	N. A.	N. A.

Appendix K

Divergent Validity of the PPSI Subscales (Fathers) with YPI-R (Fathers) Using the Manila Sample (n=520 –7 Factors 42 Items)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_jk)	Correlation between Scale j and scale h (r_jh)	Correlation between Scale k and scale h (r_kh)	z-test for testing if H0: r_jk – r_jh = 0	2-tailed *p*
Autonomy Granting	Controlling	Belittling	-0.50	-0.40	0.57	2.99	<0.01
Autonomy Granting	Controlling	Conditional/Narcissistic	-0.50	0.00	0.31	10.71	<0.01
Autonomy Granting	Controlling	Perfectionist	-0.50	-0.02	0.31	-10.14	<0.01
Autonomy Granting	Controlling	Pessimistic/Fearful	-0.50	-0.32	0.49	-4.67	<0.01
Autonomy Granting	Controlling	Punitive	-0.50	-0.37	0.57	-3.70	<0.01
Autonomy Granting	Controlling	Overprotective	-0.50	-0.31	0.38	-4.51	<0.01
Autonomy Granting	Controlling	Emotionally Inhibited	-0.50	-0.11	0.24	-8.05	<0.01
Autonomy Granting	Controlling	Emotionally Depriving	-0.50	-0.35	0.27	-3.40	<0.01
Autonomy Support	Belittling	Conditional/Narcissistic	-0.59	0.15	0.16	-14.73	<0.01
Autonomy Support	Belittling	Controlling	-0.59	-0.33	0.57	-7.55	<0.01
Autonomy Support	Belittling	Perfectionist	-0.59	0.15	0.10	-14.28	<0.01
Autonomy Support	Belittling	Pessimistic/Fearful	-0.59	-0.33	0.54	-7.26	<0.01
Autonomy Support	Belittling	Punitive	-0.59	-0.40	0.61	-5.78	<0.01
Autonomy Support	Belittling	Overprotective	-0.59	-0.05	0.20	-11.11	<0.01
Autonomy Support	Belittling	Emotionally Inhibited	-0.59	-0.28	0.30	-7.09	<0.01
Autonomy Support	Belittling	Emotionally Depriving	-0.59	-0.54	0.46	-1.36	0.18
Dependability	Emotionally Depriving	Belittling	-0.59	-0.51	0.46	2.23	0.03
Dependability	Emotionally Depriving	Conditional/Narcissistic	-0.59	0.16	-0.12	12.99	<0.01
Dependability	Emotionally Depriving	Controlling	-0.59	-0.23	0.27	7.99	<0.01
Dependability	Emotionally Depriving	Perfectionist	-0.59	0.20	-0.13	13.69	<0.01
Dependability	Emotionally Depriving	Pessimistic/Fearful	-0.59	-0.31	0.36	6.67	<0.01
Dependability	Emotionally Depriving	Punitive	-0.59	-0.26	0.34	7.63	<0.01
Dependability	Emotionally Depriving	Overprotective	-0.59	0.18	-0.25	12.55	<0.01
Dependability	Emotionally Depriving	Emotionally Inhibited	-0.59	-0.29	0.58	8.71	<0.01
Emotional Nurturance & Unconditional Love	Emotionally Depriving	Belittling	-0.81	-0.42	0.46	13.24	<0.01
Emotional Nurturance & Unconditional Love	Emotionally Depriving	Conditional/Narcissistic	-0.81	0.10	-0.12	19.09	<0.01
Emotional Nurturance & Unconditional Love	Emotionally Depriving	Controlling	-0.81	-0.29	0.27	14.70	<0.01
Emotional Nurturance & Unconditional Love	Emotionally Depriving	Perfectionist	-0.81	0.07	-0.13	18.41	<0.01

Appendix K (Continued)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_jk)	Correlation between Scale j and scale h (r_jh)	Correlation between Scale k and scale h (r_kh)	z-test for testing if H0: r_jk – r_jh = 0	2-tailed *p*
Emotional Nurturance & Unconditional Love	Emotionally Depriving	Pessimistic/Fearful	-0.81	-0.34	0.36	14.25	<0.01
Emotional Nurturance & Unconditional Love	Emotionally Depriving	Punitive	-0.81	-0.39	0.34	12.76	<0.01
Emotional Nurturance & Unconditional Love	Emotionally Depriving	Overprotective	-0.81	0.23	-0.25	20.36	<0.01
Emotional Nurturance & Unconditional Love	Emotionally Depriving	Emotionally Inhibited	-0.81	-0.62	0.58	8.11	<0.01
Intrinsic Worth	Emotionally Depriving	Belittling	-0.48	-0.39	0.46	2.19	0.03
Intrinsic Worth	Emotionally Depriving	Conditional/Narcissistic	-0.48	-0.16	-0.12	5.44	<0.01
Intrinsic Worth	Emotionally Depriving	Controlling	-0.48	-0.32	0.27	3.49	<0.01
Intrinsic Worth	Emotionally Depriving	Perfectionist	-0.48	-0.07	-0.13	6.74	<0.01
Intrinsic Worth	Emotionally Depriving	Pessimistic/Fearful	-0.48	-0.37	0.36	2.60	0.01
Intrinsic Worth	Emotionally Depriving	Punitive	-0.48	-0.31	0.34	3.68	<0.01
Intrinsic Worth	Emotionally Depriving	Overprotective	-0.48	-0.01	-0.25	7.36	<0.01
Intrinsic Worth	Emotionally Depriving	Emotionally Inhibited	-0.48	-0.31	0.58	4.57	<0.01
Playfulness & Emotional Openness	Emotionally Depriving	Belittling	-0.55	-0.21	0.46	8.33	<0.01
Playfulness & Emotional Openness	Emotionally Depriving	Conditional/Narcissistic	-0.55	0.10	-0.12	10.99	<0.01
Playfulness & Emotional Openness	Emotionally Depriving	Controlling	-0.55	-0.15	0.27	8.46	<0.01
Playfulness & Emotional Openness	Emotionally Depriving	Perfectionist	-0.55	0.15	-0.13	11.69	<0.01
Playfulness & Emotional Openness	Emotionally Depriving	Pessimistic/Fearful	-0.55	-0.16	0.36	8.71	<0.01
Playfulness & Emotional Openness	Emotionally Depriving	Punitive	-0.55	-0.16	0.34	8.68	<0.01
Playfulness & Emotional Openness	Emotionally Depriving	Overprotective	-0.55	0.14	-0.25	11.03	<0.01
Playfulness & Emotional Openness	Emotionally Depriving	Emotionally Inhibited	-0.55	-0.55	0.58	-0.10	0.92
Confidence & Competence	Emotionally Depriving	Belittling	-0.58	-0.33	0.46	6.63	<0.01
Confidence & Competence	Emotionally Depriving	Conditional/Narcissistic	-0.58	0.22	-0.12	13.93	<0.01
Confidence & Competence	Emotionally Depriving	Controlling	-0.58	-0.13	0.27	9.78	<0.01
Confidence & Competence	Emotionally Depriving	Perfectionist	-0.58	0.34	-0.13	16.07	<0.01
Confidence & Competence	Emotionally Depriving	Pessimistic/Fearful	-0.58	-0.39	0.36	4.79	<0.01
Confidence & Competence	Emotionally Depriving	Punitive	-0.58	-0.23	0.34	8.12	<0.01
Confidence & Competence	Emotionally Depriving	Overprotective	-0.58	0.11	-0.25	11.21	<0.01
Confidence & Competence	Emotionally Depriving	Emotionally Inhibited	-0.58	-0.34	0.58	7.17	<0.01

Appendix L

Divergent Validity of the PPSI Subscales (Mothers) with YPI-R (Mothers) Using the Manila Sample (n=538 –5 Factors 32 Items)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_jk)	Correlation between Scale j and scale h (r_jh)	Correlation between Scale k and scale h (r_kh)	z-test for testing if H0: r_jk – r_jh = 0	2-tailed *p*
Autonomy Support	Belittling	Conditional/Narcissistic	-0.58	0.12	0.17	-14.33	<0.01
Autonomy Support	Belittling	Controlling	-0.58	-0.36	0.56	-6.51	<0.01
Autonomy Support	Belittling	Perfectionist	-0.58	0.16	0.12	-14.69	<0.01
Autonomy Support	Belittling	Overprotective	-0.58	-0.05	0.14	-10.69	<0.01
Autonomy Support	Belittling	Pessimistic/Fearful	-0.58	-0.31	0.49	-7.18	<0.01
Autonomy Support	Belittling	Punitive	-0.58	-0.35	0.59	-6.79	<0.01
Autonomy Support	Belittling	Emotionally Inhibited	-0.58	-0.35	0.44	-5.95	<0.01
Autonomy Support	Belittling	Emotionally Depriving	-0.58	-0.56	0.51	-0.66	0.51
Dependability	Emotionally Depriving	Belittling	-0.73	-0.55	0.51	6.41	<0.01
Dependability	Emotionally Depriving	Conditional/Narcissistic	-0.73	0.13	-0.06	17.44	<0.01
Dependability	Emotionally Depriving	Controlling	-0.73	-0.27	0.31	12.08	<0.01
Dependability	Emotionally Depriving	Perfectionist	-0.73	0.19	-0.13	17.92	<0.01
Dependability	Emotionally Depriving	Overprotective	-0.73	0.20	-0.23	17.26	<0.01
Dependability	Emotionally Depriving	Pessimistic/Fearful	-0.73	-0.31	0.32	11.31	<0.01
Dependability	Emotionally Depriving	Punitive	-0.73	-0.35	0.42	11.12	<0.01
Dependability	Emotionally Depriving	Emotionally Inhibited	-0.73	-0.41	0.54	10.64	<0.01
Emotional Nurturance & Unconditional Love	Emotionally Depriving	Belittling	-0.80	-0.50	0.51	10.98	<0.01
Emotional Nurturance & Unconditional Love	Emotionally Depriving	Conditional/Narcissistic	-0.80	0.02	-0.06	17.93	<0.01
Emotional Nurturance & Unconditional Love	Emotionally Depriving	Controlling	-0.80	-0.37	0.31	12.93	<0.01
Emotional Nurturance & Unconditional Love	Emotionally Depriving	Perfectionist	-0.80	0.08	-0.13	18.35	<0.01
Emotional Nurturance & Unconditional Love	Emotionally Depriving	Overprotective	-0.80	0.15	-0.23	18.96	<0.01
Emotional Nurturance & Unconditional Love	Emotionally Depriving	Pessimistic/Fearful	-0.80	-0.37	0.32	12.75	<0.01
Emotional Nurturance & Unconditional Love	Emotionally Depriving	Punitive	-0.80	-0.46	0.42	11.35	<0.01
Emotional Nurturance & Unconditional Love	Emotionally Depriving	Emotionally Inhibited	-0.80	-0.61	0.54	7.70	<0.01
Intrinsic Worth	Emotionally Depriving	Belittling	-0.62	-0.45	0.51	4.88	<0.01
Intrinsic Worth	Emotionally Depriving	Conditional/Narcissistic	-0.62	-0.04	-0.06	10.78	<0.01
Intrinsic Worth	Emotionally Depriving	Controlling	-0.62	-0.35	0.31	6.47	<0.01
Intrinsic Worth	Emotionally Depriving	Perfectionist	-0.62	0.03	-0.13	11.64	<0.01

Appendix L (Continued)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_jk)	Correlation between Scale j and scale h (r_jh)	Correlation between Scale k and scale h (r_kh)	z-test for testing if H0: r_jk – r_jh = 0	2-tailed *p*
Intrinsic Worth	Emotionally Depriving	Overprotective	-0.62	0.03	-0.23	11.17	<0.01
Intrinsic Worth	Emotionally Depriving	Pessimistic/Fearful	-0.62	-0.52	0.32	2.72	0.01
Intrinsic Worth	Emotionally Depriving	Punitive	-0.62	-0.40	0.42	5.79	<0.01
Intrinsic Worth	Emotionally Depriving	Emotionally Inhibited	-0.62	-0.40	0.54	6.42	<0.01
Playfulness & Emotional Openness	Emotionally Inhibited	Belittling	-0.51	-0.23	0.44	6.99	<0.01
Playfulness & Emotional Openness	Emotionally Inhibited	Conditional/Narcissistic	-0.51	0.10	0.15	11.95	<0.01
Playfulness & Emotional Openness	Emotionally Inhibited	Controlling	-0.51	-0.16	0.33	7.76	<0.01
Playfulness & Emotional Openness	Emotionally Inhibited	Perfectionist	-0.51	0.20	0.01	12.88	<0.01
Playfulness & Emotional Openness	Emotionally Inhibited	Overprotective	-0.51	0.15	-0.01	11.74	<0.01
Playfulness & Emotional Openness	Emotionally Inhibited	Pessimistic/Fearful	-0.51	-0.19	0.38	7.52	<0.01
Playfulness & Emotional Openness	Emotionally Inhibited	Punitive	-0.51	-0.11	0.34	9.01	<0.01
Playfulness & Emotional Openness	Emotionally Inhibited	Emotionally Depriving	-0.51	-0.50	0.54	-0.44	0.66

Appendix M

Average Correlation Between PPSI Subscales and Counterparts from YPI-R Subscales

PPSI subscales	Correlation with counterpart		Average correlation with non-counterparts (absolute value)	
	Fathers	Mothers	Fathers	Mothers
Autonomy Support	-0.57	-0.57	0.24	0.24
Autonomy Granting	-0.50		0.24	
Dependability	-0.59	-0.73	0.27	0.30
Emotional Nurturance & Unconditional Love	-0.81	-0.80	0.31	0.32
Intrinsic Worth	-0.48	-0.62	0.24	0.28
Playfulness & Emotional Openness	-0.55	-0.51	0.15	0.16
Confidence & Competence	-0.58		0.26	
Average	-0.58	-0.65	0.24	0.26

Note. Average for counterpart is the average of absolute values of correlation as correlation coefficients have negative and positive values

Appendix N

Study 3 – EFA of the Initial Item Pool of the YPI with 204 Items Using Manila Sample (Father, n = 520; Mother, n = 538)

RQ1 Item No.	Item Description	Father			Mother		
		Loading	Selected for YPI-R2	Remarks	Loading	Selected for YPI-R2	Remarks
	Degradation & Rejection						
275	Made me feel like the "black sheep" of the family.	.69	✓		.65	✓	
290	Would call me names (like "stupid" or "idiot") when I made mistakes.	.73	R	High item correlation	.65	✓	
313	Saw me as lacking common sense.	.78	✓		.72	✓	
331	Put me down and made me feel ashamed of myself if I didn't do well.	.78	R	High item correlation	.77	✓	
384	Saw me as having little to contribute.	.78	✓		.68	✓	
284	Treated me as if I was stupid or untalented.	.81	✓		.68	✓	
346	Saw me as not good at understanding the consequences of things.	.70			.58		
307	Made me feel unloved or rejected.	.65			.70	✓	
386	Criticized me a lot.	.68			.75	✓	
299	Made me feel that almost nothing I did was quite good enough.	.41			.46		
336	Was a fearful or phobic person.	.42					
363	Would ignore me or withdraw from me for long periods of time.	.43			.48		
388	Made me feel guilty if I did not put his/her needs ahead of mine.	.43					
355	I never knew how s/he was going to treat me when s/he woke the next morning.	.46			.40		
314	Often obsessed over minor decisions, because the consequences of making a mistake seemed so serious.	.47			.45		
394	Was demanding; expected to get things his/her way.	.47					
140	Was never proud of me.	.48			.45		
227	Treated me as if my opinions or desires didn't count.	.49			.46		
6	Expected me to be a failure in life.	.49			.47		
253	Would often compare my performance at school or sports unfavorably to others.	.52			.51		
407	Would withdraw from me or reject me if I did not do what s/he thought I should.	.53					
188	Often told me there was something wrong with me.	.53			.61		
281	Even if I did very well, s/he would focus on the mistakes or on things I didn't do very well.	.53			.65		
243	Down played my successes.	.54			.48		
393	Even when things were good I was always waiting for the next outburst or bad reaction from him/her.	.55			.65		
399	Did not seem to be interested in what I would do with my life.	.56			.49		
167	Often told me I was bad.	.57			.60		
380	Was unsure about my ability to reach challenging goals.	.57			.49		

Appendix N (Continued)

RQ1 Item No.	Item Description	Father			Mother		
		Loading	Selected for YPI-R2	Remarks	Loading	Selected for YPI-R2	Remarks
	Degradation & Rejection (Continued)						
325	I had to compete with my sibling(s) for his/her attention through outperforming them in sports or school.	.61			.63		
324	Didn't trust my ability to solve every day problems on my own that other children my age could.	.62			.65		
335	Treated me as if I was not capable of coping well on my own.	.64			.60		
383	Would make me look foolish or put me down in front of my friends or other adults.	.68			.67		
18	Believed that I was better than other people.				-.45		
120	Treated me as if there was something wrong with me.				.49		
202	Made me feel to blame when things went wrong.				.47		
293	Was critical of my friends.				.43		
303	I felt like I needed to walk on eggshells around him/her.				.44		
333	I didn't expect him/her to respect me or take my feelings into account.				.46		
	Competitiveness & Status Seeking						
98	Placed strong emphasis on success and competition.	.78	✓		.77	✓	
64	Believed that if I was smarter or more talented it made me superior to others who were less so.	.69	✓		.64	✓	
63	Put a lot of emphasis on my getting good grades and getting ahead in life.	.68	✓		.73	✓	
110	Believed that you are either a winner or a loser in life.	.63	R	High item correlation	.47	R	High item correlation
52	Was concerned with social status and appearance.	.57	✓		.49	R	High item correlation
225	Expected me to do my best at all times.	.53	R	High item correlation	.52	✓	
121	Put more emphasis on competition and winning than getting along with others.	.54	R	High item correlation	.53		
330	Drove me to excel at important tasks, couldn't settle for "good enough".	.54			.49		
236	Believed I should to what ever it takes to come out ahead.	.54			.47		
160	Was concerned with how my behaviour would reflect on him/her in the eyes of others.	.51			.41		
152	Saw it a "dog eat dog" world and believed that only the toughest and best survive.	.50			.43		
172	Believed that those who come out ahead should be granted special privileges and not have to live by the same rules as others.	.46					
109	Believed that if someone had a lot of money and status that they would be happier than those who didn't.	.46					
387	Put a lot of pressure on me to excel in important areas.	.45					
198	Was a perfectionist in many areas; things had to be "just so".	.44					
244	Expected me to be the best in important areas; couldn't accept my being second best.	.43			.45		
397	Seemed to love me more or pay more attention to me when I excelled.	.42					
7	Had very high expectations for him/herself.				.47		
39	Was focused on my doing well at school and being responsible and had little interest in my having time for play and pursuing my own interests.				.43		

Appendix N (Continued)

RQ1 Item No.	Item Description	Father			Mother		
		Loading	Selected for YPI-R2	Remarks	Loading	Selected for YPI-R2	Remarks
	Emotional Inhibition & Deprivation						
273	Was uncomfortable expressing affection.	.74	✓		.65	✓	
302	Was private; rarely discussed his/her feelings.	.68	✓		.55	✓	
16	Had a hard time being playful.	.59	R	High item correlation	.54	✓	
131	Was uncomfortable expressing his/her feelings to others; even to people s/he knew well.	.58	✓		.50	✓	
319	Did not seem comfortable playing with me.	.55	R	High item correlation	.54	R	High item correlations
271	Felt uncomfortable being silly and child-like.	.50	✓		.44	✓	
170	Did not have a sense of humor.	.48	R	High item correlation	.76	✓	
154	Was cold and distant.	.52			.42		
219	Was not available for cuddling.	.52			.49		
254	We were emotionally distant and had a hard time understanding each other.	.52					
90	I did not feel like I could go to him/her with questions about personal things; I would turn to friends or just keep it to myself.	.49					
66	Didn't seem to be interested in spending time with me.	.44					
112	Was not interested in spending unplanned time together.	.41					
85	Was too self-conscious to show positive feelings to others even when s/he wanted to.	.41					
233	Took no interest in my friends.	.41			.50		
84	Was a loner.				.51		
169	Had no interest in being part of a community.				.56		
	Undependability & Irresponsibility						Scale removed - Low reliability
187	Was more focused on having fun and relaxing than keeping up with responsibilities.	.69			.42		
12	Was an undisciplined person.	.63			.57		
392	Spent too much money and was often in debt.	.58			.44		
104	Was undependable and often did not follow through on plans we made.	.53			.60		
221	Took money or a possession from me against my wishes to use for him/herself.	.44			.52		
53	Was unable to handle many daily responsibilities, so I had to do more than my share.	.48			.60		
155	Was an alcoholic or addicted to drugs.	.55			.56		
142	Lied to me, deceived me, or betrayed me.	.45			.51		
91	Abandoned me or left me on an emotional level when I was a child even though he/she was still physically present.	.45					
56	Provided very little discipline or structure for me.	.44					
310	Withdrew or left me alone for extended periods.	.43					
19	S/he dropped out of school and was not successful at work.	.42					
10	Never taught me the discipline necessary to succeed in school.				.50		
45	Left the house permanently when I was a child and did not keep in touch with me.				.62		
58	Would regularly break his/her promises to me.				.47		
65	I did not respect him/her.				.41		
70	Seemed to get pleasure out of hurting me.				.44		
74	Didn't really want me to succeed.				.52		
93	Didn't seem to care what happened to me.				.43		
156	Used me or took advantage of me.				.62		

Appendix N (Continued)

RQ1 Item No.	Item Description	Father			Mother		
		Loading	Selected for YPI-R2	Remarks	Loading	Selected for YPI-R2	Remarks
	Overprotection & Overindulgence						
283	Did a lot of things for me because s/he didn't want me to get hurt.	.66	R	High item correlation	.43	✓	
9	Did too many things for me instead of letting me do things on my own.	.66	✓		.56	✓	
123	Overprotected me.	.62	✓		.56	✓	
95	If I didn't feel like doing a difficult or unpleasant task, I could usually get him/her to do it for me.	.61	R	High item correlation	.50	✓	
4	Worried excessively that I would get hurt.	.45	✓				
48	Worried excessively that I would get sick.	.45	✓				
371	Spoiled me, or was overindulgent, in many respects.	.60			.49	✓	
305	Treated me as if I was fragile.	.52			.46	✓	
277	Made many decisions for me because s/he wanted to be sure things would turn out well.	.53					
366	Was over-involved in my life.	.53			.42		
49	Would do my homework for me, if I felt overwhelmed by it.	.49			.41		
311	I always let him/her make choices for me.	.46					
50	Has tried to live through me and did not allow me to be free to live my own life.	.44					
288	Treated me as if I were younger than I really was.	.43					
	Punitiveness						
203	Would punish me when I did something wrong.	.83	✓		.65	✓	
215	Would punish me harshly when I did something wrong.	.77	✓		.65	✓	
148	He/she relied more on punishment than praise and rewards.	.49	R	High item correlation	.45	✓	
3	Abused me physically: did things like hitting me or throwing things at me.	.49	✓		.60	✓	
46	Abused me verbally: did things like calling me names, screaming at me, swearing at me, or threatening me.	.45	✓		.54	✓	
129	His/her punishments were often out of proportion with the "crime".	.60	R	High item correlation			
209	When we disagreed s/he always needed to be right.	.59					
184	Everything had to be on his/her terms.	.56					
168	S/he believed that if you spared the rod you spoiled the child.	.53					
265	If I did what I wanted I was only asking from trouble with him/her.	.45					
263	Had to have everything under control.	.42					
	Intrusiveness & Exploitation						
156	Used me or took advantage of me.	.48					
70	Seemed to get pleasure out of hurting me.	.47					
256	Abused me sexually.	.44					
74	Didn't really want me to succeed.	.41					
	Dependency & Alienation						
8	Was unhappy a lot and relied on me for support and understanding.	.54					
214	Discouraged me from inviting friends to our house.	.50					
293	Was critical of my friends.	.49					
99	Was often anxious and relied on me for reassurance and support.	.48					
130	Was (seemed to be) jealous of my friends.	.47					
5	Made me feel guilty if I did not share everything with him/her.	.41					

Appendix N (Continued)

RQ1 Item No.	Item Description	Father			Mother		
		Loading	Selected for YPI-R2	Remarks	Loading	Selected for YPI-R2	Remarks
	Controlling						
389	Would make me feel guilty if I did not go along with him/her.				.69	✓	
388	Made me feel guilty if I did not put his/her needs ahead of mine.				.65	✓	
394	Was demanding; expected to get things his/her way.				.51	✓	
349	Put a lot of pressure on me to meet all of my responsibilities.				.40	✓	
	Fear of Harm & Illness						Scales removed using CFA results
178	Worried about me or him/her being attacked.				.53		
229	Worried when making decisions that something terrible would happen if s/he made the wrong choice.				.47		
257	Worried about my developing a serious illness even though nothing serious was diagnosed by a physician.				.46		
179	S/he often thought that something bad was likely to happen to me.				.45		
248	Would worry that something terrible would happen if I made the wrong choice.				.43		
	Total Number of items (Factors)		**20 (5 factors)**			**33 (6 factors)**	

Total Number of items selected (Fathers)	20
Total Number of items selected (Mothers)	33
Minus: Number of overlapped items	-17
Final number of items	36

Appendix O

Inter-factor Correlations for YPI-R (Fathers) Using Manila Sample (n = 520)

Factor	Degradation & Rejection	Competitiveness & Status Seeking	Emotional Inhibition & Deprivation	Undependability & Irresponsibility	Overprotection & Overindulgence	Punitiveness	Intrusiveness & Exploitation	Dependency & Alienation
Degradation & Rejection	1							
Competitiveness & Status Seeking	.32	1						
Emotional Inhibition & Deprivation	.58	.16	1					
Undependability & Irresponsibility	.53	.05	.55	1				
Overprotection & Overindulgence	.21	.45	-.07	-.08	1			
Punitiveness	.58	.51	.47	.32	.30	1		
Intrusiveness & Exploitation	-.06	-.26	-.15	.09	-.13	-.24	1	
Dependency & Alienation	.60	.40	.46	.34	.39	.54	-.18	1

Note. Extraction Method: Principal Axis Factoring; Rotation Method: Promax with Kaiser Normalization.
The average factor correlation was .32 for ratings of fathers.

Appendix P

Inter-factor Correlations for YPI-R (Mothers) Using Manila Sample (n = 538)

Factor	Degradation & Rejection	Competitiveness & Status Seeking	Undependability & Irresponsibility	Emotional Inhibition & Deprivation	Overprotection & Overindulgence	Fear of Harm & Illness	Punitiveness	Controlling
Degradation & Rejection	1							
Competitiveness & Status Seeking	.26	1						
Undependability & Irresponsibility	.63	.03	1					
Emotional Inhibition & Deprivation	.64	.24	.61	1				
Overprotection & Overindulgence	.25	.31	.08	.14	1			
Fear of Harm & Illness	.25	.31	.21	.26	.34	1		
Punitiveness	.40	.37	.32	.45	.17	.23	1	
Controlling	.55	.45	.39	.52	.38	.37	.56	1

Note. Extraction Method: Principal Axis Factoring; Rotation Method: Promax with Kaiser Normalization.
The average factor correlation was .35 for ratings of mothers.

Appendix Q

Reliability Coefficients (α), *Mean (M) and Standard Deviation (SD) of the YPI-R2 (Fathers; 5 Factors 20 Items) and YPI-R2 (Mothers; 6 Factors 33 Items) Using Manila Sample (n=520, 538)*

	Manila Sample						Jakarta Sample						USA Sample					
		Fathers			Mothers			Fathers			Mothers			Fathers			Mothers	
Factors	α	*M*	*SD*	α	*M*	*SD*	α	*M*	*SD*	α	*M*	*SD*	α	*M*	*SD*	α	*M*	*SD*
Competitiveness & Status Seeking	0.73	3.16	1.05	0.74	3.63	1.03	0.62	3.32	1.02	0.66	3.71	0.99	0.79	2.82	1.32	0.78	3.23	1.19
Degradation & Rejection	0.76	1.81	0.84	0.87	1.94	0.87	0.75	2.12	0.90	0.87	2.27	0.96	0.82	1.84	1.10	0.91	1.81	1.03
Emotional Inhibition & Deprivation	0.66	3.27	1.04	0.69	3.08	0.87	0.59	3.45	1.07	0.69	3.07	0.90	0.75	3.52	1.36	0.84	2.83	1.24
Overprotection & Overindulgence	0.62	2.99	0.98	0.69	2.94	0.88	0.70	2.88	1.07	0.62	2.93	0.85	0.71	1.82	0.91	0.81	2.34	1.07
Punitiveness	0.79	2.54	1.15	0.84	2.61	1.14	0.77	2.46	1.10	0.83	2.53	1.11	0.76	2.40	1.13	0.80	2.50	1.13
Controlling	N. A.	N. A.	N. A.	0.83	2.51	1.06	N.A.	N. A.	N.A.	0.79	2.90	1.13	N.A.	N. A.	N.A.	0.79	2.54	1.24

Appendix R

Divergent Validity of the YPI-R2 (Fathers) with s-EMBU (Fathers) Using the Manila Sample (n=520 –5 Factors 20 Items)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_jk)	Correlation between Scale j and scale h (r_jh)	Correlation between Scale k and scale h (r_kh)	z-test for testing if H0: r_jk - r_jh = 0	2-tailed p
Degradation & Rejection	sEMBU-Rejection	sEMBU-Emotional warmth	0.53	-0.36	-0.32	14.01	<.01
Degradation & Rejection	sEMBU-Rejection	sEMBU-Overprotection	0.53	0.33	0.56	5.62	<.01
Degradation & Rejection	sEMBU-Emotional warmth	sEMBU-Overprotection	-0.36	0.33	0.03	-12.02	<.01
Emotional Inhibition & Deprivation	sEMBU-Rejection	sEMBU-Emotional warmth	0.15	-0.34	-0.32	7.19	<.01
Emotional Inhibition & Deprivation	sEMBU-Rejection	sEMBU-Overprotection	0.15	0.10	0.56	1.22	0.22
Emotional Inhibition & Deprivation	sEMBU-Emotional warmth	sEMBU-Overprotection	-0.34	0.10	0.03	-7.54	<.01
Overprotection & Overindulgence	sEMBU-Rejection	sEMBU-Emotional warmth	0.13	0.20	-0.32	-1.00	0.32
Overprotection & Overindulgence	sEMBU-Rejection	sEMBU-Overprotection	0.13	0.36	0.56	-5.72	<.01
Overprotection & Overindulgence	sEMBU-Emotional warmth	sEMBU-Overprotection	0.20	0.36	0.03	-2.71	<.01
Punitiveness	sEMBU-Rejection	sEMBU-Emotional warmth	0.56	-0.32	-0.32	13.89	<.01
Punitiveness	sEMBU-Rejection	sEMBU-Overprotection	0.56	0.37	0.56	5.48	<.01
Punitiveness	sEMBU-Emotional warmth	sEMBU-Overprotection	-0.32	0.37	0.03	-11.96	<.01
Competitiveness & Status Seeking	sEMBU-Rejection	sEMBU-Emotional warmth	0.09	0.18	-0.32	-1.35	0.18
Competitiveness & Status Seeking	sEMBU-Rejection	sEMBU-Overprotection	0.09	0.24	0.56	-3.60	<.01
Competitiveness & Status Seeking	sEMBU-Emotional warmth	sEMBU-Overprotection	0.18	0.24	0.03	-0.86	0.39

Appendix S

Divergent Validity of the YPI-R2 (Mothers) with s-EMBU (Mothers) Using the Manila Sample (n=538 –6 Factors 33 Items)

Scale j	Scale k	Scale h	Correlation between Scale j and scale k (r_jk)	Correlation between Scale j and scale h (r_jh)	Correlation between Scale k and scale h (r_kh)	z-test for testing if H0: r_jk - r_jh = 0	2-tailed p
Degradation & Rejection	sEMBU-Rejection	sEMBU-Emotional warmth	0.62	-0.46	-0.38	17.87	<.01
Degradation & Rejection	sEMBU-Rejection	sEMBU-Overprotection	0.62	0.33	0.51	8.27	<.01
Degradation & Rejection	sEMBU-Emotional warmth	sEMBU-Overprotection	-0.46	0.33	0.02	-14.39	<.01
Competitiveness & Status Seeking	sEMBU-Rejection	sEMBU-Emotional warmth	0.09	0.19	-0.38	-1.35	0.18
Competitiveness & Status Seeking	sEMBU-Rejection	sEMBU-Overprotection	0.09	0.26	0.51	-4.04	<.01
Competitiveness & Status Seeking	sEMBU-Emotional warmth	sEMBU-Overprotection	0.19	0.26	0.02	-1.25	0.21
Emotional Inhibition & Deprivation	sEMBU-Rejection	sEMBU-Emotional warmth	0.30	-0.38	-0.38	10.07	<.01
Emotional Inhibition & Deprivation	sEMBU-Rejection	sEMBU-Overprotection	0.30	0.14	0.51	3.74	<.01
Emotional Inhibition & Deprivation	sEMBU-Emotional warmth	sEMBU-Overprotection	-0.38	0.14	0.02	-9.21	<.01
Overprotection & Overindulgence	sEMBU-Rejection	sEMBU-Emotional warmth	0.05	0.15	-0.38	-1.42	0.16
Overprotection & Overindulgence	sEMBU-Rejection	sEMBU-Overprotection	0.05	0.27	0.51	-5.33	<.01
Overprotection & Overindulgence	sEMBU-Emotional warmth	sEMBU-Overprotection	0.15	0.27	0.02	-2.07	0.04
Punitiveness	sEMBU-Rejection	sEMBU-Emotional warmth	0.62	-0.35	-0.38	15.61	<.01
Punitiveness	sEMBU-Rejection	sEMBU-Overprotection	0.62	0.31	0.51	8.57	<.01
Punitiveness	sEMBU-Emotional warmth	sEMBU-Overprotection	-0.35	0.31	0.02	-11.69	<.01
Controlling	sEMBU-Rejection	sEMBU-Emotional warmth	0.51	-0.29	-0.38	12.30	<.01
Controlling	sEMBU-Rejection	sEMBU-Overprotection	0.51	0.45	0.51	1.53	0.13
Controlling	sEMBU-Emotional warmth	sEMBU-Overprotection	-0.29	0.45	0.02	-13.54	<.01

Appendix T

Average Correlation Between YPI-R2 Subscales and Counterparts from s-EMBU Subscales

Negative Parenting Subscales	Correlation with counterpart		Average correlation with non-counterparts (absolute values)	
	Fathers	Mothers	Fathers	Mothers
Degradation & Rejection	0.53	0.62	0.35	0.42
Competitiveness & Status Seeking	No counterparts	No counterparts	0.17	0.18
Emotional Inhibition & Deprivation	0.34	0.38	0.13	0.22
Overprotection & Overindulgence	0.36	0.27	0.17	0.10
Punitiveness	0.56	0.62	0.35	0.33
Controlling	--	0.48	--	0.29
Average	0.45	0.47	0.23	0.26

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