University of
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INVESTIGATING THE MEDIATING EFFECTS OF THOUGHT SUPPRESSION

AND SOCIAL PROBLEM-SOLVING IN THE RELATIONSHIP BETWEEN

INSECURE ATTACHMENT AND INTERPERSONAL PROBLEMS

A Thesis submitted by

Rebecca Zammit

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ABSTRACT

Insecure attachment that represents negative internal models of self and/or others contributes to the development and maintenance of interpersonal problems. Interpersonal problems are unhealthy interpersonal behaviours that repeatedly inhibit the achievement of interpersonal goals and are likely to be influenced by thought suppression. Previous research identified that adults with insecure attachment use thought suppression to deactivate their attachment system. Insecure attachment has also been shown to be associated with poor social problem-solving (Mikulincer & Shaver, 2012). Therefore, this current research project aimed to identify whether thought suppression and poor social problem-solving sequentially link insecure attachment to interpersonal problems. The sample consisted of 571 Australian adults ($N_{\text{female}} = 412$, $M_{\text{age}} = 30$; $N_{\text{male}} = 147$, $M_{\text{age}} = 30$). An online quantitative survey collected data that was analysed with structural equation modelling to estimate a mediation model of the relationship between insecure attachment and interpersonal problems. As hypothesised, structural equation modelling revealed that the relationship between insecure attachment and interpersonal problems is sequentially mediated by thought suppression and poor social problem-solving. Our findings have implications for psychological interventions, psychotherapy, and governmental policies. Psychological interventions targeting insecure attachment and interpersonal problems will benefit from considering the sequential relationship between thought suppression and social problem-solving. Overlooking the sequential relationship identified in this study, can hinder the improvement of interpersonal problems in adults with insecure attachment.

CERTIFICATION OF THESIS

I, Rebecca Zammit declare that the Master Thesis entitled Investigating the Mediating Effects of Thought Suppression and Social Problem-Solving in the Relationship between Insecure Attachment and Interpersonal Problems is not more than 40, 000 words in length including quotes and exclusive of tables, figures, appendices, bibliography, references, and footnotes. The thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

Date:

Endorsed By:

Dr Zahra Izadikhah

Principal Supervisor

Professor Emeritus Anthony Machin

Associate Supervisor

Student and supervisors' signatures of endorsement are held at the University.

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Specifically, I would like to express my greatest appreciation and respect to my principal supervisor Dr Zahra Izadikhah for her unconditional and unwavering support throughout my Master Research. She was always able to balance being supportive of my ideas whilst also guiding me in the right direction with encouragement. She was extremely organised and answered my emails whilst being away on leave which enabled me to meet required deadlines. She always displayed patience and supported me to develop and grow as a research student. I believe that having the opportunity to undertake a higher degree by research under her supervision has been one of the greatest opportunities in my lifetime.

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was retired. His knowledge and expertise in his field of research is commendable and as a supervisor his ability to guide and teach was extraordinary. I will always value the support he provided throughout the Master Research Program and having the opportunity to be under his supervision was truly a remarkable honour that I will be forever grateful for. The opportunity to be under his supervision is one of the greatest opportunities of my lifetime.

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DEDICATION

I dedicate this research to the many children and their families that I have cared for and supported over the years through working as an early childhood educator, foster carer, children's ministry leader, health care worker and as a parent. These families provided me with valuable experience and knowledge that I am eternally grateful for. I hope this research helps leaders and professionals understand the impact the journey of your childhood has on your journey as an adult. I hope it brings the necessary changes needed to ensure that they are provided with the best support so that they can all become the best version of them. Our past does not define us, and we can overcome it to become the best version of us!

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ABBREVIATIONS

AGFI   Adjusted Goodness of Fit

AMOS-27 Analysis of Moment Structures version 27

AMT   Autobiographical Memory Test

CFI   Comparative Fit Index

Chisq   Chi-square

Chiq/df   Chi-square divided by degrees of freedom

CPT   Cognitive Psychotherapy

CR   Critical Ratio

DSM5   Diagnostic and Statistical Manual 5

ECR-R   Experiences in Close Relationships revised

GFI   Goodness of Fit

HREC   Human Research Ethics Committee

IBM   International Business Machines

ICM   Interpersonal Circumplex Model

IFI   Incremental Fix Index

IIP   Inventory of Interpersonal Problems

MLE   Maximum Likelihood Estimation

NFI   Normed Fit Index

PTQ   Perseverative Thinking Questionnaire

RCT   Randomized Control Trial

RMSEA   Root Mean Square of Error Approximation

SE   Standard Error

SPSI-R: SF   Social Problem-Solving Inventory Revised Short Form

SPSS   Statistical Package of Social Sciences

SEM   Structural Equation Modelling

TLI   Tucker-Lewis Index

USQ   University of Southern Queensland

WBSI   White Bear Suppression Inventory

CHAPTER 1 INTRODUCTION

1.1 Direction of the Research

Interpersonal problems are self-reported recurring relationship difficulties including trouble relating to, or having a healthy relationship with family, friends, loved ones, colleagues, and co-workers (Horowitz et al., 1988). Interpersonal problems are the most reported problems in clinical interviews (Horowitz et al., 1988). Interpersonal problems are behaviours in interpersonal relations that are considered as domineering/controlling, intrusive/needy, overly nurturant/self-sacrificing, exploitable/overly accommodating, non-assertive, socially inhibited, cold/distant, and vindictive/self-centred (Horowitz et al., 1988). They can be represented on a two-dimensional circumplex that aligns with interpersonal behaviours, attachment styles, personality development, and personality disorders (Horowitz et al., 1993; Horowitz et al., 1997; Perris, 2000). The ability to navigate social interactions in an appropriately flexible and goal-directed manner is a major component of psychological health (Horowitz, 2004). Interpersonal interactions are at the heart of humanity's most critical endeavours including finding a life partner, creating a family, establishing a support network, and progressing within a career (Horowitz, 2004). Individuals with interpersonal problems are likely to experience thwarted family and career goals, strained relationships, and psychological distress (Horowitz, 2004). This can have an impact on the individual's psychological wellbeing and psychological health (Gurtman, 1992). Interpersonal problems are also core to the conceptualisation of personality disorders (Perris, 2000).

Insecure attachment is associated with interpersonal problems (Haggarty et al.,

2009; Mikulincer & Shaver, 2012). Interpersonal problems that people experience in interpersonal relationships are theorised to develop from their attachment system (Horowitz et al., 1988). The insecure attachment system is composed of negative internal working models of self and others that are established in childhood in relation to the attachment bond they have with their primary caregiver (Bartholomew & Horowitz, 1991; Bowlby, 1969; Bowlby 1977; Horowitz, 1993). They can continue to influence their adult interpersonal relationships (Fraley, 2002). When experiences occur in childhood that disrupts the attachment bond with the primary caregiver then insecure attachment may result (Abbass & Schubiner, 2018; Bowlby, 1977). Experiences can also occur in adulthood that reinforce and cause insecure attachment (Mikulincer & Shaver, 2012).

Adults with insecure attachment use deactivating attachment strategies in relationships characterized by cognitive strategies that divert attention from distress evoking stimuli (attachment related situations, thoughts, and memories) and attachment related thoughts, feelings, and attachment situations (Fraley et al., 1998). One such strategy is cognitive avoidance in the form of thought suppression (Chen & Mallinckrodt, 2002; Fraley et al., 1998). Thought suppression is the tendency to block thinking about or block recalling negative thoughts that trigger unpleasant emotions (Najmi, 2013). However, trying to suppress a thought often increases the cognitive susceptibility of the unwanted thought (rebound effect) and heightens the degree of expression of the attached emotion (Najmi, 2013). Thought suppression disrupts flexible thinking and can impair social problem-solving because effective social problem-solving requires access to negative thoughts and emotions (Beaman et al., 2007; Najmi, 2013; Nezu et al., 2013).

Thought suppression is also known to be associated with poor social problem-solving (Ahmadi Forooshani et al., 2021b). Ahmadi Forooshani et al. (2021b) confirmed that cognitive avoidance (thought suppression and autobiographical memory) predicts poor social problem-solving in the relationship between trauma and social adjustment in young adults (Ahmadi Forooshani et al., 2021b). Robichaud et al. (2003) define "social problem-solving as the conscious, rational, effortful, and purposeful activity aimed at improving a problematic situation, reducing, or modifying negative emotions generated by the situation, or both outcomes. It's a metaprocess of understanding, appraising, and adapting to stressful life events, rather than simply a singular coping strategy or activity" (Robichaud et al., 2003). Adults with poor social problem-solving often have a dysfunctional cognitive mindset that constitutes seeing a problem as a threat, showing a lack of confidence and perceived control in problem-solving, a tendency to becoming upset and frustrated when attempting to problem-solve, and a pessimistic view of the outcome (Robichaud, 2003). Social problem-solving deals with all types of real-life problems, in particular interpersonal problems (interpersonal disputes, marital conflicts; D'Zurilla & Nezu, 2010). Therefore, it is reasonable to expect that impaired social problem-solving would be associated with increased interpersonal problems.

The relationship between insecure attachment and interpersonal problems is well established; however, there is a significant gap in the literature regarding whether thought suppression and social problem-solving sequentially mediates this relationship. Additionally, there is no study that has attempted to develop a mediation model of this relationship. In this study, we proposed and investigated a mediation model to explain how insecure attachment results in interpersonal

problems. According to our hypothesised model (Figure 1), adults with insecure attachment suppress their negative thoughts which can impair social problem-solving. As such, when these processes remain unimproved, significant interpersonal problems occur. The hypothesised model supports the vulnerability theory that early problems with closeness (i.e., attachment) can result in interpersonal problems later in life, potentially (Smith & South, 2021).

Figure 1

Hypothesised Sequential Relationship between Attachment Insecurity and Interpersonal Problems
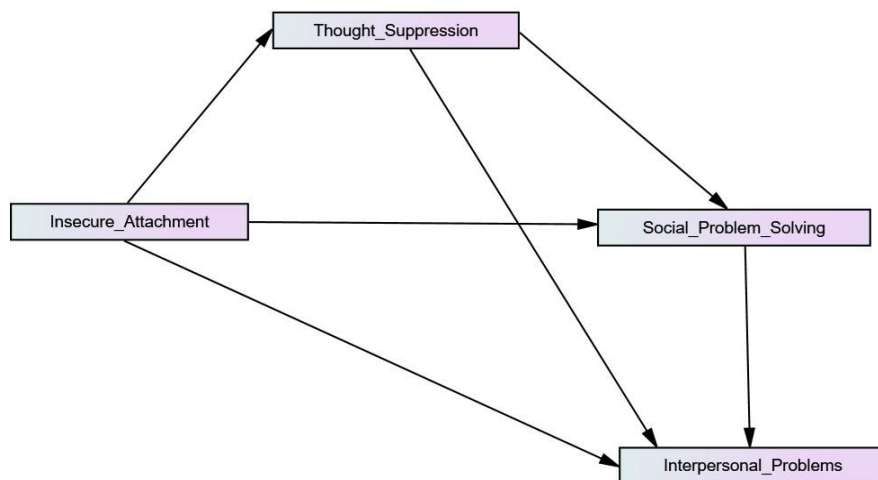
1.2 Background Information

In this section, the mediators involved in the relationship between insecure attachment and interpersonal problems are explained. Interpersonal problems are interpersonal behaviours that repeatedly fail to receive the desired complementary

response from another individual in interpersonal relationships (Horowitz et al., 1997). The theory of interpersonal behaviour suggests that when an individual displays a particular interpersonal behaviour in an interpersonal relationship, they expect a complementary response in return from the other individual (Horowitz et al., 1997). When the individual does not receive the complementary response then tension arises, and when this occurs repeatedly in different interpersonal relationships it can be considered an interpersonal problem. This results in the individual not being able to achieve their interpersonal goals (Horowitz et al., 1997).

Our interpersonal behaviours are developed from our internal working models of self and others and explain how we view and perceive others (Horowitz et al., 1997). An internal working model is a mental framework that provides understanding of the self, others, and the world and influences our behaviour. The internal working models of self and others develops from our attachment experiences with our parent/caregivers in childhood and can continue to influence our interpersonal behaviour and relationships into adulthood (Fraley, 2002; Horowitz et al., 1997). A person who has a secure attachment system perceives others and self in positive ways (trustworthy, dependable, available, loving, confident, capable; Horowitz et al., 1997). When experiences occur in childhood that disrupts the attachment bond with the primary caregiver then insecure attachment may result and can impact the cognitive processes required for interpersonal behaviours and interpersonal relationships (Caldwell & Shaver, 2013; Horowitz et al., 1997). A person with an insecure attachment system perceives others and/or self in negative ways (untrustworthy, unavailable, unlovable, incapable, and lacking confidence or ability; Horowitz et al., 1997). Insecure

attachment can cause negative internal working models of self and others that also impact our cognitive processes. Resulting in interpersonal problems that function as a barrier to our interpersonal goals (Bartholomew & Horowitz, 1993; Bowlby, 1969; Bowlby 1977; Caldwell & Shaver, 2013; Horowitz, 1993; Horowitz et al., 1997; Mikulincer & Shaver, 2003). For individuals with insecure attachment the repeated failure to obtain support from attachment figures along with not feeling a sense of security and a reliance on secondary attachment strategies (thought suppression) can interfere with the development of social skills and create serious problems in interpersonal relationships (Mikulincer & Shaver, 2012).

Adults who develop an insecure attachment system use secondary attachment strategies within their adult interpersonal relationships (Mikulincer & Shaver, 2003). The attachment system is a stored repertoire of past interpersonal interactions that provide templates that guide interpersonal behaviour through internal working models of self and others. The deactivating secondary attachment strategies use the cognitive process thought suppression (Mikulincer & Shaver, 2003). Deactivating strategies maintain the attachment system in a down-regulated state and foster the ignoring and dismissal of threatening aspects of person-environment interactions (Mikulincer & Shaver, 2003). This is achieved by the cognitive process of thought suppression which involves the suppression of any threat-related thoughts that might activate the attachment system (Mikulincer & Shaver, 2003).

In terms of deactivating strategy, it is important to consider adults with insecure attachment avoid negative or distressing thoughts and memories of early, past, and current attachment experiences (Mikulincer & Shaver, 2003). This can protect the person from unpleasant intrusive thoughts as well as their negative

associated emotions, but these strategies are only beneficial in the short-term (Wegner and Zanakos, 1994; Williams, 1996). When an individual avoids thoughts and memories chronically, it can become maladaptive and one maladaptive strategy is chronic thought suppression which is defined as a pervasive tendency to avoid processing negative thoughts (Najmi, 2013). Chronic thought suppression can be generalised to all subjects of personal or interpersonal life resulting in the individual being unable to process negative or challenging aspects of their life (Wegner & Zanakos, 1994) which can influence social problem-solving (Nezu et al., 2013) and result in interpersonal problems. This can result in interpersonal problems because thought suppression monopolizes cognitive resources (Levens et al., 2009), disrupts attentional control, and limits the capacity for nonjudgmental, compassionate, and mindful awareness in the present moment required for healthy interpersonal relations (Caldwell & Shaver, 2013).

Ahmadi Forooshani et al. (2021b) confirmed the mediating role of cognitive avoidance (thought suppression and over-general memory) in the relationship between trauma and social adjustment. Individuals with insecure attachment most often have experienced some form of trauma (Abbass & Schubiner, 2018). This highlights the importance of investigating thought suppression as a contributing factor within the relationship between insecure attachment and interpersonal problems because it has the potential to negatively impact social problem-solving which may result in interpersonal problems (Ahmadi Forooshani et al., 2021b). Thought suppression is protective in nature however it can suppress thoughts required for social problems-solving (Caldwell & Shaver, 2013). Thought suppression in the long term can interfere with the development of proper cognitive

capacity that is required for social problem-solving and then interpersonal problems can occur (Kozak et al., 2008).

Social problem-solving is a way of describing the systems and processes that individuals use to solve the problems they encounter in their everyday lives. Social refers to the real-life nature of the problems and the way individuals approach them. It applies to four different types of problems including impersonal problems (e.g., shortage of money), personal problems (emotional or health problems), interpersonal problems (e.g., disagreements with other people), and community and wider societal problems (e.g., litter or crime rate). Thomas D'Zurilla's model of social problem-solving has three basic concepts these being: problem-solving, problem, and solution. Problem-solving is defined as the process used by an individual, pair, or group to find an effective solution for a particular problem. It is a self-directed process, meaning simply that the individual or group is not following instructions from another individual or group. This process includes generating lots of possible solutions and selecting the best among them. Problem is defined as any situation or task that requires a response for it to be managed effectively but to which no obvious response is available. The demands may be external, from the environment, or internal. Solution is defined as a response or coping mechanism which is specific to the problem or situation. It is the outcome of the problem-solving process. Once a solution has been identified, it must then be implemented. D'Zurilla's model distinguishes between problem-solving (the process that identifies a solution) and solution implementation (the process of putting that solution into practise). It also acknowledges that the skills required for the two are not the same. It also distinguishes between the two parts of the problem-solving process: problem orientation and actual problem-solving.

Problem orientation is the way individuals approach problems, and how they set them into the context of their existing knowledge and ways of looking at the world. Each individual will view problems in a different way, depending on their experiences and skills, and this orientation is key to working out which skills an individual will need to solve the problem. Problem-solving requires four key skills: defining the problem, coming up with alternative solutions, deciding about which solution to use, and implementing that solution. D'Zurilla and colleagues defined two scales to measure both orientation and problem-solving. They defined two orientation dimensions (positive and negative) and three problem-solving styles (rational, impulsiveness/careless, and avoidance). They viewed positive orientation and rational problem-solving as functional behaviours and all the others as dysfunctional behaviours which lead to psychological distress.

The skills required for positive problem orientation are: seeing problems as challenges or opportunities to gain something (mindset), believing problems are solvable (positive thinking), believing that they are personally able to solve problems successfully (self-confidence), problems take time and effort to solve (resilience), and motivating self to solve problems immediately. Individuals who find it harder to develop positive problem orientation tend to view problems as insurmountable obstacles, or a threat to their well-being, doubt their own abilities to solve problems, and become frustrated or upset when they encounter problems.

The skills required for rational problem-solving include: the ability to gather information and facts through research, ability to set suitable problem-solving goals, apply rational thinking to generate possible solutions, good decision-making skills to decide which solution is best, and implementation skills (ability to plan,

organise, and do). Individuals who struggle with rational problem-solving tend to either: rush things without thinking them through properly (the impulsive/careless approach), or avoid them through procrastination, ignoring the problem, or trying to persuade someone else to solve the problem (avoidance mode). Avoidance mode is usually characterised by a lack of selection of anyone with the appropriate skills and/or attempt to avoid responsibility for the problem.

Social problem-solving refers to the ability to create and follow effective solutions to cope with problematic social and interpersonal situations (D'Zurilla & Nezu, 2010). Although this ability can be improved by education and learning, it requires some basic cognitive processes (Madore & Schacter, 2014). Social problem-solving requires a cognitive openness to negative aspects of problematic situations. In other words, for effective social problem-solving, negative thoughts and emotions related to the situations should not be avoided (Nezu et al., 2013). As such thought suppression can create barriers for the main cognitive processes of social problem-solving by disrupting flexible thinking (Beaman et al., 2007; Kozak et al., 2008; Meir, 1997; Robichaud et al., 2003) and additionally, by blocking access to thoughts and emotions which are required for effective social problem-solving which can result in interpersonal problems.

1.3 Overall Argument

In summary, as shown in Figure 1, previous research suggests that insecure attachment may predict greater levels of thought suppression and that, in turn, may predict lower levels of social problem-solving. The outcome of this process could be greater levels of interpersonal problems potentially. The reason is that experiencing issues in social and interpersonal situations is inevitable. Thus, if the

ability of social problem-solving is not effective, interpersonal problems can develop.

1.4 Significance and Rationale

Despite the theoretical background and research evidence supporting the various parts of our hypothesised model (Figure 1), no study has investigated this process as a cohesive theoretical framework. The hypothesised model can represent crucial elements in the relationship between insecure attachment and interpersonal problems. Both historic and recent writings (Levy & Blatt, 2003) have called for an integrated model to explain the development and maintenance of interpersonal dysfunction (Smith & South, 2021). This study has the potential to ground personality disorders into a developmental-etiologic framework with a rich theoretical and empirical history because interpersonal problems are core to their conceptualisation (Smith & South, 2021).

1.5 Aims and Objective of the Research

The overarching aim of the study was to identify and develop a model of the potential mediators of the relationship between insecure attachment (independent) and interpersonal problems (dependent) among a sample from the general population in Australia. Mediators implicated to be involved include thought suppression and social problem-solving.

1.6 Hypotheses

It was hypothesised that thought suppression and poor social problem-solving would mediate (individually or jointly) the relationship between insecure attachment and interpersonal problems. A sequential positive relationship was

hypothesised between insecure attachment, thought suppression, poor social-problem-solving, and interpersonal problems.

1.7 Original and Significant Contribution of the Thesis

The original and significant contribution of the thesis is a mediation model of the relationship between insecure attachment and interpersonal problems. Thought suppression and poor social problem-solving mediate the relationship between insecure attachment and interpersonal problems. The model sheds light on the relationship between insecure attachment and interpersonal problems. This is the first study to date that has attempted a model of interpersonal problems and insecure attachment and will allow conclusions to be made about the mediating factors that will have implications for psychotherapy and cognitive behavioural therapy.

The model can be used to develop new and/or modify current therapeutic interventions for individuals experiencing interpersonal problems, mood/emotional disorders, insecure attachment, complex trauma, and personality disorders (Mikulincer & Shaver, 2012). This model will be of benefit to psychologists treating individuals with interpersonal problems and may be extended to treat patients with personality disorders because the core conceptualisation of personality disorders is interpersonal dysfunction (Smith & South, 2021). It enabled the identification of cognitive processes involved in the relationship between insecure attachment and interpersonal problems which can then be targeted in therapeutic interventions such as cognitive psychotherapy (Perris, 2000). The model can also be used to inform, modify, and create policies for private and government organisations including schools, child-care centres, child

protection, residential care, and support agencies including Anglicare, Centacare,

Uniting Care and Relationships Australia, among others.

1.8 Chapter Outline

In the next chapter (Chapter 2), the author presents a literature review of the

current background information known about interpersonal problems and insecure

attachment. It provides literature on the relationship between thought suppression

and social problem-solving and how they relate to attachment theory and

interpersonal problems. The following is a brief introduction to each factor in the

model and how they might relate to each other whilst highlighting the gap and

significance of the research in this area. In Chapter 3, an overview of the

quantitative methods, used in the current research project are presented. Chapter 4

presents and explains the findings of the study including the structural equation

modelling analysis and the model developed from the data. Chapter 5 discusses the

limitations, implications, and findings in more detail and suggests directions for

future research. The chapters are outlined in Table 1.

Table 1.

Chapter Outline

	Chapter Outline	
Chapter 2 Literature Review	Theory of Interpersonal Behaviour	
	Interpersonal Problems	
	Attachment Theory	
	Attachment Insecurity	
	Thought Suppression	
	Social Problem Solving	
Chapter 3 Methodology	Quantitative Survey	
	Data Cleaning	
	Correlation	
	Basic and Hierarchical Regression	
	Structural Equation Modelling	
Chapter 4 Results	Correlation Matrix	
	Cognitive Model	
	Model Fitness	
Chapter 5 Discussion	Implications	
	Future Research	
	Limitations	

CHAPTER 2 LITERATURE REVIEW

Interpersonal problems are the primary focus of this research and therefore it is important to present a brief review of the past theories of interpersonal behaviour with a particular focus on the Interpersonal Circumplex Model (ICM) to explain interpersonal behaviour and the Inventory of Interpersonal Problems (IIP) to conceptualise interpersonal problems (Gurtman, 2009; Horowitz et al., 1988; Horowitz et al., 1993; Horowitz et al., 1997). The ICM and IIP are the most widely used and recognised models to explain interpersonal behaviours and interpersonal problems (Gurtman, 2009).

2.1 Theoretical Background for Interpersonal Problems

The first models of interpersonal behaviour began emerging in the 1940s and 1950s (Horowitz et al., 1997). They were a reaction against prevailing theories including psychoanalysis and behavioural theories of learning (Horowitz et al., 1997). These theories reduced interpersonal behaviour to discrete stimuli and responses indicating a person's action is a stimulus that mechanically elicits the partner's response (Horowitz et al., 1997). Leary (1957) emphasised that people do not merely emit responses in each other's presence instead they do something to that other person (Horowitz et al., 1997). Horowitz (1988) proposed that interpersonal behaviours can be organised graphically in a two-dimensional circumplex, and the theory assumes that every interpersonal behaviour invites a person to respond with some other particular behaviour (its complement), and the behaviour and its complement can be described in terms of the two-dimensional circumplex (Horowitz et al., 1988; Horowitz et al., 1997).

Interpersonal problems occur when a person invites a person to respond with a complement behaviour, but the person does not receive the desired response (Horowitz et al., 1997). A person with a particular interpersonal problem desires a particular type of interpersonal interaction, the person has a particular interpersonal goal or wish, but that goal often gets frustrated (Horowitz et al., 1997). To understand an interpersonal problem, it is important to assess people's interpersonal goals as well as their actual interpersonal behaviours (Horowitz et al., 1997). It is important to understand how and why an interpersonal goal gets frustrated so that we can devise an appropriate intervention/s (Horowitz et al., 1997). Interpersonal problems can also be organised graphically on a two-dimensional circumplex and the circumplex explains why interpersonal problems arise (Horowitz et al., 1997). Horowitz (1979) examined the interpersonal problems people expressed in initial clinical interviews and he constructed an inventory of the identified problems, called the Inventory of Interpersonal Problems (IIP) (Horowitz et al., 1998).

2.2 The Interpersonal Circumplex Model (ICM)

The Interpersonal Circumplex Model (ICM) is a continuous, two-dimensional representation of interpersonal needs, values, problems, and traits and is depicted in Figure 2 (Gurtman, 2009). The two continuous dimensions that make up the model are agency (becoming individualised) and communion (becoming connected) (Gurtman, 2009) and were depicted by Bakan (1996) as the fundamental modalities of human existence. For interpersonal relationships, agency refers to ideas of dominance, power, status, and control and communion refers to ideas of love, affiliation, union, and friendliness (Gurtman, 2009). The interpersonal behaviours for the agency dimension range from yielding behaviour to dominating behaviour

and for the communion dimension range from hostile behaviour to friendly

behaviour (Horowitz et al., 1997).

Figure 2.

Interpersonal Circumplex Model including dimensions, categories, and polar

coordinates (Gurtman, 2009)
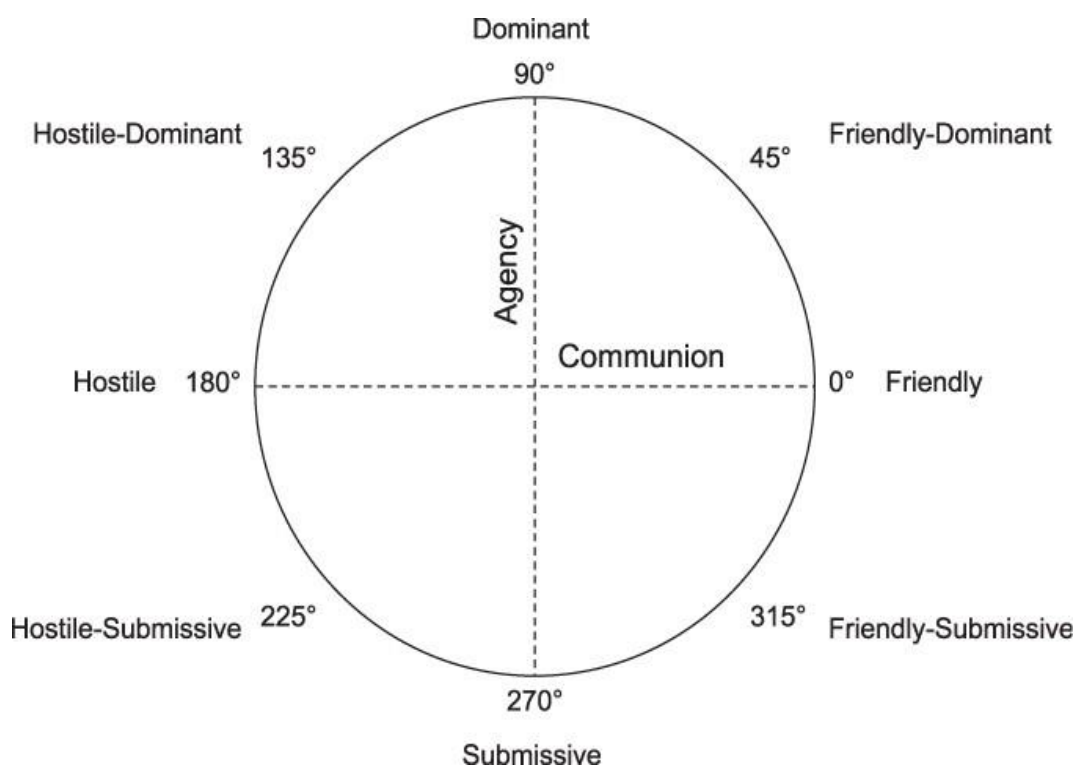
2.3 Two Dimensions of Interpersonal Behaviour

The two interpersonal dimensions have been related to two fundamental

human needs (Horowitz et al., 1997). These being a need to maintain an image of

other people that enables the person to relate to others in a satisfying way and a

need to maintain an image of the self that permits the person to behave

autonomously (Horowitz et al., 1997). Human development poses two tasks for

everyone which include that of interpersonal relatedness (connectedness) and that

of self-definition (individuation; Horowitz et al., 1997). Interpersonal relatedness

(connectedness) is the need to establish close, stable, nurturing, and protective relationships whilst self-definition (individuation) is the need to establish a coherent, differentiated, stable, realistic, and positive sense of self. They develop synergistically, such that an unfolding of one enhances the development of the other. One sided development on either is likely to result in psychopathology. Similar distinctions have been proposed by other theorists such as identify versus intimacy (Erikson, 1963), and agency versus communion (Bakan, 1966). Erikson's psychosocial stage of identity describes where the child/adolescence must learn the roles they will occupy as an adult. During this stage the adolescent examines their identity to find out exactly who they are which is similar to self-definition (individuation) and agency. Agency is the condition of being a differentiated individual which arises from strivings to individuate and expand the self. Interpersonal relatedness is like the psychosocial stage of intimacy which involves forming intimate, loving relationships with other people. It is also like communion which is the condition of being part of a larger social or spiritual entity arising from the strivings to integrate the self into a larger social unit. Individuals with insecure attachment do not maintain images of others and self that are aligned with the fundamental human needs. They develop negative internal working models of other people as unreliable or unavailable which can impact their ability to relate to others. They may also develop negative internal working models of self as incapable which can impact their ability to behave autonomously. Negative working models of others and/or self can impact cognitive processes resulting in interpersonal problems (Horowitz et al., 1997; Mikulincer & Shaver, 2003).

2.4 The Inventory of Interpersonal Problems (IIP)

The Inventory of Interpersonal Problems (IIP) is a psychological assessment tool that was developed by studying a large sample of initial clinical interviews in which common interpersonal problems expressed by individuals were identified (Horowitz et al., 1988). It can be represented on a two-dimensional circumplex that is based on and aligns with the two-dimensional circumplex of the ICM (Figure 3; Alden et al., 1990; Horowitz et al., 1993; Horowitz et al., 1997). The circumplex is composed of two interpersonal dimensions, a dimension of affiliation, nurturance, or communion (ranging from friendly or warm behaviour to hostile or cold behaviour) and a dimension of control, dominance, or influence (ranging from dominating or controlling behaviour to yielding or relinquishing control; Horowitz et al., 1993). Different interpersonal problems fall into different regions of space and no region of the space was without an interpersonal problem (Horowitz et al., 1993; Horowitz et al., 1997). The space can be divided into octants to examine problems in each narrow region of space (Horowitz et al., 1993; Horowitz et al., 1997). The organization of the problems within this two-dimensional space forms a circumplex, every region of the two-dimensional space contains some interpersonal problems that were mentioned in the initial clinical interview (Alden et al., 1990; Horowitz et al., 1993; Horowitz et al., 1997). Therefore, problems exist that correspond to every combination of the two underlying factors: some problems reflect too much friendliness (or too much hostility) whilst others reflect too much dominance (or too much submissiveness; Alden et al., 1990; Horowitz et al., 1993; Horowitz et al., 1997). Some reflect too much friendly-dominance and others reflect too much friendly-submissiveness (Alden et al., 1990; Horowitz et al., 1993; Horowitz et al., 1997). There are no

empty regions of the space (Alden et al., 1990; Horowitz et al., 1993; Horowitz et al., 1997).

Figure 3

The Interpersonal Circumplex Model: Interpersonal Problems
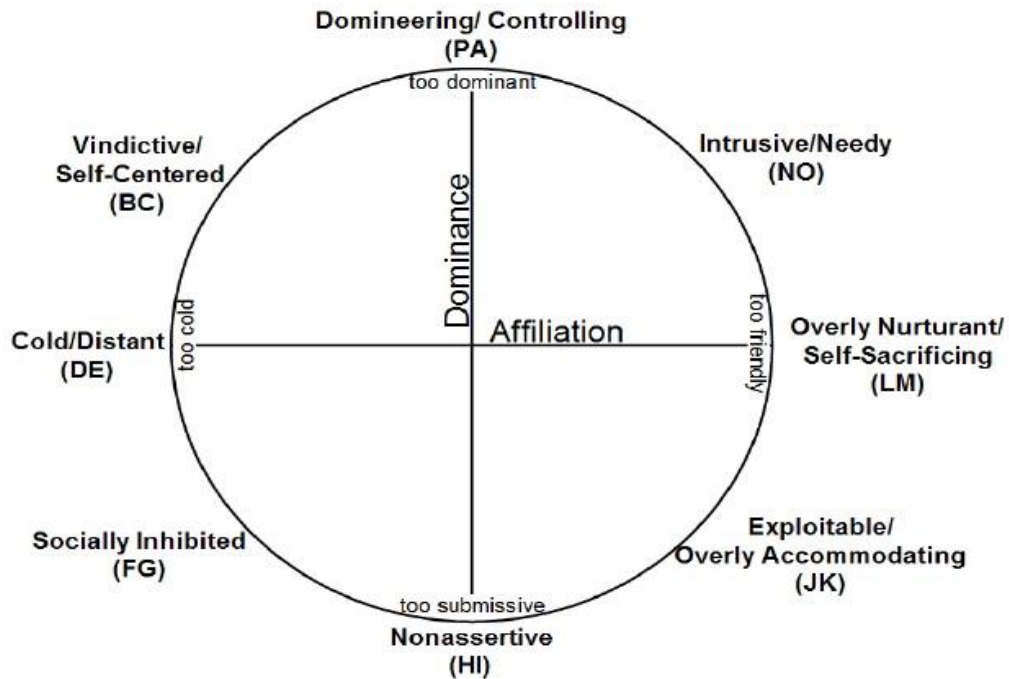
2.5 Interpersonal Problems

Interpersonal problems are best understood by comparing the person's interpersonal wishes and goals with the person's interpersonal behaviours. All three of these constructs, interpersonal problems, interpersonal goals, and interpersonal behaviours, can be described succinctly in terms of a two-dimensional circumplex (Horowitz et al., 1997). To clarify their relationship to each other, Horowitz has proposed four propositions. The first is that the two underlying dimensions of each circumplex can be characterized as (a) affiliation, nurturance, or communion, and (b) dominance, influence, or control. The second

proposition is that each interpersonal behaviour invites a particular class of reactions (the complement), and the relationship between an interpersonal action and its complement is also defined by the circumplex; that is complementary behaviours are similar with respect to affiliation but reciprocal with respect to dominance (Horowitz et al., 1997). The third proposition is that non complementarity creates a palpable interpersonal tension between the two interacting partners defined as interpersonal problems (Horowitz et al., 1997).

Interpersonal problems occur when an individual fails to reach an interpersonal goal in their interpersonal relationships (Horowitz et al., 1997). That is when an individual displays a particular interpersonal behaviour in an interpersonal relationship, they expect a complementary response in return from the other individual (Horowitz et al., 1997). When the individual does not receive the complementary response then tension arises, and when this occurs repeatedly in different interpersonal relationships it can be considered an interpersonal problem. Our interpersonal behaviours are developed from our working models of self and others and explain how we view and perceive others (Horowitz et al., 1997). A secure person perceives others and self in positive ways (trustworthy, dependable, available, loving, confident, capable) and an insecure person perceives others and/or self in negative ways (untrustworthy, unavailable, unlovable, incapable, and lacking confidence or ability). The working models of self and others develops from our attachment experiences with our parents/primary caregivers in childhood and continue to influence our adult interpersonal relationships (Horowitz et al., 1997). When experiences occur in childhood that disrupts the attachment bond with the primary caregiver then insecure attachment may result (Bowlby, 1973). Insecure attachment can prime an individual to deactivate their attachment system

(repertoire of well-learned interpersonal behaviours) in response to attachment triggers resulting in cognitive avoidance (thought suppression) which impairs social problem-solving (Horowitz et al., 1997; Mikuliner & Shaver, 2003). This can result in interpersonal problems which are interpersonal behaviours that inhibit them from achieving their interpersonal goals (Horowitz et al., 1997; Mikuliner & Shaver, 2003).

2.6 Attachment Theory

Early interactions between child and caregiver are at the core of attachment theory (Levy et al., 2015). The affective bond that develops between caregiver and infant is the developmental nucleus of identity formation, intrapersonal regulation, and interpersonal attitudes (Bowlby, 1973, 1977). According to Bowlby (1973) the attachment bond is a complex, behavioural system that has functioned throughout human evolution to protect the infant from danger by seeking security from a caregiver guardian, thus enhancing the infant's likelihood of survival and eventual reproduction (Levy et al., 2015). It also promotes comfort during stressful periods, reducing negative affect and allowing the infant to develop a healthy, realistic, and coherent sense of self (Fonagy, 1999; Levy et al., 2015). The adaptive form of attachment is ideal, Bowlby (1973) suggested other forms of attachment exist (Levy et al., 2015). Bowlby (1973) hypothesised that secure attachment derives from a caregiver's reliable and sensitive provision of love and comfort, as well as food and warmth (Levy et al., 2015). Infants with a caregiver who meets their biological and psychological needs turn to them when experiencing distress, fear, or other needs (safe haven), while otherwise exploring their surroundings with a sense that the caregiver is looking out for them (secure base; Levy et al., 2015). If the infant's needs are not met by the caregiver, then adaptive attachment is

disrupted which is insecure attachment (Levy et al., 2015). These infants are unable to garner support from their caregiver when distressed or are limited in their ability to explore during stress-free times (Levy et al., 2015). Thus, differences in styles of behaviour surrounding the caregiver as a safe haven and secure base reveal underlying disparities in the formation of the infant-caregiver bond (Levy et al., 2015).

Internal working models emerge from early infant-caregiver interactions and are mental schemas of self and others that guide interactions, provide expectations about interpersonal relations, and generate emotional appraisals and rules for processing and excluding information (Bowlby, 1973; Bretherton & Munholland, 2008). The working models entrain the infant's conceptualisation of what resources and support can be reliably obtained from others and how to function independently given such support (Bowlby, 1973; Bretherton & Munholland, 2008; Levy, 2015). An infant whose needs are met and who is nurtured emotionally by a caregiver will develop working models of others as dependable and supportive (Bowlby, 1973; Bretherton & Munholland, 2008; Levy, 2015). However, an infant who is unsupported or ignored by a caregiver may construct schemas of others as inaccessible and uncaring and may continue into adulthood with this negative working model (Bowlby, 1973; Bretherton & Munholland, 2008; Levy, 2015). For healthy interpersonal behaviour, an individual needs to develop a positive image of others that enables them to relate to others in a satisfying way and needs to maintain a positive image of the self to behave autonomously in relationships (Bowlby, 1973; Bretherton & Munholland, 2008; Levy, 2015). Individuals with insecure attachment use thought suppression to avoid their negative cognitions of self and/or others that are required for

effective social problem-solving (Bowlby, 1973; Bretherton & Munholland, 2008; Horowitz et al., 1997; Levy, 2015). Avoiding their negative attachment experiences can result in impaired social problem-solving and interpersonal problems.

Bowlby (1973) suggested that internal working models become components of an individuals' personality structure and tend to remain stable over time (Bowlby, 1973; Bretherton & Munholland, 2008; Levy, 2015). A meta-analysis of longitudinal studies of attachment found that early childhood attachment was moderately predictive of individual's attachment style in adulthood (Fraley, 2002). Given the relative stability of internal working models, insecure attachment in infancy may become maladaptive if the child or adult remains unable to connect emotionally with others who could provide support (Fraley, 2002). These models can be modified through later relationships which can correct unhealthy views of self and others leading to more adaptive/healthy interpersonal interactions (Fraley, 2002). It is understandable that insecure attachment and negative internal working models associate with maladaptive cognitive strategies or mechanisms that adversely affects cognitive functioning and social problem-solving skills required for interpersonal relationships (Bowlby, 1973; Bretherton & Munholland, 2008; Levy, 2015). Identifying the cognitive strategies or mechanisms impacted will allow the development of therapeutic interventions that specially target the disrupted mechanisms.

Childhood attachment styles influence the development of interpersonal schemas. Interpersonal schemas guide people how to interact in interpersonal situations. Healthy attachment styles result in healthy interpersonal schemas and potentially fewer interpersonal problems. Attachment styles are patterns of

expectations, needs, affect regulation strategies and social behaviour that develop within an individual (Haggerty et al., 2009). The attachment style developed by an individual is based on their childhood experiences with significant others and is illustrated by their sense of trust and degree of intimacy in interpersonal relationships (Haggerty et al., 2009). Individuals who experience a caregiver who is sensitive and consistent with responding to their needs develop secure attachment. Inconsistent or inadequate responsiveness leads to insecure attachment. Securely attached individuals develop positive models of self which include knowing they are worthy of love and comfort and expecting their needs will be met by others (Haggerty et al., 2009). Insecurely attached individuals develop negative models of self which includes believing they are undeserving of love and expecting others to be unreliable and disappointing (Haggerty et al., 2009). These working models guide the formation of stable patterns of interpersonal behaviour and provide templates for the person's interpersonal expectations and perceptions (Haggerty et al., 2009). Adults with insecure attachment may develop negative templates for interpersonal expectations which impact their cognitive processes required for interpersonal relationships increasing their susceptible to developing interpersonal problems.

2.7 Attachment in Adulthood

Developmental and social psychological research traditions have focused on the evaluation of adult attachment schemas (Levy et al., 2015). Developmental psychologists generally assess attachment patterns through the Adult Attachment Interview (AAI; George et al., 1995). The AAI queries individuals about childhood experiences with caregivers to understand how these experiences

influenced one's adult personality and interpersonal attitudes (George et al., 1985; Levy et al., 2015). The adult attachment patterns are like the styles identified in infants and can be categorised as secure and insecure (George et al., 1985; Levy et al., 2015). Secure adults value attachment relationships and seem able to deal effectively with potentially invasive feelings about the past or future (Levy et al., 2015). Insecure adults can appear overwhelmed by anxiety and negative emotions related to close relationships or distance themselves from attachment figures, defending against painful feelings related to attachment relationships (Levy et al., 2015). Insecure adults are not able to deal effectively with potentially invasive feelings about the past or future and use maladaptive cognitive strategies such as thought suppression to avoid them (Levy et al., 2015).

Social psychologists use self-report measures to assess adults' current attitudes and behaviours toward significant others (Levy et al., 2015). The self-report measure used within this research was the Experiences in Close Relationships Revised. It generates individual scores on dimensions of anxiety and avoidance that fall within the secure and insecure categories of attachment (Bartholomew & Horowitz, 1991). It gives a total score of insecure attachment based on how secure or insecure an adult feels in intimate relationships. Secure adults hold positive beliefs about the self and availability and responsiveness of close others and score low on both anxiety and avoidance (Bartholomew & Horowitz, 1991). Adults with insecure attachment have cognitions that reflect an amalgam of the following beliefs about the self and availability and responsiveness of close others because they have had multiple experiences with different attachment figures. Insecure adults can be hypervigilant with respect to attachment and feel as if others are not as invested in them as they are in others (Bartholomew

& Horowitz, 1991). They can also deny the importance of close relationships and have a strong commitment to independence and self-reliance (Bartholomew & Horowitz, 1991). Insecure adults can also be characterised by low feelings of self-worth and negative expectations about the availability and responsiveness of significant others ((Bartholomew & Horowitz, 1991; Fraley & Shaver, 1997). Adults with insecure attachment can be described in terms of their degree of approximation to different insecure attachment styles which can change in different relationships, therefore a model examining the different insecure attachment styles measured by the Experiences in Close Relationships Revised combined into one construct called insecure attachment is necessary to determine the cognitive processes mediating interpersonal problems (Horowitz, 1991).

2.8 Insecure Attachment

Attachment systems are lasting emotional bonds between child and caregiver and interruption due to deprivation, separation, and bereavement can result in insecure attachment causing a battery of problems throughout the life of an individual (Bretherton, 1992; Bowlby, 1973). The type of attachment a child develops with their caregiver may be assimilated into the child's personality and reflected throughout childhood (Bowlby, 1973). Ruptured attachment can occur because of adverse early life experiences during childhood and includes emotional, physical and/or sexual abuse, neglect, abandonment, divorce, parental loss, bullying, significant sibling rivalry or cruelty, illness, or death of family members, among other stressful or traumatic experiences (Abbass & Schubiner, 2018). Other adverse events experienced could be having critical parents or parents with high expectations, which may have led to low self-esteem and strong resentment resulting in attachment insecurity (Abbass & Schubiner, 2018).

An individual's attachment style in adulthood reflects their attachment history beginning with the individual's earliest attachment relationships (Fraley et al., 2002). The prototype perspective suggests that representations of early experiences are retained over time and continue to play an influential role in attachment behaviour throughout the life course of an individual (Fraley et al., 2002). Fraley et al. (2002) found that attachment security is moderately stable over the first 19 years of life and was able to predict stability in attachment patterns across extended periods of time (Fraley, 2002). Fraley (2002) concluded from the research that in adulthood, there is some degree of overlap between insecure attachment in the romantic and parental domains (Fraley, 2002).

A theme commonly identified in previous literature is that of insecurely attached individuals reporting heightened levels of interpersonal problems. For most of the general population, interpersonal problems are experienced infrequently, and such problems usually occur during stressful situations (Campbell et al., 2005). In some relationships, problems are experienced far more regularly than usual (Campbell et al., 2005). In a relationship marred with interpersonal problems, it is likely that at least one individual within the relationship has a lack of interpersonal skills and thus lacks the skills to interact appropriately with others which may be a result of insecure attachment (Campbell et al., 2005).

The two areas of social and developmental research present complementary views of security and insecurity of attachment. Insecurity is associated with distress, impaired interpersonal functioning, and psychopathology (Crowell et al., 1999; Mikuliner & Shaver, 2007). Bowlby theorised that insecure attachment may lead to personality disorders (Horowitz et al, 1997). Insecure attachment may lead to debilitating worry in close relationships and an inability to regulate intense

negative affect, or potentially contributes to distrust in relationships and distancing behaviours, resulting in emotional suppression. Such intra- and interpersonal problems are consistent with the disturbances seen in personality pathology (Horowitz et al., 1997).

2.9 Interpersonal Problems and Attachment Style

Relationships exist between self-reported patterns of interpersonal problems and adult attachment styles (Haggarty et al., 2009). An individual's internal models of self and others are thought to result from their attachment experiences and are therefore reflected in their interpersonal behaviour (Haggarty et al., 2009). It has been identified that interpersonal problems, based on the interpersonal circumplex (Haggarty et al., 2009; Horowitz et al., 1993) stem from maladaptive interpersonal expectations and perceptions which are motivated by their attachment style (Haggarty et al., 2009; Horowitz, 1993). For an individual with insecure attachment, it is suggested that interpersonal problems can be understood as a conflict between the individual's desire to express a certain behaviour (e.g., seeking support when distressed) and the individual's anxiety about expressing that behaviour, as they expect a negative response from the significant person in their life. These conflicts are a result of the individual's interpersonal learning history, which are a reflection and result of the individual's attachment history and style (Haggarty et al., 2009).

According to Bowlby (1973) and Bartholomew (1990; Bartholomew & Horowitz, 1991), people have two important classes of mental representations that affect their interpersonal behaviour. The first describes a person's generalized image of other people and the second describes the person's generalized image of

the self. If the person's image of other people is generally negative, the person will not trust other people, hence will avoid intimacy. If the person's image of self is negative, the person will have low self-efficacy expectations, hence will refrain from displaying initiative and autonomy (Horowitz et al., 1997).

The research investigated and developed a mediation model of the relationship between insecure attachment and interpersonal problems based on attachment being an enduring vulnerability for interpersonal problems (Bowlby, 1973; Levy & Blatt, 2003; Mikulincer & Shaver, 2012). Although we believe the relationship between insecure attachment and interpersonal problems happen through the mediating effects of thought suppression and social problem-solving. Thought suppression as a cognitive strategy, might be automatically used by insecurely attached individuals and that can impact individuals' social problem-solving and experience interpersonal problems. The following provide some background information on the mediating factors in this research.

2.10 Thought Suppression

Individuals often have intrusive thoughts, and a common response is to try to suppress these unwanted thoughts. Wegner (1989) identified this phenomenon and referred to it as thought suppression (Wegner, 1989). More specifically, thought suppression refers to the process of consciously trying to prevent certain thoughts from entering the stream of consciousness (Wegner, 1989). Caldwell and Shaver (2013) showed that individuals with insecure attachment try to suppress their aversive attachment experiences (Caldwell & Shaver, 2013). Insecure attachment has also been shown to be associated with the tendency to suppress unwanted thoughts. (Caldwell & Shaver, 2013). This suggests that people scoring

high in insecure attachment may develop a tendency to deactivate their attachment system in response to a history of insecure relationships, partly through habitual suppression of unwanted thoughts (Caldwell & Shaver, 2013). Due to strong feelings of distrust of others, these individuals actively avoid and dismiss thoughts and feelings that could lead to closeness and interdependence (Caldwell & Shaver, 2013). The act of suppressing potentially threatening information and keeping it out of awareness requires the allocation and maintenance of cognitive resources (Caldwell & Shaver, 2013; Ochsner & Gross, 2005), which can be disrupted and depleted under conditions of elevated cognitive load or intense emotion, resulting in the breakdown of attentional control and diminished capacity for self-reflection and mindful awareness which is required for effective social problem-solving and solving interpersonal problems (Caldwell & Shaver, 2013). Ahmadi Forooshani et al.'s (2021b) model illustrates that reacting to trauma by cognitive avoidance (thought suppression and over-general autobiographical memory) can disturb cognitive capacities that are required for effective social problem-solving. Consequently, they demonstrated that a lack of effective social problem-solving significantly hinders social adjustment (Ahmadi Forooshani et al., 2021b). Insecurely attached adults have experienced trauma and are more likely to suppress their negative thoughts. Therefore, according to Ahmadi Forooshani's et al. (2021b) model their tendency to suppress their negative thoughts more likely, could result in ineffective social problem-solving and greater interpersonal problems. Ineffective social problem-solving is most likely going to result in greater levels of interpersonal problems.

2.11 Social Problem-Solving

Social problem-solving is one of the psychological functions that can be impacted by thought suppression (Raes et al., 2005). Social problem-solving is defined as the complex cognitive-affective-behavioural process by which a person attempts to develop relevant ways of coping with stressful situations (D'Zurilla & Nezu, 1990; Zhang et al., 2021). Effective social problem-solving requires a cognitive openness to all negative aspects of problematic situations and negative thoughts, and emotions related to the situation should not be avoided especially through thought suppression (Nezu et al, 2013). Research has shown that appropriate levels of social problem-solving requires the ability to imagine potential solutions for a problematic situation, and that this process can be impeded by chronic thought suppression (Madore & Schacter, 2014). Social problem-solving is the process that we use to solve our interpersonal problems and ineffective social-problem will result in greater and more extensive interpersonal problems. Insecure adults have experienced distressing situations and are therefore more likely to experience and suppress negative thoughts. These negative thoughts are required for effective social problem-solving. They are more likely to have more negative and unsuccessful thoughts and experiences to use as a reference for social problem-solving because of their negative attachment experiences. Which in turn could result in greater suppression of these thoughts which has the potential to result in ineffective social problem-solving. Effective social problem-solving is required to solve interpersonal problems and therefore, ineffective social problem-solving could potentially result in more interpersonal problems (D'Zurilla & Nezu, 2010).

A significant improvement in social problem-solving requires learning emotion regulation strategies and behavioural techniques (Nezu et al., 2013). Caldwell and Shaver (2013) identified that thought suppression mediated the relationship between attachment and mindfulness and mindfulness can prevent thought suppression. This is understandable as mindfulness is known to reduce thought suppression and to improve cognitive avoidance (thought suppression; Caldwell & Shaver, 2013). This will positively impact both social problem-solving and interpersonal problems. This indicates that mindfulness strategies should be in psychological interventions such as cognitive behavioural therapy and psychotherapy (Caldwell & Shaver, 2013).

2.12 Current Research

This research aims to develop an understanding of the relationship between these variables to find ways to improve interpersonal problems in adults with insecure attachment. Adults with insecure attachment use cognitive avoidance in the form of thought suppression which impairs social problem-solving resulting in interpersonal problems.

CHAPTER 3 METHODS

A quantitative cross-sectional survey was used to collect data to investigate how insecure attachment is related to interpersonal problems. It involved collecting quantitative data through an online survey and using structural equation modelling to estimate a model of the relationship between insecure attachment and interpersonal problems through the mediator's thought suppression and social problem-solving. The quantitative design is of the positivist worldview. The quantitative design was used to calculate levels of insecure attachment, thought suppression, social problem-solving, and interpersonal problems in participants which were then analysed through statistical methods to develop a sequential mediation model of the relationship between them. Statistical methods including correlation, hierarchical regression, and structural equation modelling (regression) analysed the quantitative data.

3.1 Participants

The participants (N = 853) were Australian adults recruited from within the professional and social network of the University of Southern Queensland (USQ) and included staff, students, and known contacts of the research team. The research team included four honours students, a masters research student, and their supervisory team. The participants were a convenience sample of respondents who completed an online survey called Investigating the Mediating Effects of Thought Suppression, Rumination, Autobiographical Memory, and Social Problem-Solving in the Relationship between Insecure Attachment and Interpersonal Problems on the USQ survey tool system. They were gathered from one of five sources, either; the research team's social media websites (Facebook and Twitter), the supervisor's pool of masters and undergraduate USQ psychology students, the USQ Psychology

Student Society emailing list, approached in person by the research team or via snowballing from one of these sources. Participants from the first source were contacted via a direct message or via a post on the research team's social media pages which provided a link to the survey. Participants from the second source were emailed the link by the supervisor and were offered course credit. Participants from the third source were sent the link by the Supervisor, Dr Zahra Izadikhah to their email addresses and were offered entry in a prize draw ($50 gift voucher). Participants from the fourth source were approached in person by the researcher who had the survey open on the researcher's computer for the participant to complete. Finally, anyone who was contacted in one of these four ways was also encouraged to share the link with their social networks, thus gathering more participants through snowballing. Student participants were advised that they would receive two credit points for completion during the months of April 2021 to January 2022. In January 2022, the ethics committee approved an increase in credit allocation for students from 2 to 3 points because it was a long survey that included many assessments. The inclusion of many assessments made it difficult to recruit participants because it made the survey time consuming to complete. Participants were also advised that to compensate for their time they could register to go into the draw to win a $50 gift voucher by following a link on the last page of the survey. The survey was created within USQ survey tool and included two additional measurements for the research projects for the other members of the research team. An online link to the survey was forwarded to the research team who forwarded it to the participants who completed the survey electronically online through the USQ survey participation website.

After data cleaning there were 571 Australian residents remaining and 72.3% were female. Participants were at least 18 years of age and indicated their age from seven age groups (1 = 18-25 years, 2 = 26-35 years, 3 = 36-45 years, 4 = 46-55 years, 5 = 56-45 years, 6 = 46-55 years and 7 = above 55 years) that ranged from 18 to 25 years to 65 years and above (M = 2.47 (26-35 years), median = 2 (26-35 years), SD = 1.47). Table 2 outlines the demographic information collected within the survey. Most participants within the study were Australian (84%) because the focus of the research was on the general Australian population. However, due to the way participants were recruited (snowballing and social media advertisement) we could not ensure only Australian participants were included. This was a convenience sample predominantly comprised of USQ staff, students and their family and friends. The sample was predominantly female which could limit generalisability of results.

Participants completed the survey over a one-year period from April 2021 to April 2022 and 282 responses were excluded because they did not fully complete all the psychological assessments included within the survey. The participation information sheet advised that participation was entirely voluntary, withdrawal was possible at any time and that their data would be de-identified immediately following submission. They were also advised that to compensate for their time they could register to go into the draw to win a $50 gift voucher by following a link on the last page of the survey. They were also asked to note if they were a current USQ student to determine if they needed to be allocated course credit by the supervisor.

Table 2

Participant Demographic Data

Demographic		Frequency	Percentage
	18-25 years	185	32.4
Age	26-35 years	154	27
	36-45 years	111	19.4
	46-55 years	59	10.3
	56-65 years	32	5.6
	Above 65 years	23	4
	Prefer not to answer	7	1.2
Gender			
	Male	147	25.8
	Female	412	72.3
	Non-binary	6	1.1
	Prefer not to answer	5	0.9
Ethnicity			
	Australian	480	84.1
	Asian	20	3.5
	British	14	2.5
	European	11	1.9
	Indigenous	11	1.9
	Other	32	5.6
Religion			
	Christian	104	18.2
	Catholic	80	14
	Protestant	11	1.9
	None	309	54.1

	Prefer not to answer	15	2.6
	Other	49	8.6
Employment Status	Employed (full-time)	177	31
	Employed (part-time)	200	35
	Employed (casual)	16	2.8
	Seeking employment	35	9.4
	Not seeking employment	54	9.5
	Caring	27	4.7
	Volunteering	11	1.9
	Self-employed	7	1.2
	Prefer not to answer	12	2.1
	Other	6	1.1
Education Level	Grade 10 and below	13	2.3
	Grade 12 and below	170	29.8
	Trade certificate	83	14.5
	Bachelor's Degree (Undergraduate)	168	29.4
	Postgraduate	79	13.8
	Prefer not to answer	6	1.1
	TAFE (certificate, diploma)	19	3.3
	Other	5	0.9

Note. Categories where 'other' was listed as an option required that the participant specify by typing their response in a drop-down box. Participants who selected the 'other' condition when referring to gender all recorded non-binary as their preferred gender. For all other demographic categories, responses were recorded when 5 or more participants recorded the same response and varied responses were not recorded. Age group codes: 1 = 18-25 years, 2 = 26-35 years, 3 = 36-45 years, 4 = 46-55 years, 5 = 56-45 years, 6 = 46-55 years and 7 = above 55 years.

3.2 Materials

The self-report online quantitative survey called Investigating the Mediating Effects of Thought Suppression, Rumination, Autobiographical Memory, and Social Problem-Solving between Insecure Attachment and Interpersonal Problems includes seven sub-sections, and all sections include items to collect quantitative data (Appendix B). The first four sections composed of six validated self-report psychological assessments; Experiences in Close Relationships-Revised (ECR-R), White Bear Suppression Test (WBSI), Social Problem-Solving Inventory Revised Short Form (SPSI-R: SF) and Inventory of Interpersonal Problems (IIP-32) were relevant to this study. Four additional measures [Autobiographical Memory Test (AMT), Preservative Thinking Questionnaire (PTQ), Brief Somatisation (SOM-7) and Depression, Anxiety and Stress Scale (DASS-21)] were included to gather supplementary information for further research (Honours student's research projects] and thus are not pertinent to the scope of this study. The last section of the online survey was a demographic questionnaire and included age, gender, ethnicity, religion, highest level of education and current employment status (moderator, demographic variables).

3.2.1 Insecure Attachment

The second section of the online survey included the Experiences in Close Relationships Revised (ECR-R) to assess insecure attachment (independent variable; Fraley et al., 2000). It is a 36-item validated self-report questionnaire designed to measure attachment related 'anxiety' and 'avoidance' to produce an overall score of attachment insecurity (independent variable; Fraley et al., 2000). Attachment-related anxiety refers to a person's tendency to experience anxiety

concerning rejection and abandonment, and avoidance refers to their reluctance to be close to or dependent on others (Sibley et al., 2005). A measurement of these two types of insecure attachment places the individual along two continuums of anxiety and avoidance, effectively measuring their overall level of insecure attachment (Fraley et al., 2000).

To complete the ECR-R, participants were asked to think how they feel in emotionally intimate relationships. They can focus on a particular relationship (such as with a romantic partner, parent, or friend) or just close relationships in general. They are then asked to consider each of the 36 statements which are presented in a randomised order to prevent order bias (Brennan et al., 1998) and to rate questions such as 'I am very comfortable being close to others', on a 7-point Likert scale according to the degree of which they either disagree or agree to this statement. Response options were 0 (strongly disagree), 1 (disagree), 2 (somewhat disagree), 3 (neutral), 4 (somewhat agree), 5 (agree) to 6 (strongly agree). The results are then scored by calculating a total score of the 36 items with items 4, 8,16, 17, 18, 20, 21, 22, 24, 26, 30, 32, 34 and 36 being reversed scored. The overall insecure attachment score is the sum of all the scores from all items, to give a score between 0 (no attachment insecurity) and 216 (high attachment insecurity).

It has been shown to have suitable convergent validity, Sibley et al. (2005), identified that ECR-R attachment anxiety and avoidance scores predicted anxiety and avoidance experienced during social interactions at a comparable magnitude (γ = .46 and γ = .51 respectively; Sibley et al., 2005). They also found that the ECR-R had good discriminate validity and predictive utility and previous research indicated that the measure is stable over time (Sibley et al., 2005; Sibley & Liu, 2004) with approximately 86% of latent variance between its subscales was shared

between initial measurement at week one and then six weeks later. Fit indices and chi-square difference tests also indicate that excellent goodness of fit (GFI) for both subscales (GFI=.92) and furthermore, the subscales were shown to have high internal reliability (anxiety, α = .95; avoidance, α = .93) and the overall Cronbach's alpha for the entire questionnaire was also found to be good (α = .85) (Sibley & Liu, 2004). The reliability of the ECR-R in previous other studies was also high, with a Cronbach's α = .91 (Fraley et al., 2000). In the current research project, it had an exceptional Cronbach's alpha of α = .95.

3.2.2 Thought Suppression

The third section of the online survey included The White Bear Suppression Inventory (WBSI) which is a 15-item validated self-report questionnaire designed to measure chronic thought suppression and mental control of intrusive thoughts (mediator; independent variable; Wegner & Zanakos, 1994). Participants were asked to rate questions such as 'There are things I prefer not to think about', on a 5-point Likert scale according to the degree of which they either disagree or agree to this statement. Responses options were 0 (strongly disagree), 1 (disagree), 2 (somewhat agree), 3 (agree) and 4 (strongly agree) and higher scores on this inventory indicate higher levels of chronic thought suppression. Higher scores indicate more frequent use of thought suppression, while low scores indicate less frequent use of thought suppression as a strategy to control intrusive thoughts. The inventory is scored by calculating a total score from all the items, to give a score between 0 and 60 (Psychology Roots website). The reliability of the WBSI in previous studies was high, with a Cronbach's α = .89 (Wegner & Zanakos, 1994). The WBSI has demonstrated very good internal consistency (α = .87) and good test-retest reliability over one-week (r = .92) and three weeks to three-month (r =

.69) periods (Sexton & Dugas, 2008; Wegner & Zanakos, 1994). In the current research project, it had a high internal consistency with a Cronbach's alpha of α = .95.

3.2.3 Social Problem-Solving

The fourth section of the online survey included the Social Problem-Solving Inventory-Revised Short-Form (SPSI-R: SF) to assess social problem-solving attitudes and skills (mediator, dependant; D'Zurilla et al., 2002). It is a 25-item validated self-report questionnaire designed to measure an individual's cognitive, affective, or behavioural responses to real life problem-solving situations (Hawkins et al., 2009). The items were randomly ordered which was the same order for each of the participants. Half of the items were positively worded (e.g., 'When I have a problem, I usually believe that there is a solution for it') and the other half were negatively worded (e.g., 'After carrying out a solution to a problem, I do not usually take the time to evaluate all the results carefully'). The measure included five subscales: positive problem-solving (PPO), negative problem orientation (NPO), rational problem-solving style (RPS), impulsive/carelessness style (ICS), and avoidance style (AS). Participants were asked to respond on a 5-point Likert scale with response options being 0 (not at all true of me), 1 (slightly true of me), 2 (moderately true of me) 3 (very true of me) and 4 (extremely true of me). The final score used within analyses for each participant was the total raw score divided by five. The total raw score was calculated by adding together the individual subscale scores. The total scores ranged between 0 and 20 (D'Zurilla et al., 2002).

The psychometric properties of SPSI-R: SF have been confirmed in past studies and the reliability of the SPSI-R: SF in previous studies was high, with a

Cronbach's α = .90 (Hawkins et al., 2009). In the current research project, it had a

moderately high internal consistency with a Cronbach's alpha of α = .76.

3.2.4 Interpersonal Problems

The sixth section of the online survey included the Inventory of

Interpersonal Problems (IIP-32) which is a 32-item validated self-report

questionnaire designed to measure interpersonal problems (dependent variable;

Horowitz et al., 2000). The first section (20 items) asked participants to base their

responses on the premise 'It is hard for me to:' and an example item is 'Trust other

people', to which participants were instructed to indicate their degree of relation to

the statement. The second section (12 items) asked participants to base their

responses on the premise 'The following are things that I do too much', and an

example item is 'I try to please other people too much'. Participants were instructed

to indicate their degree of relation to the statement on a 5-point Likert scale, with

response options of 0 (not at all), 1 (a little bit), 2 (moderately), 3 (quite a bit) to 4

(extremely). Total scores ranged from 0 to 128 and higher total scores on this

measure were indicative of higher levels of interpersonal problems (Horowitz et al.,

2000).

Horowitz et al (2000) reported reliability coefficients within the

instrument's manual of between .68 and .93 for the IIP-32. Vanheule et al. (2006)

reported alpha coefficients of the IIP-64 and IIP-32 to assess the reliability of the

short form IIP against the original 64-item IIP, which had formally established high

levels of internal consistency (Vanheule et al., 2006). Vanheule et al. (2006)

demonstrated that alphas of the 32-item questionnaire were slightly lower than

those of the 64-item IIP, however this was expected of a questionnaire with fewer

items. Coefficients of the IIP-32 were still considered high overall (clinical and student samples $\alpha = .85$ and .86 respectively), and it was therefore concluded in their study that the IIP-32 had high internal reliability (Vanheule et al., 2006). Cronbach's alphas were .93 and .94 respectively in a study by Lindberg et al. (2018), which was based on both raw and ipsatized scores of the IIP-64, further supporting the instruments high internal consistency (Lindberg et al., 2018). An acceptable test-retest reliability coefficient of .79 was reported in the test instrument's manual (Horowitz et al., 2000). Similarly, a test-retest reliability coefficient within a two-month period as reported by Barkham et al. (1996) was .70 (significant at $p < .001$; Barkham et al., 1996). The reliability of the IIP-32 in previous studies was high, with a Cronbach's $\alpha = .91$ (Horowitz et al., 2000). In the current research project, it had an exceptionally high Cronbach's alpha of $\alpha = .92$.

3.3 Procedure

Ethical approval (Approval number H21REA084) was obtained from the USQ Human Research Ethics Committee (HREC) and the study was deemed as low risk. The survey was created with USQ survey tool which included an online link that was distributed to the research team for the purpose of distributing to participants. The participants were recruited by the research team through the USQ survey participation website, social media sites (including Facebook and Twitter), email, and in person. The thesis supervisor was granted permission to recruit USQ students for participation. The participants were recruited from April 2021 to April 2022. Participants were provided information about the purpose and nature of the study and completion of the online study was only possible after obtaining

informed consent. Informed consent was obtained from each of the participants at the beginning of the survey through the first question on the survey (the participant must select yes to informed consent to progress through to the next stage of the survey).

The eligibility criteria were Australian adults of at least 18 years of age. The exclusion criteria were not completing the assessments in full and a lack of consent to continue in the research at any stage. Prior to having access to the survey participants were informed of all the necessary information about their participation, the eligibility criteria, and contact details for counselling support if needed. Participants could access the questionnaires after indicating their consent to participate and were advised they could withdraw from the study at any stage.

University of Southern Queensland course credit or entry into a prize draw for a $50 gift voucher was offered to reimburse participants for their time. The online survey took approximately 30 minutes to complete. Participants were informed that all comments and responses would be treated confidentially unless required by law and only aggregated results would be reported. Participants were also informed that data was collected using USQ's secure online survey platform as it meets USQ data security and storage guidelines, and that data collected as part of the study would be stored securely as per the USQ's Research Data Management policy. Participants were advised they could withdraw from their participation and responses anytime throughout the study. The research team's contact details were provided for participants to ask questions or request further information. The contact details for the University of Southern Queensland Ethics Coordinator were provided and they were advised to contact the coordinator if they had any concerns or complaints about the ethical conduct of the project.

Participants survey responses were exported from USQ survey tool into a Statistical Package for Social Scientists (SPSS) version 27 data file during July 2021 to clean, score and start preliminary analyses and the final data set was exported during April 2022. The participants identifiable information was removed before data analysis and participants was given a unique identification number. Eight hundred and fifty-three participants completed the survey. Two hundred and eighty-two participants were excluded as they did not complete the survey in full. The participants who did not complete all the psychological assessments were excluded and the final sample consisted of 571 Australian adults who had completed all the psychological assessments. There were many participants who did not complete the survey in full. This may be because the autobiographical memory test is time consuming and needs sustained attention to complete. The survey also includes completing several assessments together which may be distressing to the participants resulting in them choosing to withdraw from the survey.

3.4 Data Analysis and Design

A preliminary analysis ($n = 372$) performed in July 2021 indicated that additional data was needed. Additional data was collected which led to the final sample of N = 853, which was cleaned to N = 571. The survey data were exported from USQ survey tool in July 2021 for preliminary analysis and then again in April 2022 for final analysis. The scores of all items of the questionnaires as well as demographic information was coded and scored in SPSS-27 software. Scale scores were all calculated as per the assessment manuals and are described in detail in the materials section. The raw data set (N = 853) underwent cleaning to ensure only relevant responses were included in analysis and included removing cases where

most of the cases are missing, removing unengaged responses (same answer for every survey item), replacing missing values, removing outliers, and assumption testing for multivariate normality, homoscedasticity, and multicollinearity. After data cleaning, 282 participants were identified to have not completed any of the assessments if full and they were removed from the study. The data was missing at random for the autobiographical memory test which was the first assessment of the survey. Data was missing for the rest of the survey for these participants because the first assessment was not completed. Autobiographical memory is an important variable to include within the model however, it is difficult to measure in a general sample, so it was removed from the study. Future studies should include autobiographical memory but measure it with a different assessment tool. Missing data analysis and multiple imputations could not be performed on the missing data because there was no data for any of the assessments for these participants. The survey was set up so that the participant had to answer each question before it moved onto the next question therefore, there were no missing values to impute. Only participants who had completed the survey in full were included within the analysis.

Before analysis commenced, assumption testing for normality was performed to determine whether parametric or non-parametric tests should be performed on the preliminary sample ($n = 372$). Cronbach's alpha values were calculated for each of the assessments to determine the reliability of the measure and its subscales. The data was assessed for normality using histograms, skewness (less than 2), and kurtosis (less than 2). Descriptive statistics and frequencies (%) were calculated for the demographic variables. Parametric analysis was performed using 95% bootstrapping (set at 1000) as the cleaned data set was approximately

normal. In October 2021, Pearson correlations with bootstrapping assessed for associations to determine if the variables were all positively related which is an assumption of structural equation modelling. Basic regression modelling (one predictor regression) was used to run an analysis to determine whether insecure attachment (independent variable) will predict (or be associated with) interpersonal problems (dependent). Hierarchical Regression with 95% bootstrapping (set at 1000) was used to run analyses to determine whether insecure attachment (independent variable 3) is a predictor of interpersonal problems (dependent variable) above and beyond the effect of gender (independent variable 1) and age (independent variable 2). Multicollinearity was assessed and VIF was below 2 which was within acceptable range. Structural Equation Modelling (SEM) with SPSS-27 and Analysis of Moment Structures version 27 (AMOS-27) investigated the validity of the hypothesised model, direct and indirect relations between variables, and path analysis (based on maximum likelihood estimation). A variety of fit indices were used to assess the model fit: chi square statistic, the root mean-square residual (RMSEA), the comparative fit index (CFI), Tucker-Lewis index (TLI) and incremental fit index (IFI). The following cut-off scores for indices were used to assess good model fit: a nonsignificant and small chi-square, and RMSEA lower than .08, a CFI greater than .90, and a TLI greater than .90 and a IFI greater than .90 (Appendix A).

The preliminary analysis indicated that additional data was needed and therefore collected to increase the power for the analyses. Assumption testing for normality was performed to determine whether parametric or non-parametric tests should be performed on the final sample ($n = 571$). Cronbach's alpha values were calculated for each of the assessments to determine the reliability of the measure

and its subscales. The data was assessed for normality using histograms, skewness (less than 2), and kurtosis (less than 2). Descriptive statistics and frequencies (%) were calculated for the demographic variables and are presented in Table 2. Parametric analysis was performed using 95% bootstrapping (set at 1000) as the cleaned data set was approximately normal. In June 2022, Pearson correlations with bootstrapping was used to assess for associations to determine if the variables were all positively related with the additional data ($n = 571$). Basic regression modelling (one predictor regression) was used to run an analysis to determine whether insecure attachment (independent variable) will predict (or be associated with) interpersonal problems (dependent). Hierarchical Regression with 95% bootstrapping (set at 1000) was used to run analyses to determine whether insecure attachment (independent variable 3) is a predictor of interpersonal problems (dependent variable) above and beyond the effect of gender (independent variable 1) and age (independent variable 2). Multicollinearity was assessed and VIF was below 2 which was within acceptable range. Structural Equation Modelling (SEM) with SPSS-27 and Analysis of Moment Structures version 27 (AMOS-27) investigated the validity of the hypothesised model, direct and indirect relations between variables, and path analysis (based on maximum likelihood estimation). A variety of fit indices were used to assess the model fit: chi square statistic, the root mean-square residual (RMSEA), the comparative fit index (CFI), Tucker-Lewis index (TLI) and incremental fit index (IFI). The following cut-off scores for indices were used to assess good model fit: a nonsignificant and small chi-square, and RMSEA lower than .08, a CFI greater than .90, and a TLI greater than .90 and a IFI greater than .90 (Appendix A).

CHAPTER 4 RESULTS

Pearson's product moment correlations were calculated to determine the associations between insecure attachment, thought suppression, social problem-solving, and interpersonal problems using IBM SPSS Statistics version 27 to investigate if all variables were significantly related to each other. A basic regression with bootstrapping was performed on the July 2021 data and August 2022 final data set to determine if insecure attachment accounted for significant variance in interpersonal problems. A hierarchical regression with bootstrapping was then performed to determine the contributions of insecure attachment, gender, and age in predicting interpersonal problems and to determine if the relationship existed above and beyond the effect of gender and age on the final data set. Structural Equation Modelling (SEM) using maximum likelihood was then performed to estimate the model of the relationship between the variables within AMOS-27 with the final data set. To develop one invariant model of the relationship between insecure attachment and interpersonal problems mediated by thought suppression and social problem-solving. An alpha level of .05 determined significance of inferential tests.

4.1 Internal Consistency

The internal consistency was calculated for each scale and the value for each variable is presented in Table 3. Cronbach alpha coefficients were identified as high for insecure attachment, thought suppression, social problem-solving, and interpersonal problems. They were also the same or higher than those reported in previous studies except for social problem-solving ($\alpha = .90$) (Hawkins et al., 2009) which were lower.

4.2 Descriptive Statistics

Descriptive statistics for each of the measurements for insecure attachment, thought suppression, social problem-solving, and interpersonal problems were calculated and are presented in Table 3.

Table 3

Descriptive Statistics for Measurements of Insecure Attachment, Thought Suppression, Social Problem Solving, and Interpersonal Problems (n=571)

Variable	*M [SD]*	Minimum	Maximum	α
Insecure Attachment	95.50 [37.25]	1	186	.94
Thought Suppression	33.70 [13.25]	0	60	.95
Social Problem Solving	13.07 [2.81]	5	19.6	.76
Interpersonal Problems	41.27 [21.06]	2	116	.92

4.3 Normality

The normality of the data was checked by visual inspection of histograms and scatter plots as well as skewness and kurtosis. All the variables obtained a value of less than 2 for skewness and kurtosis: insecure attachment (skewness = -0.05 and kurtosis = -0.72), thought suppression (skewness = -0.09 and kurtosis = -0.64), social problem-solving (skewness = -0.33 and kurtosis = -0.44), and interpersonal problems (skewness = 0.16 and kurtosis = -0.65). It was determined that the data

for all the variables was approximately normally distributed, and bootstrapping was included within analyses.

4.5 Outliers

SPSS-27 calculated the Mahalanobis distance for all values and no outliers were removed.

4.6 Pearson's Product Moment Correlation

To begin investigating whether insecure attachment, thought suppression, social problem solving, and interpersonal problems were correlated (an assumption of SEM), Pearson's product moment correlation were calculated with the preliminary sample in July 2021 and are presented in Appendix C. Pearson's product moment correlation were also calculated on the final sample in April 2022. Prior to this the assumptions of independence, normality, linearity, and homoscedasticity were assessed on both the preliminary and final data set. The assumption of independence was met by the study design and normality was assumed due to the inspection of histogram and scatter plots. Visual inspection of the scatter plots for the relationships between each of the variables found that they were linear. There also appeared to be an even variability of scores at all levels of each variable against each other variable, suggesting that the nature of the relationship between all variables is homoscedastic. Consequently, as the assumptions of linearity and homoscedasticity were met, Pearson's product moment correlations could be conducted and are presented in Table 4 in Appendix C for the preliminary data set and in Table 5 for the final data set.

A correlation matrix with bootstrapping of significant variables was produced using SPSS-27 and is shown in Table 5 for the final data set. Insecure attachment, thought suppression, and interpersonal problems were all significantly positively correlated (moderately) and were significantly negatively correlated with social problem-solving which mostly supports our hypothesised model. This means that adults who experience higher levels of insecure attachment, also experience higher levels of thought suppression, poor social problem-solving, and interpersonal problems.

Table 5

Correlational matrix for all variables included in hypothesised model (n = 571)

Variable	1	2	3
1. Attachment Insecurity			
2. Thought Suppression	.59**		
3. Social Problem-Solving	-.46**	-.47**	
4. Interpersonal Problems	.53**	.53**	-.51**

Note. n = 571.

*$p < .05$, **$p < .01$.

4.7 Hierarchical Regression

Basic regression analysis with bootstrapping using SPSS-27 demonstrated that insecure attachment was a significant predictor of interpersonal problems ($F(1,$

370) = 155.67, $p < .01$, 95% CI = [6.70, 15.83]) which supports the hypothesis. The regression model accounted for approximately 30% of the variance in interpersonal problems ($R^2 = .30$), which is considered a large effect.

4.8 Path Analyses for the Hypothesised Model

The bivariate correlations for the final data set (April 2022) between all variables of the model are presented in Table 5. According to the results all the target variables are significantly correlated in the hypothesised direction with each other. Therefore, we assessed model validity without making any changes in the original model (Figure 4). The pathway from insecure attachment and social problem-solving was constrained to give 1 degrees of freedom.

4.8.1 Model Fit Results

In terms of model fit, the results showed good model fit ($x^2 = 0.01$ [$p = .90$], NFI = 1.00; TLI = 1.01; CFI = 1.00; RMSEA = .00) as presented in Table 6. As shown in Figure 4 and Tables 6 to 8, all direct paths in the hypothesised model were significant. This indicated that thought suppression mediated the relationship between insecure attachment and poor social problem-solving as well as the relationship between insecure attachment and interpersonal problems. Additionally, thought suppression predicted poor social problem-solving, and mediated the relationship between insecure attachment and interpersonal problems. Thought suppression and poor social problem-solving mediated the relationship between insecure attachment and interpersonal problems. There was a direct effect of insecure attachment on poor social problem-solving and a direct effect of insecure attachment on interpersonal problems.

Table 6

Fitness Indices for the Model of the Relationship between Attachment Insecurity and Interpersonal Problems in Australian Adults for Figure 4

Fitness Indices	Value
Chisq/df	0.01
RMSEA	0.00
CFI	1.00
TLI	1.01
IFI	1.00

Figure 4

The Model of the Relationships between Attachment Insecurity and Interpersonal Problems in Australian Adults
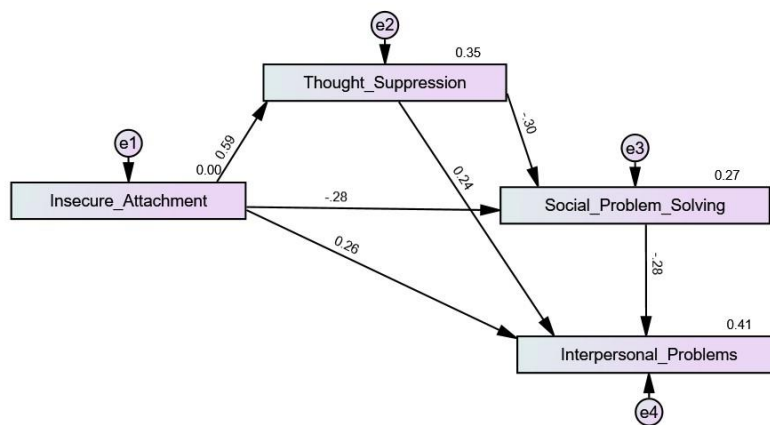
Table 7

The Regression Weights for Figure 4

			B	SE	CR	*p*
Thought Suppression	← ←	Insecure Attachment	0.21	0.01	17.50	***
Social Problem Solving	← ←	Thought Suppression	-0.07	0.01	-8.50	***
Social Problem-Solving	← ←	Insecure Attachment	-0.02			
Interpersonal Problems	← ←	Social Problem Solving	-2.04	0.28	-7.33	***
Interpersonal Problems	← ←	Thought Suppression	0.38	0.07	5.90	***
Interpersonal Problems	← ←	Insecure Attachment	0.15	0.03	6.39	***

*Note. *$^*p < .05,$ $^{**}p < .01,$ *** $p < .001$

Table 8

The standardized regression weights as shown in Figure 4

Path	Path		β
Thought Suppression	← ←	Insecure Attachment	.59
Social Problem Solving	← ←	Thought Suppression	-.30
Social Problem Solving	← ←	Insecure Attachment	-.28
Interpersonal Problems	← ←	Social Problem Solving	-.28
Interpersonal Problems	← ←	Thought Suppression	.25
Interpersonal Problems	← ←	Insecure Attachment	.26

Table 9

Squared Multiple Correlations (R^2) for figure 4

Endogenous Construct	R^2 (Effect)
Thought Suppression	.35 (34.9%)
Social Problem Solving	.27 (27%)
Interpersonal Problems	.44 (44.1%)

4.9 Summary of Results

Structural equation modelling identified that the relationship between insecure attachment and interpersonal problems was sequentially mediated by thought suppression and poor social problem-solving both individually and jointly. There was a direct relationship between insecure attachment and interpersonal problems. There was also a direct relationship between insecure attachment and thought suppression. There was a direct relationship between insecure attachment and social problem-solving.

CHAPTER 5 DISCUSSION AND CONCLUSION

The findings of this research confirmed our hypothesised model of the relationship between insecure attachment and interpersonal problems. When insecure attachment is followed by thought suppression, this predicts an impairment in social problem-solving which can result in interpersonal problems. This is the first research to attempt to investigate the hypothesised mediation model and the findings were consistent with previous theory and research that inspired the model. The model has implications for psychotherapy and cognitive behaviour therapy.

Our results indicated that thought suppression and social problem-solving can significantly mediate the link between insecure attachment and interpersonal problems. Individuals with insecure attachment reported higher levels of thought suppression. Insecure attachment indicates a history of unpleasant and distressing experiences with past loving and/or supportive relationships (Abbass & Schubiner, 2018; Bowlby, 1969; Bowlby, 1977; Horowitz et al., 1997). Their negative experiences with attachment figures results in an attachment system composed of negative internal working models of others and/or self which can be activated during interpersonal relationships (Abbass & Schubiner, 2018; Horowitz et al., 1997). Interactions in everyday life automatically mobilizes the painful and complex emotions that are associated with the early experiences such as abandonment, rejection, and abuse (Fraley et al., 1998; Martin & Young, 2010). Individuals with insecure attachment use cognitive avoidance in the form of thought suppression to suppress their unpleasant and negative past thoughts and experiences (Mikulincer & Shaver, 2003). The automatic cognitive avoidance strategy of thought suppression is meant to be protective in nature (Wegner and

Zanakos, 1994; Williams, 1996). Since any interpersonal relationship, closed or emotional relationships, activate the attachment system and their associated painful and complex emotions, thought suppression might become one of the very main cognitive strategies the individual uses to protect themselves against emotional pain (Frederickson, 2013). Such processes would interfere with development and the cognitive capacity to process and/or deal with everyday life conditions. A high level of cognitive openness to memories, thoughts of past experiences and unpleasant aspects of current problematic situations are needed for effective social problem-solving (Caldwell & Shaver, 2013; Kozak et al., 2008; Levens et al., 2009; Najmi, 2013; Nezu et al., 2013; Wegner & Zanakos, 1994; Williams, 1996). Hence, adults with insecure attachment have increased levels of thought suppression (Bowlby, 1969; Bowlby, 1977; Horowitz et al., 1997; Najmi, 2013; Najmi & Wegner, 2008) and lower levels of effective social problem-solving. Impaired social problem-solving can consequently associate with higher levels of interpersonal problems (D'Zurilla & Nezu, 2010; Caldwell & Shaver, 2013; Kozak, 2008; Levens et al., 2009; Meir, 1997; Mikulincer & Shaver, 2012; Nezu et al., 2013).

The findings of our study imply that interventions that aim to address interpersonal problems would significantly benefit from addressing the cognitive processes associated with insecure attachment. Understandably, if interpersonal problems are the core feature of the presented issues by clients, one of the main factors that could be evaluated by psychologists, is insecure attachment. Our research suggests that when the individual is insecurely attached, thought suppression might be a factor to be assessed and addressed while aiming to address the interpersonal problems. Our model highlights the sequential process by which

insecure attachment associates with thought suppression and social problem-solving and that sequence relates to interpersonal problems. Our findings also emphasise that psychological interventions, would most likely be more effective if they first target cognitive processes such as thought suppression before underlying maladaptive behavioural strategies such as poor social problem-solving. The individual needs to firstly be assisted to develop cognitive capacities to process all aspects of their experiences and then learn how to apply behavioural strategies such as assertiveness. Ahmadi Forooshani et al., (2021b) was the first research to highlight that the order of interventions should be considered in addressing social adjustment (Ahmadi Forooshani et at., 2021b). In their research, they looked at the mediating factors between trauma and social adjustment and were the first to discover that cognitive avoidance (thought suppression and over-general autobiographical memory) and poor social problem-solving sequentially mediated the relationship between trauma and social adjustment (Ahmadi Forooshani et al., 2021b). This finding highlighted that cognitive avoidance (thought suppression and autobiographical memory) should be targeted before poor social problem-solving (Ahmadi Forooshani et al., 2021; Ahmadi Forooshani et al., 2022). This indicates that cognitive strategies should be targeted before behavioural and poor social problem-solving (Ahmadi Forooshani et al., 2021; Ahmadi Forooshani et al., 2022). To our knowledge our findings are the next confirmation of such findings. Our research highlights that there is a sequential relationship between thought suppression and poor social problem-solving which indicates that cognitive strategies should be targeted before behavioural strategies. Our research highlights that thought suppression should be targeted before poor social problem-solving within the relationship between insecure attachment and interpersonal problems. It

should be noted that their research was targeted to a population of young refugees and their social adjustment, (Ahmadi Forooshani et al., 2022), whilst our research is in the more general domain of mental health looking at insecure attachment and interpersonal problems. Their research illustrated that the sequential mediation existed in both the refugee group and the general Australian group (control group) because there was no significant difference between the groups (Ahamdi Forooshani et al., 2021b). The finding that there was no difference between the two groups suggested that the model was representative of the general Australian population who had experienced trauma and therefore, we focused on investigating the model within a general population sample. Future research should focus on investigating whether the model is also representative of a clinical sample with a particular focus on personality disorders because interpersonal problems are a core to their conceptualisation. Ahmadi Forooshani et al. (2021) identified the sequential relationship between cognitive avoidance (over-general autobiographical memory and thought suppression) and poor social problem-solving in the relationship between trauma and social adjustment whilst our research showed a sequential relationship between thought suppression and poor social problem-solving in a general sample. Individuals with insecure attachment have often experienced some form of trauma. Our research is further evidence that indicates that autobiographical memory may be a key cognitive process impacted by complex trauma because over-general memory was not influencing our model in the general sample. Further investigation is needed to confirm whether autobiographical memory is a key component within the model for individuals who have experienced complex trauma by comparing a clinical sample with a general sample. That is over-general memory was important in Ahmadi Forooshani et al.

(2021b) model for trauma however, it was not influencing our model that focused on insecure attachment (which is indicative of trauma) in a general sample which indicates it may be contributing when complex trauma is present. Accordingly, psychological interventions should firstly target thought suppression to build the basic cognitive capacities required for the development of social problem-solving. Interventions such as mindfulness are known to improve thought suppression (Caldwell & Shaver, 2013). Hence, mindfulness is recommended to be included with current interventions such as psychotherapy (Perris, 2000) and cognitive behavioural therapy (Caldwell & Shaver, 2013; D'Zurilla & Nezu, 2010; Perris, 2000). The improvement of this cognitive process can facilitate enhancing social problem-solving through psychological interventions. Based on the findings, we assert that a comprehensive intervention based on this sequential process is likely to improve interpersonal problems among insecurely attached adults. Although the pilot findings of this study cannot specify the design of an intervention, they can inform the process of an intervention mapping approach to be followed by future studies. Interpersonal problems are a core pathology in the conceptualisation of personality disorders (Smith & South, 2021) and the relationship between insecure attachment and trauma is very well established in the literature (Abbass & Schubiner, 2018; Bowlby, 1969; Bowlby, 1977; Horowitz et al., 1997). This indicates that the proposed intervention could be extended to personality disorders and complex trauma.

5.1 Theoretical Contribution

The main theoretical contribution to the current research literature was to further current understanding of the mediating cognitive processes between insecure attachment and interpersonal problems. Thought suppression significantly

predicted poor social problem-solving skills and interpersonal problems. There was a significant effect of poor social problem-solving skills on interpersonal problems. This suggests adults with insecure attachment suppress distressing negative thoughts that are required for social problem-solving and without access to them interpersonal problems can occur. The results indicated that insecurely attached adults are more likely to use thought suppression as a cognitive strategy to avoid distressing thoughts. Thought suppression can impact the development of social problem-solving as confirmed by research (Ahmadi Forooshani et al., 2021b; Nezu et al., 2013). Lower social problem-solving consequently contributes or predicts interpersonal problems (D'Zurilla & Nezu, 2010; Robichaud, 2003).

Our results also indicated that thought suppression can significantly mediate the link between insecure attachment and both social problem-solving and interpersonal problems. This finding was consistent with previous theory and research supporting significant relationships between our variables. An explanation for this finding is that effective social problem-solving and interpersonal relations requires a high level of cognitive openness to thoughts and unpleasant aspects of current problematic situations (Najmi, 2013; Wegner & Zanakos, 1994). Thought suppression inhibits access to thoughts which works against such cognitive openness and therefore hinders social problem-solving ability and results in interpersonal problems (Caldwell & Shaver, 2013; Levens et al., 2009; Najmi, 2013; Wegener & Zanakos, 1994). The fact that meditation can help improve mental health highlights that removing thought suppression is a significant contributing factor in achieving optimal mental health. This is an interesting fact since, removing thought suppression meditation can be understood as an internal exposure. Exposure to the external stimuli or feared external

environment is a well-established effective behavioural strategy in psychology, although internal or inner exposure is not highlighted by the literature of psychology. When the individual no longer suppresses the thoughts and memories related to adverse experiences and peacefully processes and/or observes them not only do they not spend their mental health processing on suppression, shutting down, and/or denial but also, they process the good, the bad and the ugly of experiences. This is the reason that Narrative Exposure Therapy (NET) is a confirmed successful treatment approach with traumatized patients (Schauer et al., 2011). NET is focused on processing cognitive aspects of traumatic memory in a peaceful, relaxed, and self-compassionate loving context. According to the literature this process not only helps them to develop more cognitive capacities but also helps them in having access to better social problem-solving (Ahmadi Forooshani et al., 2022). Hierarchical exposure is widely accepted behavioural treatment intervention and based on our findings any cognitive strategy that reduces thought suppression could have significant value in treatment because it acts as an internal exposure.

The results of this study support past literature and highlighted the significant role of social problem-solving in relation to mental health outcomes (Ahmadi Forooshani et al., 2021; Ahmadi Forooshani et al., 2022). However, the findings of our study imply that when there is a history of insecure attachment, interventions for improving interpersonal problems should not be limited to social problem-solving, and they must address the cognitive capacities that might have been affected by insecure attachment. The sequential process suggested in our model, is important to be considered in future studies designing new interventions for interpersonal problems. Such interventions should target thought suppression

as the first therapeutic targets to build the basic cognitive capacities to promote healthy interpersonal relations. Based on our findings, we assert that a comprehensive intervention based on this sequential process is likely to address interpersonal problems among individuals with insecure attachment. The model developed in this study can inform the process of an intervention mapping approach in future studies to develop a therapeutic intervention that targets thought suppression and social problem-solving.

The quantitative findings of this research project supported the hypothesised theoretical model. Based on this model, adults with insecure attachment experience cognitive avoidance in the form of thought suppression. Although thought suppression may be protective it disrupts their ability for social problem-solving resulting in interpersonal problems. The reason is that for successful social problem- solving, the person needs access to the negative aspects of challenging interpersonal situations which is blocked by thought suppression. Therefore, when an insecure person has high levels of thought suppression this impedes social problem- solving and increases levels of interpersonal problems. Social problem-solving is the key ability enabling people to keep healthy interpersonal relationships despite facing inevitable challenges and problems in their attachment experiences (D'Zurilla & Nezu, 2010).

The findings of this research supported the above-mentioned sequential process about the mediating processes between insecure attachment and interpersonal problems. The basis of this process has been emphasised by different theoretical approaches and Ahmadi Forooshani et al. (2021b; 2022) acknowledged, discussed, and presented a specifically targeted evidence-based psychological intervention (Ahmadi Forooshani et al., 2021b; 2022). As the findings of this

research highlighted, insecure attachment can be associated with an impairment in basic cognitive functions, and if this capacity is impaired, interpersonal problems may be resistant to improvement.

5.2 Contributions to Mental Health Practice

The most important contribution of this research project can be considered for mental health practise for adults. The findings of this research highlight the significance of the mediating factors in the therapeutic interventions targeting interpersonal problems. The intervention should aim to rebuild the cognitive process needed for healthy interpersonal relations that have been impaired due to insecure attachment. The intervention will need to undergo rigorous evaluations and modifications before being introduced to organisations delivering mental health services to adults.

5.2.1 Clinical Implications

We believe that the results of this study can help fill an important gap in terms of understanding the process of the development of interpersonal problems. Since interpersonal problems are a major part of many mental health outcomes (Gurtman, 1992; Horowitz et al., 1988; Sheffield et al., 1995) it is important to understand how it is developed. Additionally insecure attachment is a common factor experienced by most clients in clinical settings (Egeland & Carlson, 2004; Kobak & Bosmans, 2019; Mikulincer & Shaver, 2012; Smith and South, 2021) and thought suppression is common in many types of psychopathologies (Najmi & Wegner, 2008). Therefore, it is important to recognise the factors that mediate the relationship between insecure attachment and interpersonal problems. The findings in this research highlighted that psychological interventions targeting mental health

and more particularly interpersonal problems would benefit from considering thought suppression and social problem-solving in their interventions. If psychological interventions improve cognitive processing and prevent cognitive avoidance, the adult will develop cognitive capacity. This will associate with them having access to higher capacity to do social problem-solving. The identification of the role thought suppression plays in the development of interpersonal problems is ground-breaking to interpersonal theory and highlights the value of mindfulness in healthy interpersonal relationships. Current standard psychological interventions for interpersonal problems such as cognitive therapy, focus on the identification and modification of irrational thoughts (Fruzzetti & Erikson, 2010; Dobson, 2010). This research highlights the importance of including mindfulness strategies within cognitive behavioural therapy which observe the thought as a thought (Fruzetti & Erikson, 2010). Mindfulness approaches assert that by observing that a certain stimulus elicits the thought and that observing the emotion associated with the thought (or both) can help a person reduce their reactivity to the situation and the thought (Fruzetti & Erikson, 2010). This can change the individual's attitudes about the thoughts and can be applied to interpersonal problems (Fruzzetti & Erikson, 2010; Dobson, 2010). Including mindfulness strategies within current psychological interventions to target the effects of thought suppression on social problem-solving and interpersonal problems has the potential to establish long-term effects not currently seen (Caldwell & Shaver, 2013; Nezu et al, 2013). Mindfulness can improve thought suppression by teaching the client strategies to stay in the present moment and to not let negative overwhelming past thoughts control them (Caldwell & Shaver, 2013; Fruzzetti & Erikson, 2010). In addition to mindfulness, the clients will also benefit from the clinical intervention

called problem-solving therapy which is a positive cognitive behavioural approach that focuses on training in adaptive problem-solving attitudes and skills (D'Zurilla & Nezu, 2010). Problem-solving therapy increases a person's ability to cope effectively with a wide range of stressful problems in living (D'Zurilla & Nezu, 2010). This includes learning effective coping strategies that include problem-focused coping which involves changing stressful situations for the better and emotion-focused coping which involves adapting to adverse conditions that cannot be changed or controlled (D'Zurilla & Nezu, 2010). We assert that an integrative specialised intervention is needed to rebuild these fundamental capacities in adults with insecure attachment and interpersonal problems. Improving these capacities will help adults to benefit from related educational resources and mental health services to learn and apply the skills needed for healthy interpersonal relationships.

Current psychological interventions will also benefit from including narrative therapy in which one talks about their negative attachment experiences which will enable them to heal and restructure these experiences so that they don't trigger cognitive avoidance in the form of thought suppression (Ahamdi Forooshani et al., 2022). The intervention will also need to teach social problem-solving skills to the client and the inclusion of group therapy sessions may be of benefit for the client to practise and consolidate the learnt skills (Dobson, 2010). The above-mentioned interventions will be a great candidate to be examined with complex trauma (Ahmadi Forooshani et al., 2022).

5.3 Contributions to Policy

The quantitative findings of this research have important implications for social, child protection, and domestic violence policies. Considering the findings in this research, promoting healthy interpersonal relations would be more feasible

when the social context is provided or facilitated, such as in group therapy settings. Government and educational organisations need to provide opportunities for learning social problem-solving and social skills for individuals of all ages and parenting skills. This is especially important to children who enter the child protection system as they are removed from their primary attachment figure and developing secure attachment in out of home care is vital for them to develop healthy interpersonal relationships in adulthood. It is particularly important to Australian's as we have a history of forced migration, forced removal of Aboriginal children from their primary attachment figures, and more recently we are a multi-cultural society through both voluntary immigration and refugee immigration which can involve leaving primary attachment figures, extended family, and social networks.

This study is the first step in developing a unified framework of attachment and personality disorders as it examines the directional associations between insecure attachment and interpersonal problems within the general population. There is a need to assess attachment, interpersonal problems, and personality disorders concurrently across time and to use appropriate analytic tools to examine duality of change in interpersonal problems within a clinical sample. Specifically, the model needs to incorporate latent dimensions over time and examine a change process (Insel et al., 2010; Sroufe & Waters, 1977). Further research into longitudinal modelling will provide clinical insights that cross-sectional associations cannot to substantiate a continuous model of attachment and interpersonal problems.

5.4 Limitations

We acknowledge that several psychological, social, and cultural factors that have not been included in the current study may contribute to interpersonal problems. This study was specifically focused on basic cognitive factors that can contribute to interpersonal problems in adults. The presented model is a pilot theoretical conceptualisation that needs to be replicated and extended in future studies to include other relevant emotional, behavioural, and sociocultural factors. The model also needs to be assessed within a clinical sample.

Limitations of the research included a sample that was predominantly female and using self-report questionnaires. Including a more representative proportion of male participants in future replications can help to investigate potential gender related differences in the hypothesised model. The model was assessed by correlation and hierarchical regression to determine if the relationship was gender and age dependent. The regression analysis indicated that gender and age were impacting the model however, when adjusting for the effects of age and gender the relationship between insecure attachment and interpersonal problems existed above and beyond those effects and it was still a strong effect. It is important to note that we do have a predominantly female sample in the discussion however, we have run analyses that show the relationship is still present when we adjust for both gender and age. Our regression analysis does show that gender does have a still impact and therefore further research could look at performing a multiple group analysis that develops a model for each specific gender to determine if the model is significantly different between the genders. Our results at this stage indicate that there is no difference between the two genders. An important limitation for this study was the number of people who didn't complete the survey in full. We kept

the data collection open for one year but found that the length of the study and the inclusion of several psychological assessments together may have been distressing resulting in participants choosing to exit the survey before completion. Another limitation is that we could not include more than one cognitive factor in our research. We are aware that there might be other cognitive factors that can act as cognitive avoidance strategy in addition to thought suppression. One of these factors could be autobiographical memory. The focus and aim of the study were to assess the model within the general population. The research team previously identified the sequential relationship between cognitive avoidance (over-general autobiographical memory and thought suppression) and poor social problem-solving within the relationship between trauma and social adjustment. The model was investigated by the research team in a clinical sample, and it was found that the model was not significantly different between the clinical sample and the general sample. Our study aimed to examine if this sequential relationship was present within the relationship between insecure attachment and interpersonal problems. Previous research has identified relationships between each of the variables individually however, they had not been examined in one model. In this research we did not include autobiographical memory because according to the literature there are conflicting reports on the most reliable way of measuring autobiographical memory. Over-general autobiographical memory can also be difficult to measure in a general sample. This is highlighted by research in this area to explain why the results related to autobiographical memory are controversial and at times contradictory in the literature (Griffith et al., 2012). The results confirm the previous findings of the research team that there is a sequential relationship between thought suppression and poor social problem-solving.

Autobiographical memory needs to be further investigated in the relationship between insecure attachment and interpersonal problems with a different assessment tool along with the effects of gender and age. Understandably, verbal measurement of autobiographical memory which has been indicated to be more accurate was beyond the scope of our research and should be considered within future studies. Our research indicates that over-general autobiographical memory may be specific to individuals who have experienced complex trauma however, further research with a different assessment tool is required to confirm this. The conditions of COVID-19 during the recruitment period contributed to challenges for in person networking with people in the community. Therefore, a convenience sample recruited predominantly from the USQ social and professional community including USQ psychology students who participated for course credit. To generalise the findings to diverse populations of adults, future replications of the current research design should include participants from different populations. Additionally, COVID-19 lockdowns and social distancing had the potential to cause greater feelings and occurrences of social isolation which has potential to influence/impact the variables and results of the study. Fear of contracting COVID-19 along with anxiety about being social may have impacted the key variables within the study. Finally, the hypothesised process between insecure attachment and interpersonal problems needs to be investigated though longitudinal studies which can provide valuable evidence for potential causal links between insecure attachment and interpersonal problems.

5.5 Conclusion

Supporting the development of healthy interpersonal relations for adults has important short- and long-term implications for their health and wellbeing, and the

model supported herein can provide important information to guide future research and practise. This research presented an evidence-based process explaining how cognitive avoidance (thought suppression) and social problem-solving can mediate the effects of insecure attachment on interpersonal problems of adults. Thought suppression and social problem-solving can be addressed by future studies to develop effective interventions for interpersonal problems for adults with insecure attachment.

This model will be of great benefit to understanding interpersonal problems and may be of importance/benefit to people experiencing personality disorders that align with the interpersonal circumplex model as well as those suffering from complex trauma. Targeting the cognitive processes of thought suppression and social problem-solving may be of benefit to therapists and their clients and the model can be used to develop and improve current therapies by including mindfulness strategies. Further research needs to investigate the model in different Australian samples to confirm generalisability longitudinally and a clinical trial that assesses whether targeting cognitive avoidance (thought suppression) with mindfulness strategies is a successful therapeutic strategy.

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APPENDIX A QUANTITATIVE SURVEY

Investigating the Mediators in the relationship between Insecure Attachment and Interpersonal Problems and Psychological Distress

Project Details

Title of Project: Investigating the mediating effects of thought suppression, rumination, autobiographical memory, and social problem-solving in the relationship between insecure attachment and interpersonal problems and psychological distress

Human Research Ethics Approval Number: H21REA084

Description

This survey is being undertaken as part of a Master Science Research (Psychology) Project. The purpose of this project is to determine whether thought suppression, rumination, autobiographical memory, and social problem-solving serve as mediators between insecure attachment and interpersonal problems and psychological distress. The research team requests your assistance and the data collected will be used to develop a model that illustrates the relationship between insecure attachment and interpersonal problems and psychological distress through the above-mentioned mediators. This knowledge will enable us to develop therapeutic approaches that include techniques to address these mediators.

Participation

Your participation in this project is entirely voluntary. If you do not wish to take part, you are not obliged to. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage by contacting the Principal Investigator (contact details below) and quoting your unique identifier. This process will allow your data to be kept anonymous from the Co-investigators, and your identity kept confidential by the Principal Investigator.

Your decision whether to take part, do not take part, or to take part and then withdraw, will in no way impact your current or future relationship with the University of Southern Queensland or the Investigators. If you are feeling uncomfortable or distressed answering any of the questions, it is encouraged that you exit the survey browser and thus withdraw your data.

Your participation will involve completion of an online questionnaire that will take approximately 45 to 50 minutes of your time; however, some people can do it quicker. The survey will include questions such as, "I'm afraid I will lose other people's love", to which you will rate each item according to the extent to which you think the description corresponds to you. Answers are reported on a Likert scale (which will vary throughout the survey). As an example, the Likert scale for the above question is rated from strongly disagree to strongly agree.

Aggregated results from this study will be used in research publications and reports (e.g., conference presentations, journal articles and thesis, report to participants) as both open access and restricted outputs. Participants will not be identified in any way in these publications.

Expected Benefits

It is expected that this project will not benefit you directly or extensively. However, it is possible that you may develop insight into your attachment style and problems within your interpersonal relationships. It may benefit the literature by providing knowledge and understanding of the relationship between insecure attachment, thought suppression, rumination, autobiographical memory, social problem solving, interpersonal problems, and psychological distress within the Australian population.

If you are participating as an undergraduate psychology student for course credit, you will receive this at the completion of this survey. You can access your course credit by selecting that you wish to receive the course credit and selecting the course you are enrolled in and receiving credit for (e.g., PSY3030). Please retain a copy of proof that you completed the survey by downloading the OLS credit summary and follow your course examiners instructions. If participating as a member of the Principal Investigator's social network, you will receive entry into a prize draw. You can enter at the completion of the survey by selecting that you wish to enter the prize draw. Following this, keep a copy of your unique identifier as this is how you will be able to claim your prize if you win.

Risks

In participating in the questionnaire, there may be topics that you find sensitive. If at any time during the survey you start to feel uncomfortable or distressed by the questions asked, please do not hesitate to exit the survey, thus withdrawing your data. You can contact the following services if you need to talk to someone about this immediately. Please contact USQ's counselling service on (07) 4631 2372, Beyond Blue Support Service on 1300 22 4636, or Lifeline on 13 11 14. You may

also wish to contact your General Practitioner (GP), local hospital, your psychologist, or the USQ Psychology and Counselling Clinic Ipswich (07) 3812 6163 or Toowoomba (07) 4631 1763, for additional support.

Other minimal risks included in participation of the survey include time imposition and a social risk (risk of members of the Investigator's social network feeling obliged to participate in the survey due to their relationship with the Investigator or fear that the Principal Investigator will identify their data). The inclusion of incentives is designed to compensate you for the time taken to complete the survey. To address the social risk the survey is completely voluntary, confidential, and non-identifiable and withdrawal is allowed at any time without impacting the relationship with the Investigators.

Privacy and Confidentiality

All comments and responses will be treated confidentially and unidentifiable unless researchers are required by law to identify you. Duty of care requires that if you score significantly high on the DASS, you will be contacted by Dr Zahra Izadikhah to ensure you are receiving the appropriate support. This is the reason your name and contact details are required. It should be noted, however, that only the project supervisor, Dr Zahra Izadikhah, will retain this information, and the re-identification of data will only be done in the unlikely event you score significantly high on the Depression Anxiety Stress Scale. Dr Zahra Izadikhah is a clinical psychologist with extensive research in the field. The Co-investigators, Rebecca Zammit, Grace Tunks, Jodie Gibson, Cherylin Buttle, Caitlin Balanda, and Habib Ahmadi will not be involved in the re-identification process.

After your data is used in the current research project, it will be stored confidentially to be used for future similar research (projects that have received ethical approval only). You can indicate whether you consent to your data being used for future research below, near where you indicate overall consent. Please note that you can still participate in the current study and choose not to have your data used for future research. If your data is used in future research, it will remain non-identifiable indefinitely to future researchers, as the project supervisor, Dr Zahra Izadikhah, is the only person who can remove data upon your request. Data will be stored securely as per University of Southern Queensland's Research Data Management Policy. You can request a project summary of results by contacting the Principal Investigator or Co-investigators once data analysis has been completed (see researcher's contact details below).

Consent to Participate

After reading the participant information sheet and consent form, you will be asked to tick a box indicating your consent to participate in the study. You are free to exit the survey browser anytime during the survey if you start to feel uncomfortable or become distressed and wish to withdraw your data. Once you submit your answers at the completion of the survey, you can remove your data by following the instructions detailed above.

Questions or Further Information about the Project

Please refer to the Research Team Contact Details at the bottom of the form if you have any questions or want to request further information about this project.

Concerns or Complaints Regarding the Conduct of the Project

If you have any concerns or complaints about the ethical conduct of the project, you may contact the University of Southern Queensland Manager of Research Integrity and Ethics on +61 7 4631 1839 or email researchintegrity@usq.edu.au. The Manager of Research Integrity and Ethics is not connected with the research project and can facilitate a resolution to your concern in an unbiased manner.

Thank you for taking the time to help with this research project. Please keep this sheet for your information.

Research Team Contact Details

Principal Investigator Details

Dr Zahra Izadikhah

School of Psychology & Counselling

University of Southern Queensland

E: Zahra.Izadikhah@usq.edu.au

T: +61 7 38126157

Co-Investigators

Rebecca Zammit

E: w0087617@umail.usq.edu.au

Grace Tunks

E: u1077145@umail.usq.edu.au

Cherylin Buttle

E: u1044321@umail.usq.edu.au

Jodie Gibson

E: u1133557@umail.usq.edu.au

Caitlin Balanda

E: u1130249@umail.usq.edu.au

Habib Ahmadi

E: sayedhabibollah.forooshani@hdr.qut.edu.au

Consent to Participate

If you wish to take part in this study, please provide consent below. By doing so you agree to the following:

• I am over 18 years of age.

• I have read the above information and understand the nature and purpose of this research project.

• I understand that my participation is voluntary and that I may withdraw at any time.

• I understand that if I have any additional questions, I can contact the research team.

• I understand that the results of this study will be treated confidentially. The results will be reported only in summary form, and I will not be identified individually.

• I understand that any data used may be used in future research activities.

• I understand that as part of duty of care, if I score highly on the DASS-21 the Principal Investigator will contact me.

Choose one of the following answers

Please choose only one of the following:

• I agree and wish to proceed with the survey

• I do not agree to participate and wish to exit the survey

Demographic Questionnaire

1. What is your name? (Optional - You can use a nickname or leave this blank)

Please write your answer here:

2. What is your email address?

Please write your answer here:

3. What is your age?

Choose one of the following answers

Please choose only one of the following:

• 18-25 years old

- 26-35 years old

- 36-45 years old

- 46-55 years old

- 56-65 years old

- 66 years and above

- Prefer not to answer

4. Please indicate your gender?

Choose one of the following answers

Please choose only one of the following:

- Male

- Female

- Intersex

- Non-Binary

- Prefer not to answer

- Other

5. What ethnicity do you identify with?

Choose one of the following answers

Please choose only one of the following:

- Australian

- Asian

- British

- European

- Indigenous Australian

- African

- Other

6. What religion do you identify with?

Choose one of the following answers

Please choose only one of the following:

- Christian

- Catholic

- Protestant

- Muslim

- None

- Prefer not to answer

- Other

7. What is your highest level of education?

Choose one of the following answers

Please choose only one of the following:

- Grade 10 and below

- Grade 12 and below

- Trade certificate

- Bachelor's Degree (Undergraduate)

- Postgraduate

- Prefer not to answer

- Other

8. What is your current employment status?

Choose one of the following answers

Please choose only one of the following:

- Seeking employment

- Not seeking employment

- Employed part-time

- Employed full-time

- Caring

- Volunteering

- Prefer not to answer

- Other

9. What is your contact telephone or mobile number?

Please write your answer here:

10. What device did you complete the survey on?

Please write your answer here:

11. How long did the survey take you to complete?

Please write your answer here:

12. Do you have any comments or concerns about this survey?

Please write your answer here:

Thank you for taking the time in completing this survey and helping with this research. Please keep a copy of this unique identifier for future reference {UniqueId}. To claim course credit or enter the prize draw click on this link.

Submit your survey.

Thank you for completing this survey.

Experiences in Close Relationships Revised (ECR-R)

(Fraley et al., 2000).

Instructions: The statements below concern how you feel in emotionally intimate relationships. You can use them to assess how you tend to feel in close relationships generally, or you can use them to focus on a particular relationship or type of relationship. Typical examples include your relationship with your current romantic partner, romantic partners in general, your mother, your father, your best friend, or friends in general. With adaptations, the statements are also relevant to therapeutic relationships. Using the 0 to 6 scale, after each statement write a number to indicate how much you agree or disagree with the statement.

= Strongly Disagree; 6 = Strongly Agree 0

1.   I'm afraid that I will lose others' love

       0   1   2   3   4   5   6

2.   I prefer not to show others how I feel deep down

       0   1   2   3   4   5   6

3.   I often worry that others will not want to stay with me

       0   1   2   3   4   5   6

4.   I feel comfortable sharing my private thoughts and feelings with others

       0   1   2   3   4   5   6

5.	I often worry that others don't really love me

	0 1 2 3 4 5 6

6.	I find it difficult to allow myself to depend on others

	0 1 2 3 4 5 6

7.	I worry that others won't care about me as much as I care about them

	0 1 2 3 4 5 6

8.	I am very comfortable being close to others

	0 1 2 3 4 5 6

9.	I often wish that others' feelings for me were as strong as my feelings for them

	0 1 2 3 4 5 6

10.	I don't feel comfortable opening up to others

	0 1 2 3 4 5 6

11.	I worry a lot about my relationship(s)

	0 1 2 3 4 5 6

12.	I prefer not to be too close to others

	0 1 2 3 4 5 6

13.   When others are out of sight, I worry that they might become interested in someone else (and leave/exclude me)

0   1   2   3   4   5   6

14.   I get uncomfortable when others want to be very close

0   1   2   3   4   5   6

15.   When I show my feelings for others, I'm afraid they will not feel the same about me

0   1   2   3   4   5   6

16.   I find it relatively easy to get close to others

0   1   2   3   4   5   6

17.   I rarely worry about others leaving me

0   1   2   3   4   5   6

18.   It's not difficult for me to get close to others

0   1   2   3   4   5   6

19.   Others make me doubt myself

0   1   2   3   4   5   6

20.   I usually discuss my problems and concerns with others

0   1   2   3   4   5   6

21. I do not often worry about being abandoned

0   1   2   3   4   5   6

22. It helps to turn to others in times of need

0   1   2   3   4   5   6

23. I find that others don't want to get as close as I would like

0   1   2   3   4   5   6

24. I tell others just about everything

0   1   2   3   4   5   6

25. Sometimes others change their feelings about me for no apparent reason

0   1   2   3   4   5   6

26. I talk things over with others

0   1   2   3   4   5   6

27. My desire to be very close sometimes scares others away

0   1   2   3   4   5   6

28. I am nervous when others get too close to me

0   1   2   3   4   5   6

29. I'm afraid that once others get to know me, they won't like who I really
am

0   1   2   3   4   5   6

30.   I feel comfortable depending on others

0   1   2   3   4   5   6

31.   It makes me mad that I don't get the affection and support I need from

        others

0   1   2   3   4   5   6

32.   I find it easy to depend on others

0   1   2   3   4   5   6

33.   I worry that I won't measure up to other people

0   1   2   3   4   5   6

34.   It's easy for me to be affectionate with others

0   1   2   3   4   5   6

35.   Others only seems to notice me when I'm angry

0   1   2   3   4   5   6

36.   Others really understand me and my needs

0   1   2   3   4   5   6

White Bear Suppression Inventory

(Wegner & Zanakos, 1994)

1.   There are things I prefer not to think about.

Strongly disagree

Disagree

Somewhat agree

Agree

Strongly agree

2. Sometimes I wonder why I have the thoughts I do.

Strongly disagree

Disagree

Somewhat agree

Agree

Strongly agree

3.   I have thoughts that I cannot stop.

Strongly disagree

Disagree

Somewhat agree

Agree

Strongly agree

4.   There are images that come to mind that I cannot erase.

Strongly disagree

Disagree

Somewhat agree

Agree

Strongly agree

5.   My thoughts frequently return to one idea.

Strongly disagree

Disagree

Somewhat agree

Agree

Strongly agree

6.   I wish I could stop thinking of certain things.

Strongly disagree

Disagree

Somewhat agree

Agree

Strongly agree

7.   Sometimes my mind races so fast I wish I could stop it.

Strongly disagree

Disagree

Somewhat agree

Agree

Strongly agree

8.   I always try to put problems out of mind.

Strongly disagree

Disagree

Somewhat agree

Agree

Strongly agree

9.   There are thoughts that keep jumping into my head.

Strongly disagree

Disagree

Somewhat agree

Agree

Strongly agree

10. Sometimes I stay busy just to keep thoughts from intruding on my mind.

Strongly disagree

Disagree

Somewhat agree

Agree

Strongly agree

11. There are things that I try not to think about.

Strongly disagree

Disagree

Somewhat agree

Agree

Strongly agree

12. Sometimes I really wish I could stop thinking.

Strongly disagree

Disagree

Somewhat agree

Agree

Strongly agree

13.   I often do things to distract myself from my thoughts.

Strongly disagree

Disagree

Somewhat agree

Agree

Strongly agree

14.   I have thoughts that I try to avoid.

Strongly disagree

Disagree

Somewhat agree

Agree

Strongly agree

15.   There are many thoughts that I have that I don't tell anyone.

Strongly disagree

Disagree

Somewhat agree

Agree

Strongly agree

Social Problem-Solving Questionnaire (SPS)

(D'Zurilla et al., 2002)

1.   I feel threatened and afraid when I have an important problem to solve.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

2.   When making decisions, I do not evaluate all my options carefully.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

3.   I feel nervous and unsure of myself when I have an important decision to make.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

4.   When my first efforts to solve a problem fail, I know if I persist and do not give up too easily, I will be able to eventually find a good solution.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

5.   When I have a problem, I try to see it as a challenge, or opportunity to benefit in some positive way from having the problem.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

6.   I wait to see if a problem will resolve itself first, before trying to solve it myself.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

7.   When my first efforts to solve a problem fail, I get very frustrated.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

8.   When I am faced with a difficult problem, I doubt that I will be able to solve it on my own no matter how hard I try.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

9.   Whenever I have a problem, I believe that it can be solved.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

10.   I go out of my way to avoid having to deal with problems in my life.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

11.   Difficult problems make me very upset.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

12.   When I have a decision to make, I try to predict the positive and negative consequences of each option.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

13.   When problems occur in my life, I like to deal with them as soon as possible.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

14.   When I am trying to solve a problem, I go with the first good idea that comes to mind.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

15.   When I am faced with a difficult problem, I believe that I will be able to solve it on my own if I try hard enough.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

16.   When I have a problem to solve, one of the first things I do is get as many facts about the problem as possible.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

17.   When a problem occurs in my life, I put off trying to solve it for as long as possible.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

18.   I spend more time avoiding my problems than solving them.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

19.   Before I try to solve a problem, I set a specific goal so that I know exactly what I want to accomplish.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

20.   When I have a decision to make, I do not take the time to consider the pros and cons of each option.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

21.   After carrying out a solution to a problem, I try to evaluate as carefully as possible how much the situation has changed for the better.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

22.   I put off solving problems until it is too late to do anything about them.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

23.   When I am trying to solve a problem, I think of as many options as possible until I cannot come up with any more ideas.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

24.   When making decisions, I go with my "gut feeling" without thinking too much about the consequences of each option.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

25.   I am too impulsive when it comes to making decisions.

Not at all true of me

Slightly true of me

Moderately true of me

Very true of me

Extremely true of me

Repetitive Thinking Questionnaire

(Ehring et al., 2011).

Instruction: In this questionnaire, you will be asked to describe how you typically think about negative experiences or problems. Please read the following statements and rate the extent to which they apply to you when you think about negative experiences or problems. 0 = Strongly Disagree; 6 = Strongly Agree

1.   The same thoughts get going through my head again.

0   1   2   3   4   5   6

2.   Thoughts intrude into my mind.

0   1   2   3   4   5   6

3.	I can't stop dwelling on them.

0   1   2   3   4   5   6

4.	I think about many problems without solving any of them.

0   1   2   3   4   5   6

5.	I can't do anything else whilst thinking about my problems.0 1 2 3

4   5   6

6.	My thoughts repeat themselves.

0   1   2   3   4   5   6

7.	Thoughts come to mind without me wanting them to.

0   1   2   3   4   5   6

8.	I can get stuck on certain issues and can't move on.

0   1   2   3   4   5   6

9.	I keep asking myself questions without finding an answer.

0   1   2   3   4   5   6

10.	My thoughts prevent me from focusing on other things.

0   1   2   3   4   5   6

11.	I keep thinking about the same issue all the time.

0   1   2   3   4   5   6

12.   Thoughts just pop into my mind.

0   1   2   3   4   5   6

13.   I feel driven to keep dwelling on the same issue.

0   1   2   3   4   5   6

14.   My thoughts are not much help to me.

0   1   2   3   4   5   6

15.   My thoughts take up all my attention.

0   1   2   3   4   5   6

Autobiographical Memory Test-written version

(Heron et al., 2012)

Please write down an event that each of these words reminds you of.   You should
have personally experienced the event in the past. An example memory can be:
"playing football with my friends last Saturday".

1.   Please write down an event that the word "happy" reminds you of.

2.   Please write down an event that the word "bored" reminds you of.

3.   Please write down an event that the word "relieved" reminds you of.

4.   Please write down an event that the word "hopeless" reminds you of.

5.   Please write down an event that the word "excited" reminds you of.

6.   Please write down an event that the word "failure" reminds you of.

7.   Please write down an event that the word "lonely" reminds you of.

8.   Please write down an event that the word "sad" reminds you of.

9.   Please write down an event that the word "lucky" reminds you of.

10.   Please write down an event that the word "relaxed" reminds you of.

Brief Symptom Inventory

Somatisation Subscale

Below is a list of problems people sometimes have. Please read each one carefully.
Then please circle one of the numbers that best describes how much you were
distressed by that problem during the past two weeks, including today. Mark only
one number.

0 – Not at All 1 – A little bit 2 – Moderately 3 – Quite a bit 4 – Extremely

1. (02) 0 1 2 3 4   Faintness or dizziness

2. (07) 0 1 2 3 4   Pains in chest or heart

3. (23) 0 1 2 3 4   Nausea or upset stomach

4. (29) 0 1 2 3 4   Trouble getting your breath

5. (30) 0 1 2 3 4   Hot or cold spells

6. (33) 0 1 2 3 4   Numbness or tingling in parts of your body

7. (37) 0 1 2 3 4   Feeling weak in parts of your body

Inventory of Interpersonal Problems (IIP-32)

(Horowitz et al., 2000).

Instructions: People have reported having the following problems in relating to other people. Please read the list below, and for each item, consider whether it has been a problem for you with respect to any significant person in your life. Then, using the following choices, circle the response that describes how distressing that problem has been for you.

The following are things you find hard to do with other people.

0 = Not at all; 1 = A little bit; 2 = Moderately; 3 = Quite a bit; 4 = Extremely

It is hard for me to:

1.   Say "no" to other people.

       0   1   2   3   4

2.   Join in on groups.

       0   1   2   3   4

3.   Keep things private from other people.

       0   1   2   3   4

4.   Tell a person to stop bothering me.

       0   1   2   3   4

5. Introduce myself to new people.

0 1 2 3 4

6. Confront people with problems that come up.

0 1 2 3 4

7. Be assertive with another person.

0 1 2 3 4

8. Let other people know when I am angry.

0 1 2 3 4

9. Socialize with other people.

0 1 2 3 4

10. Show affection to people.

0 1 2 3 4

11. Get along with people.

0 1 2 3 4

12. Be firm when I need to be.

0 1 2 3 4

13. Experience a feeling of love for another person.

0   1   2   3   4

14.   Be supportive of another person's goals in life.

0   1   2   3   4

15.   Feel close to other people.

0   1   2   3   4

16.   Really care about other people's problems.

0   1   2   3   4

17.   Put somebody else's needs before my own.

0   1   2   3   4

18.   Feel good about another person's happiness.

0   1   2   3   4

19.   Ask other people to get together socially with me.

0   1   2   3   4

20.   Be assertive without worrying about hurting the other person's

feelings.

0   1   2   3   4

The following are things that you do too much.

21.   I open up to people too much.

0   1   2   3   4

22.   I am too aggressive toward other people.

0   1   2   3   4

23.   I try to please other people too much.

0   1   2   3   4

24.   I want to be noticed too much.

0   1   2   3   4

25.   I try to control other people too much.

0   1   2   3   4

26.   I put other people's needs before my own too much.

0   1   2   3   4

27.   I am overly generous to other people.

0   1   2   3   4

28.   I manipulate other people too much to get what I want.

0   1   2   3   4

29.   I tell personal things to other people too much.

0   1   2   3   4

30.   I argue with other people too much.

0   1   2   3   4

31.   I let other people take advantage of me too much.

0   1   2   3   4

32.   I am affected by another person's misery too much.

0   1   2   3   4

DASS 21

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all; 1 Applied to me to some degree, or some of the time; 2 Applied to me to a considerable degree, or a good part of time; 3 Applied to me very much, or most of the time

1   I found it hard to wind down

0   1   2   3

2   I was aware of dryness of my mouth

0   1   2   3

3   I couldn't seem to experience any positive feeling at all

0   1   2   3

4   I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)

0   1   2   3

5   I found it difficult to work up the initiative to do things

0   1   2   3

6   I tended to over-react to situations

0   1   2   3

7   I experienced trembling (e.g., in the hands)

0   1   2   3

8   I felt that I was using a lot of nervous energy

0   1   2   3

9   I was worried about situations in which I might panic and make a fool of myself

0   1   2   3

10   I felt that I had nothing to look forward to

0   1   2   3

11   I found myself getting agitated

0   1   2   3

12   I found it difficult to relax

0   1   2   3

13   I felt downhearted and blue

0   1   2   3

14   I was intolerant of anything that kept me from getting on with what I

was doing

0   1   2   3

15   I felt I was close to panic

0   1   2   3

16   I was unable to become enthusiastic about anything

0   1   2   3

17   I felt I wasn't worth much as a person

0   1   2   3

18 I felt that I was rather touchy

0 1 2 3

19 I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)

0 1 2 3

20 I felt scared without any good reason

0 1 2 3

21 I felt that life was meaningless

0 1 2 3

APPENDIX B FITNESS INDICES

Table 11

Structural Equation Modelling Fit Indices

Fit Measure	Full name	Level of Acceptance	Comments
Chisq	Chi-square	$p > .05$	Sensitive to sample size > 200
Chisq/df*		< 5.0	The value should be less than 5
RMSEA*	Root Mean Square Approximation	$< .08$	Range 0.05 to 0.1 is acceptable
GFI	Goodness of Fit Index	$> .90$	GFI = .95 is a good fit
AGFI	Adjusted goodness of fit	$> .90$	AGFI = .95 is a good fit
CFI*	Comparative fit Index	$> .90$	CFI = .95 is a good fit
TLI*	Tucker-Lewis Index	$> .90$	TLI = .95 is a good fit
NFI	Normed Fit Index	$> .90$	NFI = .95 is a good fit
IFI*	Incremental Fit Index	$> .90$	IFI = .95 is a good

Note. *As a minimum these fit indices should be satisfied by the measurement model

APPENDIX C PRELIMINARY SAMPLE RESULTS

Pearson's Product Moment Correlation

To begin investigating whether insecure attachment, thought suppression, social problem solving, and interpersonal problems were correlated with each other (an assumption of SEM), Pearson's product moment correlation were calculated with the preliminary sample in July 2021. Prior to this the assumptions of independence, normality, linearity, and homoscedasticity were assessed. The assumption of independence was met by the study design and normality was assumed due to the inspection of histogram and scatter plots. Visual inspection of the scatter plots for the relationships between each of the variables found that they were linear. There also appeared to be an even variability of scores at all levels of each variable against each other variable, suggesting that the nature of the relationship between all variables is homoscedastic. Consequently, as the assumptions of linearity and homoscedasticity were met, Pearson's product moment correlations could be conducted and are presented in Table 4.

Table 4

Descriptive Statistics, Reliabilities and Pearson Correlation Coefficients (n = 372)

	M	*SD*	1	2	3
1. Insecure Attachment	93.13	35.85			
2. Thought Suppression	32.65	13.55	.59**		
3. Social Problem Solving	13.18	2.83	-.45**	-.43**	
4. Interpersonal Problems	41.27	21.06	.54**	.55**	-.50**

Note. n = 372. $^*p < .05$, $^{**}p < .01$.