



A SYSTEMATIC LITERATURE REVIEW ON THE EFFECTS
OF SECURE AND INSECURE ATTACHMENT
ON LEADER-MEMBER EXCHANGE-BASED RELATIONSHIPS

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Abstract

The purpose of this literature review was to integrate research on Leader-Member Exchange (LMX) and attachment, by evaluating the effect of attachment styles on LMX quality. The strength and robust findings supporting attachment theory have long been recognized in clinical psychology. More recently, researchers in organizational psychology have found that secure and insecure attachment patterns explain and predict the quality of relationships between leaders and their associates, under the framework of an important leadership theory: LMX theory. However, because of the applied nature of leadership research, we expect that a large number of studies remain buried in grey literature, such as organizational reports, academic theses, and working papers. The objective of this thesis is to collect systematically the results of all available research on the effect between secure and insecure attachment patterns and the strength of LMX-Based Relationships for leaders. To date there is no review available on the aggregate size associated with the relationship between a leader's attachment and the quality of related LMX relationships, in spite of LMX theory being one of the most influential leadership theories of the 20th century. This thesis will fill a critical gap in the psychological literature by providing a systematic review of accessible academic databases and Google Scholar. Articles retrieved from these sources were included or excluded based on replicable criteria. Each article was evaluated regarding its methodological quality and in terms of its results and conclusions. The results arising from this thesis provided the data necessary to make overall recommendations regarding the strength of the effect between a leader's attachment and the quality of related LMX relationships based on all relevant studies, including the identification of patterns of effect within the focal articles.

Certification of Thesis

This thesis is entirely the work of Daniela Benea except where otherwise acknowledged. The work is original and has not previously been submitted for any other award, except where acknowledged.

Student and supervisors signatures of endorsement are held at USQ.

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Chapter One - Introduction

The topic of leadership is one of the most researched areas of applied psychology such as Industrial and Organizational Psychology; findings show that leadership effectiveness is an important factor of organizational performance (Bass, 1990; Landy & Conte, 2010). This systematic literature review examines the role of secure and insecure attachment for leaders using leader-member exchange (LMX) theory. For the purpose of this study, a leader is the individual who has the responsibility for results in a work team (e.g. supervisor, manager) and the followers are the individuals under the supervision of a leader. Effectiveness in leadership is associated with positive relationships and contributions of members to group goal attainment (Landy & Conte, 2010; Yukl, 1989).

Leadership is a broad concept and has many definitions due to different leadership theories (Mahdi, Mohd, & Almsafir, 2014; Summerfield, 2014). One comprehensive definition was provided by the Global Leadership and Organizational Behavior Effectiveness (GLOBE) project, which involved 54 researchers from 38 countries, stating that leadership was “the ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of the organizations of which they are members” (House & Javidan, 2004, p. 15). Most definitions of leadership highlight that it is a social process of influence with the aim to achieve individual, team and organizational goals (Dansereau, Graen, & Haga, 1975; DePree, 1990; Yukl, 2002). Leadership effectiveness can be defined in terms of how efficiently a leader motivates the followers to achieve the tasks according to an organization’s requirements, while fulfilling the followers’ expectations (Liu, Lepak, Takeuchi, & Sims, 2003; Yukl, 1989). In the last decade, there has been an increased interest in the research of leadership behaviour and leader-follower relationships as explained by attachment theory and individual differences (Harms, 2011; Richards & Hackett, 2012). Relationship-based leadership behaviours such as leader- member exchange promote mutual trust, demonstrating care for followers’ needs and promoting supportive working relationships between leaders and followers (Fletcher, Jordan, & Miller, 2000; Graen & Uhl-Bien, 1995). An extensive body of research suggests that the essence of leadership is concerned with developing effective relationships with others (Bass, 1990; Chen, Lam, & Zhong, 2007; Day, Fleenor, Atwater, Sturm, & McKee, 2014; DuBrin, 2013; Fletcher, 2012; Game, 2008; Liu et al., 2003; Lyons & Schneider, 2009; Molero, Moriano, & Shaver, 2013;

Popper & Maysseless, 2007; Ronen & Mikulincer, 2012; Thomas, Martin, Epitropaki, Guillaume, & Lee, 2013; Yukl, 1989). Attachment theory is similar in that it emphasizes that all individuals are born with the tendency to promote contact with their primary caregiver, in times of need or distress (Harms, 2011; Mikulincer & Shaver, 2005; Rholes & Simpson, 2004).

Attachment theory can be applied to any adult relationship that meets three criteria: proximity (e.g. the members remain near one another), the relationship offers a safe haven, and the relationship offers a secure base (Harms, 2011; Mikulincer & Shaver, 2005; Rholes & Simpson, 2004). Therefore, attachment theory and LMX share a conceptual link, as both theories reflect an exchange process and the importance of trust in relationships (Boatwright, Lopez, Sauer, VanDerWege, & Huber, 2010; Coombe, 2010; Gerstner & Day, 1997; Grosvenor & Boies, 2006; Harms, 2011; Hazan & Shaver, 1994; Hsu, Lin, & Chen, 2010; Hudson, 2013; Maysseless, 2010; Pang Tze Lin, 2009). In summary, the literature shows that LMX theory has a strong conceptual link to attachment theory, as LMX reflects a stronger emphasis on the exchange process and the importance of trust, which are key components of attachment (Boatwright et al., 2010; Chan, Au, & Hackett, 2012; Chen et al., 2007; Coombe, 2010; Graen & Uhl-Bien, 1995; Harms, 2011; Pang Tze Lin, 2009). In particular, this stronger emphasis within LMX can be justified by findings on attachment theory that cluster around the three criteria of proximity, safe haven, and secure base (Bowlby, 1982; Brennan, Clark, & Shaver, 1998; Dewitte, De Houwer, Buysse, & Koster, 2008). Attachment styles play an important role in this process because particular styles influence motivation, work related behaviours, and emotional responses of leaders and followers (Harms, 2011; Hazan & Shaver, 1990; Mikulincer & Shaver, 2007; Richards & Schat, 2011). Transformational leadership theory (e.g. transformational leaders motivate people to do their best) is another perspective that incorporates strong relationships between leaders and followers (Avolio & Bass, 1988; Bass, Riggio, & EBooks, 2006; Dvir, Eden, Avolio, & Shamir, 2002; Wang, Law, Hackett, Wang & Chen, 2005). However, transformational leadership addresses a broader range of criteria (e.g. intellectual stimulation, inspirational motivation, idealised influence and individualised consideration) and the security of exchange is not as evident (Avolio & Bass, 1988; Bass et al., 2006; Dvir et al., 2002; Jung, Chow, & Wu, 2003; Li & Hung, 2009). Therefore, the focus of this systematic literature review will be on LMX.

Contemporary attachment theory aims to explain the functional importance of how individual attachment styles affect preferences for relational behaviors (Gabriel, Carvallo, Dean, Tippin, & Renaud, 2005; Lopez & Brennan, 2000; Rholes & Simpson, 2004). Many researchers used contemporary attachment theory to examine the influence of attachment styles on leader-follower dynamics, job satisfaction and trust (Boatwright et al., 2010; De Sanctis, 2012; Harms, 2011; Loi, Chan, & Lam, 2014; Maysless, 2010; Ossiannilsson & Linder, 2011; Swan, Rentfrow, & Guinn, 2003).

1.1 LMX Theory

Research shows that organizations are increasingly trying to promote relational styles of leadership to improve worker satisfaction and organizational loyalty (Day et al., 2014; Fletcher, 2012; Schriesheim, Castro, & Cogliser, 1999; Troth & Miller, 2000).

Relational oriented leaders emphasize the importance of trust and confidence in their followers as well as showing appreciation, respect and kindness (Yukl, 1989). For example, LMX examines the quality of the relationship between leaders and followers based on reciprocal relationships where each individual plays a role and the importance of developing mutual trust and respect between leaders and followers (Graen & Uhl-Bien, 1995; Krishnan, 2005; Martin, Epitropaki, Thomas, & Topakas, 2010; Moss, Dowling, & Callanan, 2009).

Research on LMX began with Dansereau et al. (1975) who hypothesised that leaders adopted different behaviours with individual subordinates that developed over time and were dependent on the quality of the leader-subordinate relationship. In the original version of LMX, subordinates fall into two categories: in-group and out-group members (Landy & Conte, 2010). More recent versions of LMX describe “a life cycle of a leader-follower relationship,” in which the leader’s effectiveness is measured by the ability to change the relationship with the subordinates from low to high quality, with the key mechanisms being the social exchange of valued rewards (Landy & Conte, 2010, p. 558). As found in American and Chinese studies, when this key mechanism of social exchange of valued rewards is active, the leaders provide an open and supportive environment while the follower provides commitment and higher job performance (Bernerth, Armenakis, Feild, Giles, & Walker, 2007; Chen et al., 2007). Therefore, LMX benefits both the leaders and the followers in organisations. Studies have found higher LMX quality required high levels of mutual trust and that it

was positively associated with job performance and satisfaction and negatively associated with intentions to quit (Chen et al., 2007; Gerstner & Day, 1997).

Thomas et al. (2013) found that a good quality relationship between a leader and a follower is characterised by high trust, mutual influence, reciprocal liking, and mutual disclosure of privileged information, responsiveness, similar goals, and mutual support. Similarly, it was found that effective leaders were available and responsible to their followers' psychological and instrumental needs, and that followers' job burnout and job satisfaction could be predicted by the attachment orientation of their direct managers (Ronen & Mikulincer, 2012; Shamir, House, & Arthur, 1993; Walumbwa, Wang, Wang, Schaubroeck, & Avolio, 2010). Furthermore, burnout (e.g. prolonged response to chronic emotional and interpersonal stressors on the job) and job dissatisfaction were less likely to occur in a supportive work environment (Hetland, Sandal, & Johnsen, 2008; Hochwalder & Brucefors, 2005; Maslach & Leiter, 2008; Maslach, Schaufeli, & Leiter, 2001). In accord with the recent version of LMX, the relationship between a leader and followers can be explained as a model with three possible stages: initial testing phase (e.g. development of LMX relationships, individuals engage in limited social interactions), second stage (e.g. mutual trust, loyalty, respect), and a third stage (e.g. mutual commitment; Graen & Uhl-Bien, 1995). Supportive behaviour is perceived as support to the follower when he or she believes that the leader will be there for him or her when required (e.g. stressful situations) and that the leader demonstrates concern for the followers' needs by showing genuine interest in the follower and respect for his or her concerns (Lyons & Schneider, 2009; Pang Tze Lin, 2009).

1.2 Attachment theory

Attachment theory was initially formulated by John Bowlby and later extended by Mary Ainsworth (Ainsworth & Bowlby, 1991). A basic assumption of attachment theory is that all individuals are born with a biologically based predisposition to search for and promote physical contact with their primary caregivers in times of need or distress (Rholes & Simpson, 2004). Attachment bonds/styles are formed by infants in their first two years of life and tend to be activated by distress or fear (Bowlby, 1973; Rholes & Simpson, 2004). Through the interaction with the attachment figure, a child develops internal working models that contain beliefs and expectations about the caregiver (e.g. caring and responsive) and self (e.g. worthy of care and attention; Bowlby, 1973). As individuals mature, they

develop an orientation toward attachment figures in general as a function of their unique history with specific attachment figures (Dewitte et al., 2008; Harms, 2011; Rholes & Simpson, 2004). These processes are important for organisational life because individual differences in strategies people used when dealing with stress are likely to reflect internal working models of the self (e.g. worthy of love) and of others (e.g. dependable or trustworthy; Bowlby, 1973, 1982). Accordingly, an important principle of attachment theory is that these mental models are carried forward into new relationships, providing the mechanisms that maintain the continuity of attachment style (Hazan & Shaver, 1994).

Moving beyond Bowlby, other scholars have argued that attachment theory could be applied to any adult relationships that meet the criteria of proximity, a safe haven, and a secure base (Ainsworth, Blehar, Waters, & Wall, 1978; Hazan & Shaver, 1994; Main, Kaplan, & Cassidy, 1985; Mikulincer & Shaver, 2005). Attachment theory was then further extended to adults, looking at differences in attachment style and the effect on interpersonal relationships in general and in adult relationships at work in teams and in organizations (Karreman & Vingerhoets, 2012; Popper & Mayseless, 2003; Rholes & Simpson, 2004). These findings support that when efforts to gain proximity are met, individuals develop a sense of security, which becomes the basis of an individual attachment style that remains relatively stable over the lifespan; although these styles can change as shown in studies of adults (Gillath, Selcuk, & Shaver, 2008).

Individuals that have internal mental models based on consistent care from responsive caregivers early in life should develop a secure sense of self (Richards & Hackett, 2012). Previous research has shown that repeated encounters with sensitive and responsive attachment figures play an important role in the formation of attachment security, and that approximately 30% of adults will change their self-reported attachment style if reassessed at a later point in time (Baldwin & Fehr, 1995; Davila, Burge, & Hammen, 1997; De Wolff & van IJzendoorn, 1997). Bowlby (1973) argued that individuals' working models must be able to integrate new information about self and others in order to remain functional during changing life circumstances. Therefore, working models of attachment are likely to remain flexible and open to change (Collins & Reed, 1994). In terms of the relationships of the two concepts, leadership is based on internal working models representing the self and others and because a core function of leaders is to help individuals change

maladaptive behaviour patterns (Boatwright et al., 2010; Chen et al., 2007; Coombe, 2010; Crawshaw & Game, 2015; Keller, 2003; Mumford, Zaccaro, Harding, Jacobs, & Fleishman, 2000; Nishii & Mayer, 2009). Furthermore, the internal working model of attachment in adulthood is influenced by relationship-specific contextual factors, particularly for relationships that extend beyond the nuclear family, such as leader-follower relationship (Bowlby, 1982; Baldwin & Fehr, 1995; Mikulincer & Shaver, 2007).

Two major models of adult attachment are used in attachment research. A two-dimensional model that uses two categories of insecure attachment (e.g. anxious and avoidant; Hazan & Shaver, 1987) and secure attachment style, and one that uses four attachment categories (e.g. secure, avoidant or fearful, dismissive and anxious or preoccupied; Bartholomew & Horowitz, 1991).

Most adult attachment studies are based on the model developed by Hazan and Shaver (1987) which focuses on two primary dimensions of insecure attachment style (e.g. anxious and avoidant attachment) versus the secure attachment style (Berson, Dan, & Yammarino, 2006; Engelbert & Walgren, 2016; Grosvenor & Boies, 2006; Hansbrough, 2012; Hinojosa, Davis McCauley, Randolph-Seng, & Gardner, 2014; Rholes & Simpson, 2004). Individuals high on anxious attachment view themselves negatively, needing a lot of assurance from others; they fear rejection and report greater anxiety when others are not available or responsive to them (Mikulincer & Shaver, 2005, 2007). Individuals high on avoidant attachment view others negatively, as unavailable or unresponsive and thus distance themselves, denying their need for proximity, which leads to self-reliance and difficulties in trusting and depending on others (Bowlby, 1969, 1973; Mikulincer & Shaver, 2005). By contrast, secure individuals are low in anxiety and avoidance; they view themselves and others as worthy of care and attention; they are willing to offer and receive support from others (Harms, 2011; Littman-Ovadia, Oren & Lavy, 2013).

Bartholomew & Horowitz (1991) have built on the previous model by elaborating four attachment styles: secure attachment, avoidant or fearful attachment, dismissive attachment and anxious or preoccupied attachment. Securely attached individuals develop successful, satisfying and positive relationships with others, they perceive themselves as worthy of love and view others as available and trustworthy (Bartholomew, 1990; Mikulincer & Shaver, 2007). Avoidant or fearful attached individuals avoid close relationships with others in order to protect themselves

(Bartholomew & Horowitz, 1991). Dismissing individuals feel unworthy and see others as untrustworthy and rejecting (e.g. negative view of self and others; Bartholomew & Horowitz, 1991). The anxious or preoccupied individuals feel unworthy while they see others as trustworthy and caring (e.g. negative view of self, positive view of others; Bartholomew & Horowitz, 1991). Research using self-reports has shown that approximately 60-70% of adults (e.g. age range 14-82 years, 67% female, Hazan & Shaver, 1987) are securely attached, 20-30 % are avoidantly attached, and 10-20 % are anxiously attached (Harms, 2011; Hazan & Shaver, 1987).

The most important function of attachment bonds during stressful situations is to control individuals' emotional states, to reduce anxiety, and to increase security (Mikulincer & Shaver, 2007; Rholes & Simpson, 2004). It is important to note that the ability to identify others' emotions and the ability to display one's own emotions are reported as crucial in developing effective leader-member relations (Landen & Wang, 2010; Newcomb & Ashkanasy, 2002; Schirmer & Lopez, 2001; Simmons, Gooty, Nelson, & Little, 2009; Vasquez, Durik, & Hyde, 2002). Thus, in organizational settings, the attachment style of both the leader and the follower has strong conceptual links to the leader-follower relationship (Keller, 2003; Popper, 2000; Popper & Mayselless, 2003).

1.3 Attachment Theory and LMX

Understanding attachment theory and hypothesized attachment styles is important because it affects outcomes in close relationships. In organizations, attachment styles help predict the actions of both the leader and the follower and subsequently the effectiveness of the leader (Hudson, 2013; Thomas et al., 2013). Popper and Mayselless (2003) argued that in adulthood, the need for attachment security cannot be fulfilled only in the context of close private relationships, since parents, peers or romantic partners are not able to function as a strong attachment figure in all life situations (e.g. work). Therefore, leaders could fulfil the role of providing a sense of attachment security, and the quality of the leader-follower relationship has an important effect on followers' attitudes and functioning at work (Popper & Mayselless, 2003).

Securely attached individuals have several qualities important for leaders to have such as: a high tolerance for ambiguity, flexible thinking, an optimistic sense of self-efficacy, the ability to improve rapport, and the ability to address existential concerns (Little, Nelson, Wallace, & Johnson, 2011; Mikulincer & Shaver, 2007).

This is consistent with the proposition of attachment theory that suggests secure attachment relationships between leaders and followers will foster exploration and support, similar to parent-child relationships (Harms, 2011; Rholes & Simpson, 2004; Richards & Hackett, 2012). Here, the primary source of felt security is the perception that the attachment figures are accessible, responsive and maintaining proximity (Harms, 2011; Rholes & Simpson, 2004; Richards & Hackett, 2012). Previous studies have shown positive links between leaders' secure attachment style and important outcomes such as leadership potential and emergence, relational leadership, leader delegation and effectiveness, workplace cohesion, followers mental health, turnover intentions, job satisfaction and low levels of burnout (Harms, 2011; Johnstone & Feeney, 2015; Mayseless, 2010; Popper & Mayseless, 2003; Richards & Schat, 2011).

For example, leaders can perform two key caregiving functions: they can adopt the role of stronger and wiser caregivers and provide a safe haven and a secure base for their followers, while balancing reliance on self with reliance on others (Mayseless, 2010; Popper & Mayseless, 2007). A leader fulfils both the care seeker and caregiver roles, by reaching his or her own goals of relief from confusion, uncertainty and the challenges in an organization, while helping, supporting and regulating the distress of his or her followers when dealing with the same challenges (Hudson, 2013). Furthermore, effective leaders are sensitive; they focus and respond to the followers' needs, providing their followers with advice, emotional and instrumental resources, support initiative and autonomy, and enhance their self-worth and self-efficacy (Hudson, 2013; Popper & Mayseless, 2007). When others seek proximity or help, effective leaders are neither too unresponsive when others seek proximity or help, nor are they overactive when others need to operate on their own (Crawshaw & Game, 2015). Leaders are perceived as capable when they are able to display contextually correct emotions to their followers, and this requires using emotion regulation effectively, by not wasting physical and emotional resources to hyperactivate or suppress negative emotions (Haver, Akerjordet, & Furunes, 2013; Little et al., 2011). These are qualities associated with securely attached individuals, who feel worthy of love and protection, and in addition they develop flexible and resilient emotion-regulation strategies (Hudson, 2013; Popper & Amit, 2009; Popper & Mayseless, 2007). When leaders provide consistent and responsive caregiving, followers feel securely attached (Popper & Mayseless, 2003). Securely attached

individuals generally have the psychological base required for such leadership, while the insecurely attached individuals lack it (Popper & Mayselless, 2007).

Insecure attachment is characterised by negative affect and lower ability to manage negative emotions, and as a result leaders' insecure attachment style may have an adverse impact on followers' affective responses and job performance (Davidovitz, Mikulincer, Shaver, Izsak, & Popper, 2007; Richards & Schat, 2011; Ronen & Mikulincer, 2012). Therefore, insecurely attached individuals are less suited to leadership roles; for example, avoidant individuals will discourage reliance on others because they rely on themselves, and are perceived as insensitive and uncaring towards others, especially towards others' emotional needs. It is also relevant that inconsistent caregiving is associated with attachment anxiety (Bartholomew & Horowitz 1991; Crawshaw & Game, 2015). For example, Kafetsios, Athanasiadou, and Dimou (2014) found that leaders' anxious attachment was associated with an increase in negative affect and decrease in positive affect in followers with higher emotion suppression.

Avoidantly attached leaders are insensitive and unresponsive, contributing to a lack of trust (Crawshaw & Game, 2015). These leaders are unlikely to care or respond with comforting behaviours, and develop a deactivating or suppressing approach to emotion regulation, ignoring their own and other people's needs (Mayselless, 2010). Therefore, avoidant attached individuals are less likely to be chosen as leaders, and when chosen, their performance as leaders may be compromised by their lack of sensitivity (Mayselless, 2010). Furthermore, avoidant leaders were unlikely to be motivated to find solutions to problems that blocked relationship development (Keller & Cacioppe, 2001). Avoidant attachment in leaders was associated with emotion suppression, lower job satisfaction and higher negative affect at work (Gross & John, 2003; Richards & Shat, 2011). However, this effect may be culturally dependent because in one culture where leaders are expected to be distant and controlled (e.g. Greece), leaders displaying avoidant attachment behaviours (e.g. control and suppression of emotions) were associated with a decrease in negative affect in followers, and higher job satisfaction (Kafetsios, Nezlek, & Vassiou, 2011, 2012; Kafetsios et al. 2014; Manning, 2003).

Similarly, anxiously attached individuals are preoccupied by their own feelings and have a strong wish to be noticed and appreciated, while lacking the task oriented attention required by an effective leader; they regulate emotions by hyper-

activating them (Maysseless, 2010). In addition, it was found that anxious leaders did not address conflict out of fear that the relationship would be harmed (Keller & Cacioppe, 2001). A study of Israeli military officers conducted by Davidovitz et al. (2007) showed that leaders with an insecure attachment style (e.g. either anxious or avoidant) were described by followers as having lower task and emotional efficacy, resulting in followers' poor performance. Additionally, secure leaders trying to build a strong relationship with an anxious follower would be discouraged by the follower's continuous need of self-worth affirmation; while avoidant followers would resist relationship building efforts (Keller & Cacioppe, 2001). Both leader and follower attachment insecurity contributed to follower burnout and job dissatisfaction while high quality relationships between secure leaders and subordinates were positively associated with job performance and satisfaction (Gerstner & Day, 1997; Ronen & Mikulincer, 2012).

Richards and Schat (2011) argued that avoidant followers were self-reliant and suppressed negative emotions by avoiding relationships with others and not seeking support to deal with work difficulties. This pattern of leader behaviours produced anxious followers that were less likely to show prosocial behaviour and more likely to think about quitting their job and more likely to seek support at work (Richards & Schat, 2011). These findings showed that the anxiety (hyperactivation of attachment system) and the avoidance (deactivation of the attachment system) have unique influences on individual behaviour at work (Richards & Schat, 2011).

We know it is important to promote high quality LMX because LMX positively predicts individual and organizational work outcomes (Gerstner & Day, 1997). Equally important is the nature of attachment as it influences attachment-related behaviours, such as support seeking and giving, conflict resolution style and communication (Fletcher, Overall, & Friesen, 2006; Rholes & Simpson, 2012). This in turn affects relationship quality (Fletcher et al., 2006; Rholes & Simpson, 2012). And of course, the attachment style of followers may also affect the quality of LMX relationships. Another point to consider is that avoidant attached individuals may be negatively biased in their perception of leadership effectiveness, and may be difficult to satisfy and lead (Davidovitz et al., 2007). Hsu et al. (2010) also found that the attachment styles of leaders and followers affect the formation of LMX. These research results showed that attachment styles of followers do affect LMX relationships. Consequently, it is not only the leaders influencing the relationships.

Attachment insecurity in either the leader or the follower will negatively influence LMX development (De Sanctis, 2012; Harms, 2011; Keller, 2003; Keller & Cacioppe, 2001; Martin et al., 2010; Richards & Schat, 2011).

However, it is important to acknowledge the functional behaviours within roles of the leader in LMX relationships, which includes significant demands for relational initiation and relationship maintenance. These role demands, which are supported by organisational systems and structures, require leaders to initiate relational behaviours and cycles of LMX development between themselves and followers. Through these behaviours and the organisational rewards attached to leadership, the attachment style of leaders may be considered the primary attachment style in the leader-member dyad. Thus, leader attachment can be reasonably expected to strongly affect the initiation of relationships and sustaining of relationships with followers. And because leader and followers will potentially maintain a relationship of strong and attached emotions with each other, leaders need to understand and satisfy the attachment needs of followers (Thomas et al., 2013). Therefore, the focus of this research was on the attachment style of the leader.

1.4 Research Questions

The aim of this research is to review and raise awareness on the importance of attachment style on leadership effectiveness. There is currently no systematic review in this area. A systematic review is needed because applications of attachment theory can be leveraged to address several difficult areas of leadership development. As one example, large number of leaders are selected based on their cognitive, analytic and technical abilities; however, they might lack relational skills (Balkundi & Kilduff, 2006; Cohen & Prusak, 2001; Day & Connor, 2003; Ireland & Hitt, 2005; Locke, 2003; Maak, 2007; McCallum & O'Connell, 2009). Attachment styles can be assessed easily and reliably, offering a developmental intervention that may increase a leader's insight and awareness on how his or her attachment style affects behaviour in relationships (Bartholomew & Horowitz, 1991; Berson et al., 2006; Engelbert & Walgren, 2016; Grosvenor & Boies, 2006; Hansbrough, 2012; Hinojosa et al., 2014; Hazan & Shaver, 1989; Karreman & Vingerhoets, 2012; Popper & Maysel, 2003; Rholes & Simpson, 2004). In general, attachment security places individuals in a better position to become leaders, and in particular to be effective leaders. Although individuals with different attachment styles hold leadership positions, it is important to discover how a specific style of attachment affects their performance as leaders

(Maysless, 2010). Having an understanding of the effects of attachment style could also help leaders improve their effectiveness (e.g., you first need to be aware of the issue before you can change behaviour; Bartholomew, 1990; Mikulincer & Shaver, 2007). Because leadership involves sets of skills and behaviours that can be learned. the current review aimed to consolidate the findings on the attachment-LMX relationship, with the scope of improving selection and /or training of organizational leaders (Gardner, 1993; Koozes & Posner, 2002)

For example, organizations could use attachment styles knowledge when they train leaders, with the goal of ensuring individuals are able to engage with their followers on a personal level (Harms, Bai, & Han, 2016). These findings have clear implications for organizational decisions in hiring, training or interventions aimed at improving managers' skills where attachment is both stable and changeable.

Although some work has been done on the role of attachment, LMX, and leadership effectiveness, there is no comprehensive, systematic review of this relationship. Accordingly, the purpose of this study is to conduct a systematic literature review of empirical quantitative findings (e.g. from academic journals, published reports and other grey literature) comparing the effect between: secure and insecure attachment in leaders and LMX in the context of organisational settings (e.g. empirical quantitative work that addresses this effect for participants who are organisational leaders). Our specific research question is the effect of secure and insecure attachment and the strength of leader-member relationships. The hypotheses are as follows:

- H1: There will be evidence for a positive effect between secure attachment of leaders and high LMX
- H2: There will be evidence for a negative effect between insecure attachment of leaders and high LMX

Chapter Two - Method

2.1 Search Strategy

A systematic search of electronic databases was conducted, identifying literature in English and including only full text articles. The online USQ library (e.g. databases A-Z) and Google Scholar was searched 'incognito', and the reference lists of the articles included were scanned. The following search terms were used: "attachment theory" AND "LMX" OR "LMX theory" OR "leader-member exchange" OR "leader-member exchange theory".

In respect to inclusion criteria, we included only studies or components of studies where the attachment style of the *leader* was taken into consideration. This focus on leaders resulted in a more interpretable analysis and a review that is more applicable to leader selection and training practises. In this research we focused on two broad types of attachment: 1) secure attachment, and 2) insecure attachment (including avoidant dismissing OR avoidant fearful, OR anxious preoccupied). Thus, at least one of these broad types of attachment would need to be present in order to include an article in the analyses.

The search terms were entered to include terms used anywhere in the article. The following databases produced our initial results: EBSCO Host including Academic Search Complete, Australia/New Zealand Reference Centre, Business Source Complete, CINAHL with Full Text, Computers & Applied Sciences Complete, EconLit, E-Journals, PsycARTICLES, Psychology and Behavioural Sciences Collection, PsycINFO, PsycTESTS, Regional Business News (8), SAGE Humanities and Social Sciences (0), Science Direct (233), Springer Link (103), Web of Science (15), Wiley Online Library (559) and Google Scholar incognito (8,070). We note that 90% of our initial results were generated in Google Scholar, which is relevant because Google Scholar uses a broad search algorithm that returns many ambiguous "hits" and thus may overestimate the true number of articles that actually examine attachment of leaders associated with LMX. Initially ($n = 8,988$) articles were screened for relevance through the title and abstract, resulting in retrieval of full text articles ($n = 279$). The quality analyses of the studies included: evaluation of their design (including strategy of deriving the samples), a thorough analysis of psychometric properties of the measures, interpretation of results and a discussion on the implications. However, there was not enough data to calculate an appropriate,

aggregate effect size for the studies; therefore, no further analysis (e.g. meta-analysis) could be performed.

There were two steps in evaluation and screening. The initial step was a review for inclusion based on the four specified criteria. All studies ($n = 279$) were evaluated for inclusion by this author and another researcher, based on the inclusion criteria, regardless of source (e.g. grey and academic literature). In the second step, all articles meeting the inclusion criteria ($n = 9$) were evaluated for quality. For the nine included articles, a quality appraisal and data extraction were undertaken for each study by the author and an independent researcher. Subsequently, the full text was reviewed for eligibility, based on the 4 inclusion criteria (e.g. giving a score of 1 or 0 for meeting or not meeting the criteria). The total score for each article was calculated as the product of each inclusion criteria score. For example, if the article was an empirical study, the participants were organizational leaders, secure and/or insecure attachment was a measured variable and the effect between secure and or/insecure attachment of the leader and LMX/ leadership effectiveness was reported, then the total score would be 1 (e.g. $1*1*1*1$). However, if any of the inclusion criteria was not met, then the total score would be 0, and the article was not included in the review. Further examples of actual articles that have been included or excluded, are provided in Appendix C. As a result of this screening, there was a final sample of nine articles. Figure 1 outlines the search strategy.

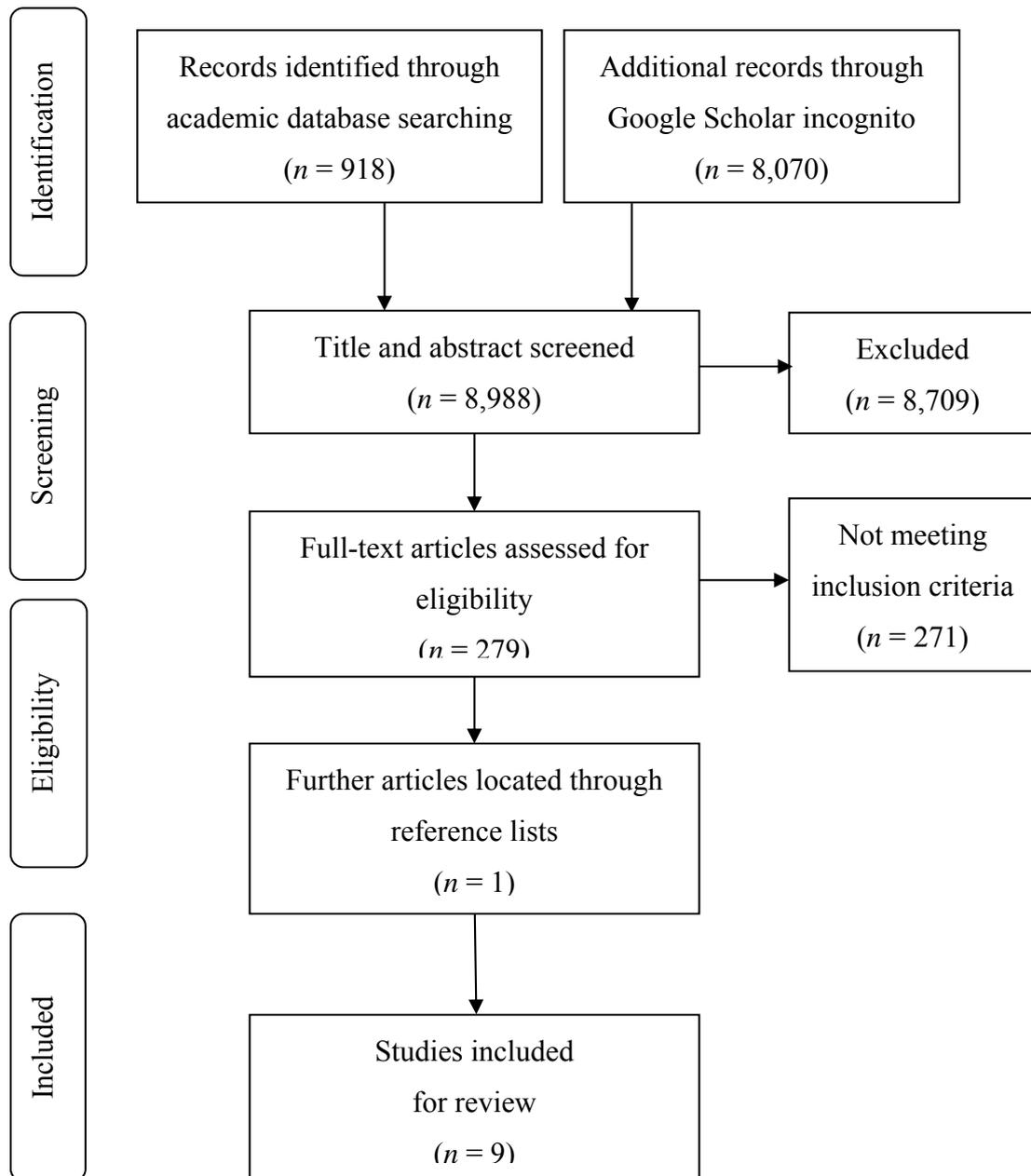


Figure 1. Flow diagram indicating the search procedure.

2.2 Screening Phase, Inclusion and Exclusion Criteria

Initially articles were screened for relevance through the title and abstract, then the full text of included articles were retrieved. Subsequently, the full text was reviewed for eligibility, as outlined in Table 1.

Table 1

Summary of Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Empirical quantitative study	Not an empirical quantitative study
Organisational leaders as participants.	Participants not organisational leaders
Secure and/or insecure attachment of the leader is a measured variable in the study	Secure and/or insecure attachment of the leader is not measured in the study
Effect reported between secure and or/insecure attachment of the leader and LMX/ leadership effectiveness	Effect not reported between secure and/or insecure attachment of the leader and LMX/ effectiveness

2.3 Data Extraction and Quality Appraisal

All articles included in the review ($n = 9$) were evaluated. A quality appraisal and data extraction were undertaken for each study by the author and an independent researcher. Studies were evaluated for bias, internal and external validity and general quality through an appraisal checklist which assessed the methodology, results and conclusions (see Appendix A). While reviewing the full text, we recorded relevant details about the study in a data extraction form (see Appendix B). Details such as author/s, title, publication, volume, issue, date, measures, aims and hypotheses, method of recruitment, sample characteristics, design, key findings, outcomes, limitations and strengths were recorded. The evaluation process was based on accepted methodological procedures and elements of the PRISMA systematic review protocol (Moher et al., 2015). Additionally, we analyzed and critically evaluated the strategies used to derive the sample as outlined in Table 2a. Furthermore, we critically evaluated the measures used to assess each variable of interest, as outlined in Table 2b.

Table 2a

Evaluation of Studies: Strategy Used to Derive the Sample

Authors/ Year	Strategy to derive the sample
Coombe (2010)	<ul style="list-style-type: none"> • Email sent to manager who invited the members to participate • Three groups of participants: leaders (participants from an executive leadership program), followers (direct reports of the leaders) and managers of leaders • Response rate: leaders 90%, followers 89%, managers 66% • Data collected through online survey • No incentive to participate
Frazier et al. (2015)	<ul style="list-style-type: none"> • Participants (three employees and their direct supervisor) recruited by undergraduate students • Data collected through online survey • No incentive to participate
Grosvenor & Boies (2006)	<ul style="list-style-type: none"> • Participants recruited through personal contacts • Followers distributed questionnaires to managers • Source: local hospital, investment bank and a large manufacturing organization • Response rate: 38% (for followers) • No incentive to participate
Jackson (2008)	<ul style="list-style-type: none"> • Participants: working undergraduate students (older non-traditional) and their work supervisors • Surveys distributed in early morning and late night classes and returned via mail • Source: variety of industries (e.g. service, medical, professional, technical) • Response rate: 55% (followers), 33% (supervisors) • No incentive provided

Table 2a continued

Authors/ Year	Strategy to derive the sample
Kafetsios et al. (2014)	<ul style="list-style-type: none"> • Leaders and followers approached independently • Source: high school • Response rate 100% • No incentive to participate • Participants were contacted personally or by phone
Lavy (2014)	<ul style="list-style-type: none"> • Source: business organizations • No incentive to participate • Participants approached independently
Pang Tze Lin (2009) *	<ul style="list-style-type: none"> • Source: retail • Incentive: two movie tickets for each participant • Participants selected from staff lists in a quasi-random manner
Richards (2009) *	<ul style="list-style-type: none"> • Survey submitted electronically or mailed directly • Source: hospitals • Response rate: co-workers 74%, front line 36%, managers 73% • Gift certificate (coffee & doughnut) for managers and front-line participants, and a two draw prizes incentive for all participants (\$100 gift certificate to a local store)
Richards & Hackett (2012)	<ul style="list-style-type: none"> • Participants recruited through the StudyResponse project (non-profit service that facilitates online research) • Source: various sectors (e.g. manufacturing, service) • Any unmatched leaders and subordinates excluded • No incentive to participate

Table 2b

Evaluation of Studies: Psychometric Properties of Measures

Measure	Reliability	Validity
Attachment Style		
Experiences in Close Relationship Scale (ECR; Brennan, Clark, & Shaver, 1998)	$\alpha = .75 - .94$ test-retest = .68 - .71	Attachment anxiety and avoidance positively correlated with self-concealment, personal problems, ineffective coping, negative mood
Revised Experiences in Close Relationships questionnaire (ECR-R; Fraley, Waller, & Brennan, 2000)	$\alpha = .91 - .92$	Negative relationship between scores on ECR-R Anxiety and Avoidance subscales and Social Provisions Scale Positive relationship between scores on ECR-R Anxiety and The Penn State Worry Questionnaire
Hebrew version of ECR (Brennan, Clarke, & Shaver, 1998)	$\alpha = .72 - .95$	Two-factor structure validated on Israeli sample
Self Reliance Inventory (SRI; Joplin et al., 1999)	$\alpha = .78 - .82$	Face validity: securely attached individuals are comfortable seeking help from others, and can function effectively alone Predictive: distinguish between healthy individuals (securely attached) and those clinically diagnosed with behavioural problems Construct: clear factor structure

Table 2b continued

Measure	Reliability	Validity
	Attachment Style	
Relationship Scale Questionnaire (RSQ; Griffin & Bartholomew, 1994b)	$\alpha = .41$ (secure) $\alpha = .70$ (insecure) test-retest = .63	Discriminant: measures of different constructs were independent Convergent: different measures of a construct were related
Attachment style: Carver (1997)	$\alpha = .59 - .83$ (followers) $\alpha = .75 - .89$ (leaders)	Convergent: avoidant individuals scored lower levels on the security scale
Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991)	$\alpha = .87 - .95$ Moderate high stability over 8 months	The RQ attachment ratings show convergent validity with interview ratings (Bartholomew & Horowitz, 1991; Griffin & Bartholomew, 1994)
	LMX	
LMX – 7 (Graen & Uhl- Bien, 1995)	$\alpha = .89 - .92$	LMX positively correlated with performance ratings, objective performance, overall satisfaction and turnover intentions

LMX- MDM (Liden & Maslyn, 1998)	$\alpha = .57 - .90$ test- retest : .56-.83	LMX-MDM significantly correlated with LMX-7 Correlations between satisfaction with co-workers and affect, loyalty, contribution, and professional respect Four of the six outcome variables, the LMX-MDM scales as a group were significant
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Table 2b continued

Measure	Reliability	Validity
	LMX Outcomes	
Job Diagnostic Survey (Hackman & Oldham, 1975)	$\alpha = .56 - .88$	The job dimensions are positively related to measures of work satisfaction and motivation Variables measured by JDS relate to one another as predicted by theory
Followers Job Satisfaction: Three-item scale (Cammann, Fichman, Jenkins & Klesh, 1979)	$\alpha = .89 - .90$	Supervisor social support positively related to followers job satisfaction; job satisfaction negatively related to anxiety; job satisfaction positively correlated with job performance
Leaders Job Satisfaction: Four-items of supervision subscale (Spector, 1985) Jackson	$\alpha = .78 - .82$	The structural validity of the GJSS items has been shown in many employee surveys in different

		industries using different administration modes
		High correlations with turnover and other outcome variables
Turnover intentions:	$\alpha = .79 - .86$	Supervisor social support related to lower turnover intentions
Three item scale from Camman et al. (1979)		

2.4 Grouping Procedure

Most of the studies used in this systematic literature review focus on the two dimensions of insecure attachment (e.g. anxious and avoidant attachment; Coombe, 2010; Frazier, Gooty, Little, & Nelson, 2015; Jackson, 2008; Lavy, 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012) while a few studies focus on the four dimensions model (e.g. secure, fearful, preoccupied, dismissing; Grosvenor & Boies, 2005; Kafetsios et al., 2014).

The studies were grouped by attachment style (e.g. secure or insecure attachment) and by leader effectiveness (e.g. quality of leader-follower relationships) or important outcomes of leader effectiveness (e.g. trust, job satisfaction, turnover intentions). Our interpretive, grouping rationale aimed to overcome the heterogeneity amongst the studies. This was done by identifying and extracting consistencies and inconsistencies from within and across groups. Such synthesis and analysis was expected to clarify the key variables and patterns of attachment style on LMX effectiveness in reference to answering the research questions. Thus two main groups (secure/insecure attachment) were identified. In each group the attachment style (secure or insecure) was assessed for the impact on leader-follower relationship quality (LMX) or on LMX-based important outcomes (e.g. job satisfaction, trust).

The aim of this literature review was to synthesise, analyse, evaluate and explain the effect of attachment style on the strength and quality of leader-follower relationship in this sample and to be able to determine whether there was sufficient evidence showing that secure/insecure attachment had a positive/negative effect on high quality LMX. As such we followed a valid process and a rigid scientific design to make the synthesis more comprehensive and to minimise the chance of bias

(Campbell Collaboration, 2017; Petticrew, Roberts, & EBooks, 2006; Wright, Brand, Dunn, & Spindler, 2007).

Chapter 3 - Results

Nine articles were eligible for inclusion (Coombe, 2010; Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Kafetsios et al., 2014; Lavy, 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012). The final sample of publications was composed of three published journal articles, five theses and one published report (Coombe, 2010; Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Kafetsios et al., 2014; Lavy, 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012). These nine studies yielded data from 2,862 adult respondents with the smallest sample of 141 and the largest of 538 ($M = 340.88$, $SD = 139.39$; Coombe, 2010; Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Kafetsios et al., 2014; Lavy, 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012). The mean age of the participants within this sample was 37.69 years old, with an age range 21 to 65 ($SD = 1.51$; Coombe, 2010; Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Kafetsios et al., 2014; Lavy, 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012). Approximately 58 % of total participants were female, while 42 % were male (Coombe, 2010; Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Kafetsios et al., 2014; Lavy, 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012). In all studies the participants were recruited through the internet or by mail and they represented various organizations and occupations such as manufacturing, retail, banking, education, health care, and government (Coombe, 2010; Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Kafetsios et al., 2014; Lavy, 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012). Data was collected from across seven countries: the USA, Canada, Singapore, Israel, UK, Switzerland, and

Greece and measures were translated into different languages as required (Coombe, 2010; Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Kafetsios et al., 2014; Lavy, 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012). All studies were quantitative and used a cross sectional survey design (Coombe, 2010; Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Kafetsios et al., 2014; Lavy, 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012). The range of outcomes measured included quality of leader member exchange, job satisfaction, trust, trustworthiness, and turnover intentions (Coombe, 2010; Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Kafetsios et al., 2014; Lavy, 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012).

Table 3 summarizes each study and includes the authors (ordered alphabetically), publication year, design, measures, sample and recruitment, key findings and limitations.

Table 3

Synopsis of the Studies

Authors/ Year	Study design	Sample	Measures	Key findings	Limitations
Coombe (2010) *	Cross- sectional	218 followers, 32 % female, 67 % male, 50 leaders ($M = 43$), 10 % female, 90 % male 37 managers of leaders	Experience in Close Relationship Scale (ECR; Brenan, Clark, & Shaver, 1998), LMX -MDM (Liden & Maslyn, 1998) Job Satisfaction: JDS (Hackman & Oldham, 1975)	Leader anxiety predicted follower job satisfaction and psychological safety Leader anxiety predicted leader effectiveness Successful leaders can be either secure or avoidant, but not anxious	Small sample size Participants high performing No causality
Frazier et al. (2015)	Cross- sectional	381 followers (M $=36.6$, $SD= 10.97$), 57 % female, 43 % male, 157 leaders ($M = 42.9$, $SD =12.43$), 38 % female, 62 % male	SRI (Joplin et al., 1999) Trust Scale (Mayer & Gavin, 2005) Trustworthiness (Mayer & Davis, 1999)	Secure attachment was a significant predictor for ability, for benevolence it was marginally significant predictor Secure attachment was a significant predictor of trust	Data collection, little control over who participated No causality

* Unpublished study (thesis)

Table 3 continued

Authors/ Year	Study design	Sample	Measures	Key findings	Limitations
Grosvenor & Boies (2006) *	Cross- sectional	121 followers 20 leaders, aged 21-60 ($M = 38.9$, $SD =$ 9.5), 78 % female, 22 % male	LMX-7 (Graen &Uhl-Bien, 1995) Relationship Questionnaire (RQ; Griffin & Bartholomew, 1994b)	Secure attachment was positively related to LMX Securely attached leaders had high quality LMX with their followers	Sample bias, context effects , male under- represented No causality
Jackson (2008) *	Cross- sectional	140 matched dyads; followers ($M =$ 23.55 , $SD = 6.26$), 73 % female, 27% male; leaders aged 30-49, 54 % male, 56 % female	Revised LMX-7 (Lidell, Wayne & Stilwell, 1993); LMX-7 (Graen & Uhl-Bien, 1995); Carver (1997) Three-item scale (Cammann, Fichman, Jenkins & Klesh, 1979); Four-items of supervision subscale (Spector, 1985)	Higher quality LMX for those mismatched on attachment style compared to those matched on attachment style Leaders with relational orientations tend to focus on fostering high quality relationships with followers	Small sample size May not be generalizable Data source bias No causality

* Unpublished study (thesis)

Table 3 continued

Authors/ Year	Study design	Sample	Measures	Key findings	Limitations
Kafetsios et al. (2014)	Cross- sectional	321 followers teachers ($M = 51.9$, $SD = 6.42$), 41 % male, 58 % female 45 leaders directors ($M = 44.17$, SD $= 11.32$) 54 % male, 46 % female	Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991) 12 of the 18 items of General Index of Job Satisfaction, Greek version (Brayfield & Rothe, 1951).	Avoidant and anxious attachment orientations were unique predictors of leaders' job satisfaction Leaders avoidant attachment was significantly positively related to followers job satisfaction Leaders anxious attachment was inversely related to job satisfaction	Sample size: not possible to reliably test hypotheses for leaders No causality
Lavy (2014)	Cross- sectional	Study 1: 150 employees Study 2: 120 service employees, range 22-66 ($M = 33.3$, SD $= 9.6$), 40 % male, 60 % female	ECR, Hebrew (Brennan, Clarke, & Shaver, 1998); Izsak (2001); JDS (Hackman & Oldham, 1975), Minnesota Satisfaction Questionnaire (Weiss et al. 1967)	Supervisor security provision was associated with greater job satisfaction and greater organizational commitment Closeness behaviours have positive effects of supervisors' security provision	Sample bias No causality New translation of measures Analysis focuses on two mechanisms only

* Unpublished study (thesis)

Table 3 continued

Authors/ Year	Study design	Sample	Measures	Key findings	Limitations
Pang Tze Lin (2009) *	Cross- sectional	270 followers ($M = 26.05$, $SD = 8.62$), 33 % male, 67 % female 97 leaders ($M = 31.59$, $SD = 7.96$), 38 % male, 62 % female	ECR- Revised (Fraley, Waller, & Brennan, 2000). LMX-7 (Graen &Uhl- Bien, 1995)	Leader's general attachment avoidance/anxiety and follower's general attachment avoidance anxiety on specific leader attachment was not significant Leader attachment style had direct main effects on follower specific attachment bond with the leader	Variables reported by a single source, common method bias might be present Cross-sectional design, no causality Little variance in behaviours (leaders)
Richards (2009) *	Cross- sectional	132 Followers ($M = 45$) 95% female 293 Co-workers ($M = 42$) 92 % female, 27 Leaders ($M = 47$) 76 % female	LMX-MDM (Liden & Maslyn, 1998), ECR (Brennan et al., 1998) adapted by Richards and Schat (2007) for use in organizational settings.	Leader anxious and avoidant attachment was not negatively related to LMX	Sample bias (predominantly female, from two organizations-same industry) No causality

* Unpublished study (thesis)

Table 3 continued

Authors/ Year	Study design	Sample	Measures	Key findings	Limitations
Richards & Hackett (2012)	Cross- sectional	150 matched dyads; 150 Followers aged 21- 65 ($M = 37.1$, $SD =$ 9.15), 51 % male, 49 % female; 150 Leaders ($M = 41.2$; $SD = 9.86$), 49 % female, 51 % male	LMX-MDM (Liden & Maslyn, 1998) Richards and Schat's (2011) adaptation of Brennan et al.'s (1998)	Significant and negative actor effect for attachment anxiety and attachment avoidance No significant partner effects for either dimension of attachment Leaders attachment insecurity (anxiety and avoidance) associates negatively with their own perceptions of LMX quality; similarly for followers Leaders (followers) attachment insecurity was unrelated to their followers (leaders) reported LMX (no cross-member or partner effects)	Single source bias Sampling method (large correlations between leaders and followers on the measure of attachment)

3.1 Secure Attachment and LMX

Four studies from 2005 to 2015 investigated the role of secure attachment on the leader-follower LMX quality and LMX outcomes (e.g. job satisfaction, turnover intentions, and trust in the leader; Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Lavy, 2014). A total of 1,109 participants were included in this group (Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Lavy, 2014). This sub-sample with a mean age of 33.87 years old (age range of 21-66 years) included 645 females (58 %; Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Lavy, 2014). The participants in this group were from the USA, Canada, and Israel; they were recruited from retail, service, medical, government, professional, large manufacturing, and business organizations (Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Lavy, 2014). One study did not specify the exact place of recruitment, mentioning multiple organizations and occupations (Frazier et al., 2015). All studies were cross-sectional and measured attachment style and LMX effectiveness and a total of nine measures were used (Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Lavy, 2014). In this sub-sample, each study used a different measure to assess attachment style that included the Relationship Questionnaire (RQ; Griffen & Bartholomew, 1999), Experience in Close Relationship Questionnaire (ECR; Brennan, Clark, & Shaver, 1998); Carver's (1997) measure of attachment, and the modified version of Self Reliance Inventory (SRI; Joplin et al., 1999). Leader member relationships were measured using the LMX-7 (Graen & Uhl Bien, 1995), and the revised LMX-7 (Liden, Wayne, & Stilwell, 1993). Three studies measured LMX outcomes; these included measures of leaders' job satisfaction (e.g. measure based on Job Diagnostic Survey, Hackman & Oldham, 1975; Lavy, 2014), followers' job satisfaction (e.g. three-item scale, Cammann et al., 1979; Jackson, 2008), followers' turnover intentions (three item scale, Cammann et al., 1979; Jackson, 2008), followers' trust in the leader (Frazier et al., 2015; Mayer & Gavin, 2005). Two studies specified that the measures were translated into French and Hebrew (Grosvenor & Boies, 2005; Lavy, 2014).

The effect of secure attachment on leader-follower high quality relationships showed mixed results. Three of the four studies provided support for the hypothesis that secure attachment would be positively related to LMX or to important outcomes of LMX (e.g. trust, job satisfaction, organizational commitment), while one study did

not provide support for the same hypothesis (Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Lavy, 2014).

Frazier et al. (2015)

Frazier et al. (2015) found significant positive correlations between trust and secure attachment ($r = .34, p < .01$) and significant negative correlations between counterdependence/overdependence and trust ($r = -.31, r = -.28, p < .01$). The results indicated that secure attachment was a significant predictor of trust ($B = 0.16, p < .01$) and the indirect effects of secure attachment on trust were also significant (0.09, 95%, CI [0.0001, 0.176]; Frazier et al., 2015).

Grosvenor and Boies (2005)

Grosvenor and Boies (2005) found that securely attached leaders had high quality LMX with their followers (Pearson $r(119) = .38, p < .01$, one tailed; $\Delta R^2 = 0.06, \Delta F(1, 98) = 9.62, p < .01$). Significant negative correlations were found between fearful and preoccupied attached leaders and LMX ($r = -.43, r = -.26, p < .01$; Grosvenor & Boies, 2005).

Jackson (2008)

Jackson (2008) reported significant positive correlations between secure attachment and leader's LMX ($r = 0.23, p < .01$), significant positive correlations between avoidant attachment and LMX ($r = 0.24, p < .01$) and significant negative correlations between ambivalent attachment and LMX ($r = -0.25, p < .01$). It was also found that followers and leaders who were mismatched on attachment style had higher quality follower-rated and leader-rated LMX ($M = 4.20, SD = 0.70; M = 4.48, SD = 0.53$) than those who were matched on attachment style ($M = 3.88, SD = 0.88$), $t(138) = -2.31, p < .05; M = 4.26, SD = .60, t(137) = -2.04, p < .05$), but there were no significant differences in member LMX for secure matches ($M = 4.16, SD = 1.02$) versus other matches ($M = 3.81, SD = 0.77$), $t(37) = 1.06 ns$. (Jackson, 2008). However, both followers ($r = 0.49, p < .01$) and leaders ($r = .26, p < .01$) perceptions of LMX were significantly positively related to followers' job satisfaction. Furthermore, followers ($r = -0.21, p < .05$) and leaders ($r = -0.17, p < .05$) perceptions of LMX were significantly negatively related to followers' intentions to turnover (Jackson, 2008).

Lavy (2014)

Supervisor security provision was associated with greater job satisfaction and greater organizational commitment ($\beta = 0.42, R^2 = 0.17, F = 30.91$; Lavy, 2014).

3.2 Insecure Attachment and LMX

Five studies from 2009 to 2014 investigated the role of insecure attachment on the leader-follower-relationship quality (Coombe, 2010; Kafetsios et al., 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012). A total of 1,753 participants were included in this group (Coombe, 2010; Kafetsios et al., 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012). This sub-sample with a mean age of 40.73 (age range 21-65) included 1,022 (58 %) females (Coombe, 2010; Kafetsios et al., 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012). The participants in this group were from Canada, Singapore, Switzerland, the UK, and the USA and were recruited from medical, retail, manufacturing, professional, service, and government organizations (Coombe, 2010; Kafetsios et al., 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012). All studies were cross-sectional and measured attachment style and LMX effectiveness or important LMX outcomes (e.g. job satisfaction; Coombe, 2010; Kafetsios et al., 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012).

Two studies measured leader and follower attachment style using Richards and Schatt's (2011) adaptation of Brennan et al.'s (1998; Richards & Hackett, 2012; Richards, 2009). Three studies each used different measures to assess attachment style: The Relationship Questionnaire (RQ, Bartholomew & Horowitz, 1991; Kafetsios et al., 2014); the adaptation of Experiences in Close Relationship Scale (ECR; Brennan et al., 1998; Coombe, 2010); and the Revised Experiences in Close Relationships Questionnaire (ECR-R; Fraley, Waller, & Brennan, 2000; Pang Tze Lin, 2009).

Three studies assessed leader member relationship with the 12-item multidimensional LMX-MDM Questionnaire (Liden & Maslyn, 1998; Coombe, 2010; Richards & Hackett, 2012; Richards, 2009). Two studies assessed job satisfaction as an LMX outcome using 12 of the 18 items of the Greek version of the General Index of Job Satisfaction (Brayfield & Rothe, 1951; Kafetsios et al., 2014), and The Job Diagnostic Survey (JSAT; Hackman & Oldham, 1975). One study measured leader effectiveness as an outcome (Coombe, 2010), with one study specifying that the measures were translated into a different language (Kafetsios et al., 2014).

The effect of insecure attachment on leader-follower high quality relationships showed mixed results.

Coombe (2010)

Leader anxiety predicted followers job satisfaction ($r^2 = 0.008$), leader effectiveness rated by the follower ($r^2 = 0.01$) and leader effectiveness rated by the higher manager-boss ($r^2 = 0.009$; Coombe, 2010). However, leader avoidance did not predict any of these variables (Coombe, 2010).

Kafetsios et al. (2014)

Kafetsios et al. (2014) found that avoidant and anxious attachment orientations were unique predictors of leaders' job satisfaction. Leaders' avoidant attachment was significantly positively related to their followers' job satisfaction ($\gamma_{01} = .03, p < .001$); while the leaders' anxious attachment was inversely related to job satisfaction ($\gamma_{02} = -.03, p < .001$; Kafetsios et al., 2014).

Pang Tze Lin (2009)

Pang Tze Lin (2009) found no interaction between the leader's general attachment avoidance and follower's general attachment avoidance on specific leader attachment avoidance ($\beta = -.56, n.s.$). Likewise, the interaction of leader's general attachment avoidance and follower's general attachment anxiety on specific leader attachment anxiety ($\beta = 0.10, n.s.$) was not significant (Pang Tze Lin, 2009). However, the leader's attachment style had direct main effects on follower specific attachment bond with the leader ($\beta = .10, \Delta R^2 = .02, p < .10$; Pang Tze Lin, 2009). In addition, although leader's avoidance did not predict their ability to function as a safe haven and secure base ($\beta = -.14, n.s.$), anxious leaders were perceived by their followers as less effective in providing support ($\beta = -.23, p < .01, R^2 = .10$; Pang Tze Lin, 2009).

Richards (2009)

Richards (2009) results did not show support for the hypothesis that leader attachment anxiety ($r = 0.18, p > .05, N=63$) and avoidance ($r = -0.14, p > .05, N=63$) would be negatively related to LMX.

Richards & Hackett (2012)

Richards and Hackett (2012) found significant negative effects for both attachment anxiety ($t(288) = -2.28, p < .05$) and attachment avoidance ($t(288) = -3.46, p < .001$) on leaders' own perception of LMX quality. However, leaders' attachment insecurity was unrelated to their followers reported LMX (e.g. no cross-member or partner effects; Richards & Hackett, 2012).

Chapter 4 – Discussion

Leaders' attachment style has important implications on the LMX quality. Leadership is a social process, and LMX theory emphasizes the importance of leader-follower relationship by examining the quality of this relationship. The aim of this review was to identify the effect of leaders' secure and insecure attachment on LMX quality, in the context of organisational settings, across a sample of nine studies. The hypotheses were: 1) there will be evidence for a positive effect between secure attachment and high LMX and 2) there will be evidence for a negative effect between insecure attachment and high LMX. The findings could be relevant for training and recruiting, talent use, retention and organizational development of leaders in organizations and to achieve greater follower job satisfaction and well-being.

The review was conducted through a systematic literature search through the USQ online database A to Z, Google Scholar “incognito” and reference lists. The initial search produced 8,988 results indicating the interest for the role of attachment style and leadership. These initial results that include journal articles and a considerable amount of grey literature highlight the importance of a structured review to consolidate the evidence indicating that attachment style plays an important role in LMX leader- follower relationship. To date, although some work has been done on the role of attachment, LMX and leadership effectiveness, there is no comprehensive systematic review of this relationship. Nine studies (e.g. four journal articles, four theses and one report) were included from across seven cultures; with 2,862 participants that were assessed for their attachment style and a range of outcomes, such as the quality of leader member exchange, job satisfaction, trust, trustworthiness and turnover intentions (Coombe, 2010; Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Kafetsios et al., 2014; Lavy, 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012). Cross-sectional survey design was applied to all studies, using quantitative methods (Coombe, 2010; Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Kafetsios et al., 2014; Lavy, 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012). To best address the research questions, the studies were grouped according to the attachment style of the leader.

4.1 Key Findings

Leader attachment styles can be reasonably expected to strongly affect the initiation and maintaining the quality of relationships with followers. This is because

attachment styles influence relational behaviours. Generally, the results suggested findings consistent with previous research: securely attached leaders were associated with higher LMX and better work outcomes, while insecurely attached leaders were linked to lower LMX and less positive work outcomes (Coombe, 2010; Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Kafetsios et al., 2014; Lavy, 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012). However, the effects of secure and insecure attachment on LMX quality showed mixed results in some areas across the studies.

4.2 Secure Attachment and LMX

It is widely accepted that secure attachment style forms the basis for positive relationships with others and that high quality LMX relationships are characterized by trust and respect (Graen & Uhl-Bien, 1995). Securely attached individuals can develop successful, satisfying and positive relationships with others and they are willing to offer support (Bartholomew, 1990; Harms, 2011; Littman-Ovadia et al., 2013). Furthermore, securely attached individuals have the psychological base required for leadership and important qualities for a leader: are accessible, responsive and maintain proximity (Harms, 2011; Popper & Mayseless, 2007; Rholes & Simpson, 2004; Richards & Hackett, 2012).

Consistent with previous research, it was found that leaders who were securely attached had greater ability to establish high quality, positive relationships with their followers (Grosvenor & Boies, 2005; Jackson, 2008). Similarly, supervisor security provision (e.g. relationship closeness and intimacy, employee sense of meaning at work) was associated with positive job satisfaction, suggesting that a secure relationship with the supervisor facilitates positive work outcomes for followers, such as job satisfaction and turnover intentions (Lavy, 2014). These results support the relevance of attachment theory to leader-follower relationships and validate the findings of Davidovitz et al. (2007) and Molero et al. (2013) concerning the contribution of a secure relationship to followers' work life. The results also correspond with Ronen and Mikulincer (2012) findings relating to the important role of leaders' caregiving in facilitating followers' job satisfaction.

Trust is fundamental to high quality LMX (Chan et al., 2012; Deluga, 1994; Dirks & Ferring, 2002; Simmons et al., 2009). It was found that secure attachment plays an important role in developing trust-based relationships and was significantly related to trust in one's leader, a finding consistent with previous research on

attachment in the workplace (Frazier et. al, 2015; Grosvenor & Boies, 2005). Overall, these findings were generally consistent with attachment theory in that securely attached individuals develop reciprocal relationships and are more likely to view others in a positive light (Ainsworth & Bowlby, 1991; Mikulincer & Shaver, 2007).

Although previous research indicates that LMX quality would be optimal if leader and follower attachment styles were congruent, current analysis indicated that those who were mismatched on attachment style had higher quality member-and leader-rated LMX than those who were matched on attachment style (Keller, 2003; Jackson, 2008). One possible explanation could be that leaders and followers expect different things from each other. For example, followers may prefer secure leaders because they can offer guidance and support. Similarly, followers could find it difficult to work with anxious-ambivalently attached leaders, because leaders' dependency is inconsistent with the notion of a supportive leader. Leaders with relational orientations tend to focus on fostering high quality relationships with their followers, and these high quality relationships lead to increased LMX quality. It can then be argued that although secure attachment style in leaders promotes high quality LMX, the highest quality relationships may be achieved when followers' and leaders' attachment styles best complement each other.

4.3 Insecure Attachment and LMX

Insecurely attached individuals are unavailable and unresponsive; provide inconsistent caregiving which contributes to difficulties in trusting and depending on others (Bowlby, 1973; Mikulincer & Shaver, 2005). Avoidant attached individuals discourage reliance on others; they are perceived as insensitive and uncaring towards others. Insecurely attached individuals lack the psychological base required for leadership (Popper & Mayseless, 2007). Similarly, anxiously attached individuals lack the task oriented action required by an effective leader and they fear to address conflict (Keller & Cacioppe, 2001; Mayseless, 2010)

Therefore, based on theoretical premises, insecure attachment in leaders is expected to negatively influence LMX development (Harms, 2011; Keller, 2003; Martin et al., 2010). Similarly, the inability to trust a relationship partner is characteristic of insecure attachment style, yet trust is fundamental to high quality LMX (Chan et al., 2012; Deluga, 1994; Dirks & Ferring, 2002; Richards & Hackett, 2012). Coombe (2010) found no support for the relationship between leader avoidance and anxiety and follower job satisfaction or leader effectiveness; a

dimensional approach to attachment theory could be too reliant on measurement instruments, with the focus on anxious and avoidant attachment dimensions.

Kafetsios et al. (2014) found that anxious attachment in leaders predicted followers lower job satisfaction, but avoidant attachment in leaders was associated with higher job satisfaction in followers.

Leader attachment style had direct main effect on follower specific attachment bond with the leader, and that anxiously attached leaders was negatively related to supportive leadership behaviours (Pang Tze Lin, 2009). Individuals with a poor model of self may be preoccupied with gaining acceptance, which could have a negative effect on their ability to function effectively as supportive leaders (Pang Tze Lin, 2009). This was in line with Davidovitz et al. (2007) finding that anxious leaders are more likely to put their own interests before the needs of their followers.

Contrary to predictions, the direct link between the attachment dimensions and LMX was not significant; suggesting that additional research was needed to rule out sampling error, including restriction of range in the criterion variables (Richards, 2009). These findings do not necessarily contradict the expectations of other researchers (Keller & Cacioppe, 2001; Quick, Nelson, & Quick, 1987); rather, they merely suggest that the influence of attachment on the leader-subordinate dyad is more complicated and may be influenced by additional factors (Richards, 2009).

Consistent with the fact that attachment style influences relationship related expectations, Richards and Hackett (2012) found that leader and follower attachment insecurity were both negatively associated with self-evaluation of LMX, and one's own appraisal of LMX. However, if both leaders and followers have similar levels of attachment anxiety, LMX may be enhanced through mutual levels of proximity seeking (Richards & Hackett, 2012). Leader and follower attachment avoidance did not interact, suggesting that the negative effect of one dyad partner deactivating proximity seeking is sufficient to inhibit LMX development (Richards and Hackett, 2012). High quality LMX relationships are marked by strong social bonding, expressed through loyalty, trust and respect- while the inability to trust a relationship partner is a defining characteristic of insecure attachment style; trust is fundamental to high quality LMX (Chan et al., 2012; Deluga, 1994; Dirks & Ferrin, 2002). Therefore if leaders and followers were high on attachment avoidance, the negative effect of disengaging from social exchanges would prevent LMX development. High quality LMX relationships are marked by strong social bonding, expressed through

loyalty, trust and respect; while the inability to trust a relationship partner is a defining characteristic of insecure attachment style. On the other hand, avoidant attachment in leaders was associated with higher job satisfaction in followers, perhaps due to cultural expectations of ideal leadership style (e.g. distant, controlled, low communication) and followers' greater autonomy under avoidant leaders.

4.4 Limitations

Although the hypotheses in this systematic literature review received some support, there were some evident limitations. Firstly, all studies were cross-sectional; therefore, causation could not be assessed (Coombe, 2010; Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Kafetsios et al., 2014; Lavy, 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012). For example, a leader who has high quality LMX relationships may cause followers to perceive their leader as trustworthy. Similarly, if the leader is perceived as trustworthy, it may cause followers to evaluate the leader as high LMX. The relationship between LMX and work criteria has been established in previous research, therefore limiting the possibility of reverse causality (Jackson, 2009). Longitudinal studies could help establish the direction of these relations. In addition, it is assumed that attachment styles are relatively stable across time and situations and the individual differences in job attitudes are a result of differences in attachment styles (Kafetsios et al., 2014). Having said that, the agreement amongst attachment scholars is that attachment styles can be activated and changed by socio-cognitive factors or changed by security activation (Mikulincer & Shaver, 2007; Scharfe & Bartholomew, 1994).

Secondly, as the studies were conducted in different organizations, context effects could have come into play, such as different levels of personal contact between leaders and followers. Sampling method may have resulted in large correlations between leaders and followers on the measure of attachment dimensions ($r = .61$ for avoidance and $r = .40$ for avoidance) possibly due to a general attraction between certain individuals or a sample issue (Richards & Hackett, 2012). Past research shows that insecurely attached individuals are more likely to be attracted to similar others in relationship, whereas there is an attraction to secure individuals regardless of attachment style (Klohn & Luo, 2003). In addition, majority of participants were volunteers, therefore their answers could be biased (Lavy, 2014); and some participants were high performing, thus a broader sample size would allow better generalizability (Coombe, 2010).

Thirdly, the studies used self-report measures which carry a risk of bias, and the performance measures could be subjective as they were rated by the leaders, with the possibility of influencing the outcome variable to rater effects (Coombe, 2010; Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Kafetsios et al., 2014; Lavy, 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012). Therefore, it would be important if future studies would make use of observational data to limit the possibility of bias. It is also important to acknowledge that different attachment measures were used across the studies (Coombe, 2010; Frazier et al., 2015; Grosvenor & Boies, 2005; Jackson, 2008; Kafetsios et al., 2014; Lavy, 2014; Pang Tze Lin, 2009; Richards, 2009; Richards & Hackett, 2012). For example, Coombe (2010) found that ECR did not translate well in an organizational context; and similar results were found using a modified ECR version. It is possible that ECR scores the leaders' style at work in general and not with a particular follower. Other studies have shown that attachment measures (other than ECR) have predicted outcomes such as job satisfaction (Ghazal, 2010). Furthermore, there was inconsistency with the source of rating, with some studies having leaders rate themselves, while in other studies the leaders were rated by the followers. Similarly, when multiple followers provide ratings of LMX for the same leader (e.g. non-independence in the data), this could influence the results and contribute to problems with significance testing, and contribute to increase in both Type I and Type II errors (Richards, 2009).

Inconsistent with past research, which indicates that effective leaders are more likely to be securely attached (e.g. low levels of anxiety and avoidance attachment), one study found that the direct link between the attachment dimensions and LMX was not significant (Richards, 2009). This finding does not necessarily contradict previous research results (e.g. insecure attachment would negatively impact relationship quality; Keller & Cacioppe, 2001; Quick, Nelson, & Quick, 1987) they only suggest that the influence of attachment on the leader-follower relationship is more complex and may be influenced by additional factors, such as emotion regulation abilities (Richards, 2009). It appears that anxious and avoidant individuals respond differently to work stressors, which then may influence the work relationships. It could be that anxiety and avoidance attachment operate through different mechanisms that affect LMX quality. The lack of significant results was surprising, given the strength of the influence that attachment has on non-work adult relationships (Mikulincer & Shaver, 2007; Richards, 2009). One explanation is that

work relationships are less intense and evolve differently than romantic relationships; therefore, some of the non-significant results may have resulted from sample-specific lack of variance in the criterion variable (Richards, 2009). Similarly, it can be argued that a dimensional approach to attachment theory is too reliant on measurement instruments, with the focus being on avoidance and anxiety styles; while secure base leadership focuses on the desired form of attachment, being less diagnostic and more descriptive of an ideal style (Coombe, 2010).

Some authors argued that a dimensional approach to attachment theory is too reliant on measurement instruments that focus on anxious and avoidant dimensions (Coombe, 2010). In addition, there was inconsistency in the analysis method, where some studies conducted the analysis at the individual level, using follower data only (Grosvenor & Boies, 2005; Richards & Hackett, 2012) while others collected data from multiple sources (followers and leaders) reducing the threats of same source bias (Jackson, 2008). Furthermore, some measures were newly translated into a different language, with insufficient data on reliability and validity (Lavy, 2014).

Finally, it is important to note that not only the attachment style of the leaders influenced the relationships observed in final set of studies. However, attachment insecurity in either the leader or the follower will negatively influence LMX development (De Sanctis, 2012; Harms, 2011; Keller, 2003; Keller & Cacioppe, 2001; Martin et al., 2010; Richards & Schat, 2011).

4.5 Implications and Future Research

Research shows that LMX positively predicts a variety of positive individual and organizational outcomes (Gerstner & Day, 1997); therefore it is practical to maximize efforts to promote the development of high quality LMX relationships. The attachment style of the leader influences the sense of self-security in the follower, evident when the leaders show genuine concern and support to their followers, and when seen by followers as available and accessible in time of threat.

Positive and trusting relationships between leaders and followers are very important in the work environment, influencing organizational outcomes. Knowing that secure attachment is essential for positive interpersonal relationships, it might be possible to train leaders on how to become more effective at relating to their followers. Equally important and relevant is that leaders' secure attachment results in emotional closeness and related closeness behaviours in the work setting. This highlights the benefits of developing close, meaningful relationships with followers,

because they seem to be the essential elements of secure leader-follower relationships and high quality LMX.

The secure attachment style implies trusting relationships (Simmons et al., 2009), therefore it might be possible to coach leaders to be more open with their followers and trust them with their responsibilities. Leaders could also be trained to relate more positively to their followers using the secure attachment style basis. Future research should examine if a leader can actually influence the attachment style of the followers (e.g. make it more secure) through trusting experiences.

The results point in particular to the importance of trust in leaders, especially during times when organizations face growing complexity and change. Leaders who want to develop trusting relationships with followers, need to be trustworthy, however, they need to realize that follower attachment style will also affect whether the follower will develop trust in the leader or not. Therefore, leaders may be more effective at fostering trust and/or prevent the loss of trust if they understand what factors form the basis of trusting relationships.

Similarly, leaders could be shown the behaviours of insecure attachment style they should avoid, because leaders who ignore their followers (e.g. dismissing style) or overpower them (e.g. preoccupied style) may negatively impact the quality of their relationship. As evident from past research, leaders' anxious attachment is a clear target for training schemes (Davidovitz et al, 2007; Kafetsios et al., 2014; Ronen & Mikulincer, 2012). However, when considering training, the leaders need to be aware of and take into account the followers' implicit perceptions of attachment styles. This is particularly relevant when dealing with anxious followers, who are concerned about how the leader views him or her and whether the leader accepts them. These findings do not necessarily contradict previous research results (e.g. insecure attachment would negatively impact relationship quality; Keller & Cacioppe, 2001; Quick et al., 1987) they only suggest that the influence of attachment on the leader-follower relationship is more complex and may be influenced by additional factors such as emotion regulation abilities (Richards, 2009). Leaders are perceived as capable when they are able to display contextually correct emotions to their followers, and this requires using emotion regulation effectively, by not wasting physical and emotional resources to hyperactivate or suppress negative emotions (Haver, Akerjordet, & Furunes, 2013; Little et al., 2011). These are qualities associated with securely attached individuals, who feel they are worthy of love and protection, and in addition they develop flexible

and resilient emotion-regulation strategies (Hudson, 2013; Popper & Maysseles, 2007). Therefore, future research should examine if emotion regulation moderates or explains the lack of effect between insecure attachment and LMX.

Securely attached leaders need to manage their relationship with such followers carefully, as they probably need more individualized attention to build that sense of worthiness and acceptance. Future research should examine if leaders' helpful behaviour has an effect on anxious and avoidantly attached followers, or if a secure leader could actually change the followers' attachment style through trusting experiences. Although, theoretically attachment style is a trait like construct (e.g. stable over time), and it has been shown to influence the quality of the relationships between individuals; it is recommended to use attachment style with caution as a fixed selection criterion, particularly in the positions that are dependent on the success of interpersonal relationships (e.g. teamwork).

Leadership development and training is an area of practical application, which is particularly relevant when individuals with high technical knowledge and skill but lower interpersonal skills are pushed into leadership positions by contextual forces. Accordingly, a first step is leader self-awareness, which is a key to all leader training. In the context of attachment and LMX this would include being self-aware of one's attachment patterns and how these could affect leadership behaviours. Development and training could be targeted for insecure leaders, assuming insecure attachment is not at a pathological level. Employee selection and placement is another area that could be examined for impact. When the selection pool of potential leaders is large enough, securely attached leaders could be selected for the highest return. According to the Job Demands-Resources (JDR) model, for instance, individuals with the highest attachment may serve as a job resource via the JDR model, which suggests their behaviours would promote health and promote motivation in followers (Berson et al., 2006; Boatwright et al., 2010; Chan et al., 2012; Chen et al., 2007; Day et al., 2014; Harms, 2011; Ronen & Mikulincer, 2012). For example, the individuals with the highest secure attachment scores should be selected for leadership positions in the most stressful or demanding contexts. Thus, it would be beneficial for organisational decision makers to be aware of the attachment styles in actual and potential leaders in order to help organizations to recruit and develop leaders; maximise talent use, retention and organizational development; and aim to promote leader behaviours that

promote greater job satisfaction and well-being in employees (Rahimnia & Sharifirad, 2014; Riley, 2011).

Future research with a longitudinal design could examine the development of the leader-follower relationship over time; how attachment influences perceptions of LMX and how perceptions could change as the relationship develops over time. Ideally, future studies would deepen our understanding of attachment related mechanisms underlying a good quality follower-leader relationship, and link these mechanisms to related organizational outcomes. It is also important that future research minimises measurement error that could arise from social desirability or concerns about confidentiality, for example using coded surveys that do not require collection of names.

4.6 Conclusions

Effective leadership is considered increasingly important, with an extensive body of research suggesting that the essence of leadership is concerned with developing effective relationships with others. The unique contributions of this review indicate the potential for attachment theory to assist researchers and practitioners in understanding the nature and quality of leader-follower relationships in organizations. The studies in this review include grey literature and increase our overall understanding of attachment dynamics in leader-follower interactions by showing the processes that link leaders' secure, anxious, and avoidant orientations with the quality of LMX. Furthermore, we know that a high quality LMX relationship is characterised by trust, respect and mutual obligation, and a securely attached individual relates positively to others and is trusting in the workplace.

A secure relationship with the leader shows to be significantly related to trust in the leader; this facilitates positive work outcomes for followers (e.g. greater job satisfaction) and for organizations (e.g. performance). Additionally, although secure attachment style in leaders promotes high quality LMX, the highest quality relationships may be achieved when followers' and leaders' attachment styles best complement each other. Although attachment style can be considered a part of an individual's personality, caution should be practiced when using it as a criterion for selecting leaders in organizations. Research shows that working models of attachment remain flexible and open to change (Collins & Read, 1994). Therefore, if leaders that have an insecure attachment style are hired, training and coaching them on positive relational qualities (e.g. secure attachment) might contribute to the

frequency and intensity of trusting leader-follower relationships in organization. Consequently, facilitating positive high quality relationships between leaders and followers could play a critical role in the success of individuals, teams and organizations as a whole. If leaders have a secure attachment style, positive experiences such as leader support (e.g. higher quality LMX) could actually meet the attachment needs of the anxious individual and mitigate the effect of anxiety on commitment. Avoidant individuals might develop greater levels of organizational commitment if they work in an environment that allows them to disengage easily from emotionally charged interactions. At the end of the day leaders should endeavour to provide a sense of attachment security, which according to the present evidence will increase the quality of LMX and also affect the followers' attitudes and behaviours at work.

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Appendix A

Quantitative Critical Review Checklist

SECTION 1: INTRODUCTION	
<i>A well conducted study...</i>	<i>Does this study do it?</i>
Explains scientific background and rationale for the investigation being reported	Yes <input type="checkbox"/> No <input type="checkbox"/> Can't say <input type="checkbox"/> N/A <input type="checkbox"/>
States specific objectives including any pre-specified hypotheses (research questions are ok as well)	Yes <input type="checkbox"/> No <input type="checkbox"/> Can't say <input type="checkbox"/> N/A <input type="checkbox"/>
Addresses an appropriate and clearly focused question. Consider... The population studied? (case-control study only) Is the case definition explicit and confirmed? The outcomes considered? Are the aims of the investigation clearly stated?	Yes <input type="checkbox"/> No <input type="checkbox"/> Can't say <input type="checkbox"/> N/A <input type="checkbox"/>
SECTION 2: METHODOLOGY	
<i>A well conducted study...</i>	<i>Does this study do it?</i>
States and adequately describes the study design (might be done in the INTRODUCTION section).	Yes <input type="checkbox"/> No <input type="checkbox"/> Can't say <input type="checkbox"/> N/A <input type="checkbox"/>
Studies an appropriate population. Consider... (cross-sectional study) Was the sample representative of its target population? (cohort study) Was an appropriate control group used – i.e. were groups comparable on important confounding factors? (case-control study) Were the controls randomly selected from the same population as the cases? *(here cases means those in the active intervention or treatment condition or just the primary group of interest and controls are the comparison participants and thus, are those not in the active intervention or treatment condition)	Yes <input type="checkbox"/> No <input type="checkbox"/> Can't say <input type="checkbox"/> N/A <input type="checkbox"/>
States and adequately describes the source population.	Yes <input type="checkbox"/> No <input type="checkbox"/> Can't say <input type="checkbox"/> N/A <input type="checkbox"/>
States and adequately describes the sources and methods of selection (recruitment) of participants.	Yes <input type="checkbox"/> No <input type="checkbox"/> Can't say <input type="checkbox"/> N/A <input type="checkbox"/>
States and adequately describes any inclusion or exclusion criteria for participants to be in the study.	Yes <input type="checkbox"/> No <input type="checkbox"/> Can't say <input type="checkbox"/> N/A <input type="checkbox"/>
Avoids inappropriate exclusions.	Yes <input type="checkbox"/> No <input type="checkbox"/> Can't say <input type="checkbox"/> N/A <input type="checkbox"/>
If there are different groups, has the same exclusion criteria are used for all groups (those in the active or treatment group) and controls.	Yes <input type="checkbox"/> No <input type="checkbox"/> Can't say <input type="checkbox"/> N/A <input type="checkbox"/>
States and adequately describes "where" the study takes place. Consider... Were the subjects studied in "real life" circumstances – relates to EXTERNAL VALIDITY.	Yes <input type="checkbox"/> No <input type="checkbox"/> Can't say <input type="checkbox"/> N/A <input type="checkbox"/>
Where the study is carried out at more than one site, are the results comparable across all sites?	Yes <input type="checkbox"/> No <input type="checkbox"/> Can't say <input type="checkbox"/> N/A <input type="checkbox"/>

Includes participants and settings that match the key research questions.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
Minimises selection bias.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
Has an appropriate sample(s) size for the study aims and to warrant the conclusions drawn.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
Has a control population or a comparison group identical (as much as possible) in all aspects other than the variable of interest (possibly the intervention or exposure/treatment).	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
In an intervention study, has a control population or a comparison group undergone some form of placebo or sham manipulation? (Zero treatments or waitlist controls do not control for the confounding influence of common treatment factors)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
If it is possible, randomisation is used to assign participants to different groups or conditions.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
If there are different groups, comparison is made between those in different groups to establish their similarities or differences. This way they can correct for important differences that may confound the results. (e.g., Despite randomisation, the treatment and control groups should be tested and found similar on all relevant variables except the IV of interest (i.e., treatment) at the start of the study).	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
Describes relevant sample characteristics and does so separately for each group (relevancy here is determined in relation to the topic area being reviewed).	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Consider... Demographic, clinical, social) and information on exposures and potential confounders (might be done in the RESULTS section).	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
Describes the rationale for study size, including practical and statistical considerations.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
Indicates how many of the people asked to take part actually participated - i.e., response rate (and for each of the groups being studied if there are groups).	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
If longitudinal (i.e., experiment, Cohort study, etc.), reports the percentage of individuals (or clusters) recruited that dropped out before the study was completed - i.e., attrition rate (and for each of the groups being studied if there are groups). A rule of thumb is that a drop-out of more than 20% generally threatens validity.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
If there is attrition, offers reasons for the drop-out that occurs at each stage.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
If there is attrition, comparison is made between full participants and those lost to follow up.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
If a longitudinal study, has a 'long-enough' follow up (the study must be of adequate length for experimentation / observation / trial and measurement of the outcome(s)). Consider... Could all likely effects have appeared in the time scale? Could the effect be transitory? Was follow up sufficiently complete? Was dose response demonstrated?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
If it is an intervention/treatment study, where possible, participants are blind to the condition they are in.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>

Important confounding variables are controlled in some way (e.g. matching, randomisation, or statistically in the analysis stage).	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
Control of confounds are adequate to justify the author's conclusions? OR, if not, the authors take these into account in their interpretation of the findings.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
Considers other important factors that introduce confounding and bias. Consider... Have all possible explanations of the effects been considered? (cohort study) Were the assessors blind to the different groups? (cohort study) Could selective drop out/attrition explain the effect? (cross-sectional study) Did the study achieve a good response rate? (cross-sectional study) Were rigorous processes used to develop the questions? (E.g. were the questions piloted/validated?) (case-control study) How comparable are the cases and controls with respect to potential confounding factors? (case-control study) Were interventions and other exposures assessed in the same way for cases and controls? *(here cases means those in the active intervention or treatment condition or just the primary group of interest and controls are the comparison participants and thus, are those not in the active intervention or treatment condition)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
Lists and clearly defines all variables of interest indicating which are seen as outcomes, exposures, potential predictors, potential confounders or effect modifiers (in many studies the researcher will assume the reader can work out the role of these variables from the introduction).	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
Uses measurement "tools" that match the variable (for example, a self-directed survey versus a measurement of function, metabolic marker, etc.)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
All relevant variables are measured in a standard and reliable way. Consider... The author makes changes or amendments to a measurement tool and thus cannot rely on previously reported validity or reliability data. Statistics in support of reliability include inter-rater reliability coefficient, internal consistency measure (like Cronbach's Alpha), test-retest coefficient, etc. Look for reliability evidence in the article or outside if not inside the article.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
Uses measurements or measurement tools that are validated, well known and accepted (are there references indicated)? Look for validity evidence in the article or outside if not inside the article.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
SECTION 3: RESULTS		
<i>A well conducted study...</i>	<i>Does this study do it?</i>	
Indicates the completeness of the data. (i.e., discusses and justifies an approach to dealing with missing data).	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
Uses analytical or statistical methods that are appropriate, recognized or well-known, sufficiently described and sufficiently explained.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
Checks whether the data conform to important assumptions underlying the statistical techniques. Consider... Normality, outliers, linear relationships, homogeneity of variance (that the amount of variance or individual differences within each group is roughly equal to the other groups), etc.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
Has "p values" that are been stated and interpreted appropriately.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
Reports and interprets effect sizes.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>

Has tables/graphs that are labelled and understandable.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
SECTION 4: DISCUSSION		
<i>A well conducted study...</i>	<i>Does this study do it?</i>	
The authors' conclusions and discussion reflect the calculated statistics, including the mean, p values or confidence intervals (if calculated and reported).	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
Writes as if the mere discussion of limitations is not a substitute for good methodological quality.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Consider... Just because the author can articulate all the areas s/he went wrong doesn't mean the results are therefore valid and useful for your purposes.	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>
Gives a cautious overall interpretation of the results in the context of current evidence and study limitations, paying attention to alternative interpretations.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Can't say <input type="checkbox"/>	N/A <input type="checkbox"/>

Some Caveats:

- These criteria are not all equal in increasing the risk of bias (that is, reducing a study's internal and external validity). Your appraisal of a study's overall quality should not merely count the number of "No" checks in the table below but actually consider the seriousness of each no since some may be considered more serious (i.e., control groups and sample size) than others (i.e., blinding).
- For any given study design, some of the points below will not be important and you can check N/A for those. For example, blinding is N/A for a cross-sectional study. In other cases where a particular aspect is not normally included in a particular design (like having a control group for a cross-sectional survey) this still might represent a weakness since the risk of bias might be higher because there is no control group.
- This list is not exhaustive and if you notice anything other weakness in the study you should make a note of it and factor it into your considerations.
- Remember you are not merely criticising the studies according to this checklist just for its own sake but you are meant to be reflecting on how each identified limitation actually weakens the use of the study's data to answer your research question.

Appendix B

Data Extraction Form

USQ Psychology Data Extraction Form

Study ID#: _____

Identification Information

Article Title	
Authors	1.
	2.
Data of Publication 2011	
Publication Title (i.e., Journal Title)	
Volume Number	
Issue or Chapter Number	
Page Numbers	

Aims and Hypothesis

Stated Aim of the Study	
Hypothesis	1.
	2.
	3.
	4.
	5.

Design

Study Design	
Longitudinal <input type="checkbox"/>	Cross Sectional <input type="checkbox"/>

Experimental <input type="checkbox"/>	Quasi-Experimental <input type="checkbox"/>	Survey <input type="checkbox"/>	Naturalistic Group Comparison <input type="checkbox"/>
Qualitative <input type="checkbox"/> (describe) _____			
Number of Groups/Conditions		Number of Populations	
Method of Assignment to Groups/Conditions (i.e., random?)			
Number of Assessment Points			
Time Between Assessment Points			

Sample

Population Description(s)	1.
	2.
	3.
Sample Size(s) (Per-Condition or Group)	1.
	2.
	3.
Sample(s) Age Range (including M, SD)	1.
	2.
	3.
Sample(s) Gender Makeup	1.
	2.
	3.
Other Sample Features	1.
	2.
	3.

Recruitment

Recruitment Strategy for Each Sample	1.
	2.
	3.
Response Rate	
Attrition Rate and Time Points (when did subjects dropout and how many at each time point)	
Incentives	

Measurement

Construct	Instrument	Reliability	Validity
1 Name	Name	Data	Data
Construct	Instrument	Reliability	Validity
2 Name	Name	Data	Data
Construct	Instrument	Reliability	Validity
3 Name	Name	Data	Data
Construct	Instrument	Reliability	Validity
4 Name	Name	Data	Data
Construct	Instrument	Reliability	Validity
5 Name	Name	Data	Data
Construct	Instrument	Reliability	Validity
6 Name	Name	Data	Data

Conclusions / Analysis / Results

Conclusion 1	Method of Analysis	Specific Results
Conclusion 2	Method of Analysis	Specific Results
Conclusion 3	Method of Analysis	Specific Results
Conclusion 4	Method of Analysis	Specific Results

	Analysis	
Conclusion 5	Method of Analysis	Specific Results
Conclusion 6	Method of Analysis	Specific Results

Notable Limitations

Design Limitations	1.
	2.
	3.
Sample Limitations	1.
	2.
	3.
Recruitment Limitations	1.
	2.
	3.
Analysis Limitations	1.
	2.
	3.
Conclusion Limitations	1.
	2.
	3.
Other Limitations	1.
	2.
	3.

Notable Strengths

Design Strengths	4.
	5.
	6.
Sample Strengths	4.

	5.
	6.
Recruitment Strengths	4.
	5.
	6.
Analysis Strengths	4.
	5.
	6.
Conclusion Strengths	4.
	5.
	6.
Other Strengths	4.
	5.
	6.

Appendix C
Screening of articles examples

Author/ Article	Empirical study	Participants	Attachment measured	Effect	Total score
Frazier, M. L., Gooty, J., Little, L. M., & Nelson, D. L. (2015). Employee attachment: Implications for supervisor trustworthiness and trust. <i>Journal of Business and Psychology, 30</i> (2), 373-386.	1	1	1	1	1
Kafetsios, K., Athanasiadou, M., & Dimou, N. (2014). Leaders' and subordinates' attachment orientations, emotion regulation capabilities and affect at work: A multilevel analysis. <i>The Leadership Quarterly, 25</i> (3), 512-527.	1	1	1	1	1
Little, L. M., Nelson, D. L., Wallace, J. C., & Johnson, P. D. (2011). Integrating attachment style, vigor at work, and extra-role performance. <i>Journal of Organizational Behavior, 32</i> (3), 464-484.	1	1	1	0	0
Mahdi, O. R., Mohd, E. S. B. G., & Almsafir, M. K. (2014). Empirical study on the impact of leadership behavior on organizational commitment in plantation companies in Malaysia. <i>Procedia - Social and Behavioral Sciences, 109</i> , 1076-1087.	1	1	0	0	0