

ATTACHMENT, ALEXITHYMIA, GENDER AND EMOTIONAL DISCLOSURE: AN
INTERACTIONAL INVESTIGATION

by

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THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

(Counselling Psychology)

THE UNIVERSITY OF BRITISH COLUMBIA

(Vancouver)

April, 2016

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ABSTRACT

Emotional disclosure—verbal communication of emotional experiences—reduces emotional distress and positively impacts interpersonal relationships. Consequently, concealing emotions has been shown to negatively impact physical and psychological health. Previous research has shown that people with attachment avoidance orientation, and people with alexithymia, limit their use of emotional disclosure as a means of affect regulation. Little research however, has been conducted to determine if alexithymia mediates the negative relation between attachment avoidance and emotional disclosure. Additionally, there is little research evaluating the moderating effect of gender on the relation between attachment avoidance and alexithymia. Presently, we investigated if alexithymia mediated the negative relation between attachment avoidance and emotional disclosure. Secondly, we evaluated whether gender moderated the positive relation between attachment avoidance and alexithymia. Participants were Mechanical Turk workers ($N = 178$) who completed measures of attachment orientation, alexithymia, and generalized emotional disclosure tendencies. Our primary hypothesis was supported: alexithymia partially mediated the relation between attachment avoidance and emotional disclosure. Our secondary hypothesis was also supported: gender moderated the relation between attachment avoidance and alexithymia in that the relation was stronger for male participants compared to female participants. Implications for theory and counselling psychology practice will be discussed.

PREFACE

This thesis is original, unpublished, independent work by the author, J. O'Loughlin

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ACKNOWLEDGEMENTS

I would like to begin by expressing my gratitude to my thesis supervisor, Dr. Dan Cox, for his support and encouragement. I am grateful for the opportunities you have provided me with and for challenging me to grow and develop as a researcher and writer. Your mentorship has been invaluable.

I would also like to thank my committee members, Drs. Jef Kahn and Amery Wu. I appreciate your insights and contributions to this project and your willingness to provide me with guidance when needed.

I would also like to take this opportunity to thank my family, friends, and fellow CNPS grad students. I would especially like to thank my Mom and Dad who have always believed in me and encouraged me to follow my passions. Zephyr, thanks for always making me smile and for the joy and perspective into my life. To my sister Emily, thanks for always being there to listen to me.

Lastly, I would like to express my deepest gratitude and appreciation to my husband James who has provided me with unwavering support and encouragement through this process. Thank you for the many sacrifices you have made for me to earn my graduate degree. You bring so much love, laughter, and happiness into my life!

CHAPTER I

LITERATURE REVIEW

Emotional disclosure, or verbal communication of emotional experiences, reduces emotional distress, facilitates insight development, and positively impacts interpersonal relationships (see Kennedy-Moore & Watson, 2001 for review). Previous research has shown that people with attachment avoidance orientation limit their use of emotional disclosure as a means of affect regulation (Anders & Tucker, 2000; Garrison et al., 2012; Grabill & Kerns, 2000; Mikulincer & Nachshon, 1991; Pistole, 1993; Wei, Russell, Mallinckrodt, & Vogel, 2007; Wei, Russell, & Zakalik, 2005). Similarly, alexithymia is characterized by limited use of emotional disclosure as a means of affect regulation (see, e.g., Lumley, 2004; Taylor & Bagby, 2000). No research however, has been conducted to determine the extent to which alexithymia accounts for the relation between attachment avoidance and limited use of emotional disclosure. Moreover, few studies have evaluated the relation between attachment avoidance and alexithymia and no study, as far as we are aware, has examined gender differences within this relation.

The current study aims to extend the existing literature on attachment and emotional disclosure by exploring the underlying influences of alexithymia on the previously established relation between attachment avoidance and emotional disclosure. Additionally, it seeks to explore the relation between attachment avoidance and alexithymia and examine whether there are significant gender differences within this relation.

Emotional Disclosure

Emotional disclosure refers to “observable verbal and nonverbal behaviours that communicate and/or symbolize emotional experience” (Kennedy-Moore & Watson, 1999, p. xv).

Though individual differences in disclosure tendencies exist, ample data suggest that emotional experiences elicit an urge for interpersonal exchange and communication (Nils & Rimé, 2012). Decades of research on emotional disclosure has resulted in significant evidence that disclosure is linked to increased psychological health and decreased emotional distress (see Frattaroli, 2006 for review). Such results have led psychologists to conclude that emotional disclosure is foundational to emotional regulation and stress coping (Kahn, Huckle, Bradley, Glinski, & Malak, 2012).

Disclosing feelings about personal and meaningful experiences has been linked to the following psychological and cognitive benefits: decreased anxiety, depression, and anger (Frattaroli, 2006); fewer intrusive thoughts (Lepore, Ragan, & Jones, 2000); a reduction in the emotional intensity of an event (Zech & Rimé, 2005); improved capacity for working memory (Klein, 2002); increased self-esteem (Kahn & Hessling, 2001); facilitation of cognitive insight (Kennedy-Moore & Watson, 2001); and higher self-esteem, greater positive affect, and greater life satisfaction (Kahn & Hessling, 2001). Alternatively, those who limit their use of disclosure have been shown to experience poorer well-being, higher levels of depression and loneliness, and lower levels of social support (see Kahn & Hessling, 2001 for a review). These profoundly negative implications for health and well-being may be exacerbated as the intensity of an emotional experience increases (Zech & Rimé, 2005). For example, concealing pain and suffering following a traumatic experience, such as victimization, has been shown to intensify trauma-related distress, suppress coping abilities, and ultimately, impede recovery (Mejia, 2005; Sorsoli, Grossman, & Kia-Keating, 2008).

Adult Attachment and Emotional Disclosure

Several studies have shown that patterns of self-disclosure are related to attachment style (Anders & Tucker, 2000; Grabill & Kerns, 2000; Mikulincer & Nachson, 1991). Attachment theory is a comprehensive theory of social development, with particular emphasis on the nature and role of early attachments (Bretherton, 1992). Within attachment theory, social and emotional development is largely dependent on people's early relational experiences (Fraley, 2010). Defined as a "lasting psychological connectedness between human beings" (Bowlby, 1969, p.194), attachment is considered an adaptive function, without which an infant would fail to thrive (Fraley, 2010). According to Bowlby (1988), the parent-child connection, being the primary attachment relationship in the early stages of life, provides the prototype for an understanding and expectation of close relationships throughout one's life.

Personality and behaviour traits related to early attachment experiences are generally classified into one of three orientations or styles (Brennan, Clark & Shaver, 1998). *Attachment avoidance* is characterized by a tendency to be overly self-reliant and unwilling or unable to trust others (Brennan et al., 1998). It is likely to develop when an infant's efforts to seek comfort and security from its attachment figures are habitually ignored (Rholes, Simpson, & Friedman, 2006). *Attachment anxiety* is marked by a fear of abandonment and strong desire to be overly close to others (Brennan et al., 1998). It is likely to develop when responses to an infant's efforts to seek proximity and security when distressed are experienced as unpredictable or unreliable (Rholes et al., 2006). Finally, *secure attachment* is demonstrated by a comfort or ease with emotional closeness and a willingness to depend on others (Brennan et al., 1998). It is likely to develop if an infant's comfort seeking is routinely accepted and met by attachment figures (Rholes et al., 2006).

Attachment Avoidance and Emotional Disclosure

As noted above, attachment avoidance develops due to the lack of availability of an attachment figure and results in an inability or unwillingness to trust others and experience a sense of security (Rholes et al., 2006). As a result of learning that it is futile to depend on others when distressed, avoidantly attached people tend not to seek support from others when they experience emotional distress. Rather, they practice self-reliance or other suppression techniques, collectively referred to as *deactivating strategies* (Mikulincer, Shaver, & Pereg, 2003). The basic goal of deactivating strategies is to keep the attachment system inactive to escape the experience of emotional distress caused by attachment figure unavailability. Deactivating strategies involve active inattention to personal vulnerabilities and threatening events. They may include inhibition of proximity seeking behaviours, concerted attempts to handle distress alone, suppression of thoughts or memories that evoke feelings of distress or vulnerability, and resisting the request for support.

The use of deactivating strategies as an emotion regulation technique has important implications for the study of emotional disclosure. Previous research has found that emotional disclosure increases in concordance with the intensity of the emotional experience (Garrison et al., 2014; Nils & Rimé, 2012). Therefore, since deactivating strategies involve inhibition and suppression of emotional distress, people with attachment avoidance styles are more likely to exhibit low levels of disclosure. This may explain the consistent finding that people with higher attachment avoidance exhibit less emotional disclosure compared to those with lower levels of attachment avoidance (Anders & Tucker, 2000; Garrison et al., 2012; Grabill & Kerns, 2000; Mikulincer & Nachshon, 1991; Pistole, 1993; Wei, et al., 2007; Wei, et al., 2005).

Low Attachment Avoidance and Emotional Disclosure

When compared to persons with high avoidant or anxious attachment orientations, those with secure attachment are more willing to emotionally disclose, express distress, and receive comfort and support from others (Mikulincer & Nachson, 1991; Stroebe, Schut, & Stroebe, 2006), as their interaction goal is intimacy or closeness (Mikulincer & Nachson, 1991). Adults with low attachment avoidance tend not to hesitate to create closeness with others, as past experiences have led to positive associations with such relationships (i.e., love, support, caring, attentiveness, etc.). Disclosure, considered a necessary characteristic of building close relationships, is a likely strategy one will use to bring his/her interaction goal of becoming close to others to fruition.

Gender and Emotional Disclosure

In addition to attachment orientation, gender is a variable that is often considered important in the explanation of differential emotional disclosure. Numerous studies have been conducted to examine the relation between emotional disclosure and gender, many of which suggest that emotional inexpressiveness is a pervasive problem among men, particularly when compared with women (see Wong & Rochlen, 2005 for review). Several theories have been proposed to explain this phenomenon, the majority of which assert that because men and women are socialized differently with respect to emotional expression, they subsequently exhibit different expression behaviours (Wong, Pituch, & Rochlen, 2006).

For example, within *Gender Schema Theory* (Bem, 1991), sex differences in emotional disclosure patterns are consequential to the process of becoming gendered in society by way of schemata (Langer, 2010). Applied to gender, schemata refer to networks of information regarding masculinity or femininity that are formed in people, over time, based on cultural

norms, socialization processes, and interpersonal interactions. With respect to emotional disclosure, *Gender Schema Theory* posits that those ascribing to hegemonic masculinity—the culturally and politically dominant form of masculinity—are less likely to integrate, process, and disclose emotionally distressing information, as doing so would be discordant with their schema.

According to *Gender Socialization Theory* (Stockard, 1999), differential reinforcement history during development is the cause of gender differences with respect to emotional expressivity (Langer, 2010). Within this theory, if boys or men emotionally disclose, they are behaving differently than society deems acceptable (i.e., in stereotypically feminine ways). As a result, they are likely to be met with ridicule as opposed to empathy (Mejia, 2005). Subsequently, boys and men learn to change their behavior and to avoid repeating that behaviour by instead exhibiting stoicism and independence.

While research on emotional disclosure and gender has a long history, it is a history wrought with significant contradictions and mixed findings. The bulk of the work previously described expresses interpretations of hegemonic gender relations and practices. Recent research, however, has pointed to the fact that hegemonic masculinity does not exist in the statistical sense in so much as its qualities are accepted as normative (Peralta, 2007). In other words, men adhere to masculinity norms in varying ways and to variable degrees, despite there being an agreed upon and dominant cultural concept of what masculinity is (Kahn, 2010). Moreover, the hegemonic form of masculinity is said to be becoming more permissive and inclusive, widening the range of masculine identities that are possible to embody and perform (Anderson, 2010).

These changes may explain why more recent studies comparing male and female disclosure patterns have yielded mixed results. While some studies continue to find a disparity

between men and women's disclosure rates, others have not (see Wong & Rochlen, 2005 for a review). Thus, it is increasingly important that individual difference variables be incorporated into studies of these phenomena to improve our understanding of the impact of gender on emotional disclosure.

Alexithymia

One such individual difference variable that has been indicated as important in the relation between gender and emotional disclosure is alexithymia. Literally translated as lacking words for feelings, *alexithymia* was coined by Sifneos (1972) to describe patients who exhibited difficulty engaging in traditional, insight-oriented therapy (Lumley, 2004). Presently, alexithymia is considered a stable personality construct reflecting a deficit in the cognitive processing and regulation of emotional states (Luminet, Rimé, Bagby, & Taylor, 2004).

Alexithymia is comprised of two general deficits, each with two facets (Wagner & Lee, 2007). Reduced affective awareness involves difficulty identifying feelings and difficulty describing feelings to others. Operative thinking is characterized by reduced imaginal processes and externally oriented thinking—a tendency to describe details of external reality without reference to their impact on internal emotions. In addition to the characteristics noted above, hallmarks of alexithymia include difficulty differentiating emotion from physiological states, and difficulty distinguishing among emotions (Lumley, 2004). Due to these cognitive and affective deficits, the ability to regulate emotions successfully, and adapt to stress, is hindered, increasing one's susceptibility to various psychiatric, medical, and behavioural problems. Paradoxically, despite clear increased need for psychotherapeutic intervention, people exhibiting higher levels of alexithymia demonstrate difficulty engaging in, and experiencing positive therapeutic outcome from, insight-oriented psychotherapy (Lumley, 2004).

Alexithymia and Emotional Disclosure

Several studies show that persons high in alexithymia demonstrate reduced verbal expressiveness, both for positive and negative emotions (see Wagner & Lee, 2007 for review). In addition to reduced verbal expressiveness, one study found that high levels of alexithymia are inversely related to non-verbal expressiveness (Troisi et al.,1996). These findings may be explained by the fact that persons high in alexithymia cannot successfully identify and process their emotions and therefore, are unable to communicate their emotions effectively (Hesse & Rauscher, 2013). Additionally, it has been shown that persons high in alexithymia have strict privacy orientations and thus, tend to reveal less information about themselves.

As previously discussed, emotional disclosure is associated with numerous physical, social, and psychological benefits, whereas concealment tendencies have been shown to negatively impact health and well-being (see Kahn & Hessling, 2001 for review). When examined in the context of alexithymia, however, the impact of emotional disclosure on mood and affect is not quite so parsimonious. The few research studies conducted to explore this relation have yielded mixed findings.

In 2004, using data from four separate studies, Lumley and colleagues tested the hypothesis that alexithymia attenuates the benefits of emotional disclosure. In all four studies, the impact of emotional disclosure on health outcomes was measured, and participants with alexithymia were compared with non-alexithymic controls. Results suggested that non-alexithymic controls showed improvements in health and/or decreases in distress following emotional disclosure, while alexithymic participants showed decreases in health status and increases in distress (Lumley, 2004). Together, the results of these studies provided evidence that people with alexithymia are not likely to benefit from emotional disclosure by expressive

talking or writing when compared to people who have a greater ability to identify, differentiate, and communicate feelings.

Contrary to these findings, two studies reported that emotional disclosure influenced positive health outcomes and positive affect in alexithymic participants. One study found that students with higher levels of alexithymia had more significant improvements in positive affect following expressive writing as compared to those with lower levels of alexithymia (Paez, Velasco, & Gonzalez, 1999). In another study, alexithymia was shown to predict faster recovery time and better psychological responses following bladder surgery for participants in the expressive writing group as compared with the no-writing controls (Solano, Donali, Pecci, Persichetti, & Colaci, 2003). Taken together, these mixed results suggest a need for further studies on the impact of emotional disclosure on people with higher levels of alexithymia.

Alexithymia and Attachment

Several studies have examined and proposed theories relating to the etiology of alexithymia (see Taylor & Bagby, 2004 for review), many of which suggest that alexithymia is caused by events occurring in childhood, including disturbances in the parent-child relationship (Montebarocci, Codispoti, Baldaro, & Rossi, 2004). Many of the principles of attachment theory are reflected in such theories, namely that attachment experiences in early childhood influence the development of emotional schemas, imagination, and other cognitive abilities involved in affect regulation (Taylor & Bagby, 2013). For children reared in environments in which they feel physically or emotionally insecure, and in which emotional expression is discouraged, successful coping with distressing emotional states is made profoundly difficult. Indeed, poor parent-child bonding has been implicated in perceived difficulty in articulating feelings (Montebarocci et al., 2004).

Alexithymia has also been found to be positively associated with dismissing and deactivation strategies (including dismissal of attachment bonds) (Schiedt, 1999). Since creative imagination, emotional articulation, and effective emotion-regulation skills are more likely to develop in the context of secure attachment relationships, it has been suggested that alexithymia emerges secondarily as a consequence of attachment avoidance (Taylor & Bagby, 2013).

Alexithymia and Gender

While alexithymia is observed in men and women, results of several studies have consistently shown men score higher, on average, than women on measures of alexithymia (Levant, Hall, Williams & Hasan, 2009; Lumley, 2004). Most recently gender role socialization processes have been emphasized as a key factor in the development of alexithymia, leading to the proposal of the Normative Male Alexithymia hypothesis (Levant et al., 2009).

The Normative Male Alexithymia hypothesis was proposed to account for the influence of traditional masculinity ideology on patterns of restrictive emotionality (Levant et al., 2009). Based on clinical observations, Levant found that men who exhibited deficits in their ability for affective expression had been discouraged during their formative years from expressing their emotions by parents, peers, school teachers, and sports coaches – some were even punished for talking about their emotions. As a result, they did not develop a vocabulary for, or an awareness of, their emotional states. Levant’s observations suggest that men who were more traditionally engendered through socialization, and/or embody more characteristics of hegemonic masculinity, are likely to show greater levels of alexithymia.

The Present Study

The primary purpose of the present study is to extend our understanding of the relation between attachment avoidance and emotional disclosure which has been proposed in the existing

literature as a direct relation (Anders & Tucker, 2000; Garrison et al., 2012; Grabill & Kerns, 2000; Mikulincer & Nachshon, 1991; Pistole, 1993; Wei, Russell, Mallinckrodt, & Vogel, 2007; Wei, Russell, & Zakalik, 2005). We hope to expand on previous studies by exploring whether alexithymia, which like attachment avoidance is characterized by limited use of emotional disclosure (Lumley, 2004), mediates the relation between attachment avoidance and emotional disclosure. The secondary purpose of this study is to test the Normative Male Alexithymia hypothesis (Levant et al., 2009) by exploring if the relation between attachment avoidance and alexithymia is stronger for men compared to women. The following research questions will guide this exploration: (a) Does alexithymia mediate the relation between attachment avoidance orientation and emotional disclosure? (b) Is the relation between attachment avoidance and alexithymia moderated by gender? The following two hypotheses will be tested: (a) Alexithymia will mediate, at least in part, the relation between attachment avoidance and emotional disclosure and (b) The relation between attachment avoidance and alexithymia will be moderated by gender in that the positive relation will be stronger in male participants than in female participants. See figure 1 for a conceptual diagram of the hypothesized model.

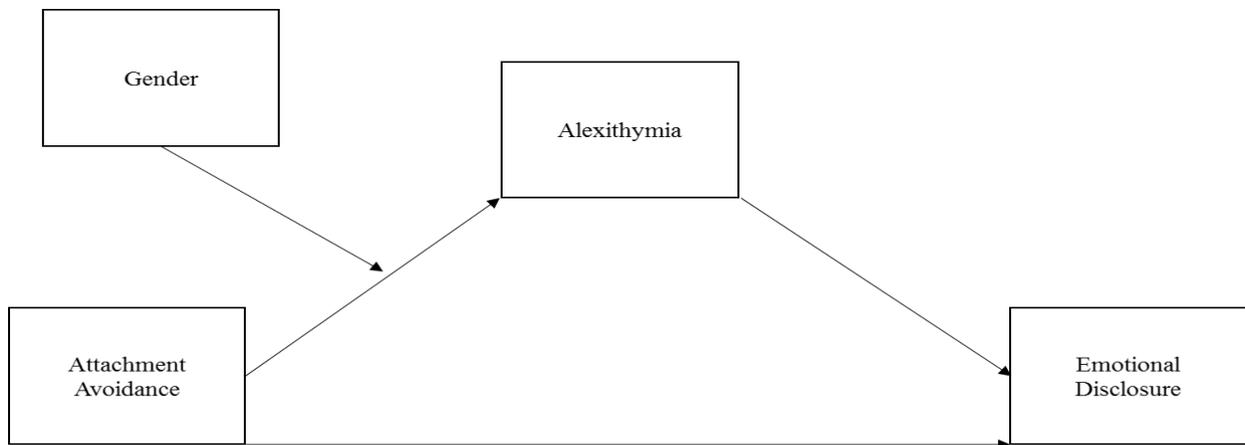


Figure 1. Conceptual diagram of the relation between avoidant attachment and emotional disclosure mediated by alexithymia and the relation between avoidant attachment and alexithymia moderated by gender.

CHAPTER II

METHOD

Participants

The sample for this study consisted of 183 participants who were recruited using Amazon's Mechanical Turk (MTurk), an on-line crowdsourcing tool. Of the initial 183 participants, five were not included in analyses due to a significant (>50%) amount of missing data. Thus, the final sample consisted of 178 participants (88 women, 90 men). Participant inclusion criteria included U.S. citizenship, English literacy, and being 18 years or older. The majority of participants ($n = 137$; 77%) were Caucasian, followed by Hispanic ($n = 15$), East Asian ($n = 12$), African American ($n = 7$), South Asian ($n = 2$), Aboriginal ($n = 2$), and other ($n = 3$). The mean age was 35.94 ($SD = 11.76$), with a range of 18 to 78. A gendered comparison of demographic characteristics is represented in Table 1.

Table 1
Comparison of Men and Women Demographic Characteristics

| Characteristic | Men ($n = 90$) | | Women ($n = 88$) | |
|--------------------------|---------------------|-----------|-----------------------|-----------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| Age | 36.92 | 12.25 | 34.99 | 11.26 |
| | <i>N</i> | % | <i>n</i> | % |
| Race/Ethnicity | | | | |
| White/Caucasian | 67 | 74.4 | 70 | 79 |
| Black/African American | 2 | 2.2 | 5 | 5.7 |
| Hispanic | 11 | 12.2 | 4 | 4.5 |
| South Asian | 1 | 1.1 | 1 | 1.1 |
| East Asian | 7 | 7.8 | 5 | 5.7 |
| Aboriginal/First Nations | 2 | 2.2 | - | - |
| Other | - | - | 3 | 3.4 |

Measures

Demographic Questionnaire. The demographic questionnaire included 3 items to assess: gender, age, and ethnicity.

Experiences in Close Relationships Scale (ECRS). The ECRS is a self-report measure of adult attachment consisting of 36 items that make up two subscales—attachment avoidance and attachment anxiety (Brennan et al., 1998). Participants are instructed to respond to each item in terms of how they generally experience romantic relationships, as opposed to their experience in a specific relationship or a current relationship (Brennan et al., 1998). Therefore, participants who are not currently in a romantic partnership are still able to complete this measure.

For the present study, we used the Attachment Avoidance subscale to assess participants' tendencies to emotionally distance themselves from interpersonal relationships (e.g., “I prefer not to show a partner how I feel deep down” and “Just when my partner starts to get close to me I find myself pulling away”) (Brennan et al., 1998). Participants rate their responses on a scale ranging from 1 (*strongly agree*) to 7 (*strongly disagree*) to determine how well each statement reflects their emotional experiences in romantic relationships (Brennan et al., 1998).

A high level of internal consistency for scores from the ECRS has been reported, with a coefficient alpha of .94 for the Avoidance subscale (Brennan et al., 1998). In the present sample, internal consistency (i.e., coefficient alpha) for the Avoidance subscale was .97 (see Table 2). Further supporting the validity of scores from the ECRS are findings that attachment avoidance is positively correlated with self-report measures of ambivalence and negatively correlated with measures of secure attachment (Brennan et al., 1998).

Distress Disclosure Index (DDI). A 12 item, unidimensional self-report measure, the DDI is designed to measure the general tendency to disclose personally distressing information

(Kahn et al., 2012). The DDI contains items that measure both disclosure behaviours (e.g., “When I feel upset, I usually confide in my friends”) and concealment behaviours (e.g., “I prefer not to talk about my problems”).

Participants rate how much they agree or disagree with each item on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) (Kahn et al., 2012). Participants’ answers to the 12 items are summed, with 6 items requiring reverse scoring. Higher scores reflect a higher tendency to disclose distress, whereas lower scores indicate a greater pattern of distress concealment (Kahn & Hessling, 2001).

A review of published reliability coefficients, 38 of which were internal consistency coefficients and 5 of which were test-retest reliability coefficients, were analyzed to objectively assess the reliability of the DDI (Kahn et al., 2012). This reliability generalization analysis resulted in a mean of .92 for internal consistency and a mean of .80 for test-retest reliability (Kahn et al., 2012). In the present sample, internal consistency (i.e., coefficient alpha) for the total score was .95 (see Table 2).

Toronto Alexithymia Scale – 20 (TAS – 20). The TAS – 20 is a 20 item self-report measure comprised of three subscales—difficulty identifying feelings, difficulty describing feelings, and externally-oriented thinking (Parker, Taylor, & Bagby, 2003). The TAS – 20 is the most widely used measure of alexithymia. Validation studies have been conducted with both university populations and psychiatric patients, resulting in coefficient alphas ranging from .73 - .84. Construct validity of the TAS – 20 was further evidenced by studies that show theoretically meaningful scale convergences and divergences with measures of closely related constructs (e.g., emotional self-awareness and empathy) and unrelated constructs (e.g., agreeableness and excitement seeking).

Each item on the TAS – 20 is rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) (Parker et al., 2003). Five items are negatively keyed. The *Difficulty Identifying Feelings* subscale, consisting of seven items, assesses the ability to identify feelings and to distinguish them from the somatic sensations that accompany emotional arousal (e.g., “I am often confused about what emotion I am feeling”). The *Difficulty Describing Feelings* subscale assesses the ability to describe feelings to other people and consists of five items (e.g., “It is difficult for me to reveal my innermost feelings, even to close friends”). The *Externally-Oriented Thinking* subscale, consisting of eight items, assesses externally oriented thinking, an inclination to focus on external rather than internal events and experiences (e.g., “I prefer to analyze problems rather than just describe them”) (Taylor & Bagby, 2000). In the present sample, internal consistency (i.e., coefficient alpha) for the total score was .90 (see Table 2).

Overview of Procedure

Prior to collecting the bulk of the data used for the current study, we ran two trials on MTurk where we collected data from a total of 12 participants, 6 men and 6 women. These trials were conducted to determine the speed at which our Human Intelligence Task (HIT) would be completed, the results of which would determine the effective hourly wage for our HIT. From these trials, we determined that the average time for completion was approximately 9 minutes. Recent research on the behaviour of MTurk workers suggests that an effective hourly wage is \$4.80 USD, but that wages higher than this can act as an incentive resulting in improved quality of work and faster data collection (Chilton et al., 2010). Based on these findings we offered workers \$1.50USD for completing our survey, which resulted in an hourly wage of \$10.00.

Two HITs were posted on MTurk, one for female participants and one for male participants. The recruitment advertisement indicated the nature of our study (i.e., an academic

survey about relationships and emotional disclosure), the study's inclusion criteria, information about the remuneration provided for participation in the study, and instructions for receiving credit for completion of the survey (see Appendix F).

To ensure participants met the criteria for participation, and for quality assurance purposes, we added qualifications to our HIT. We added qualifications that limited participation to residents of the United States and to those MTurk workers who had been granted with Masters qualification status. MTurk Masters are Workers who have demonstrated accuracy on specific types of HITs on the Mechanical Turk marketplace. Workers achieve a Masters distinction by consistently completing HITs of a certain type with a high degree of accuracy across a variety of requesters.

When our request was selected by an MTurk worker, they were redirected to our survey which was created with FluidSurveys, a Canadian-hosted web survey tool. Each participant was provided with the terms and conditions of the study, which included a brief overview of the study, instructions for participation, an indication of the remuneration they would receive for participating, and contact information for the investigators (see Appendix E). After providing informed consent, MTurk workers completed two validity questions designed to discourage spammers and bots (Mason & Suri, 2012). A simple mathematical question and a question pertaining to the location where the survey was being completed were chosen based on the criteria that they required human knowledge and had verifiable answers that could be used to vet the submitted work. Following completion of the validity questions, participants completed the ECRS, DDI, TAS-20, and demographic questions (see Appendix A-D). Upon completion of the survey, MTurk Workers were provided with a code to enter on the MTurk Request page. Upon approval of their work, they were provided payment.

Data Analysis

To assess the mediation effects of alexithymia on the relation between avoidant attachment and emotional disclosure Preacher and Hayes' (2008) bootstrapping method was used. Bootstrapping is a non-parametric resampling method that generates an estimate of the indirect effect of a variable by taking a sample (with replacement) from the full data set and calculating the indirect effects in the resamples. Indirect effects are considered statistically significant if the upper and lower 95% confidence intervals do not straddle zero. To address the non-normality of the indirect effect's sampling distribution, this method bootstraps the sampling distribution to facilitate the distribution's normality. Presently, we bootstrapped this distribution 10,000 times.

To assess moderation effects of gender on the relation between avoidant attachment and alexithymia linear multiple regression analysis was used.

A single moderated mediation analysis was conducted using the PROCESS macro (Hayes, 2013) in SPSS version 23.0.

CHAPTER III

RESULTS

Preliminary Analyses

Data from 183 participants were screened for missingness, and five participants were removed from the data set due to significant missing information (>50%) which rendered their questionnaires invalid. Next, we examined skewness and kurtosis via both visual inspection of univariate histograms and skewness and kurtosis statistics. Normality was observed for all scales and all subscales.

Primary Hypothesis: Alexithymia Mediates the Relation between Attachment Avoidance and Emotional Disclosure

We began by examining how attachment avoidance related to general distress disclosure tendencies. Based on findings from previous research studies, we expected that attachment avoidance would be negatively correlated to emotional disclosure. This hypothesis was supported with attachment avoidance showing a significant negative correlation to emotional disclosure ($r(176) = -.590, p < .001$) (see Table 2).

Next we examined the relation between alexithymia and emotional disclosure. Based on findings from previous research that persons high in alexithymia demonstrate reduced verbal expressiveness, both for positive and negative emotions (Wagner & Lee, 2007), and tend to have strict privacy orientations (Hesse & Rauscher, 2013), we predicted that alexithymia and emotional disclosure would be negatively correlated. This prediction was supported by the data which showed a significant negative correlation between alexithymia and emotional disclosure ($r(176) = -.520, p < .0001$) (see Table 2).

Based on empirical evidence that alexithymia emerges secondarily as a consequence of attachment avoidance (e.g. Montebanocci et al., 2004; Taylor & Bagby, 2004; Triosi et al., 2001), we expected that attachment avoidance and alexithymia would be correlated. The present data supported this expectation, showing a significant correlation between attachment avoidance and alexithymia ($r(176) = -.616, p < .0001$) (see Table 2).

Table 2
Bivariate Correlations, Descriptive Statistics, and Coefficient Alphas for Primary Variables

| Variable | 1 | 2 | 3 | α | <i>M</i> | <i>SD</i> |
|------------------------------|---------|---------|---|----------|----------|-----------|
| 1. ECRS Attachment Avoidance | — | | | .97 | 2.73 | 1.32 |
| 2. DDI Total | -.59*** | — | | .95 | 38.42 | 12.51 |
| 3. TAS-20 Total | .62*** | -.52*** | — | .90 | 43.52 | 12.73 |

Note. ECRS = Experience with Close Relationships Scale; DDI = Distress Disclosure Index; TAS-20 = Toronto Alexithymia Scale 20

* $p < .05$, ** $p < .01$., *** $p < .001$

Next, alexithymia was tested as a mediator between attachment avoidance and emotional disclosure. We hypothesized that attachment avoidance would indirectly effect emotional disclosure through the mediating variable of alexithymia. As Figure 2 illustrates, there was a significant indirect effect of attachment avoidance on emotional disclosure through alexithymia. The standardized regression coefficient between attachment avoidance and alexithymia was statistically significant ($b = .606, t(176) = 10.4, p < .001$), as was the unstandardized regression coefficient between alexithymia and emotional disclosure ($b = -.243, t(175) = -3.24, p < .001$). The bootstrapped standardized indirect effect was $-.149$ and the 95% confidence interval ranged from $-.259$ to $-.0590$. Thus, the indirect effect was statistically significant. Next we calculated the percent mediation (P_m) which showed that alexithymia could account for 25% of the total effect of attachment avoidance on emotional disclosure.

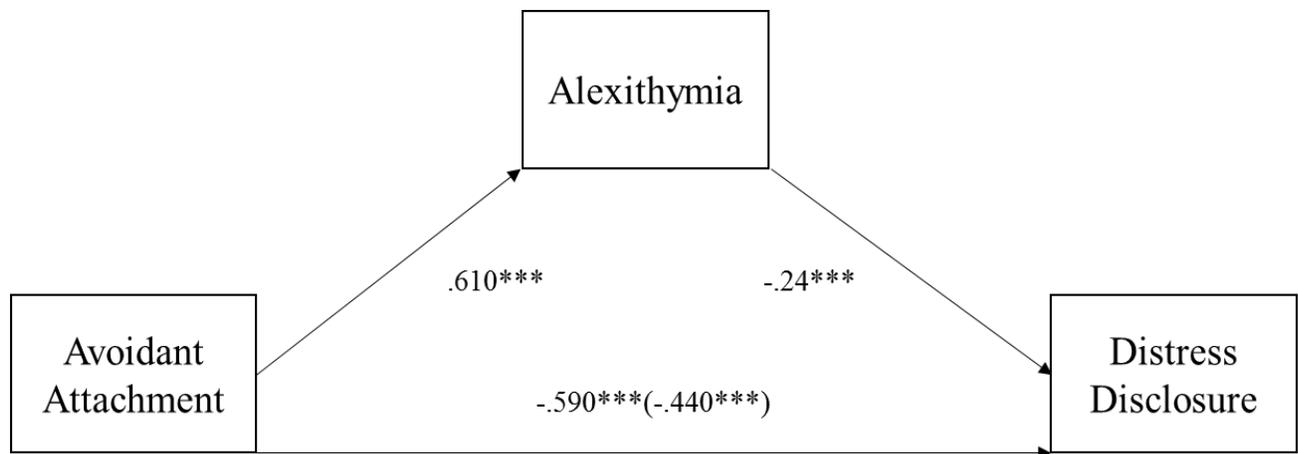


Figure 2: Standardized regression coefficients for the relationship between attachment avoidance and emotional disclosure mediated by alexithymia. The standardized regression coefficient between attachment avoidance and emotional disclosure, controlling for alexithymia, is in parentheses.

* $p < .05$, ** $p < .01$, *** $p < .001$

Secondary Hypothesis: Gender Moderates the Relation between Attachment Avoidance and Alexithymia

To better understand how gender contributes to emotional disclosure tendencies, we hypothesized that gender would moderate the relation between attachment avoidance and alexithymia. As Figures 3 and 4 illustrate, the relation between attachment avoidance and alexithymia was stronger for men compared to women. To assess possible gender differences in the relation between attachment avoidance and alexithymia, a regression analysis was performed to predict alexithymia from attachment avoidance and gender (dummy coded 0 = females, 1 = males). The overall regression was statistically significant and explained a large proportion of the variance in alexithymia ($R^2 = .403$, $F(3,174) = 39.09$, $p < .001$). The standardized regression coefficient between attachment and alexithymia was more significant for men ($b = .762$, $t(174) = 9.38$, $p < .001$) compared to women ($b = .458$, $t(174) = 5.39$, $p < .001$). The interaction between gender and attachment avoidance was statistically significant, with $b = .304$, $t(174) = 2.60$, $p = .011$ (see Figure 3 & 4).

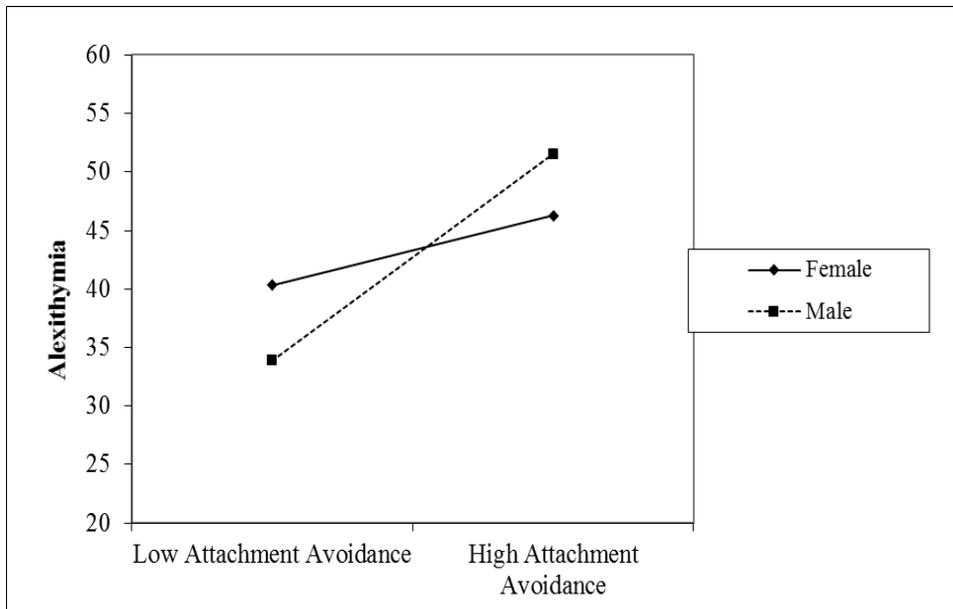


Figure 3. Simple slopes of attachment avoidance predicting alexithymia for male and female participants.

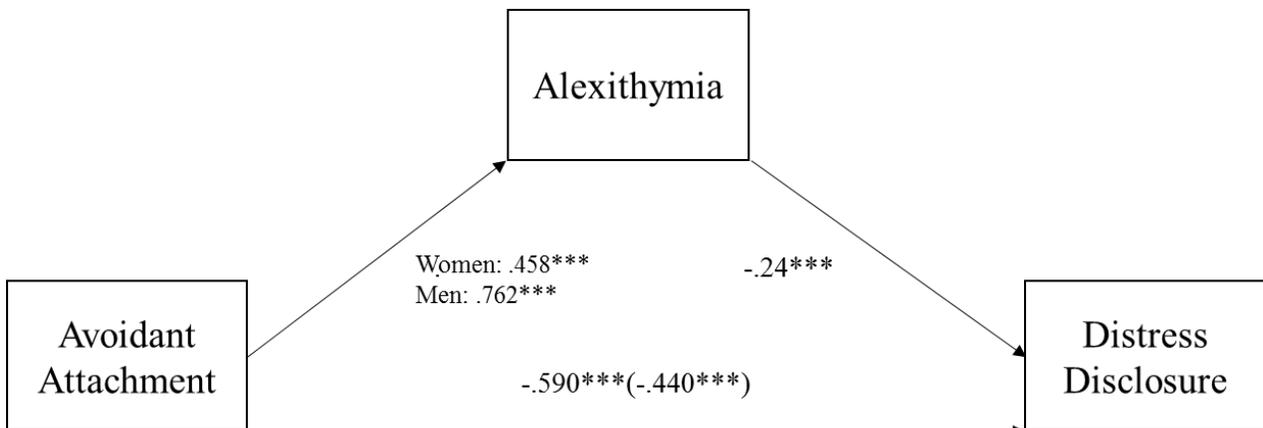


Figure 4: Standardized regression coefficients for the relationship between attachment avoidance and emotional disclosure mediated by alexithymia. The standardized regression coefficient between attachment avoidance and emotional disclosure, controlling for alexithymia, is in parentheses.

* $p < .05$, ** $p < .01$, *** $p < .001$

CHAPTER IV

DISCUSSION

In this final section, I will provide a discussion of the primary findings of this study. We will begin with a review of the study's major findings and provide an explanation for these results. Next, we will summarize the theoretical and clinical implications of these research findings. Finally, we will note the limitations of this study, pose ideas for future research on attachment, gender, alexithymia and emotional disclosure, and discuss the next steps involved in this project.

Major Findings

The primary aim of this study was to determine the extent to which alexithymia mediates the relation between attachment avoidance and emotional disclosure. Additionally, we wanted to examine whether gender would moderate the relation between attachment avoidance and alexithymia.

We will begin by reviewing findings as they relate to general disclosure tendencies as predicted by attachment avoidance. Next, we will review findings related to the indirect effect of attachment avoidance on emotional disclosure through alexithymia. Finally, we will discuss findings related to the moderating effect of gender on the relation between attachment avoidance and alexithymia.

Attachment Avoidance and Emotional Disclosure. Based on findings from several previous studies (e.g. Anders & Tucker, 2000; Garrison et al., 2012; Grabill & Kerns, 2000; Mikulincer & Nachshon, 1991; Pistole, 1993; Wei, Russell, Mallinckrodt, & Vogel, 2007; Wei, Russell, & Zakalik, 2005) we hypothesized that attachment avoidance and emotional disclosure

would be negatively correlated. Consistent with previous studies, this hypothesis was supported by the current data.

From an attachment perspective, this finding reflects the lasting effect of formative experiences wherein distress was exacerbated by unsuccessful attempts to depend on others (i.e., attachment figures). As per these experience, attachment behaviours, including emotional disclosure, begin to be seen as futile and ineffective. Moreover, with frequent experiences of having attachment requests rebuffed, attachment behaviours may begin to be associated with distress. As a result, they may become more inclined to refuse to depend on others, opting instead for self-reliance techniques (i.e. concealment) and deactivating strategies (i.e. emotional suppression), which may be perceived as safer.

Attachment Avoidance, Alexithymia, and Emotional Disclosure. In our primary hypothesis, we proposed a model in which alexithymia would mediate, or account for the relation between attachment avoidance and emotional disclosure. Overall, results of this study provided support for our hypothesis indicating that attachment avoidance indirectly effects emotional disclosure through alexithymia.

This finding suggests that alexithymia explains, in part, the process or mechanism by which attachment avoidance impacts emotional disclosure. The relation found between attachment avoidance and alexithymia may reflect a lasting consequence acquired as a result of being raised in an environment unconducive to feeling physically or emotionally secure, and in which emotional expression is discouraged. It may be that due to emotional suppression, or a lack of received empathy, the ability to identify and describe feelings became increasingly impaired, ultimately leading to the hallmark characteristics of alexithymia (i.e. difficulty identifying one's feelings, difficulty differentiating emotion from physiological states, difficulty

distinguishing among emotions, and difficulty verbally communicating feelings). Although not studied directly, it is possible that the significant positive relation found between attachment avoidance and alexithymia is due to the shared utilization of deactivation strategies as a means of emotion regulation.

As expected, our model indicated a significant negative relation between alexithymia and emotional disclosure. The latter result is consistent with several previous research studies (e.g., Lee & Wagner, 2007) and likely reflects the fact that those higher in alexithymia are unable to communicate emotions effectively due to an emotional processing deficiency which effectively limits their ability to identify emotions (Hesse & Rauscher, 2013). Though not directly studied, this result may also be explained by the fact that those higher in alexithymic traits have stricter privacy orientations which cause them to disclose less and conceal more.

Attachment Avoidance, Gender, and Alexithymia. To better understand gender differences in emotional disclosure tendencies we were interested to learn more about whether gender would moderate the relation between attachment avoidance and alexithymia. More specifically, we hypothesized that the relation between attachment avoidance and alexithymia would be stronger for men than it would be for women. This hypothesis was supported by the present data.

This result indicates that alexithymia is more likely to be experienced concurrently with attachment avoidance for men compared to women. The operation of gender within the relation between attachment avoidance and alexithymia may best be explained from a gender role socialization perspective that emphasizes the role of social expectations in the development of one's gendered identity.

Because Western cultural norms are more permissive of female bodied people disclosing their emotions, there may be more opportunities and positive reinforcement available for girls to learn the language of emotion outside of their primary attachment relationships. As a result, they may begin to learn to identify their own emotions, and thereby gain the ability to describe them. Thus, despite not being reared in environments in which they feel physically or emotionally secure, or in which emotional expression is facilitated, corrective opportunities may present themselves readily for girls at school or via other social interactions that take place outside the home. In this way, for girls, the negative impact of insecure parent and child relationships on emotional articulation and emotion-regulation skills may be circumvented, resulting in lower levels of alexithymia.

Alternatively, for boys, there may be less opportunity outside the home to learn how to identify and describe their feelings as emotional disclosure, in a Western context, is less permissive for male bodied people. Thus, over time, the vocabulary needed to describe feelings becomes less a part of one's vernacular and the cognitive ability to identify affect is decreased. As a result, it may be more likely for men with attachment avoidance to display the hallmark characteristics of alexithymia.

Implications for Theory

The results of this study add to the existing literature on emotional disclosure by examining individual difference variables that influence distress disclosure.

Attachment Avoidance, Alexithymia, and Emotional Disclosure. The finding that attachment avoidance influences emotional disclosure through alexithymia indicates that the relation between attachment avoidance and emotional disclosure may not be as simple or direct as observed in previous studies (Anders & Tucker, 2000; Gabriell & Kerns, 2000; Garrison et al.,

2012; Mikulincer & Nachson, 1991; Wei et al., 2005, Wei et al., 2007). In other words, results of this study suggests that the heightened potential for the development of alexithymia in persons who demonstrate attachment avoidance is responsible, in part, for the previously established negative relation between attachment avoidance and emotional disclosure.

Attachment Avoidance and Alexithymia. The significant relation between attachment avoidance and alexithymia demonstrated by our model garners support for notion that alexithymia may develop secondarily to attachment avoidance (see Taylor & Bagby, 2004). While the data analyzed for this study are cross sectional, and thus cannot determine the causal direction of the relations examined, we are assuming causal direction based on theory that suggests attachment orientations are most influenced by experiences that occur in the first few years of life (Bowlby, 1988), whereas alexithymia is thought to occur as a result of a longer process of socialization (Levant et al., 2009). Thus, it is theoretically supported that avoidance attachment precedes alexithymia. Results of this study then, provide further theoretical support for the notion that emotional articulation and effective emotion-regulation skills are more likely to develop in the context of secure attachment relationships (Taylor & Bagby, 2013).

Attachment Avoidance, Gender, and Alexithymia. The novel finding that gender moderates the relation between attachment avoidance and alexithymia extends the small body of literature of the relation between attachment and alexithymia by examining the operation of an individual difference variable. This finding supports the Normative Male Alexithymia hypothesis proposed by Levant (1992) and the theory that gender role socialization processes are an important factor in the development of alexithymia.

This finding also has important implications for the field of gender studies in which findings pertaining to the relation between gender and emotional disclosure have been

inconsistent. Our finding, that the relation between attachment avoidance and alexithymia is stronger for men compared to women, indicates that masculinity ideology has not become as permissive, at least in relation to emotional disclosure, as some theorists have suggested (e.g., Anderson, 2010). Importantly, the assertion that the hegemonic form of masculinity is becoming more permissive and inclusive is largely based on studies involving adolescent participants. Being that the mean age of the sample for this study was approximately 36, it is possible that gender would not significantly moderate the relation between attachment avoidance and alexithymia were a younger sample was surveyed.

Implications for Clinical Practice

Attachment Avoidance, Alexithymia, and Emotional Disclosure. The finding that attachment avoidance negatively predicts distress disclosure through alexithymia has important implications for the practice of counselling psychology. This finding suggests that treatment of alexithymia may be an important intervention point for clients who are experiencing problems related to limited use of emotional disclosure. As discussed previously, these problems are often interpersonal in nature, but may also manifest in psychological and/or physiological imbalances (see Lumley, 2004). Moreover, as has been previously mentioned, emotional disclosure is a predictor of successful psychotherapeutic treatment (Kahn et al., 2012). Thus, for those clients who are unwilling or unable to express their affective experience in the counselling setting, treatments indicated for alexithymia may improve the efficacy of counselling by intervening in low emotional disclosure behaviours. Treatments indicated for alexithymia include those designed to increase the capacity to be more attentive to internal feeling states and others' feeling states such as Dialectical Behavior Therapy, Cognitive Mindfulness Training, and Short Term Interpersonal Therapy (Kennedy & Franklin, 2002).

Moreover, the indication that attachment avoidance and alexithymia are related suggests that when working with clients, particularly men, exhibiting high levels of alexithymia, assessment of attachment orientation may be an important element in therapy. This may provide important information as to the developmental process of alexithymia which can be used to inform intervention techniques.

Attachment Avoidance, Gender, and Alexithymia. The finding that the relation between attachment avoidance and alexithymia is stronger for men compared to women also has important implications for the practice of counselling psychology. First, for those counsellors working with male youth who display attachment avoidance, our findings indicate that therapeutic interventions focused on improving cognitive-emotional processing skills may prevent the development of alexithymia, and with it, several interpersonal, psychological, and physiological difficulties (see Lumley, 2004; Wagner & Lee, 2007 for review). While interventions of this nature may prove beneficial to female youth as well, our results indicate an increased benefit for male youth. Additionally, our results suggest that when working with male youth, integration of gender awareness techniques, such as those employed in feminist therapy (Kahn, 2011), that operate to bring attention to, and challenge, normative assumptions related to masculinity, may prove to be an important mechanism in the prevention of alexithymia.

While our findings emphasize the preventive potential for youth-based treatment, implications for working with adults exhibiting high levels of alexithymia are also apparent. The finding that the relation between attachment avoidance and alexithymia is significantly stronger for men compared to women, indicates that different treatment methods for alexithymia may be indicated based on the client's gender. From the gender role socialization perspective we used above to explain this finding, we posit that for men with high levels of alexithymia, treatments

designed to bring attention to and challenge masculinity ideology (e.g., gender role analysis), may be particularly effective, and perhaps even necessary, to fully treat alexithymia. By bringing awareness to gender in therapy, a male client facing struggles related to high level of alexithymia may become better able to understand the impact of societal expectations on his tendency to resist emotional disclosure. As a result, the development of cognitive and emotional processing skills, and eventual affective expression, are less likely to be hindered by continued adherence to masculinity ideology.

Limitations and Directions for Future Research

There are several limitations of this study that need to be considered. First, the sample, consisting of North American residents, the majority of who identified as Caucasian, lacked diversity. Moreover, this study did not control for or evaluate differences as they relate to culture, an important individual difference variable in disclosure tendencies. Future research in this area would benefit from having a more culturally diverse sample.

Due to the cross sectional design of this study, we were unable to determine the direction of the relations evaluated. Thus, future research of these phenomena would benefit from a longitudinal design.

By using measures of general disclosure tendencies, the precision of our measurements may have been negatively impacted by the effects of retrospection. Other researchers (e.g., Garrison & Kahn, 2010) have suggested the best approach to enhance the ecological validity of studies of these phenomena involve a daily diary design. This approach, wherein participants typically indicate the most distressing event experienced in a given day, the degree to which it impacted them, and the frequency with which they disclosed about it, is said to improve measurement precision by making it less difficult for participants to gauge how often they

engage in disclosure behaviours. Additionally, by examining disclosure tendencies on a daily basis, the role of the type and severity of the distressing event can be evaluated in relation to disclosure behaviours.

It is important to note that all measures used in this study were self-report measures, which are vulnerable to several types of response bias (e.g., acquiescence bias, extreme or moderate bias, social desirability bias, etc.). There is a particular concern when using a self-report measure to assess alexithymic personality traits, as alexithymia is a construct involving impairment in self-awareness. Thus, some researchers have expressed doubts as to whether a self-report measure can adequately assess alexithymia (e.g., Parker et al., 2003). The daily diary method described above may provide a more accurate assessment of disclosure tendencies for those high in alexithymia.

Moreover, this study aims to have not only theoretical implications, but also clinical implications. Given however, that the sample of this study is a non-clinical sample, conclusions related to disclosure tendencies within the counselling setting are speculative. Future research in this area would benefit from using a clinical sample.

Lastly, the use of MTurk for data collection poses some challenges and potential limitations. One such limitation is the lack of experimenter control over the environment in which participants complete their assigned measure. Distractions, such as music, background television, etc. may decrease the quality of the data (Litman, Robinson, & Rosenzweig, 2014). While this is less likely to occur during completion of short and straight-forward measures, such as the measures used in the present study, it is still a noteworthy consideration.

Future research on the relation between attachment avoidance and alexithymia may further benefit from evaluating the possible mediating role of deactivating strategies. This may

improve our understanding of the specific mechanisms through which attachment avoidance and alexithymia are related. Future research in this area may also benefit from a similar study conducted with a younger sample. This design may elucidate changes in gender ideologies and the impact of those changes on the development of alexithymia and disclosure tendencies for people exhibiting attachment avoidance.

Lastly, little remains known about the impact on affect following emotional disclosure for people with high levels of alexithymia. Given the inconsistent findings as to whether alexithymia attenuates the benefits of emotional disclosure seen in non-alexithymic samples, more research in this area is necessary.

Next Steps

Following completion of the present study, we intent to evaluate intraindividual differences (i.e., differences that emerge in one person over time or under different circumstances) as they relate to emotional disclosure tendencies. In addition we would like to examine whether alexithymia influences the impact of emotional disclosure on affect. These research goals will be achieved via analysis of secondary data collected during the data collection portion of the present study.

Of the 178 participants who made up the sample of the present study, 96 also completed a minimum of 3 entries of daily diary measure. Following completion of their baseline measures, participants were asked to complete an on-line questionnaire for 7 consecutive days. Items on the questionnaire were drawn from items used by Garrison and Kahn (2010) on a study examining intraindividual differences in emotional disclosure. Each night, participants were instructed to consider the most significant unpleasant event that was experienced that day and to

provide a brief description of it. Participants were then asked to indicate, on a 5-point scale ranging from 1 (*very slightly or not at all*) to 5 (*extremely*), the degree to which the event was emotionally distressing. Participants were additionally asked to assess the degree to which (a) they shared information about the distressing event and (b) they shared their feelings about the distressing event. Following each daily diary entry, participants were asked to complete the Positive and Negative Affect Schedule (PANAS) daily to examine how emotional disclosure influences affect. See Figure 4 for a conceptual diagram.

Data will be analyzed using Hierarchical Linear Modeling (HLM). The following research questions will be evaluated: (a) How does severity of distress influence disclosure tendencies for people high in alexithymia? (b) Does alexithymia attenuate the benefits of emotional disclosure on affect? (see Fig. 5).

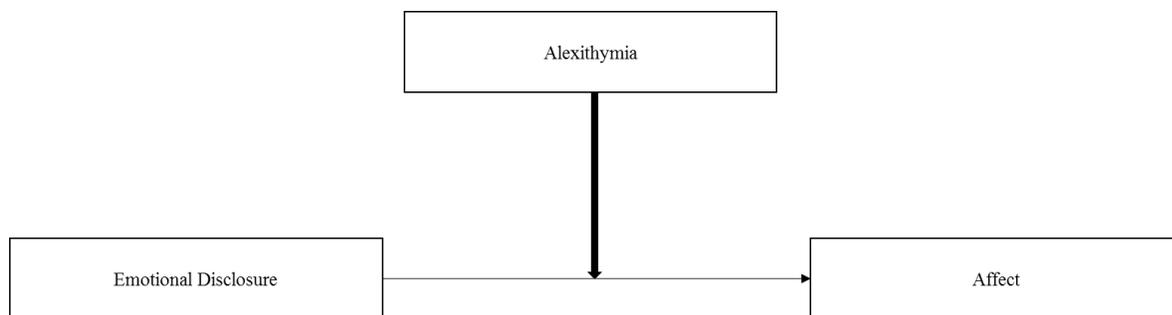


Figure 5. Conceptual diagram of the relation between emotional disclosure and affect moderated by alexithymia.

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Appendix A
Demographic Questionnaires

A 1. Please identify a unique nickname: _____

A 1. Today's Date: ___ ___ / ___ ___ / ___ ___
 D D M M Y Y

A 2. Your Age: _____ years

A 3. Your Gender Assignment at Birth: 1. Male 2. Female

A 4. Racial/Ethnic Background (circle one):

1. Aboriginal/First Nations
2. South Asian
3. East Asian
4. Middle Eastern
5. Black
6. Hispanic
7. White
8. Other: _____

A8. What is the answer to the following question $2 + 6 =$ _____

A9. From what state are you filling out this survey? _____

Appendix B

Experience with Close Relationships Scale

The statements below concern how you feel in emotionally intimate relationships. We are interested in how you *generally* experience relationships, not just in what is happening in a current relationship. Respond to each statement by indicating on a scale of 1-7 how much you agree or disagree with the statement.

1-----2-----3-----4-----5-----6-----7

| | | | | | | |
|------------------------------|------------------------------|-----------------|---|---------------------------|--------------|---------------------------|
| Strongly Disagree | Disagree Somewhat | Disagree | Neither Agree nor Disagree | Agree Somewhat | Agree | Strongly Agree |
|------------------------------|------------------------------|-----------------|---|---------------------------|--------------|---------------------------|

| | | |
|----------|--|---------------------------|
| ECRS 1. | I'm afraid that I will lose my partner's love. | 1 - 2 - 3 - 4 - 5 - 6 - 7 |
| ECRS 2. | I often worry that my partner will not want to stay with me. | 1 - 2 - 3 - 4 - 5 - 6 - 7 |
| ECRS 3. | I often worry that my partner doesn't really love me. | 1 - 2 - 3 - 4 - 5 - 6 - 7 |
| ECRS 4. | I worry that romantic partners won't care about me as much as I care about them. | 1 - 2 - 3 - 4 - 5 - 6 - 7 |
| ECRS 5. | I often wish that my partner's feelings for me were as strong as my feelings for him or her. | 1 - 2 - 3 - 4 - 5 - 6 - 7 |
| ECRS 6. | I worry a lot about my relationships. | 1 - 2 - 3 - 4 - 5 - 6 - 7 |
| ECRS 7. | When my partner is out of sight, I worry that he or she might become interested in someone else. | 1 - 2 - 3 - 4 - 5 - 6 - 7 |
| ECRS 8. | When I show my feelings for romantic partners, I'm afraid they will not feel the same about me. | 1 - 2 - 3 - 4 - 5 - 6 - 7 |
| ECRS 9. | I rarely worry about my partner leaving me. | 1 - 2 - 3 - 4 - 5 - 6 - 7 |
| ECRS 10. | My romantic partner makes me doubt myself. . | 1 - 2 - 3 - 4 - 5 - 6 - 7 |
| ECRS 11. | I do not often worry about being abandoned. | 1 - 2 - 3 - 4 - 5 - 6 - 7 |
| ECRS 12. | I find that my partner(s) don't want to get as close as I would like. | 1 - 2 - 3 - 4 - 5 - 6 - 7 |
| ECRS 13. | Sometimes romantic partners change their feelings about me for no apparent reason. | 1 - 2 - 3 - 4 - 5 - 6 - 7 |
| ECRS 14. | My desire to be very close sometimes scares people away. | 1 - 2 - 3 - 4 - 5 - 6 - 7 |
| ECRS 15. | I'm afraid that once a romantic partner gets to know me, he or she won't like who I really am. | 1 - 2 - 3 - 4 - 5 - 6 - 7 |
| ECRS 16. | It makes me mad that I don't get the affection and support I need | 1 - 2 - 3 - 4 - 5 - 6 - 7 |

from my partner.

| | |
|---|--------------------------|
| ECRS 17. I worry that I won't measure up to other people. | 1 - 2 - 3 - 4 - 5 - 6 -7 |
| ECRS 18. My partner only seems to notice me when I'm angry. | 1 - 2 - 3 - 4 - 5 - 6 -7 |
| ECRS 19. I prefer not to show a partner how I feel deep down. | 1 - 2 - 3 - 4 - 5 - 6 -7 |
| ECRS 20. I feel comfortable sharing my private thoughts and feelings with my partner. | 1 - 2 - 3 - 4 - 5 - 6 -7 |
| ECRS 21. I find it difficult to allow myself to depend on romantic partners. | 1 - 2 - 3 - 4 - 5 - 6 -7 |
| ECRS 22. I am very comfortable being close to romantic partners. | 1 - 2 - 3 - 4 - 5 - 6 -7 |
| ECRS 23. I don't feel comfortable opening up to romantic partners. | 1 - 2 - 3 - 4 - 5 - 6 -7 |
| ECRS 24. I prefer not to be too close to romantic partners. | 1 - 2 - 3 - 4 - 5 - 6 -7 |
| ECRS 25. I get uncomfortable when a romantic partner wants to be very close. | 1 - 2 - 3 - 4 - 5 - 6 -7 |
| ECRS 26. I find it relatively easy to get close to my partner. | 1 - 2 - 3 - 4 - 5 - 6 -7 |
| ECRS 27. It's not difficult for me to get close to my partner. | 1 - 2 - 3 - 4 - 5 - 6 -7 |
| ECRS 28. I usually discuss my problems and concerns with my partner. | 1 - 2 - 3 - 4 - 5 - 6 -7 |
| ECRS 29. It helps to turn to my romantic partner in times of need. | 1 - 2 - 3 - 4 - 5 - 6 -7 |
| ECRS 30. I tell my partner just about everything. | 1 - 2 - 3 - 4 - 5 - 6 -7 |
| ECRS 31. I talk things over with my partner. | 1 - 2 - 3 - 4 - 5 - 6 -7 |
| ECRS 32. I am nervous when partners get too close to me. | 1 - 2 - 3 - 4 - 5 - 6 -7 |
| ECRS 33. I feel comfortable depending on romantic partners. | 1 - 2 - 3 - 4 - 5 - 6 -7 |
| ECRS 34. I find it easy to depend on romantic partners. | 1 - 2 - 3 - 4 - 5 - 6 -7 |
| ECRS 35. It's easy for me to be affectionate with my partner. | 1 - 2 - 3 - 4 - 5 - 6 -7 |
| ECRS 36. My partner really understands me and my needs. | 1 - 2 - 3 - 4 - 5 - 6 -7 |

Appendix C
Distress Disclosure Index

Please read each of the following items carefully. Indicate the extent to which you agree or disagree with each item according to the rating scale below:

1-----2-----3-----4-----5

**Strongly Disagree Disagree Neither Agree
Nor Disagree Agree Strongly Agree**

| | | |
|---------|--|-------------------|
| DDI 1. | When I feel upset, I usually confide in my friends. | 1 – 2 – 3 – 4 – 5 |
| DDI 2. | I prefer not to talk about my problems. | 1 – 2 – 3 – 4 – 5 |
| DDI 3. | When something happens to me, I often look for someone to talk to. | 1 – 2 – 3 – 4 – 5 |
| DDI 4. | I typically don't discuss things that upset me. | 1 – 2 – 3 – 4 – 5 |
| DDI 5. | When I feel depressed or sad, I tend to keep those feelings to myself. | 1 – 2 – 3 – 4 – 5 |
| DDI 6. | I try to find people to talk with about my problems. | 1 – 2 – 3 – 4 – 5 |
| DDI 7. | When I am in a bad mood, I talk about it with my friends. | 1 – 2 – 3 – 4 – 5 |
| DDI 8. | If I have a bad day, the last thing I want to do is talk about it. | 1 – 2 – 3 – 4 – 5 |
| DDI 9. | I rarely look for people to talk with when I am having a problem. | 1 – 2 – 3 – 4 – 5 |
| DDI 10. | When I'm distressed I don't tell anyone. | 1 – 2 – 3 – 4 – 5 |
| DDI 11. | I usually seek out someone to talk to when I am in a bad mood. | 1 – 2 – 3 – 4 – 5 |
| DDI 12. | I am willing to tell others my distressing thoughts. | 1 – 2 – 3 – 4 – 5 |

Appendix D

Toronto Alexithymia Scale – 20

Please read each of the following items carefully. Indicate the extent to which you agree or disagree with each item according to the rating scale below:

1-----2-----3-----4-----5

| | Strongly Disagree | Disagree | Neither Agree | Agree | Strongly Agree |
|---------|--|-----------------|----------------------|--------------|-----------------------|
| TAS 1. | I am often confused about what emotion I am feeling. | | | | 1 – 2 – 3 – 4 – 5 |
| TAS 2. | It is difficult for me to find the right words for my feelings. | | | | 1 – 2 – 3 – 4 – 5 |
| TAS 3. | I have physical sensations that even doctors don't understand. | | | | 1 – 2 – 3 – 4 – 5 |
| TAS 4. | I am able to describe my feelings easily. | | | | 1 – 2 – 3 – 4 – 5 |
| TAS 5. | I prefer to analyze problems rather than just describe them. | | | | 1 – 2 – 3 – 4 – 5 |
| TAS 6. | When I am upset, I don't know if I am sad, frightened, or angry. | | | | 1 – 2 – 3 – 4 – 5 |
| TAS 7. | I am often puzzled by sensations in my body. | | | | 1 – 2 – 3 – 4 – 5 |
| TAS 8. | I prefer to just let things happen rather than to understand why they turned out that way. | | | | 1 – 2 – 3 – 4 – 5 |
| TAS 9. | I have feelings that I can't quite identify. | | | | 1 – 2 – 3 – 4 – 5 |
| TAS 10. | Being in touch with emotions is essential. | | | | 1 – 2 – 3 – 4 – 5 |
| TAS 11. | I find it hard to describe how I feel about people. | | | | 1 – 2 – 3 – 4 – 5 |
| TAS 12. | People tell me to describe my feelings more. | | | | 1 – 2 – 3 – 4 – 5 |
| TAS 13. | I don't know what's going on inside me. | | | | 1 – 2 – 3 – 4 – 5 |
| TAS 14. | I often don't know why I am angry. | | | | 1 – 2 – 3 – 4 – 5 |
| TAS 15. | I prefer talking to people about their daily activities rather than their feelings. | | | | 1 – 2 – 3 – 4 – 5 |
| TAS 16. | I prefer to watch "light" entertainment shows rather than psychological dramas. | | | | 1 – 2 – 3 – 4 – 5 |
| TAS 17. | It is difficult for me to reveal my innermost feelings, even to close friends. | | | | 1 – 2 – 3 – 4 – 5 |
| TAS 18. | I can feel close to someone, even in moments of silence. | | | | 1 – 2 – 3 – 4 – 5 |
| TAS 19. | I find examination of my feelings useful in solving personal problems. | | | | 1 – 2 – 3 – 4 – 5 |

TAS 20. Looking for hidden meanings in movies or plays distracts from their enjoyment.

1 - 2 - 3 - 4 - 5

Appendix E

Terms and Conditions

Principal Investigator

Dr. Daniel Cox, Department of Educational and Counselling Psychology, the University of British Columbia.

Co-Investigator

Julia O’Loughlin, M.A. student of Counselling Psychology in the department of Educational and Counselling Psychology, and Special Education at the University of British Columbia. This research is being conducted as part of Julia’s graduate thesis. Upon completion, the thesis will be made a public document.

Purpose

The purpose of this study is to examine how individual difference variables impact one’s willingness or ability to verbally communicate emotional experiences. Specifically, gender, attachment orientation and alexithymia (a personality trait) will be examined in relation to emotional disclosure. Your participation in the survey will contribute to a better understanding of the processes involved in emotional disclosure, an important element of the counselling process.

Funding

This study is being funded in part, by the University of British Columbia’s Office of Graduate Programs and Research (OGPR).

Study Procedures

Participants in this study will be asked to complete a set of questionnaires. We estimate that it will take a maximum of 30 minutes of your time to complete this task.

Potential Risks and Benefits or Participation in this Study

While this study is considered to carry with it no more than minimal risk, one potential risk is that a participant might become distressed or feel discomfort about revealing information about psychological symptoms while completing questionnaires. Should this occur, please contact the principal investigator or co-investigator to discuss a referral for counselling.

Significant research suggests when people write about emotional experiences, as participants in this study will be doing in the daily diary portion of the current study, physical and mental health improvements follow. Thus, participants may benefit in this way as a result of their participation in this study.

Additionally, participants will be provided with a monetary honorarium.

Confidentiality

Any identifying information will be kept strictly confidential. All documents will be identified only by a code number and kept in a password protected, encrypted computer file. Subjects will not be identified by name in any reports of the completed study.

Remuneration/Compensation

In order to defray the costs of the time you spend completing questionnaires for this study, each participant will be receive an honorarium in the amount of \$1.50 USD.

If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or if long distance e-mail RSIL@ors.ubc.ca or call toll free 1-877-822-8598. Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without any consequence.

I agree

Appendix F

Mechanical Turk Recruitment Advertisement

We are conducting an academic survey about relationships and emotional disclosure. This HIT is part one of a two part project. **To participate in this study, you must be female (male), 18 years or older, and a U.S. resident.** Select the link below to complete the survey. At the end of the survey, you will receive a code to paste into the box below to receive credit for taking our survey. At the end of the survey, you will also receive information about the second HIT related to this study which is a short questionnaire that we request you fill out once daily for 7 consecutive days. You will be paid an additional \$1.75USD once all 7 questionnaires are received. **Please do not select this HIT if you have already participated in this study.**

Make sure to leave this window open as you complete the survey. When you are finished, you will return to this page to paste the code into the box.