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Affection mediates the impact of alexithymia on relationships

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ABSTRACT

Previous research has shown alexithymia leading to a deficit in the ability of an individual to build and maintain relationships. Using the tenets of Affection Exchange Theory, the current study hypothesized a mediating role of trait affection in the relationship between alexithymia and both attachment behavior (specifically, anxious/avoidant and the need for intimacy) and an individual's self-reported number of close relationships. Participants ($N = 921$) filled out self-report measures of all variables, and the hypotheses were tested using a path analysis. Findings largely supported the predictions, with affection partially mediating the relationship between alexithymia and anxious/avoidant attachment and fully mediating the relationship between alexithymia and the need for intimacy and the number of close relationships. One sex interaction was also found, with the relationship between alexithymia and the need for intimacy becoming significantly stronger for women than for men. Implications and directions for future research are explored.

1. Introduction

Sifneos (1973), after noticing several individuals who seemed unconcerned with emotional discourse during therapy, highlighted the construct of alexithymia, which simply means a lack of words for emotions. The term describes individuals who (1) are unable to understand and process emotion; (2) are unable to communicate their emotions to others; and (3) process events and behaviors externally, due to the inability to understand internal motivations (Taylor, Bagby, & Parker, 1997). These individuals are generally not expressive, showing little outside emotional communication, and are uncomfortable discussing feelings and cognitive mechanisms. Alexithymic individuals find it more difficult than non-alexithymic individuals to even make lexical decisions in communicating emotions (Suslow & Junghaans, 2002). One study found an inverse relationship in the amount of nonverbal expressiveness (e.g. yawning, self-grooming, fumbling, and closing the eyes) for individuals during a psychiatric interview and alexithymia, with a positive relationship between alexithymia and individual behaviors indicating avoidance, anxiety, and tension (Troisi et al., 1996). Other research has found a deficit in empathy in alexithymic individuals compared to non-alexithymics (e.g. Moriguchi et al., 2007).

Overall, over the previous few decades researchers have built a large body of work regarding the relationship between alexithymia and a host of psychological and physiological outcome variables (see review in Taylor and Bagby (2004)). Alexithymia, for example, is positively related to eating disorders (Sureda, Valdés, Jódar, & de Pablo, 1999), substance abuse (Lumley, Stettner, & Wehmer, 1996), self-reports of pain (Kano, Hamaguchi, Itoh, Yanai, & Fukudo, 2007), and fibromyalgia (Van Middendorp et al., 2008). Alexithymia appears to thus impact the health of an individual in a multitude of avenues.

Researchers have also started to examine the relationship between alexithymia and interpersonal success. One of the larger areas of research in this field has been on the relationship between alexithymia and individual attachment traits. Several studies have examined the impact of alexithymia, including a tendency to have a fearful attachment style (Wearden, Lamberton, Crook, & Walsh, 2005) and testing higher on attachment anxiety and avoidance (Mallinckrodt & Wei, 2005). Montebarocci, Codispoti, Baldaro, and Rossi (2004) discovered a positive relationship between alexithymia and a host of attachment problems such as placing relationships as secondary and needing more approval from others. Overall, alexithymics appear to have greater difficulty forming relationships, prone to social isolation and lacking in trust (Kokkonen et al., 2001; Vanheule, Desmet, Meganck, & Bogaerts, 2007).

This deficit is apparent in the ability of alexithymic individuals to create and maintain meaningful attachments to others. Hesse and Floyd (2008), in a sample of undergraduate students, found alexithymia to be inversely related to the amount of affection one gave to their closest relationship and how close they were to that individual. Cooley (2006) reported that marital satisfaction was inversely associated with alexithymia. Brody (2003) found an inverse correlation between alexithymia and the frequency of

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vaginal intercourse for women (though not for men). All of these findings were supported by later research done by Humphreys, Wood, and Parker (2009), who discovered an inverse relationship between alexithymia and both relational and sexual satisfaction. Finally, Hesse and Floyd (in press) examined the real-time impact of alexithymia on initial interactions. Participants high and low in alexithymia underwent a 10-min initial interaction with a partner who had tested in the mid-range on alexithymia. After the interaction, partners reported being less physically and socially attracted to high-alexithymic than non-alexithymic participants (Hesse & Floyd, in press). Overall, the study pointed to an immediate impact of alexithymia in the ability to form attachments.

One potential reason for the biopsychosocial impact of alexithymia is the deficit for alexithymic individuals in their levels of trait affection (how much affection an individual generally gives and receives in their relationships). Affection has long been referred to in the literature as a fundamental human need (Burgoon & Hale, 1984; Schutz, 1966). Recent research has strengthened that claim by discovering a link between communicating and receiving affection with a host of psychological and physiological benefits (for further review, see Floyd (2006a)). Psychologically, more affectionate individuals are less prone to stress and depression (Floyd, 2002), and loneliness (Downs & Javidi, 1990), and more emotionally stable (Davies, Cummings, & Winter, 2004) and happy (Floyd et al., 2005). Physiologically, affectionate behavior is inversely correlated with stress by-products including cortisol, blood pressure, blood glucose, and total cholesterol (e.g. Floyd, 2006b; Floyd, Hesse, & Haynes, 2007; Floyd, Mikkelson, Hesse, & Pauley, 2007). Trait and state affection are positively related with oxytocin (Floyd, Pauley, & Hesse, in press). Relationally, affectionate experience leads to relationships that are closer, more satisfying, and more intimate (Floyd, 2006a). Affection appears to be central to the path towards greater wellness for the individual. We subsequently explain one potential reason for this conclusion.

2. Theory

Affection exchange theory (AET: Floyd, 2006a) is a neo-Darwinian theory whose foundational assumption is that affectionate communication is adaptive, allowing us to gain access to resources through the building and maintaining of relationships. Individuals better equipped to communicate affection are thus better able to succeed at relationships, thus leading to better indices of psychological and physiological wellness. While AET would claim that the need to communicate affection is innate, the theory also provides for the idea that the general capacity to communicate affection is variable, subject to both genetic and environmental factors between individuals. As adults, this difference in capacity to both give and receive affection is consequential. We conceive of alexithymia as one potential path to variation, with individuals higher in alexithymia less capable of experiencing affection (Hesse & Floyd, 2008). Indeed, previous research has found that affectionate experience partially mediates the relationship between alexithymia and nonverbal immediacy, happiness, depression, and relational closeness (Hesse & Floyd, 2008).

Although understanding these initial associations between alexithymia, affection, and relational outcomes is a good first step, there is much more to be examined. The combination of alexithymia and affection could potentially impact a plethora of variables relating to relationship dynamics or relationship success. To truly understand the pathways between which affection influences alexithymia on relationships, we need to dig deeper into the core of relationships than previous efforts have done. We perceive of variables like attachment and the total number of close relationships as central to an individual's general ability to succeed in building and maintaining relationships. Previous research has shown that individual attachment security can vary depending on relationship contexts such as amount and satisfaction of sex (Little, McNulty, & Russell, 2010). Understanding how alexithymia and affection can also combine to influence these variables will give us a clearer picture of why alexithymia leads not only to relational costs, but to the psychological and physiological deficits expounded above. This also continues the call for research by Humphreys et al. (2009), who stated that in order to completely understand the impact of alexithymia on relationships, one must look for potential mediators among other indicators of relational quality.

Thus, the current study seeks to replicate and extend current research by examining whether levels of trait affectionate experience is a path by which alexithymia impacts relationships. This leads to two specific hypotheses:

H1: Trait affectionate experience will mediate the relationship between alexithymia and attachment behaviors.

H2: Trait affectionate experience will mediate the relationship between alexithymia and an individual's overall number of close relationships.

3. Method

3.1. Participants

Participants ($N = 921$) consisted of 332 men and 583 women (6 declined to report their sex) ranging in age from 17 to 50 ($M = 20.77$, SD = 3.02). Most of the sample identified as Caucasian (78.9%), with 11% identifying as Hispanic, 5.6% as African–American, 6.7% as Asian, .9% as Native American, and 3.9% as Other (these percentages sum to >100 because several participants identified with more than one ethnic group).

3.2. Procedure

Participants were recruited from undergraduate courses in a large university in the southwestern United States and told they were taking part in a study on emotional competence and relationships. All participants filled out and submitted the survey online, which took approximately 20 min to complete. Participants were then given extra credit for their involvement.

3.3. Measures

Participants completed the Toronto Alexithymia Scale (TAS-20: Bagby, Parker, & Taylor, 1994), a measure of trait affection both given and received (Floyd, 2002), measures of attachment (Guerrero, 1996), and a measure assessing their number of close relationships.

3.3.1. Toronto alexithymia scale (TAS-20)

The TAS-20 is a self-report measure of alexithymia that is divided into three sections: Individual difficulty identifying feelings, individual difficulty describing feelings, and a tendency toward externally-oriented thinking. The TAS-20 is the most widely used measure of alexithymia, and has been validated in numerous studies across several cultures (for review, see Bagby and Taylor (1997), Taylor and Bagby, (2004)). The TAS-20 continued to show a high measure of reliability in the present study ($\alpha = .85$).

3.3.2. Trait experience of affection

Trait experience of affection was measured by combining two scales, the 10-item Trait Affection Scale-Given (TAS-G: Floyd, 2002), and the 6-item Trait Affection Scale-Received (TAS-R: Floyd,

2002). The TAS-G asks participants to indicate how much affection they generally give to those around them, while the TAS-R asks participants to report how much affection they generally receive from those around them. Since our interest in the present study was in the combined impact of affection on alexithymia, we elected for both accuracy and parsimony to combine the scales into one continuous measure. The combined scale has shown high degrees of reliability in the past (e.g. Hesse & Floyd, 2008), and continued to show high degrees of reliability in the present study (α = .93).

3.3.3. Attachment behaviors

Participants completed the 30-item scale measuring attachment-style dimensions developed by Guerrero (1996). The scale was originally developed to test for five attachment dimensions, including general avoidance, lack of confidence, preoccupation, fearful avoidance, and relationships as secondary. However, reliability measures for the current study did not support the use of five factors from the items. Thus, for the sake of both reliability and parsimony, an exploratory principal components factor analysis was run on the 30-item scale to reduce the number of factors. The items showed high levels of multicollinearity with a KMO of .92, while Bartlett's test of sphericity was significant, χ^2 (435) = 11876.49, $p < .001$. The final solution was run using a Promax rotation while constraining the variables to only two factors. Items were included in the final solution if they loaded above .60 on one factor and no more than .40 on any other factor (except for one item that was retained on the second factor). The final two factors explained 50.2% of the variance. The first factor, anxious/avoidant, explained 34.50% of the variance, while the second factor, need for relationships, explained 15.70% of the variance. The full factor structure can be seen in Table 1. Both anxious/avoidant (α = .90) and need for relationships (α = .76) showed acceptable levels of reliability.

3.3.4. Number of close relationships

Individual number of close relationships was assessed with a single item measure designed for this study, which read, "How many individuals in your life would you consider to be in a close relationship with? Think about this for an instant. Try not to estimate, but give an exact number of your close relationships." The answer from participants ranged from 0 to 35. A comprehensive list of all study variables, including descriptive statistics and intercorrelations, appears in Table 2.

4. Results

Before testing our hypotheses, we ran a series of independent *t*-tests to assess if there were any sex differences on any of the measures. The results indicated significant sex differences on the need for relationships, affectionate experience, and alexithymia, and are found in Table 3. Those possible interactions were further probed with regressions using the enter method. The only significant interaction was between sex and alexithymia predicting the individual need for relationships (see Table 4). For women, the negative slope of the relationship between alexithymia and the need of intimacy was much sharper than for men, showing that alexithymia impacts the need of intimacy more for women than for men (see Fig. 1).

We then tested our hypotheses through structural equation modeling. The final model is displayed in Fig. 2, with alexithymia as the exogenous variable and affectionate experience, anxious/

Table 1
Factor loadings for attachment items.

	Anxious/ avoidant	Need for relationships
I feel uneasy getting close to others	**.66**	−.30
I worry about people getting close to me	**.64**	−.27
I am confident that other people will like me*	**.58**	−.10
I worry that others will reject me	**.80**	.16
I am confident that others will accept me*	**.61**	−.09
I sometimes worry that I do not really fit in	**.73**	.17
I sometimes worry that I do not measure up	**.69**	.29
I worry that others do not care about me	**.76**	.29
It makes me nervous to depend on others	**.66**	−.02
Getting close to people makes me uneasy	**.67**	−.26
I worry about allowing myself to get close to others	**.70**	−.08
I will get hurt if I get too close to others	**.70**	−.04
Intimate relationships are a central part of my life	−.01	**.73**
I feel a very strong need to have close relationships	.06	**.80**
Maintaining good relationships is a top priority	−.09	**.62**
Achievements are more important than relationships*	.04	−**.55**
I put more energy into relationships than activities	.13	**.74**
Eigenvalues	5.87	2.67

The full scale, including all items removed from analysis, is available upon request.
* Items were recoded. *Note:* Factors were taken from Guerrero's (1996) scale on attachment-style dimensions. Some items have been slightly reworded due to space constraints.

Table 2
Descriptive statistics and intercorrelations for predictor and outcome variables.

Variable	*M*	SD	1	2	3	4
1. Alexithymia	3.04	0.80				
2. Affectionate experience	5.04	1.05	−.61**			
3. Anxious/avoidant	3.32	1.16	.64**	−.52**		
4. Need for relationships	4.60	1.09	−.33**	.55**	−.19**	
5. Number of close relationships	6.47	4.96	−.15**	.21**	−.21**	.09*

Notes. All variables except for the number of close relationships were measured on a 1–7 scale wherein higher scores indicate greater levels of the variable.
* $p < 05$.
** $p < 001$.

Table 3
Means and standard deviations for predictor and outcome variables by participant sex.

	Male		Female	
Variable	Mean	SD	Mean	SD
1. Alexithymia	3.20**	.73	2.95	.81
2. Affectionate experience	4.71**	.95	5.24	1.05
3. Anxious/avoidant	3.27	1.08	3.34	1.21
4. Need for relationships	4.25**	1.02	4.80	1.07
5. Number of close relationships	6.76	6.27	6.33	4.03

Notes. Asterisks indicate significant sex differences, per independent-samples *t*-tests.
** $p < 001$.

Table 4
Regression analysis predicting need for relationships.

Variable	$F(3, 911)$	*B*	SE *B*	β
Need for relationships (R^2 = .15)	55.44**			
Sex		1.36	.29	.60**
Alexithymia		−.21	.08	−.15*
Sex * alexithymia		−.29	.09	−.42**

* $p < .05$.
** $p < .001$.

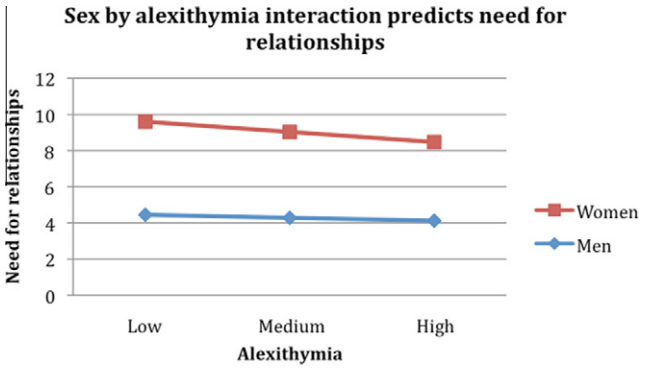

Fig. 1. Sex by alexithymia interaction predicts need for relationships.

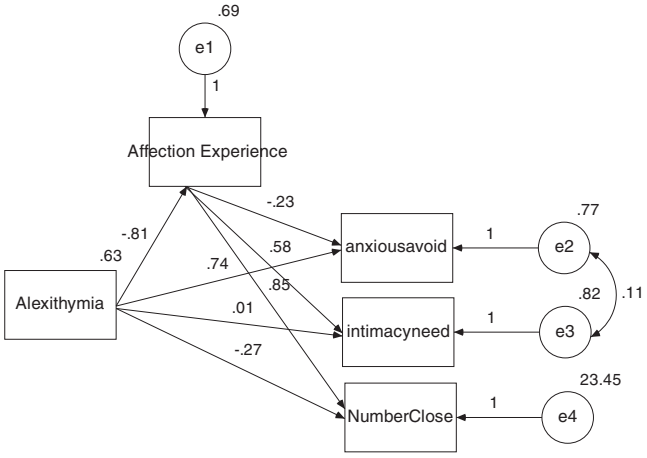

Fig. 2. Full path model predicting that affectionate experience mediates the relationship between alexithymia and the three outcome measures. *Note* 1: Intimacyneed = the need for relationships; NumberClose = the individual number of close relationships. *Note* 2: Only nonsignificant paths were between alexithymia and both the need for intimacy and the number of close relationships. All other paths were significant.

avoidant, need for intimacy, and the number of close relationships as the endogenous variables. All coefficients in the model appear in Fig. 2. We allowed the two attachment measures to covary due to the conceptual overlap. The fit indices for the model were good: CFI = .993, RMSEA = .074, and CMIN/DF = 6.05. The parameter estimate from alexithymia to affectionate experience was significant and showed a large negative association (−.81). The parameter estimates from affectionate experience to the three dependent variables were all significant, with a moderate positive relationship for the number of close relationships (.85) and the need for intimacy (.58) and a smaller negative relationship with anxious/avoidant (−.23). The parameter estimate from alexithymia to anxious/avoidant was significant and showed a large positive association (.74). However, the parameter estimates from alexithymia to both the number of close relationships and the need for intimacy became nonsignificant in the full model.

We ran a bootstrapping procedure using a 95% confidence interval to assess whether the indirect effects from alexithymia to the three outcome measures through affectionate experience were significant. The indirect effect from alexithymia to anxious/avoidant ranged from .09 to .17 and was significant, $p = .001$. Because the direct path from alexithymia to anxious/avoidant was also significant, we concluded that affectionate experience partially mediated the relationship between alexithymia and anxious/avoidant. The indirect effect from alexithymia to the need for intimacy ranged from −.40 to −.29 and was significant, $p = .001$. The indirect effect from alexithymia to the number of close relationships ranged from −.16 to −.06 and was significant, $p = .002$. Because the direct paths from alexithymia to both the need for intimacy and the number of close relationships were nonsignificant, we concluded that affectionate experience fully mediated the relationship between alexithymia and the need for intimacy and the number of close relationships.

5. Discussion

The present study wanted to further understand the interpersonal impact of alexithymia. We wished to extend research showing that trait levels of affectionate experience can help potentially mediate the deficit for alexithymic individuals in variables central to the ability to build and maintain relationships.

Our results uncovered several interesting findings. Alexithymia had both a significant direct and indirect relationship on anxious/avoidant behaviors through affectionate experience, but had only a significant indirect relationship on the need for intimacy and the number of close relationships. It appears that alexithymia might have a stronger influence on issues of anxiety in relationships than intimacy-seeking behaviors. This also supported previous research finding that affection only partially mediated the relationship between alexithymia and depression and failed to mediate the relationship between alexithymia and stress (Hesse & Floyd, 2008). One potential explanation is that part of the influence of alexithymia on an individual's general mood occurs independently from levels of affection. The findings also supported previous research showing that an individual's relational behaviors can impact their feelings of attachment insecurity (Little et al., 2010). Overall, these findings continued to support a host of research that has shown a relationship between alexithymia and interpersonal problems such as attachment (Sonnby-Borgström, 2009; Troisi, D'Argenio, Peracchio, & Petti, 2001). We also extended previous research showing that the communication of affection (both given and received) can potentially help mediate this interpersonal deficit (Hesse & Floyd, 2008).

This study adds to the growing literature on the impact of alexithymia on our ability to grow and maintain relationships (e.g. Hesse & Floyd, in press). Research has now found a link between alexithymia and lower indices of initial attraction (Hesse & Floyd, in press), relational and sexual satisfaction (Humphreys et al., 2009), relational closeness (Hesse & Floyd, 2008), and a general ability to form relationships (Kokkonen et al., 2001). However, a host of questions remained unexplored. We still know very little of the dyadic effects of alexithymia, and how long-term romantic couples remain committed and satisfied even with at least one member of the dyad having high indices of alexithymia. We did find a significant sex difference on alexithymia in the study, with men scoring significantly higher than women. This aligns with previous research showing similar results (e.g. Joukamaa et al., 2007). However, the significant sex by alexithymia interaction on the need for intimacy showed alexithymia impacting women more than men. One possible explanation is that men are socially conditioned to be more comfortable with fewer expressions of emotion, and thus a deficit in that skill would not be as impactful. Women, on the other hand, are socialized to be very comfortable with emotional expression, and thus a deficit in that skill could potentially lead to greater relational difficulties than for men. This finding is consistent with previous research (Brody, 2003), but further studies should continue to explore this issue. We also know very little of the real-time impact of alexithymia on relationships. For example, one would expect alexithymics to have greater difficulty

in conflict settings due to their inability to discuss their feelings and their propensity towards avoidant behaviors.

Humphreys et al. (2009) called for further research assessing possible mediators of the impact of alexithymia on relationships. This study is a partial answer to that call, finding trait levels of affectionate communication as a mediator of the relationship between alexithymia and variables that show an individual's core ability to successfully build and maintain relationships (attachment behaviors and the number of close relationships). This further supports previous research with trait affection mediating the relationship between alexithymia and relational closeness (Hesse & Floyd, 2008). These findings also support the predictions derived from AET. Affection helps an individual achieve their superordinate goals through increased ease of building relationships. These findings over time can lead to intervention possibilities. If individuals high in alexithymia can be trained to be more affectionate with the people around them, that increase could potentially mitigate the relational deficit of alexithymia, helping individuals better succeed in building and maintaining relationships. Overall, this study points to the variable of trait affection as a variable of interest in assessing how researchers can help individuals with alexithymia not only succeed at relationships, but also potentially ease the psychological and physiological costs of alexithymia.

This study does carry with it several limitations that should be addressed in future research. First, the study obviously precludes causality, joining a large percentage of the literature on alexithymia and relationships. As stated previously, scholars should attempt to assess the impact of specific behavioral differences on relationships. For example, alexithymics are less likely than non-alexithymics to show nonverbal expressiveness during a psychological interview (Troisi et al., 1996). Future research could examine whether a similar difference is found during interactions with a close relationship. For the findings regarding attachment behaviors, future causal studies could determine whether insecure attachment precludes the capacity for sustained affection, or whether sustained affection could help an individual cope with an attachment deficiency. The study used measures of self-report for all variables, including assessing the individual's number of close relationships, potentially introducing elements of a social desirability bias into the responses. There is the possibility of other personality traits (e.g. extraversion) and relational quality indicators (e.g. seeking commitment) that could play a significant role in this analysis. Sexual and orgasmic frequency, which has been linked to relationship quality, could also be included in this analysis (Costa & Brody, 2007). The study also is limited in assessing *why* affection is one potential mediator of alexithymia, and whether alexithymics can fully understand the emotional experience and communication of affection. One possible avenue lies in neural functioning. Studies have found a deficit in brain processing for alexithymic individuals while viewing emotional facial expressions (Kano et al., 2003). Scholars could thus examine whether alexithymic individuals have a deficit in brain processing for viewing images of affection.

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