Running Head: The Mediating Role of Alexithymia in the Relationship between Insecure Attachment and Loneliness

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Abstract

Attachment-related insecurities along with emotional processing difficulties, hamper the ability of individuals to acquire and maintain close relational bonds. Identification and expression of feelings enable individuals to form supportive and intimate interpersonal relationships, and serve a protective function against experiencing loneliness. This is particularly relevant in young adults, who experience important life transitions and their levels of loneliness show an upward trend, the last decades. This study aims to investigate associations between alexithymic characteristics and adult attachment orientations (anxiety and avoidance), as well as, the mediating role of alexithymia in the relationship between insecure attachment and loneliness. Our sample consisted of 379 Greek-speaking young adults, aged 18-25, who took part in an online survey and completed measures of attachment orientation, alexithymia and loneliness. Regression models indicated that both attachment anxiety and attachment avoidance were positively associated with alexithymia dimensions and consistently predicted higher level of loneliness. Results also revealed, that alexithymia partially mediated the effects of both attachment avoidance and attachment anxiety on participant's levels of loneliness. The findings underline that individuals who have the capacity to understand and express their emotions can benefit from receiving emotional support and feel less lonely. Theoretical and practical implications, as well as, directions for future research are also discussed.

Keywords: Alexithymia, emotions, attachment, loneliness.

Introduction

Loneliness is characterised as a distressing and unpleasant experience that arises from a quantitative or qualitative shortage interpersonal relationships in a person's life (Peplau & Perlman, 1984, Cacioppo et al., 2010). It has also been conceptualised as a lack of fulfilling and supportive relationships in people's life (Weiss, 1973). Loneliness is a subjective feeling that fluctuates by strength and frequency (Hawkley et al., 2022) and is linked with various negative consequences, such as, psychological rumination (Arslan et al., 2020), poor mental and physical health (Richard et al., 2017) and lower life satisfaction (Moore & Diener, 2017). Other scholars have linked loneliness to the discrepancy between the desired and the observed level of human contact experienced by individuals (Ernst & Cacioppo, 1999). Lonely individuals perceive others as less trustworthy and less socially attractive, while they see others as less similar to them (Cacioppo et al., 2009). Lonely people are also found to be more cynical and often expect negative feedback in their social interactions (Jones et al., 1983). As a result, they find it difficult to build stable and trustworthy intimate relationships.

Research has shown that individual differences in the level of shyness and self-esteem are linked to social anxiety, thus exacerbating experiences of loneliness (Anderson & Harvey, 1988). Emotional skills and emotional selfcompetency improve emotional communication and thereby to protect individuals against feelings of loneliness (Davis et al., 2019). One of the most widely adapted measures of loneliness is the UCLA loneliness scale (Russell et al., 1980) a unidimensional measure that captures both emotional and social aspects of loneliness, which are considered to be highly interrelated. Research has shown that social, emotional and existential aspects of loneliness are all inversely related to life satisfaction (Moore & Diener, 2017). Loneliness has also been associated with lower dyadic trust and commitment, as well as, with poor relationship quality among dating and married couples (Mikulincer & Shaver 2003). Overall, lonely people have fewer close friends and are less likely to be committed in a romantic relationship.

Young adulthood is a period of significant life transitions, characterised by higher relational mobility and increased levels of loneliness (Arnet, 2000) Young adults try to adjust to various changes in their social environment, while they try to adapt to normative roles of the adult. The transition from an established social support network poses significant challenges, as they experience restructure of peer and networks and become support independent from the family. Moreover, during young adulthood romantic relationships are less and vary between committed relationships and periodic romantic interactions (Shulman et al., 2018). At this life stage individuals aim to explore and question their personal and social identity, by searching for coherence in self-concept and by adjusting to multiple social roles. While addressing to these uncertainties, individuals often experience difficulties in managing and regulating their emotions effectively, and in turn, they experience lower personal and relational wellbeing (Verzeletti et al., 2016).

Attachment, Alexithymia and Loneliness

It is suggested that people have an inner drive to satisfy their need to belong, through interpersonal attachments and by forming intimate, lasting and satisfactory relational ties with others (Baumeister & Leary, 1995). The failure to fulfil the need to belong, might lead to adverse emotional outcomes and exacerbate feelings of loneliness. The development of emotional intimacy and a sense of self-worth, are particularly important for forming and maintaining relational bonds.

Attachment theory posits that early experiences with primary caregivers tend to shape internal operating models characterise the way adults are involved in interpersonal and romantic relationships (Bartholomew 1990; Mikulincer & Shaver 2003). Brennan et al. (1998), argued that individual characteristics in attachment insecurity can be explored from the attachment anxiety perspectives of attachment avoidance. Individuals who have established anxious and avoidant attachment styles are facing difficulties in experiencing supportive and long-lasting close relationships (Feeney, 1995). Insecure attachment raises fears and uncertainties in relationships, reflects higher vulnerability in stress, and is associated with dysfunctional attitudes and behaviours (Mikulincer & Shaver, 2003). Attachment anxiety is associated with feeling unworthy of love and with preoccupation with fears of abandonment; whereas attachment avoidance is associated with low trust in others and avoidance of emotional intimacy with romantic partners (e.g., Brennan et al., 1998). Anxiouslyattached individuals present high rejection sensitivity and hold negative self-views that make them vulnerable in experiencing loneliness, while they often excessively seek for approval from others (Feeney, 1995). On the other hand, avoidantly-attached individuals experience dissatisfying interpersonal relationships because of their unwillingness to develop emotional intimacy with others, while they lack confidence in others. As a result, they difficulties in communicating constructively in incidents of conflict (Pistole & Arricale, 2011), and in obtaining and providing adequate emotional support (Mikulincer & Shaver, 2003).

Alexithymia is considered a multifaceted personality trait that determines interpersonal functioning (Taylor& Bagby, 2004, Troisi et al., 2001). It literary means 'having no words for emotions', thus a reduced ability to verbally express one's emotions, and is associated with an externally oriented cognitive style (Sifneos, 1973). Alexithymic individuals have difficulty in identifying their own feelings and to distinguish between feelings and bodily sensations (Lane et al., 1996, Taylor et al., 1997). Additionally, highly alexithymic people have a reduced ability to understand the emotions of others (Prkachin et al., 2009) and experience difficulties in linking personal memories to specific past events (Muir et al., 2017). As demonstrated by a study that included a facial expression recognition task (Prkachin et al., 2009), individuals with high alexithymia showed reduced awareness of positive emotions, such as, love, excitement jov. Moreover, highly alexithymic individuals feel uncomfortable in sharing their personal issues with others, and exhibit limited emotional self-disclosure (Lumley, 2004).

People with high alexithymia are likely to experience higher level of loneliness (Qualter et al., 2009), as they tend to downgrade the importance of emotional interactions (Taylor et al., 1997). Highly alexithymic individuals view relationships as highly interchangeable and can easily enter and exit relationships (Frye-Cox & Hesse, 2013). Additionally, alexithymia is associated with deficits in cognitive aspects of empathy, like perspective-taking, subsequently they appear less warm and during interpersonal friendly exchanges (Luminet et al., 2021). Building on that, research has shown that when people interact in a cold and detached communication style, reciprocal effects might occur, and individuals who display coldness to others, are treated accordingly and tend to receive coldness in return (Hopwood et al., 2013). Individuals with alexithymic characteristics tend to regulate their emotions in a dysfunctional and hostile way and face problems in adjusting to intimate relationships (Panahi et al., 2018). Overall, they present maladaptive coping mechanisms, less intimate communication and avoid relationship

conflicts (Craparo et al., 2011, Wells et al., 2016).

Existing literature suggests that memories from early experiences are important contributing factors of alexithymia (Taylor & Bagby, 2004). On the other hand, it is suggested that alexithymia is complex emotional manifestation encompassing "trait" components, as well as, "state" dependent characteristics (Lumley 2004, Karukivi et al., 2011). Bratis et al, (2009), found that alexithymia was linked to reduced parental support. A study on young adults found alexithymia to be more pronounced in insecurely-attached individuals, after controlling for depressive and anxiety symptoms (Troisi et al., 2001). Individuals with secure attachment are less likely to adapt externally oriented thinking styles, since they feel more comfortable introspecting their feelings (Mikulincer et al., 2003). Anxious individuals, despite their over-expressive style of affective reactions, tend to supress emotions in romantic relationships due to the fear of losing intimacy with the partner (Feeney, 1995).

Montebarocci et al, (2004) showed that alexithymia was significantly associated with insecure attachment, with a higher need for approval, as well as, with discomfort with closeness. In a study on young adults Besharat et al. (2014), found alexithymia to predict various interpersonal problems associated with submissiveness and social conformity. Furthermore, studies have shown alexithymic individuals are not assertive in their interpersonal relationships (Vanheule et al., 2007) and experience higher level of romantic and social loneliness (Qualter et al., 2009). Research has shown that the lack of interpersonal trust partially mediated the relationship between alexithymia and loneliness (Qualter et al., 2009). Additionally, alexithymia was negatively associated with happiness and non-verbal intimacy and this was partially explained by the difficulty in affectionate communication (Hesse & Floyd, 2008). In a longitudinal study (Conti et al., 2019) young adults who reported higher level alexithymia before the COVID-19

pandemic, experienced higher level of loneliness during the implementation of social distancing measures. Lastly, a study on Finnish adolescents found that the lack of social support experienced by individuals, was related mostly to the difficulties in identifying and describing feelings (Karukivi et al., 2011).

A meta-analysis by Chervonsky and Hunt (2017), showed that low levels of emotional expressions are associated with interpersonal outcomes, across the lifespan. In general alexithymia reflects dysfunctional regulation of emotions (Luminet et al., 2021). Besharat and Shahidi (2010), found that dysfunctional cognitive emotion regulation mechanisms mediated the relationship between attachment orientation and alexithymia. The exploration of emotional processing difficulties in insecurely attached individuals might explain the relationship between attachment orientation and experiences of loneliness, in young adults. In particular, it is possible that difficulties in recognising and expressing emotions can further interpret the link between insecure attachment and loneliness. Thus, alexithymia could depict emotional processing difficulties in insecurely attached individuals, that result in emotional distress from intimate relationships. Alexithymic individuals experience lower life satisfaction (Shibata et al., 2014), have poor social networks and lack the emotional skills to seek for social support (Saikonen et al., 2018). Since, loneliness is an unpleasant feeling, meaningful intimate depicting lack of relationships, alexithymia is expected to exacerbate the emotional distress, through deficits in intimate communication and reduced seeking of social support.

The Present Study

Based on existing literature, we expect that alexithymia will negatively impact individual's interpersonal functioning. Emotion processing deficits in young adults are particularly relevant for interpreting the high level of loneliness among young adults. Given the difficulties associated with alexithymia, there is a scarcity of studies examining attachment-related insecurities along with alexithymia, on young adults. The main aim of this study is to identify

potential mechanisms that contribute to emotional deficits related to loneliness, from an attachment framework perspective.

In the present study, we will examine the mediating role of alexithymia on the relationships between attachment-related insecurities and loneliness. We hypothesize that both attachment anxiety and attachment avoidance to be positively associated with the level of alexithymia. Lastly, we also expect that both dimensions of attachment insecurity and alexithymia are predictive of higher levels of loneliness.

To test our research hypotheses, we used the criteria for mediational analysis outlined by Baron and Kenny (1986). Given the relatively large sample size of our study, we used Sobel tests to examine the mediational effects of alexithymia on the associations between attachment-related insecurities and loneliness. Thus, we examined whether the effect of insecure attachment is reduced, after including alexithymia in our hypothesized models.

Method

Participants

We invited participants to fill in an online survey, via google forms. Participants were recruited through email, online advertisements and social media, using a snowball sampling. They were informed about the purpose of the study and participation was voluntary. They had to complete all the measures used in the survey, and to be between 18 and 25 years old. Participants who did not meet the inclusion criteria, were excluded from the analysis. The study was conducted in accordance with the ethical standards outlined in the Declaration of Helsinki. Responses were anonymous and confidential and no incentive reward was given for the participation. The data were analysed with the software program, IBM SPSS 26.

We collected data from 379 young adults, living in urban and suburban regions of Greece. The sample comprised of 271 females (n=271, 71.5 %) and 108 males (n=108, 28.5%) and the average age was 21.63 years (SD=1.97).

Additionally, 58% participants were involved in a committed romantic relationship (n=220), while 42% participants were singles (n=159).

Measures

Firstly, participants had to complete demographic information (e.g., age, gender, education) and information regarding relationship status, family background and parental rearing behaviours. Then they completed the measures above:

Adult Attachment Orientation: To capture attachment insecurity, we employed The Experiences in Close Relationships-Revised (ECR-R) questionnaire (Fraley et al., 2000), which is a revised version of the Experiences in Close Relationships (ECR) questionnaire (Brennan et al., 1998). In this study, we used the greek version of ECR-R, that has been validated in Greek population (Tsagarakis et al., 2007). This questionnaire is measuring adult attachment insecurity in two dimensions: attachment anxiety and attachment avoidance. It includes 36 items in total, comprised of two subscales of 18 items, each. A total of 12 items, are reversed scored. Examples of items are "Sometimes romantic partners change their feelings about me for no apparent reason.", (attachment anxiety) and "I find it relatively easy to get close to my partner" (attachment avoidance).

Loneliness: This study employed the Revised UCLA Loneliness Scale (Russell et al., 1980). The scale we used, has been translated and validated in Greek population and showed good properties (Anderson psychometric Malikiosi-Loizos, 1992). This measure captures subjective feelings of loneliness and social isolation. It includes 20 items, that are evaluated on a 4-point Likert scale, and includes statements such as "I am unable to reach out and communicate with those around me". We calculated a total score for loneliness and the scale showed good psychometric properties (α =.86).

Toronto Alexithymia Scale (TAS-20): This study employed the TAS scale (Bagby et al., 1994). It is a widely used measure of alexithymia, that consists of 3 subscales:

Difficulty identifying feelings 8 items (DIF), Externally oriented thinking 7 items (EOT) and Difficulty describing feelings (DDF), 5 items. It includes 20 items in total, measured on a 5point Likert scale. Examples of subscale's items are: "People tell me to describe my feelings more." (DFF), "I find examination of my feelings useful in solving personal problems." (EOT) and "I have feelings that I can't quite identify." (DIF). In our study we calculated a total score for alexithymia, with higher levels representing higher difficulty in understanding and expressing emotions. This scale has been translated and validated in a Greek sample (Tsaousis et al., 2010), and demonstrated good internal consistency (a= .89).

Results

All scales used in this study showed good psychometric properties, as revealed from alpha Cronbach indicators. Descriptive statistics for the study's variables are presented in Table 1. A series of independent -sample t-tests examined whether mean levels of attachment anxiety, avoidance, alexithymia and loneliness were statistically different between males and females. There were no statistical mean differences between gender, regarding study's main variables.

Pearson's correlations revealed significant associations between attachment, alexithymia and loneliness (see Table 2). Loneliness was significantly associated with alexithymia (r= .38, p<.001). Furthermore, alexithymia was positively associated with attachment avoidance (r= .34, p<.001), with the dimension of difficulty in describing feelings, showing the highest correlation (r=.35, p<.001). Lastly, significant positive associations were observed between attachment anxiety and alexithymia (r=.36, p<.001) with the dimension of difficulty of identifying feelings showing the highest correlation (r=.38, p<.001).

Variables	M	SD	Alpha Cronbach
			Cronbach
Attachment	2.90	1.30	.92
Anxiety			
Attachment	2.15	.83	.93
Avoidance			
Alexithymia	2.71	.38	.86

Table 1 Descriptive Statistics of study variables

Table 2 Pearson's Correlations of Study Variables and Alexithymia Dimensions

Variables	1 TAS	2 DIF	3 DDF	4 EOT
1. Loneliness	.384***	.362***	.253***	.206***
2. Attachment Anxiety	.362***	.377***	.262***	.164***
3. Attachment Avoidance	.341***	.250***	.350***	.193***

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

We then analysed a multiple regression model, while controlling for relevant confounding variables such as, age, gender and relationship status. In the first step we entered age, gender and relationship status and in the second step we entered attachment anxiety and avoidance and alexithymia as predictor variables of loneliness. The variables entered in the first step did not show significant association with

participants level of loneliness. Regression coefficients showed that alexithymia was a significant predictor loneliness (b= .18, t=4.76, p<.001). Moreover, attachment anxiety was found to be strongly associated with loneliness (b = .12, t=5.55, p<.001), while attachment avoidance was also associated with loneliness (b= .07, t=2.51, p<.05), but to a lesser extent than attachment anxiety.

Table 3 Hierarchical Regression of Attachment Dimensions and Alexithymia predicting Loneliness

Model		В	S.E. b	t-test
1	Constant	1.97	.20	
	Gender	04	03	42
	Relationship Status	09	.05	-1.86
	Age	022	01	-1.66
2	Constant	.98	.28	
	Alexithymia	.18	.04	4.76***
	Attachment Anxiety	.12	.02	5.55***
	Attachment Avoidance	.07	.03	2.51*

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

With regard to the second hypothesis, we expected alexithymia to mediate the

relationship between the two dimensions of attachment insecurity and loneliness. In relation

to attachment anxiety (see Figure 1), we observed positive significant direct effects on loneliness (b= .14, t= 8.03, p < .001), while attachment anxiety was also predictive of alexithymia (b= .17, t = 6.48, p < .001). Additionally, alexithymia was strongly associated with loneliness (b= .23, t=5.99, p <.001). We noted that when alexithymia was added as a mediator variable, the effect of attachment anxiety on loneliness was weaker (Sobel test z=5.17, p<.001). However, the relationship between attachment and loneliness remained statistically significant controlling for alexithymia, implying that attachment anxiety served as a partial mediator. Figure 2 shows the pathways of the mediation model for the associations between attachment avoidance, alexithymia and loneliness. Attachment avoidance had significant direct effects on loneliness (b= .12, t = 5.91, p<.001) and was also positively associated with alexithymia (b = .29, t=11.36, p <.001). Moreover, alexithymia showed a significant positive association with loneliness (b=.28, t=6.99, p<.001). We noted that when alexithymia was added as a mediator variable, the effect of attachment avoidance on loneliness was weaker (Sobel test z=5.76, p<.001). However, attachment avoidance was still significantly associated with alexithymia, implying that alexithymia partially mediated the effect of attachment avoidance on loneliness.

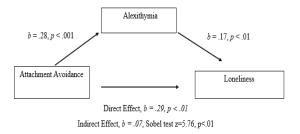


Figure 1 Alexithymia as a mediator between Attachment Avoidance and Loneliness

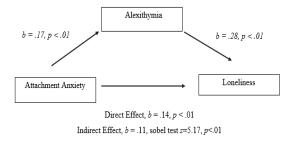


Figure 2 Alexithymia as a mediator between Attachment Anxiety and Loneliness

Discussion

Our results confirmed our research hypotheses and revealed that both attachment anxiety and attachment avoidance. were significant predictors of participants' loneliness level. Our findings are in line with attachment theory, implying that anxious and avoidant internal working models hamper individuals from building emotionally fulfilling and stable interpersonal relationships. Since anxious and avoidant individuals are characterized by interpersonal distrust and low self-worth, they fail to connect with others at a desired level. Moreover, our study found significant positive associations between both attachment insecurity dimensions and alexithymic characteristics, confirming previous findings (Troisi et al., 2001, Montebarocci et al., 2004, Meins et al., 2008). Noteworthy, attachment anxiety was more strongly linked with the difficulty of identifying feelings, dimension of alexithymia. while attachment avoidance showed a higher association with the difficulty of describing feelings, dimension. Lastly, we also observed significant associations between oriented cognitive externally style attachment insecurity dimensions, in line with previous research (Karukivi et al., 2014).

The negative association between attachment avoidance and alexithymia reflects developmental experiences that led to discomfort with emotional intimacy. Self-disclosing emotional expressions are often perceived as secondary or risky, by avoidant individuals. Eventually, this leads to emotional suppression strategies, in an attempt to avoid emotional distress. On the other hand, early

experiences of anxiously-attached individuals have shaped an increased need for approval from others and might lead to deficient emotional intimate communication. Despite their high need for autonomy, avoidant individuals are also likely to experience high levels of loneliness, as shown, in our results. We can refer to Mikulincer and Shaver (2003), who postulated that for avoidant individuals, the deactivation of their internal working models occurs only up to a certain extent, and consequently they lack supportive interpersonal relationships and experience higher distress.

According to our findings, one potential mechanism, through which, insecure experience individuals less meaningful relationships, as well as, lower quality social connections, is their difficulty in processing emotions. Hence, alexithymic characteristics were found to contribute to more intense feelings of loneliness, among insecurely attached individuals. Our results, are in agreement with previous studies, linking insecure attachment to emotional regulation difficulties (Brenning & Braet, 2013), as well as, with studies showing that poor emotional skills prospectively lead to higher levels of loneliness (Qualter et al., 2019). An alternative interpretation of our findings might stem from the reciprocal effects of alexithymia, since highly alexithymic individuals provide less emotional support to others, in return, they receive inadequate affectionate support (Wells et al., 2016).

Importantly, mediational effects were observed, while controlling for relevant confounding factors, highlighting importance of alexithymia in predicting the level of loneliness. The hyperactivation emotional strategy adopted by anxiously attached individuals, makes them highly sensitive to the negative feelings of others and hampers the capacity to experience satisfactory interpersonal relationships. On the other hand, avoidant individuals present limited emotional awareness and expression in order to reduce perceived stress, and when the source of stress is linked to people close to them, they subsequently detach from them (Mikulincer & Orbach, 1995). We can suggest that adults with

insecure attachment styles present deficits in emotional understanding, since experiences revealed that significant others were not emotionally available to provide them with support. Our mediation analysis revealed that alexithymia can partly explain the mechanism through which, insecure individuals experience increased level of loneliness. Early experiences that do not provide a secure base, are likely to hinder emotional expression, which in turn, might lead to emotional distress. However, in our models we noticed partial mediation, meaning that insecure romantic attachment encompasses other relevant characteristics, that might result in feelings of Maintaining isolation. attachment also entails adaptive coping strategies and a functional social support network that fosters psychological resilience.

The high level of alexithymia among insecurely attached individuals might reflect emotional deficits, stemming from early experiences with primary caregivers. Therefore, having a secure base is particularly relevant for strengthening the capacity to express and understand feelings. Developing confidence in self and others, could equip individuals with the emotional skills that are essential for intimate communication, and also motivate them to seek and receive social support.

Limitations and Future Directions

Despite the relatively large sample of our study, our findings are subject to a number of limitations. Firstly, in our study we used selfreport data, that might be sensitive to social desirability response bias. Moreover, the correlational design of our study is not indicative, for drawing conclusions about the causal direction of the effects. It is important to conduct more longitudinal studies that could offer a better understanding about the link between attachment and alexithymia. Future research, focusing on a more ethnically diverse population, could shed more light about the interpersonal effects of alexithymia, culturally different contexts. Lastly, future research might benefit by including alternate

observational methods to measure alexithymia, such as, structured interviews (e.g. Bagby et al., 2006), or diary studies.

The study's findings regarding the associations between attachment insecurities and identification and expression of emotions can have some practical implications. Individuals that are not introspecting their emotional states, tend to have difficulties in expressing their feelings, which in turn leads to feelings of loneliness and distress. We can suggest that approaches and techniques that emotional disclosure could be beneficial for improving the adverse interpersonal results of alexithymia, with particular reference to avoidant individuals. Despite the fact that highly-alexithymic individuals experience difficulties integrating in relationships, research has shown that they are as open, as nonalexithymic people, in seeking therapy treatment (Ogrodniczuk et al., 2011). Research on individuals seeking treatment has shown, that long-term psychodynamic therapy can lead to a more secure attachment style, and improve alexithymia and anxiety symptoms (Khademi et al., 2019). It is proposed that focusing on improving the emotional communication skills of insecure individuals, could alleviate the emotional distress, stemming from loneliness. Mental health professionals could benefit by supporting alexithymic people to introspect and discern emotional states, to describe these states, and to develop relevant explanations for them. In conclusion, our findings also underline the preventive role of social support interventions in young adults, and the sensitization of families in promoting a responsive and secure base to their children.

Conflict of interest

No conflict of interests between the authors

Funding

There was no funding to support this study

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