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# The Role of Collectivism in the Relationship Between Attachment and Grief: A Cross-Cultural Comparison Between Spain, Iran and Ghana

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## Abstract

Prior research has shown that attachment plays an important role on grief intensity when a person loses a loved one. However, little has been researched on how culture and, more concretely collectivism, may have an impact on the relationship between attachment and grief. Therefore, this study investigated the relationship between collectivism and attachment anxiety as well as the possible moderating role of collectivism on the relationship between insecurity of attachment and grief. A total sample of 353 participants from Spain, Iran and Ghana answered an online questionnaire. Results of the study showed that participants from an individualistic country (Spain) scored significantly lower on attachment anxiety when compared to participants from collectivistic countries (Iran and Ghana). Results also showed a relationship between attachment anxiety and grief intensity. However, contrary of what expected, collectivism did not moderate the relationship between attachment and grief intensity. Results are discussed in terms of possible differential effects of attachment on grieving when comparing collectivistic versus individualistic cultures.


*Keywords:* grief, bereavement, collectivism, individualism, attachment

## Introduction

Bereavement is known as one of the most painful experiences in life. Bereaved people are more likely of developing mental and physical health issues continuing long after the loss of a loved person (M. S. Stroebe et al., 2006). Furthermore, the risk of mortality for bereaved people is significantly higher in comparison with non-bereaved people with equivalent age and gender (M. Stroebe et al., 2007). However, most people are able to adjust to the death of a loved one in due course, and manage to continue having a normal and pleasurable life (Shear et al., 2007). Nevertheless, due to the diversity and individual differences in grief, it is crucial to identify which people are more likely to suffer the more severe consequences of bereavement, because then it will be possible to direct professional help to those who need it most and will benefit from it (Schut et al., 2001).

One of the main intrapersonal variables explaining individual differences in the grief experience is attachment style. The influence of attachment style in the grief process is initially explained by the attachment theory developed by Bowlby (1969). According to this theory, infants have an innate intrinsic motivational system known as an attachment system, which has the function of maintaining closeness to the attachment figures and keeping low levels of distress through proximity to these figures when faced with perceived threats. According to this theory, Individuals who developed a “secure attachment style” have a positive mental model in which they are valued and worthy of others affection, support and concern (Bowlby, 1969). When secure attached individuals are separated from an attachment figure through the process of death,

they will likely engage in the same type of affective reactions and searching behaviors found in infants removed from their mothers, experiencing an intense process of grief which would gradually diminish as they accept the reality of the loss (Bowlby, 1980).

Bowlby also identifies two other type of bereavement reactions in those individuals with anxious-ambivalent attachment style or avoidant attachment style. The different attachment styles initially developed by Bowlby (1980) and later by Bartholomew and Hollowitz (1991) into four categories have been more recently developed into a dimensional model of adult attachment comprised of two dimensions that cover the different categories in an incremental way: attachment anxiety and attachment avoidance (Fraley & Shaver, 2000; Mikulincer & Shaver, 2007).

Individuals high on attachment anxiety are afraid of being underappreciated, have low self-esteem, and perceive others as being unable or unwilling to commit to long-term and intimate relationships (Collins & Feeney, 2000). Consequently, their attachment system could be strongly activated during times of distress making them anxiously search for their attachment figure (Fraley & Shaver, 2000). Bowlby hypothesized that these individuals would show a more chronic grief pattern, with high levels of distress persisting over time. By contrast, individuals high on attachment avoidance are characterized by being emotionally distant, and seeing significant others as unreliable or eager for intimacy (Bowlby, 1980). Their attachment system is believed to be deactivated during times of distress, which in turn leads to social withdrawal and minimization of pain (Fraley & Shaver, 2000).

A number of studies have analyzed the relationship between attachment style and coping with bereavement (Boelen & Klugkist, 2011; Currier et al., 2015; Delespaux et al., 2013; Ho et

al., 2013; Maccallum & Bryant, 2018), finding that attachment anxiety is related to a higher degree and intensity of bereavement symptomatology and reactions.

Nevertheless, with regards to the relationship between attachment avoidance and grief reactions results are inconsistent, with some of them showing relationship between attachment avoidance and grief (Ho et al., 2013; Wijngaards-de Meij et al., 2007) and other studies not finding such association (Field & Sundin, 2001; Wayment & Vierthaler, 2002). This suggests that the dimension of attachment avoidance with regards to grief may be more complex than it was initially expected.

Furthermore, most of these studies have been carried out mostly in western and individualistic countries, which may be problematic due to the western and individualistic conception upon attachment theory has been built, with the ultimate primary goal of an individual psychological autonomy (Keller, 2013). Therefore, more cross-cultural comparison research measuring the relationship between insecurity of attachment and grief is needed in non-western countries.

One way of understanding cultural differences is in terms of individualism and collectivism. According to Hofstede (1984) Individualism stands for a society where everyone is expected to take care only of his or her immediate family. Individualistic societies, according to Schwartz (1990) are essentially contractual, with narrow primary groups, concrete obligations and expectations focused on obtaining status. The personal view of their members is perceived as separated from others, with an emphasis on the personal identity, self-reliance, independence and more unique qualities about the self (Oyserman et al., 2002).

By contrast, Collectivism stands for a society where people are integrated into strong and cohesive in-groups which protect them in exchange for unquestioning loyalty (Hofstede, 1984).

Schwartz (1990) describes collectivistic societies as communal societies featured by mutual and diffuse obligations and expectations based on ascribed statuses. The personal view on oneself is perceived as embedded in relational networks, with a duty to the in-group, and an emphasis in social harmony (Oyserman et al., 2002).

Some attachment researchers suggests that because of the higher collectivistic orientation characterizing collectivistic countries, individuals from collectivistic societies are more concerned with fitting in the social group and maintaining social harmony than individuals from individualistic societies (Kim & Marcus, 1999), which in turn leads to a higher need for social approval and a greater sensitivity to social influence (Cheng & Kwan, 2008; Wang & Mallinckrodt, 2006). Furthermore, people with higher attachment anxiety have developed a negative model of the self and a positive model of others as the result of inconsistent care provided by their caretakers when they were young, which is accentuated by the higher need from social approval and sensitivity to social influence characterizing collectivistic countries (Cheng & Kwan, 2008). Because of this it seems reasonable to assume that a higher level of attachment anxiety would be related to collectivistic societies.

In addition, other experts also suggest that insecure attachments in collectivistic populations might have a stronger association with more negative psychosocial outcomes in comparison with more individualistic populations for two reasons: First, their relationships are more integral to their happiness, self-concept, and source of self-esteem, which could be more distressful when they are not functioning well and, second, insecure attachment styles such as high attachment avoidance is in conflict with collectivistic cultural norms, leading to a poor fit between the person and the culture (Friedman, 2006; Friedman et al., 2010; Lin et al., 2017). In fact, results of these studies suggest that collectivism may moderate the relationship between

attachment anxiety, attachment avoidance and negative psychosocial outcomes as well as psychological health. However, despite the previous studies mentioned, to our knowledge there is no specific research measuring the possible moderation effect that individualism-collectivism may have on the relationship between insecure attachment styles and grief.

Because of the previously stated arguments this research is intended to test the following hypothesis: (1) There will be significantly higher levels of attachment anxiety in collectivistic countries versus individualistic countries (2) Higher levels of attachment anxiety will be related to more grief intensity. (3) Collectivism will moderate the relationship between attachment anxiety and avoidance and grief symptomatology. More concretely, higher levels of attachment anxiety and avoidance will predict higher intensity of grief symptoms in collectivistic countries than in individualistic ones.

## Method

### Participants

#### *Inclusion and exclusion criteria*

Ghana, Iran and Spain were considered in the study for their cultural differences in terms of individualism and collectivism (Hofstede, 1984). Based on the dimension of collectivism-individualism proposed by Hofstede (1984) two of these countries were considered as collectivistic (Ghana and Iran), whereas Spain was considered as individualistic. The population from which the sample was recruited consisted of people aged 18 and above who had lost a loved person within the last 36 months. Furthermore, participants that were not from either Ghana, Iran or Spain were excluded from the study. A total of 433 participants were recruited from Spain, Ghana and Iran, out of which 49 participants were excluded because they had not

lost anyone in the last 36 months, 29 did not belong to any of the countries previously mentioned, one was below 18 years old, and another participant because her score deviated more than 3.3 standard deviations from the mean score. The final total sample was 353 participants (106 participants from Spain, 146 from Iran and 101 from Ghana).

### *Background information of final sample*

The final total sample of participants included in the study when combining the three countries was 353 participants. All variables but two (relationship with the deceased person and time since loss) were found statistically significant, with p-values below .05. Background and grief-related information as well as results and significance for the analysis of the background variables for the sample can be found in Table 1.

**Table 1**

*Demographic and grief-related information*

| | Country | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Variable | Spain | | Iran | | Ghana | | Total | | Value |
| | M | SD | M | SD | M | SD | M | SD | |
| Age | 39.1 | 14.9 | 31.8 | 9.12 | 28.22 | 7.13 | 33.01 | 1.5 | $\chi^2$ =29.74** |
| Closeness | 3.4 | .82 | 3.34 | .84 | 3.1 | .88 | 3.29 | .85 | F = 3.61* |
| Time since loss | 15.7 | 10.7 | 15.7 | 10.7 | 14.4 | 11.1 | 15 | 11.1 | F = 2.962 |
| Age of deceased | 71.2 | 23.7 | 62.7 | 22.1 | 52.4 | 20.9 | 62.3 | 23.4 | F = 18.42** |
| | % | N | % | N | % | N | % | N | |
| Gender | | | | | | | | | $\chi^2$ =15.95** |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Male | 27.4 | 29 | 21.2 | 31 | 44.6 | 45 | 29.7 | 105 | |
| Female | 72.6 | 77 | 78.8 | 115 | 55.4 | 56 | 70.3 | 248 | |
| Education | | | | | | | | | $\chi 2$ =43.89** |
| Elementary | 2.8 | 3 | | | | | 0.8 | 3 | |
| Secondary | 11.3 | 12 | 8.9 | 13 | 10.9 | 11 | 10.2 | 36 | |
| Higher Diploma | 6.6 | 7 | 0 | 0 | 6.9 | 7 | 14 | 4 | |
| Bachelor | 49.1 | 52 | 39.7 | 58 | 60.4 | 61 | 48.4 | 171 | |
| Postgraduate | 30.2 | 32 | 51.4 | 75 | 21.8 | 22 | 36.5 | 129 | |
| Marital status | | | | | | | | | $\chi 2$ = 54.66** |
| Never married | 52.8 | 56 | 49.3 | 72 | 83.2 | 84 | 60.1 | 212 | |
| Married | 34 | 36 | 48.6 | 71 | 15.8 | 16 | 34.8 | 123 | |
| Divorced | 9.4 | 10 | 2.1 | 3 | 0 | 0 | 3.7 | 13 | |
| Widowed/er | 3.8 | 4 | 0 | 0 | 1 | 1 | 1.4 | 5 | |
| Religion | | | | | | | | | $\chi 2$=450.24** |
| Christian | 49.1 | 52 | .7 | 1 | 100 | 101 | 44.2 | 156 | |
| Muslim | 0 | 0 | 61 | 89 | 0 | 0 | 25.5 | 90 | |
| Non-religious | 42.5 | 45 | 37.7 | 55 | 0 | 0 | 14.7 | 52 | |
| Other | 8.5 | 9 | .7 | 1 | 0 | 0 | 15.6 | 55 | |
| Deceased person | | | | | | | | | $\chi 2$ = 15.909 |
| Partner | 2.8 | 3 | .7 | 1 | 1 | 1 | 1.4 | 5 | |
| Parent | 28.3 | 30 | 18.5 | 27 | 24.8 | 25 | 23.2 | 82 | |
| Sibling | 3.8 | 4 | 4.8 | 7 | 8.9 | 9 | 5.7 | 20 | |
| Child | 2.8 | 3 | 1.4 | 2 | 0 | 0 | 1.4 | 5 | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Friend | 18.9 | 20 | 17.1 | 25 | 22.8 | 23 | 19.3 | 68 | |
| Other | 43.4 | 46 | 57.5 | 84 | 42.6 | 43 | 49 | 173 | |
| Reason of death | | | | | | | | | $\chi 2$ = 34.087** |
| Long disease | 36.8 | 39 | 34.2 | 50 | 34.7 | 35 | 40.2 | 142 | |
| Short/sudden disease | 27.4 | 29 | 43.2 | 63 | 46.5 | 47 | 42.5 | 150 | |
| Accident | 8.5 | 9 | 8.2 | 12 | 8.9 | 9 | 8.8 | 31 | |
| Homicide | 1.9 | 2 | 0 | 0 | 7.9 | 8 | .6 | 2 | |
| Suicide | .9 | 1 | 4.8 | 7 | 0 | 0 | 2.3 | 8 | |
| Unknown/other | 24.5 | 26 | 9.6 | 14 | 2 | 2 | 5.5 | 4 | |

*Note. M=Mean. SD= Standard Deviation. N= Sample size. **p<.001. *p<.05.*

**Procedure**

Participants for the study were recruited from May until June 2020 through an announcement on social media such as Facebook, Whatsapp, LinkedIn and Instagram. The announcement explained the purpose of the research, the inclusion criteria of the participants needed for the study, the estimated time for completing the questionnaire and stated that participation would be anonymous and voluntary. The announcement with the link to the Qualtrics survey was posted on the profile of the researchers on the various platforms. It was also spread through specific Facebook groups for people that had lost a loved person, and through Whatsapp groups.

Three versions of the informed consent and the questionnaire were provided depending on the language that the participants spoke as mother tongue (English, Persian and Spanish). The Spanish versions of the questionnaires were used for the subsample collected from Spain (Garcia

et al., 2011; Yárnoz-Yaben & Comino, 2011). For the Persian version, one of the questionnaires was first translated into Persian and later back-translated again to English by another native speaker while the other one was taken from the Persian version (Arefi & Mohsen zadeh, 2012). The data were collected at one point in time, and the participants received no compensation for their participation.

## Measurement Instruments

### *Inventory of complicated grief*

Grief intensity was measured using the Inventory of Complicated Grief (Prigerson et al., 1995). This 19-item questionnaire uses a 5-point Likert scale ranging from 0 (never) to 4 (always) to assess the frequency with which subjects experience grief symptoms in the emotional, cognitive and behavioral domains. Higher scores indicate a higher level of grief manifestations. This questionnaire has a strong internal consistency with a Cronbach alpha of .94. Test-retest reliability is .80. It also has good concurrent validity with other similar scales (Prigerson et al., 1995). Reliability tests of the questionnaire for the sample of the study showed Cronbach alpha´s of .933, .922 and .904 for the Spanish, Iranian and Ghanaian sub-samples respectively.

### *Experience in Close Relationships-Revised Questionnaire*

In order to assess attachment anxiety and attachment avoidance the Experience in Close Relationships questionnaire short form (ECR-RD12) was used, developed by Brenk-Franz et al. (2018) from the original 36-item version initially developed by Brennan et al. (1998). This questionnaire was initially developed to assess secure versus insecure attachment patterns. From

the 12 items that compound the questionnaire, 6 are measuring attachment anxiety, and 6 attachment avoidance. Items are scored using a Likert scale for degree of agreement, ranging from 1 (strongly disagree) to 7 (strongly agree). The instrument has shown strong reliability, with a Cronbach alpha of .88 for the Anxiety scale and a Cronbach alpha of .87 for the Avoidance scale. This test also shows good construct validity (Fraley et al., 2000). For the attachment anxiety scale, reliability tests for the sample of the study showed Cronbach alpha´s of .81, .77 and .83 for the Spanish, Iranian and Ghanaian sub-samples respectively. For the attachment avoidance scale, reliability tests for the sample of the study showed Cronbach alpha´s of .66, .79 and .62 for the Spanish, Iranian and Ghanaian sub-samples respectively.

**Statistical analysis**

In order to test for differences in attachment anxiety between countries, an analysis of covariance (ANCOVA) was carried out. The Spanish sub-sample was considered as individualistic, the Iranian sub-sample was considered as collectivistic and the Ghanaian sub-sample as very collectivistic. Prior to this analysis, a multiple regression analysis was carried out with the background variables as predictors to find those significantly related to the dependent variable of attachment anxiety. Only age was included as a covariate in the ANCOVA.

In order to test for the relationship between grief intensity, attachment anxiety and attachment avoidance, a hierarchical lineal regression was carried out. The control variables of this model accounting for the demographic differences were age, sex, marital status, education level and religion. The control variables accounting for the nature of the loss were time since loss, degree of closeness to the deceased person, reason of death, relationship with the deceased person and age of the deceased person.

## Results

Preliminary tests were carried out in order to check for the assumptions of each model. The assumption of normality for the distribution of data was also checked. With regards to the multiple regression analysis, assumptions were also checked for both the variables of grief and attachment anxiety.

For the first hypothesis, previously, a multiple regression analysis with the significant background variables was carried out. The model was found statistically significant, with F change (8, 341) = 2.274 and p=.022. Only one of the variables was found significant (Age) with p =.003 and partial eta square = -.159. This variable was included as a covariate in the ANCOVA.

**First Hypothesis: There will be significant higher levels of attachment anxiety in collectivistic countries in comparison with individualistic countries**. Results from the ANCOVA showed, after controlling for the influence of age, a significant difference in attachment anxiety between countries, F (2, 349) = 11.076, p < .001, partial eta squared =.06. These results show a medium effect of the country on attachment anxiety. Post-hoc comparisons yielded significant differences for both Spain in comparison with Iran (p <.001) and Ghana (p <.05), as well as Iran in comparison with Ghana (p <.05). However, contrary to expected, the mean score for Ghanaian participants was lower than the mean score of Iranian participants (see table 2). Therefore, the first hypothesis of significantly higher scores in attachment anxiety for collectivistic versus individualistic countries was only partially supported.

**Table 2**

*Estimated marginal means for each country after controlling for age*

| | Country | N | Mean | Std. error |
|---|---|---|---|---|
| AttachmentAnxiety | Spain (Individualistic) | 106 | 20.14 | .825 |
| | Iran (Collectivistic) | 146 | 25.16 | .672 |
| | Ghana (Very collectivistic) | 101 | 22.88 | .828 |

**Second Hypothesis: Higher levels of attachment anxiety will be related to more grief intensity.** The first model of the multiple regression included all the background variables as control variables in the regression equation. Results were statistically significant, with F (10, 342) =13.572 and p <.001, explaining 28.4% of the total variance of the dependent variable. Then, in the second model, when introducing the predictor of attachment anxiety in the equation, the model improved slightly, with F change (1, 341) = 11.332, and p =.001, contributing an addition 2.1% to the explained variance of the model. Therefore, the second hypothesis of a relationship between attachment anxiety and grief intensity was supported.

**Third hypothesis: Collectivism moderates the relationship between attachment anxiety and avoidance and grief symptomatology. More concretely, higher levels of attachment anxiety and avoidance will predict higher intensity of grief symptoms in collectivistic countries than in individualistic one.** After testing for the second hypothesis, the variables of attachment anxiety, attachment avoidance and collectivism were mean centered in order to prevent multicollinearity between these variables and their respective interactions

(Iacobucci et al., 2016). Then, after adding the control variables on the first model, the mean centered variables of attachment anxiety and attachment avoidance were introduced in the second model along with the interaction between those two variables. the model improved slightly, with F change (3, 336) = 6.146 and p <.001, contributing to a 3.7% to the explained variance of the model. After that, in the third model, the mean centered predictor of collectivism along with the interaction of collectivism, attachment anxiety and attachment avoidance were added to the equation. The model did not improve, with F change (2, 334) = 1.017 and p= .363. Therefore, the third hypothesis of collectivism moderating the relationship between grief and attachment anxiety and avoidance was not supported. Results from each relevant predictor can be seen in Table 3.

**Table 3**

*Relevant predictors of grief*

| Predictor | Std. Beta coefficient | Std. Error | p-value | Partial Correlation | Overall F | F-change |
|---|---|---|---|---|---|---|
| **First model** | | | | | 13.572 | 13.572 |
| Age | -.100 | .071 | .000 | -.097 | | |
| Sex | .190 | 1.488 | .073 | .218 | | |
| Education | -.046 | .744 | .000 | -.052 | | |
| Time since loss | -.177 | .062 | .333 | -.200 | | |
| Age of deceased | -.249 | .031 | .000 | -.266 | | |
| Closeness | .318 | .850 | .000 | .331 | | |
| Religion | -.031 | 1.478 | .000 | -.037 | | |
| Marital status | -.065 | 1.612 | .500 | -.068 | | |
| Relationship with deceased | .175 | 1.639 | .210 | .180 | | |
| Type of loss | .127 | 1.447 | .001 | .142 | | |
| **Second model** | | | .009 | | 12.388 | 6.326 |
| Attachment anxiety (centered) | -.140 | .081 | .003 | -.163 | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Attachment avoidance (centered) | -.127 | .109 | .007 | -.146 | | |
| Interaction attachment anxiety and avoidance | .003 | .012 | .952 | .003 | | |
| **Third model** | | | | | 10.873 | 1.017 |
| Collectivism | .047 | 1.738 | .381 | .048 | | |
| Interaction collectivism and attachment | .052 | .028 | .268 | .060 | | |

## Discussion

This research addresses how cultural collectivism-individualism is associated with level of attachment anxiety, how attachment anxiety is related to grief and how attachment insecurity is differentially related to grief among people from collectivistic and individualistic countries.

The first hypothesis of higher levels of attachment anxiety in collectivistic (Ghana, Iran) versus individualistic countries (Spain) was partially supported, in consistency with previous studies (Agishtein & Brumbaugh, 2013; Cheng & Kwan, 2008; Frías et al., 2014; Friedman, 2006; Lin et al., 2017). Attachment anxiety levels were significantly higher in both Ghana and Iran when compared to Spain. People from individualistic cultures tend to see themselves as independent from each other, whereas people from collectivistic countries see themselves rather as interconnected and interdependent from each other (Markus & Kitayama, 1991). As anxiously attached people are more reliant on others to fulfil one's security needs and collectivistic societies emphasize the model of the other against the model of the self (Cheng & Kwan, 2008), the dependence on another person to regulate security needs may therefore lead to an increase of attachment anxiety in more collectivistic countries.

However, contrary to what it was initially expected, mean levels of attachment anxiety were significantly lower in Ghana (considered as very collectivistic) when compared to Iran (considered as collectivistic). A possible explanation could come in terms of the current situation Iran has been facing on the last decades, marked by economic unstability and political sactions on the country, which seems to be having a negative impact on their civilians mental health and quality of life (Tahan, 2019). Furthermore, several studies link the experience of poverty, violence exposure and uncertainty with insecure attachment styles (Johnson et al., 2018; Nowakowski-Sims & Rowe, 2017; Spinazzola et al., 2018; Wright et al., 2017). Therefore the current situation of the country may have increased attachment anxiety scores for the Iranese subsample.

It is also necessary to note that, with regards to the relationship between collectivism and attachment anxiety, most previous studies compare such relationship between western versus non-western countries. This poses some limitations, due to the impossibility of determining whether collectivism is directly related to attachment anxiety, or if it is just because of differences between western and non-western cultures. Because of this, it is necessary to conduct more research comparing attachment anxiety levels between non-western societies in order to gain a better understanding of the possible link between collectivism and attachment anxiety.

Despite of what was previously mentioned, this is one of the first and few studies to analyse and compare attachment anxiety levels in collectivistic societies from the Middle East and Central Africa. This is especially important specially when considering that the vast majority of previous research on attachment has only compared collectivistic societies that are East Asian or Latin American.

The second hypothesis of a relationship between attachment anxiety and grief was supported, as shown by previous studies in the past (Boelen & Klugkist, 2011; Currier et al., 2015; Delespaux et al., 2013; Ho et al., 2013; Maccallum & Bryant, 2018). Individuals with higher levels of attachment anxiety are more reliant on attachment figures to feel a sense of security. This leads to a more intense yearning for the deceased and more negative appraisals of the person´s ability to manage the situation when losing a loved one (Maccallum & Bryant, 2018).

These findings are important because this relationship between attachment anxiety and grief has been found in a sample compounded by both participants from western (Spain) as well as non-western countries (Ghana, Iran). Cross-cultural attachment data are particularly useful because most social and personality psychology theories have been developed in and based on the middle-class Caucasian populations of only a few western cultures (Agishtein & Brumbaugh, 2013). Therefore, these results contribute to provide more evidence of the link between attachment theory and grief as a universal phenomenon. However, it is also necessary to be cautious due to the small effect found between these variables in the analysis. The large sample of the study makes it´s statistical power likely to detect differences that are rather non-substantial for the research question (Tanaka, 1987).

The third hypothesis of a possible moderating role of collectivism in the relationship between attachment insecurity and grief was not supported. Collectivism did not moderate the relationship with attachment anxiety and attachment avoidance. This is inconsistent with previous research showing an influence of collectivism on attachment insecurity and negative psychological as well as psychosocial outcomes (Friedman, 2006; Friedman et al., 2010; Lin, Chew, & Wilkinson, 2017). This could be due mainly to the following reasons:

First, despite results from previous studies showing an influence of collectivism in how attachment insecurities may exacerbate negative outcomes such as negative psychological symptoms and relationship outcomes, in the case of grief, other unknown cultural factors could influence that relationship. For example, some studies (Bonanno et al., 2005; Lalande & Bonanno, 2006) have shown different patterns of grieving in China (regarded as a highly collectivistic country) and the United States (regarded as a highly individualistic country), with a more acute pattern of grieving in the first months of bereavement for Chinese participants, but also a faster recovery in contrast with participants from the United States. These findings seem to indicate that culture may affect grief in ways still unknown for us.

Second, it is theorized that insecure attachment styles could be more detrimental to psychological well-being in collectivistic societies due to a poorer fit between person and culture (Friedman, 2006; 2010), and to a stronger influence of the personal relationships in their self-esteem, which could be more distressful when they are not functioning well (Lin et al., 2017). However, it is also possible that some attachment styles, such as attachment avoidance, could lead to an independent view of oneself and less need for belonging, which would buffer against the negative perceptions of others in collectivistic societies, as suggested by a prior study (Yaakobi & Williams, 2016). Furthermore, some research seems to indicate that, with a higher use of continuing bonds, individuals with high attachment anxiety would experience less grief intensity than individuals with lower attachment anxiety (Currier et al., 2015). This may be particularly noticeable in collectivistic societies, where, as some findings suggest, continuing bonds could protect from long-term distress due to the communal aspects of their rituals, which may give the bereaved a stronger sense of cultural identity and social support (Lalande & Bonanno, 2006).

In any case, no conclusions can be drawn so far due to the limited amount of research available studying how collectivism may impact grief intensity and how culture could influence the effect of attachment insecurities in psychological health. Therefore, more research needs to be conducted in that direction in order to assess interventions that are more specific to each person and culture.

**Limitations and future directions**

This study contains a number of limitations that are necessary to address in the following section:

First, 89% of the participants from the study had at least some sort of tertiary degrees such as college degrees or postgraduate degrees (86% for Spain, 91% for Iran, 89% for Ghana). This is problematic due to a clear over representation of people with higher education studies, in contrasts with the proportion of tertiary education degrees in the real population, which is around 14.96% for Spain, 1.44% for Ghana and 14.66% for Iran (Roser & Ortiz-Ospina, 2013). Therefore, future research aimed at analyzing the influence of grief and attachment insecurities in populations with lower levels of education would fill a gap in research with regards to the education level of participants taking part in scientific studies.

Second, the cross-sectional nature of the study poses another problem about how grief intensity may vary differently over time for insecure attachment styles and for each culture. Some longitudinal research focused on bereavement shows different patterns of grief processing according to culture (Bonanno et al., 2005; Lalande & Bonanno, 2006), which strengthens the need to carry out more research focused on bereavement that measures longitudinal changes in grief cross-culturally.

A third limitation of the study to consider is that attachment theory has been created and developed from a western theoretical framework. Therefore, it bases the healthy functioning of the person towards the attainment of a strong individual psychological autonomy (Keller, 2013). However, this becomes problematic when considering collectivistic cultures, in which people are integrated into cohesive and strong in-groups, with a personal view that is embedded into relational and interconnected networks with others (Hofstede, 1984). Because of this, it is normal to expect individuals from collectivistic societies to score higher on insecure attachment dimensions when compared with individuals from individualistic societies. Nevertheless, this may occur simply because their culture emphasizes more interdependence rather than independence, and wouldn't consequently be linked to a worse functioning within their own cultural context. Therefore, in order to carry out less biased cross-cultural research on attachment, it would be necessary to further develop attachment theory in a way that integrates better different cultural points of view.

In conclusion, despite these limitations, this study is one of the first ones to provide a cross-cultural comparison on how attachment style may influence the bereavement experience. It is also one of the first studies to analyze the degree of attachment anxiety in collectivistic societies from the Middle-East and Central Africa, as well as it's impact on grief intensity. The results obtained from this research will hopefully give some more insight about how these variables are influenced by culture, all in an attempt to help developing treatments programs for bereaved people that satisfy better the specific needs for each individual and culture.

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