

The Relationship between Analytic and Holistic Styles of Thinking and Forgiveness

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Abstract

This study examined the relationship between styles of thinking (analytic and holistic) and willingness to forgive. Previous research has demonstrated that individuals attend to their worlds in qualitatively different ways: analytic thinkers focus on objects and their attributes while holistic thinkers focus on the context as a whole, in which objects are viewed in relation to each other. Consistent with these differences in attention, analytic thinkers may be more likely to make internal attributions for other people's transgressions while holistic thinkers may tend to perceive external attributions for those transgressions (Nisbett, Peng, Choi, & Norenzayan, 2001). Research has shown that people who attribute transgressions to external factors report higher levels of forgiveness (Fincham, Paleari, & Regalia, 2002). Thus, analytic and holistic styles of thinking may be related to a person's willingness to forgive. We therefore hypothesized that people who think more holistically would be more forgiving because they view others' behaviors as more strongly influenced by situational factors. On the other hand, people who think more analytically would be less likely to forgive because they are more likely to understand others' transgressions as a result of their underlying dispositions. Study participants answered online surveys regarding their styles of thinking (analytic or holistic), their attributional style (situational or dispositional) and their willingness to forgive. Holistic thinkers were found to be more likely to forgive others than analytic thinkers. However, this relationship was not mediated by attributional style. Alternative explanations for the findings are discussed.

Through the transformation of negative emotions to neutral or positive ones, forgiveness is one of the most effective tools to prevent conflicts and to heal relationships after conflicts (McCullough, Root, Tabak, & Witvliet, 2009; Thompson, et al., 2005). It can also heal emotional wounds and foster greater personal well-being after the occurrence of transgressions (DiBlasio & Proctor, 1993; Toussaint & Webb, 2005). Recognizing these potential benefits, an increasing number of clinical intervention programs are focusing on forgiveness. Unfortunately, despite its increasing popularity as a target for clinicians, our knowledge about forgiveness and the factors that may influence it are limited (Gordon, Baucom, & Snyder, 2000; Worthington, 1998). Researchers have only recently begun to explore which factors may be related to individuals' willingness to forgive another's transgression against them (Fincham, 2000). The current study seeks to add to this effort, examining how analytic and holistic styles of thinking may relate to forgiveness.

Transgressions and Forgiveness

According to Thompson et al (2005), an individual may perceive that a transgression has been made against them when an action contradicts their expectations and assumptions about how things should be, often resulting in negative thoughts, feelings and behaviors against the transgressions and the transgressors. People may respond to transgressions in various ways, one of which is forgiveness.

Forgiveness is an emotional and cognitive process (Enright & Fitzgibbons, 2000; Smedes, 1998) in which negative thoughts and feelings towards the transgressions and transgressors are transformed into either neutral or positive ones (Thompson, et al., 2005). Forgiveness is an individual mental process in which individuals may consider various factors such as the transgression's level of harm, the surrounding circumstances, or/and the transgressors' personalities in order to decide whether they want to let go of negative emotions towards the transgressors and forgive them. There may be several targets of the act of forgiveness, such as the self, another person(s), or a situation. In this study, we focus on the tendency to forgive others. We examine the thinking processes of people who perceive transgressions made against them in order to better understand the decision to forgive.

Causal Attribution and Forgiveness

One factor that an individual is likely to consider when deciding whether to forgive a transgression is the cause of that transgression. There are two main types of causal attributions: external (contextual) and internal (personal) (Heider, 1958). People who apply external attributions focus their attention on situational factors, such as the environment, peer pressure, social positions and economic status. On the contrary, people who apply internal attribution consider mainly the personality, intentions or dispositions of the transgressors as the cause for what happened (Weiner, 1995).

It is thought that individuals who make external attributions for behaviors would be less likely to view a transgressor as solely responsible for his/her actions and would thus be more likely to forgive him or her. Consistent with this idea, several researchers have documented the relationship between causal attribution and forgiveness (e.g., Fincham, 2000; Fincham & Bradbury, 1992; Fincham, Paleari, & Regalia, 2002). Fincham and his colleagues (2002) surveyed 79 Italian husbands and 92 wives. They demonstrated that spouses who made external

attributions for their partners' transgressions reported a higher tendency to forgive than spouses who made internal attributions. When the spouse used an 'internal attribution' lens to explain their partner's transgression, they viewed the transgressor as more accountable for the event. In this case, the spouse may find it more difficult to forgive because she or he believed that the transgressor intentionally hurt her or him. Although the causal nature of this relationship is difficult to discern from these correlational findings, it is possible that one's willingness to forgive may be related to the causal attribution one makes for the transgression.

Styles of Thinking and Causal Attributions

Another factor that might relate to forgiveness is the individual's thinking style: analytic or holistic. People who think more analytically focus on objects and their individual attributes while people who think more holistically focus on the context and objects are viewed in relation to each other (Nisbett, Peng, Choi, & Norenzayan, 2001). These two styles of thinking have been proposed to differ in four dimensions: focus of attention, attributions for behaviors, perception of the nature of change, and tolerance of contradictions (Nisbett, et al., 2001). Namely, when observing an object or event, holistic thinkers tend to pay attention to the entire context while analytic thinkers tend to focus on the object as separate from its context (locus of attention). In terms of attributions, holistic thinkers tend to locate the cause of an event in the interactions between the actor and his/her surrounding conditions while analytic thinkers would be more likely to emphasize the internal dispositions of the actor as the cause of an event (causality). Regarding perception of change, holistic thinkers are more likely to expect constant change due to the complex interactions between phenomena while analytic thinkers are more likely to believe that the future is predictable and that phenomena will proceed in similar patterns as they have in the past (Perception of Change; Peng & Nisbett, 1999). For instance, if the value of a stock is decreasing, an analytic thinker will be more likely to believe that the value will continue to decrease over time. Finally, holistic thinkers are more tolerant towards contradictions. They are more likely to accept that two seemingly contradictory propositions could be simultaneously true and even complementary to each other while analytic thinkers are more likely to feel that only one proposition can be true at a time (Attitude Toward Contradictions; Peng & Nisbett, 1999).

Nisbett et al. (2001) suggested that because analytic thinkers focus on individual objects and their attributes, they would be more likely to locate the cause of an event in the disposition of the actor. In contrast, because holistic thinkers tend to focus on the whole picture rather than separate parts, they would be likely to take surrounding factors into consideration in addition to the object. In other words, analytic thinkers might be more likely to make internal or dispositional attributions for others' behaviors while holistic thinker might be more likely to make external or contextual attributions.

The Current Study: Thinking Styles and the Tendency to Forgive

Given that individuals who focus on external attributions for others' behaviors are more likely to forgive than those who make internal attributions; and holistic thinkers may make more external attributions for others' behaviors while analytic thinkers may make more internal attributions, it

follows that holistic thinkers may have a greater willingness to forgive than analytic thinkers. We therefore hypothesize that:

1. Holistic thinkers will be more forgiving of transgressions compared to analytic thinkers.
2. Of the four dimensions of thinking styles (Causality, Attitude Toward Contradictions, Perception of Change, and Locus of Attention), Causality will be most closely related to the tendency to forgive.
3. The relationship between one's thinking style and one's tendency to forgive will be mediated by the type of causal attributions made regarding transgressions. Holistic thinkers will be more forgiving because they make external attributions towards the transgressions, while analytic thinkers will be less forgiving because they make internal attributions.

In the current study, we drew our sample from both Western and Eastern populations. Since research has shown that Westerners tend to think more analytically while Asians tend to think more holistically (Nisbett & Miyamoto, 2005), we hoped the inclusion of individuals from both the East and the West would result in a wide variability in thinking styles. In addition, the inclusion of Asian participants adds to previous findings in the area of forgiveness, which have relied primarily on Western samples.

Methods

Participants

Participants were recruited online through postings on the Facebook accounts of the authors and of participants who chose to post the link of the survey on their facebook accounts. Participants were also recruited through a university-wide email sent out to all faculty, staff and students of an international university in Bangladesh. Of 357 participants who began the survey, 200 (56%) completed it. Of these 200, six did not provide demographic information. Those who completed all of the surveys and provided demographic information included 162 women and 32 men, ranging in age from 16 to 80 years ($M = 32.76$, $SD = 13.2$). Participants represented a significant variety of ethnicities: the sample consisted of 40.7% Asian participants (whose birth countries are Bangladesh, Bhutan, Cambodia, India, Malaysia, Myanmar, Nepal, Pakistan, Palestine, Sri Lanka, Syria and Vietnam) and 59.3% Western participants (whose birth countries are Canada, Germany, Spain, Trinidad, U.S and U.K). In terms of occupation, 104 (53.9%) worked outside the home, 10 (5.2%) were retired or worked in the home, and 79 (40.9%) were undergraduate or graduate students.

Measures

Willingness to forgive. We measured participants' self-reported tendency to forgive with the Heartland Forgiveness Scale (HFS, Thompson & Snyder, 2003). The HFS includes a total forgiveness score and is also divided into three six-item subscales, which measure dispositional forgiveness of self, of others, and of situations that are beyond their control, such as disease. Participants were asked to indicate their agreement with 18 statements on a 7-point scale, from 1= Almost Always False of Me to 7= Almost Always True of Me. The scale has been used in numerous studies about forgiveness (e.g., Day, & Maltby, 2005; Edwards et al., 2002; Thompson

et al., 2005) and been shown to be a valid and reliable measure of the tendency to forgive (Thompson & Snyder, 2003). For the current study, we used only the forgiveness of others subscale, for which the alpha was 0.75

Causal Attributional Style. We measured participants' understanding of the causes of transgressions against them using the Transgression Attribution Questionnaire (TAQ; Hook, 2007). Participants were first asked to remember and think about a specific transgression against them. We did not specify a particular type of transgression or time period in which the transgression should have occurred. Participants were then asked to rate their current beliefs about the cause of the transgression, indicating their agreement with each of 10 statements on a 5-point rating scale from 1= strongly disagree to 5= strongly agree. The TAQ is divided into two five-item subscales: internal attribution (e.g., "He or she is not a good person") and external attribution (e.g., "He or she has had a rough time lately"). Higher scores on each subscale indicate a greater tendency to make an internal or an external attribution accordingly. For the current sample, the alphas are .85 for the Internal Attribution subscale and .83 for the External Attribution subscale.

Analytic and Holistic Thinking. We measured participants' styles of thinking with the Analysis-Holism Scale (AHS; Choi, Koo, & Choi J., 2007). The AHS consists of 24 items in which participants rate statements on a 7-point scale from 1= strongly disagree to 7= strongly agree. In addition to a total score, the AHS is divided into 4 subscales, each consisting of 6 items. The first subscale measures the types of causal attributions people make (e.g., "Any phenomenon has numerous numbers of causes, although some of the causes are not known"). The second subscale measures participants' level of tolerance towards contradiction (e.g., "We should avoid going to extremes"). The perception of change subscale measures the expectations that participants hold toward future events (e.g., "Current situations can change any time"). The locus of attention subscale measures whether participants tend to focus on parts or on the whole (e.g., "It is not possible to understand the parts without considering the whole picture"). Higher scores on the total scale represent a greater tendency to apply holistic thinking. Similarly, higher scores on each of the subscales indicate that participants give more weight to external attributions for behaviors, have more tolerance towards contradiction, believe that the future is unpredictable, and pay more attention to the whole context. The scale has been validated with a sample of Americans and Koreans (Choi, et al., 2007) and has been used in many studies of thinking styles (e.g., Jen, & Lien, 2010, Konrath, Bushman, & Grove, 2009). For the current sample, the Cronbach's alpha coefficients were 0.76 for the total scale, 0.78 for the Causality subscale, 0.74 for the Attitude toward Contradictions subscale, 0.72 for the Perception of Change subscale and 0.65 for the Locus of Attention subscale.

Procedure

Both authors posted an online version of the survey to their Facebook accounts and a university-wide announcement was emailed to all faculty, staff and students requesting their participation. Participants were also requested to post the survey's link in their own Facebook accounts, if they were willing, in order to facilitate snowball sampling. After reading a consent form describing the study procedures and their rights as research participants, participants indicated their consent by pressing a button to enter the survey rather than signing their names, to preserve anonymity. Those who did not consent were directed away from the survey. The survey took about 15 minutes to complete. We provided our contact information and encouraged participants to

contact us to discuss any questions, comments, or concerns regarding the survey. The online survey was active for approximately one month.

Results

Sample Characteristics. Table 1 displays the age, gender and occupations of the total sample, Asian subsample, and North American/European subsample. Significant differences exist between the Asian and Western subsamples in age, $t(133.509) = -13.468, p < .001$, gender, $\chi^2(2) = 19.282, p < .001$, and occupation, $\chi^2(4) = 98.672, p < .001$. Compared to the Asian subsample, the Western subsample was significantly older, included more male participants, and was more likely to be employed or in other occupations (e.g., retired, non-income generating work).

Table 1 also displays the means and standard deviations of all the measures used in the study. There are no significant differences between the Asian or the North American/European subsamples on any of the measures.

Hypothesis 1. Our first hypothesis was that participants who apply holistic thinking would be more forgiving of others compared to people who apply analytic thinking. Both the thinking style and the forgiveness of others variables are continuous, so this hypothesis was tested through a Pearson's correlation. This hypothesis was supported by the data, $r(200) = 0.20, p < .001$.

Hypothesis 2. Our second hypothesis was that, of the four aspects of Analysis/Holism (Causality, Attitude toward Contradictions, Perception of Change and Locus of Attention), Causality would be most closely related to the Forgiveness of Others. The correlation of each of the Analysis/Holism Subscales with Forgiveness of Others is as follows: Causality, $r(200) = 0.24, p = .001$, Attitude toward Contradictions, $r(200) = .12, ns$, Perception of Change, $r(200) = 0.01, ns$, and Locus of Attention, $r(200) = 0.10, ns$. Thus, this hypothesis was also supported by the data.

Hypothesis 3. Our third hypothesis was that the relationship between thinking style and tendency to forgive would be mediated by the types of causal attribution made about transgressions. We thought participants who thought more holistically would make more external attributions for transgressions and be more forgiving of transgressors while participants who thought more analytically would make more internal attributions for transgressions and be less forgiving of transgressors. We did two sets of analyses, testing both Internal Attribution and the External Attribution as mediators.

The standard procedure for testing the mediation hypothesis, as described by Baron and Kenny (1986), involves determining that relationships exist between 1) the initial variable (Analytic/Holistic Thinking) and the criterion variable (Forgiveness of Others), 2) the initial variable (Analytic/Holistic Thinking) and the potential mediating variable (Internal Attribution and External Attribution), and 3) the potential mediating variable (Internal Attribution and External Attribution) and the criterion variable (Forgiveness of Others).

As hypothesized, Analytic/Holistic thinking was correlated with Forgiveness of Others, $r(200) = 0.20, p < .001$ and Internal Attribution was correlated with Forgiveness of Others, $r(232) = -0.30, p < .001$. External Attribution was also correlated with Forgiveness of Others, $r(232) = 0.14, p$

< .05. However, contrary to our hypothesis, Thinking Style was not significantly correlated with Internal Attributions or with External Attribution. Thus, mediating hypothesis was not supported.

Discussion

The results support our primary hypothesis that holistic thinking is positively correlated with a higher tendency to forgive others. Specifically, individuals who tend to locate the cause of a behavior in the interactions between the actor and his/her surroundings are more likely to forgive a transgressor than individuals who focus on the internal disposition of the actor as the cause of behavior. Consistent with this idea and with previous findings (e.g., Fincham, 2000; Fincham, et al., 2002; Fincham & Bradbury, 1992), attributional style was also related to the forgiveness of others: participants who tended to make more external attributions for others' transgressions were more likely to forgive and those who tended to make more international attributions less likely to forgive. However, contrary to our third hypothesis, the relationship between thinking style and forgiveness was not mediated by attributional styles.

There are several possible explanations why, although a relationship between thinking style and willingness to forgive was found to exist, the relationship was not mediated by attributional style. Firstly, the relationship may be mediated by another variable, rather than by attributional style. For instance, individuals who tend toward holistic ways of thinking may also be more collectivistic than analytic thinkers (Nisbett & Miyamoto, 2005; Nisbett, et al., 2001). People who are more collectivistic tend to identify themselves with a group, value the group' goals as more important than their own, and are thus motivated by the group' goals rather than individual ones. In contrast, people who are more individualistic value their individual needs and preferences over the groups' needs, think of themselves as independent from other members of society, and are motivated by their own individual goals (Hook, Worthington, Utsey, Davis, & Burnette, 2012). Collectivists value interpersonal harmony (Sandage & Wiens, 2001) and stress the importance of reconciliation and relationship repair. Consequently, people from collectivist societies are likely to experience significant social pressure to preserve social harmony and happiness (Ho & Fung, 2011) and thus may view forgiveness as a duty (Hook et al., 2012). This social pressure may override individual views about the cause of the transgression and result in a greater tendency to forgive others. Alternatively, given the pressure to maintain social harmony, a transgressor in a collectivistic society may be more likely to apologize and make amends for the transgression than a transgressor in an individualistic society. Accordingly, a positive correlation has been found between collectivistic self-construal and forgiveness (Hook et al., 2012). Thus, the correlation between styles of thinking and forgiveness identified in the current study may be a statistical artifact, with styles of thinking serving as a proxy for the individuals' level of collectivism/individualism.

Alternatively, differences in analytic and holistic thinkers' tendency to experience empathy, which requires the ability to sense how another might be feeling, may mediate the relationship between styles of thinking and forgiveness. Holistic individuals tend to have more interdependent senses of selves, or senses of selves that overlap with close others, compared to analytic thinkers, whose senses of self tend to be more bounded (Nisbett et al., 2001). Because individuals with interdependent self-construals incorporate close others into their identities, they may be more empathetic. Thus, regardless of the causal attribution that they make to explain the

transgression, in comparison to analytic thinkers, holistic individuals may feel empathetic to the transgressors, leading to greater forgiveness.

An individual's predisposition to experience socially engaged or disengaged emotions is another potential mediator of the relationship between styles of thinking and forgiveness. Socially engaged emotions, such as respect, friendliness, and guilt, facilitate interpersonal relationships, while socially disengaged emotions, such as pride, superiority and anger, tend to separate people from others, (Kitayama, Markus, & Matsumoto, 1995). Socially engaged/disengaged emotions have been found to be correlated to independent and interdependent self-construal (Matsumoto, 1990), such that those with independent self-construals are more likely to experience socially disengaged emotions and those with interdependent self-construals are more likely to experience socially engaged emotions. Individuals with interdependent senses of selves are more tolerant and accepting of others (Schwartz, 1992) and may thus experience socially engaged emotions even after perceiving a transgression against them (Schwartz, 1992), emotions that would lead to a more forgiving response. On the contrary, people with independent senses of selves would be more likely to experience socially disengaged emotions following a transgression (Schwartz, 1992), leading to a tendency to be less forgiving. In previous studies, individuals primed to think either independently or interdependently have been shown to demonstrate analytic or holistic thinking, respectively (e.g. Kim & Markman, 2006; Kühnen & Oyserman, 2002). It follows that analytic thinkers may be more likely to experience socially disengaged emotions and be less forgiving compared to holistic thinkers who may experience socially engaged emotions and therefore be more forgiving.

Before ruling out attributional style as a mediator of the relationship between styles of thinking and forgiveness, it is important to consider the limitations of our methodology that may have prevented us from identifying a true relationship. For instance, the measures we chose to assess thinking styles and forgiveness were both dispositional or trait-like in nature while the participant's attributional style was assessed in relation to a specific participant- selected transgression and thus measured the participant's state attributional style rather than his or her trait attributional style. Traits are stable attributes while states are temporary characteristics that are influenced by different situations and internal motives at these particular times. Participants' responses to the measure of attributional style may thus have been specific to the particular transgression they selected. A measure of a temporary state may not have been the best choice of mediator of the relationship between two trait measures. Given that the causality subscale of the Analysis-Holism scale, which is essentially a measure of attributional style, seems to be driving the correlation between thinking style and forgiveness, it will be worthwhile to reexamine attributional style as a mediator of this relationship with a dispositional measure of attributional style.

Strengths and Limitations

This sample is notable for its diverse sample, in terms of age, cultural background, and occupation of the participants. This sample is distinctive in that it includes Southeast Asians and South Asians, when most studies of thinking styles have examined East Asians or Westerners. We believe the inclusion of individuals from North America, Europe and Asia resulted in greater variability in thinking styles than if we had recruited our sample from a single culture. It furthermore allowed us to have greater confidence in the generalizability of the findings. However, several limitations of our study should also be noted.

Firstly, women were significantly overrepresented in our sample (83.5%). As a result, our findings might not generalize to men. Secondly, our survey was in English; however, nearly half of our participants are from Asia and their first languages are probably not English. Therefore, language difficulties may have prevented some participants from accurately understanding the questions. The third limitation is that the study was conducted online as a self-reported survey. Because we were not present while participants completed the surveys, we were not available to assist in case of language difficulties nor could we ensure that participants devoted their full attention to the survey. However, it should be noted that several other investigations of forgiveness have also utilized an online format (e.g., Hook et al., 2012.).

Fourthly, although our measure of willingness to forgive, the Heartland Forgiveness Scale, demonstrated adequate reliability and validity in a sample recruited from a Midwest American university (Thompson & Snyder, 2003; Thompson et al., 2005) and has been used previously with Asian samples (e.g., Pareek & Jain, 2012), the measure has not yet been validated with Asian populations. Similarly, the measure we used to assess attributional style, the Transgression Attribution Questionnaire, has not undergone full peer-review, and requires further testing before we can be confident of its reliability and validity (Hook, 2007).

In addition, the transgressions that individual participants recalled prior to answering the questions related to attributional style may have varied greatly in terms of the nature and severity of the transgression as well as the relationship to the person who transgressed. One can imagine that the process of forgiveness would differ for mild versus severe transgressions or for transgressions committed by friends versus life partners. While this method has positive implications for the generalizability of the findings, it is also possible that combining such diverse sorts of transgressions could have “muddied the waters,” obscuring the identification of relationships between variables that may have emerged had we specified a certain type of transgression. Furthermore, as in any study that examines recall of past events, participants’ memories about prior transgressions may be less than accurate. Likewise, studies that utilize self-report are prone to desirability and other response biases.

Finally, individuals with independent self-construals tend to experience more stable senses of selves while those with interdependent self-construals tend to change their sense of self with context (Kanagawa, Cross, & Markus, 2001). Therefore, measuring the dispositional traits of thinking styles and of forgiveness may have been less valid for participants from interdependent cultural contexts (such as many cultures in Asia) since they might not have consistent styles of thinking or a stable tendency of forgiveness. In other words, Asian participants’ thinking styles and willingness to forgive may vary based on the context more than those of the participants from independent cultural contexts.

Directions for Future Research

In light of the noted limitations, replication of this study with a more balanced gender representation among participants would be a useful endeavor. It would also be worthwhile to re-examine causal attribution as a mediator of the relationship between thinking styles and forgiveness in a future study, either using a dispositional or trait measure of causal attributions or using state measures of thinking styles and of forgiveness. Future research in this area would also benefit from the use of measures translated to participants’ dominant language and validated in the cultures from which the participants are drawn.

In summary, although replication is necessary, our findings suggest a link between styles of thinking and willingness to forgive. However, the hows and whys of that relationship have yet to be discovered. The next step in our research program will be to experimentally manipulating participants' thinking styles in order to investigate whether the nature of the relationship between thinking styles and forgiveness is a causal one. We also plan to measure other potential mediators and explanations of this relationship, such as collectivism/individualism, motivations for forgiveness (e.g., interpersonal harmony versus improvement of personal mood), empathy, and socially engaged versus disengaged emotions. Efforts to obtain a better understanding of the factors most closely related to the willingness to forgive, if fruitful, stand to make important contributions towards the development of programs targeting the prevention and resolution of conflict as well as the restoration of personal well-being following perceived transgressions.

The logo for the International Association for Frontiers in Psychology (iafor) is centered on the page. It consists of the lowercase letters "iafor" in a light blue, sans-serif font. The text is enclosed within a circular frame composed of two concentric, slightly irregular arcs. The outer arc is a light blue color, and the inner arc is a light red color, creating a subtle, hand-drawn effect around the text.

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Table 1

Participant Characteristics

Demographic	Total Sample <i>n</i> = 194	Asians <i>n</i> = 79	North Americans & Europeans <i>n</i> = 115
Gender			
Female <i>n</i> (%)	162 (83.5 %)	76 (96 %)	89 (77 %)
Male <i>n</i> (%)	32 (16.5 %)	3 (3 %)	26 (23 %)
Occupation			
Employed <i>n</i> (%)	104 (53.9%)	12 (15.2 %)	84 (73.3 %)
Student <i>n</i> (%)	79 (40.9%)	66 (83.5 %)	13 (11.3 %)
Other <i>n</i> (%)	10 (5.2%)		
Age in years <i>M</i> (<i>SD</i>)	32.76 (13.2)	22.3 (3.87)	40.0 (12.9)
Forgiveness of Others (HFS) <i>M</i> (<i>SD</i>)	28.29 (6.01)	28.05 (5.31)	28.85 (6.07)
Internal Attribution (TAQ) <i>M</i> (<i>SD</i>)	13.97 (4.40)	13.73 (4.43)	13.86 (4.50)
External Attribution (TAQ) <i>M</i> (<i>SD</i>)	15.32 (4.12)	15.47 (4.03)	15.36 (4.33)
AHS Total <i>M</i> (<i>SD</i>)	115.73 (12.73)	117.15 (12.76)	115.34 (12.43)
AHS Causality <i>M</i> (<i>SD</i>)	30.19 (5.75)	31.13 (5.09)	29.89 (6.19)
AHS Attitude toward Contradictions <i>M</i> (<i>SD</i>)	28.14 (5.49)	28.85 (5.06)	27.82 (5.51)
AHS Perception of Change <i>M</i> (<i>SD</i>)	30.39 (5.21)	29.91 (5.09)	30.78 (5.35)
AHS Locus of Attention <i>M</i> (<i>SD</i>)	27.03 (4.82)	27.27 (4.54)	26.85 (5.12)

Note. Differences between the Asian and North American/European subsamples in age, gender, and occupation are significant at $p < .001$. No other differences are statistically significant.

