Belief in an Afterlife Influences Altruistic Helping Intentions in Alignment With Adaptive Tendencies

Saeed Rezvani Nejad¹, Ahmad Borjali¹, Mahdi Khanjani¹, and Daniel J. Kruger²

Abstract

Evolutionary definitions of altruism are only concerned with reproductive consequences and not motives or other psychological mechanisms, making them ideal for generalization to all forms of organisms. Hamilton’s inclusive fitness theory explains altruistic behavior toward genetic relatives and has generated extensive empirical support. Trivers’ theory of reciprocal altruism helps explain patterns of helping among non-kin, and other research has demonstrated that human helping intentions follow fitness consequences from age-based reproductive value on altruism. The current study examines a novel psychological factor, belief in the afterlife, which may influence altruistic helping intentions. Belief in the afterlife was incorporated into a previous study design assessing the effects of a target’s genetic relatedness and age-based reproductive value. The influences of inclusive fitness and target age were reproduced in a non-Western sample of participants (N = 300) in Iran. Belief in the afterlife predicted the overall confidence of risking one’s life to save another across all targets, and also moderated the effects of genetic relatedness and target age. Rather than promoting altruism equitably or advantaging those favored by adaptive tendencies, higher belief in an afterlife aligned with these tendencies in promoting further favoritism toward close kin and younger targets with higher reproductive value.

Keywords

altruism, Hamilton’s rule, inclusive fitness, belief in the afterlife

Date received: August 13, 2020; Accepted: March 25, 2021

Philosophers have frequently debated whether true altruism exists, if people actually perform actions that would bring benefit to others with no benefit, or even a cost, to themselves. For example, both Thomas Aquinas and Thomas Hobbes thought that helping another person in need could bring relief from personal distress, thus benefitting oneself. More recently, psychologists have addressed this long-standing philosophical debate with empirical studies from a variety of perspectives. Latane and Darley (1970) developed a five-step cognitive model of bystander intervention for both emergency and non-emergency situations. Behaviorists demonstrate that direct reinforcement and modeling increases helping behaviors, and social psychologists have shown that helping is encouraged when the rewards of helping outweigh the costs (see Kenrick et al., 1999). Helping is also influenced by target characteristics, such as attractive physical appearance, friendly behavior or personal qualities, and similar racial characteristics (Shroeder et al., 1995). Batson et al.’s (1997) empathy–altruism hypothesis proposes that empathic concern evokes an altruistic motivation, whereas Cialdini et al. (1997) propose that it is the sense of self-other overlap, or “oneness” between the helper and the individual in need, that motivates psychologically rewarding helping.

Evolution and Altruism

Integrating concepts from evolutionary theory enhances the psychological framework for understanding altruism and...
helping intentions (Kruger, 2003). An evolutionary framework acknowledges the possibility of both altruistic and egoistic motivations from the perspective of the individual. The subjective experiences underlying an adaptation can vary, as long as they reliably lead to adaptive behaviors. An evolutionary framework also clarifies the altruism debate by disentangling proximate motivations and ultimate selection pressures. The evolutionary definition of altruism focuses on reproductive consequences (Sober, 2018), an altruistic behavior would improve the reproductive fitness of others, while reducing the fitness of the altruist (Bell, 2008).

William Hamilton’s (1964) inclusive fitness theory explained that one could help his or her relative become an ancestor of offspring with shared (individually variable) genes by assisting in a time of need. Thus, tendencies to help close relatives could be adaptive, even if costly to the helping individual, as long as there was a benefit to genes shared by the helper and target (and not universal in the population). Hamilton formulated his theory in the formula, commonly known as Hamilton’s rule; \( c < rb. \) In this formula, \( b \) represents the benefit gained by the recipient, \( r \) is the degree of genetic relatedness of the recipient and actor (between 0 and 1), and \( c \) is the cost inflicted to the actor. All costs and benefits are measured in reproductive currencies (Hamilton, 1964). Predictions based upon inclusive fitness theory have empirical support (e.g., Essock-Vitale & McGuire, 1980). Shavit et al., (1994) have documented nepotistic actions in real-life emergency situations. Furthermore, the subjective experiences of oneness or empathy could arise as a consequence of attachment-related cues (co-residence, friendship, familiarity) that signaled the potential for relatively high genetic commonality in our ancestral environment (Kenrick, 1991).

Burnstein et al. (1994) demonstrated how target selection in life or death rescue scenarios and everyday helping behaviors is influenced by the consequences to evolutionary fitness. Participants reported being more likely to help infants and the elderly in everyday situations, but more likely to save young targets (1, 10, and 18 years) than older targets (45 and 75 years) in life-or-death situations (Burnstein et al., 1994). Thus, individuals consider other factors when allocating costly assistance to close relatives, including reproductive potential and survivability. Fisher (1930) introduced the concept of reproductive value as the contribution of an individual of a given age to the future growth of the population, based on their probability of future survival and the average number of offspring produced by age, and as a function of class membership such as sex. Human reproductive value follows sex-specific trajectories across the life course (see Conroy-Beam & Buss, 2019). Women’s reproductive value follows an inverted U-shape, peaking in the mid-20s and declining near zero by the mid-40s (Martin et al., 2013; Martinez et al., 2012). For both women and men, reproductive value of infants and children is lower than those in their late teens because of the possibility of mortality before sexual maturity (Pawlowski & Dunbar, 1999). Men’s reproductive value is somewhat lower than that for women early in life because of women’s greater average fecundity and the far greater contribution of economic resource productivity for men than women (Conroy-Beam & Buss, 2019). Although relatively lower for young adults, men’s reproductive value continues to increase at the time women are reaching menopause, because their economic resource productivity is still growing (Conroy-Beam & Buss, 2019). Elderly men’s reproductive value declines due to both their declining economic productivity and the increasing mutational load in sperm, which may result in unhealthy offspring (Bordson & Leonardo, 1991). This age and gender dependent pattern of reproductive value, as demonstrated by Burnstein et al., (1994), is expected to influence helping intentions toward relatives; As ultimately the inclusive fitness gained through this help creates selective pressure toward mechanism facilitating such intentions and this inclusive fitness is dependent on the productive value of the recipients.

Trivers’ (1971) theory of reciprocal altruism is another recognized evolutionary pathway for altruistic actions, predicting that altruistic behaviors will be a function of beliefs about the recipient’s likelihood of reciprocating. In one study, cognitive mechanisms facilitating reciprocal altruism accounted for the greatest portion of the variance in helping intentions, more than all other effects combined (Kruger, 2003). Some have suggested that empathy has evolved in animals as a trigger to bring about directed altruism in accordance with predictions from inclusive fitness and reciprocal altruism theories (e.g., De Waal, 2008).

**Belief in the Afterlife**

The studies noted above indicate that psychological factors, including beliefs about consequences, can influence helping intentions and moderate the pattern of helping predicted by Hamilton’s rule. In the terms of Hamilton’s formula, psychological factors would not affect genetic relatedness, but they could affect perceptions of the costs and benefits of helping. Belief in the afterlife, believing that a major or some parts of the individual’s consciousness will not cease to exist after physical death (Smith et al., 1992), may be a factor that decreases the perceived cost of altruistic help in a life-or-death situation. If an individual truly believes that she or he will continue to exist, even after facing death in physical form, she or he might be more willing to risk their physical body under life-or-death conditions.

Religious participation and belief in the afterlife have previously been suggested to strengthen the prevalence of cooperative behaviors and mutual assistance (Levy & Razin, 2012). Belief in the afterlife and belief in deities may contribute to perceptions that cooperative behaviors are monitored, and violations are policed, thus reducing the cost of enforcing rules of cooperation (Atkinson & Bourrat, 2011; Johnson & Bering, 2006). Belief in moralizing gods as well as karma predicted stronger judgment of individual actions as having greater consequences in this life and the next and exposure to notions about moral afterlife beliefs (reincarnation or heaven/hell) and ancestor veneration beliefs increased generosity to strangers...
Belief in deities and belief in the afterlife and independently predicted the perceived justifiability of a range of moral transgressions among individuals from 87 countries, even after controlling for frequency of religious participation, country of origin, religious denomination and level of education (Atkinson & Bourrat, 2011).

Other studies suggest that a belief in afterlife in the form of ancestor worship evolved before a belief in high gods and complex religions, and that a belief in afterlife can be observed in the majority of existing hunter-gatherer societies (Peoples et al., 2016). The widespread prevalence in contemporary foraging populations suggests that belief in an afterlife was common among ancestral humans. Belief in afterlife would promote cooperation in society by generating a sense of being watched by supernatural entities (Bering, 2006). Furthermore, it has been shown that when faced with death threats, those with a high belief in afterlife will intensify their belief as a mechanism to cope with death anxiety (Osarchuk & Tatz, 1973).

Current Study
This project examined the effect of belief in afterlife on intentions for risky helping behaviors, and the moderating effect of belief in afterlife on individuals’ intentions to help their genetic relatives under life-or-death conditions based on both age and degree of relatedness. We aimed to investigate the effects of a new non-biological factor, belief in afterlife, on high-cost altruism toward kin. This particular factor was chosen based on the components of Hamilton’s rule. It was our hypothesis that a belief in any form of life after death might reduce the perceived cost of high-cost altruism. We predict that (H1) higher levels of belief in afterlife in will be associated with higher levels of risky helping intentions, (H2) that previous relationships of helping intentions with genetic relatedness and reproductive value based on age will be replicated, and (H3) belief in afterlife will moderate the effects of target genetic relatedness and reproductive value. The study was conducted with students at Iranian universities, creating an opportunity for attempting to replicate and extend previous results with a non-WEIRD sample (Henrich et al., 2010). Atari et al. (2020) thoroughly discuss the non-WEIRDness of the Iranian population. In brief, although Iran’s population is educated and relatively industrialized, it is less western, rich, and democratic compared to WEIRD population (Atari et al., 2020; Thalmayer et al., 2020).

Although the institution of family in Iran has been transitioning from its traditional form in the past two centuries due to the cultural, social, and political regeneration processes (Azadarmaki & Bahar, 2006), it still retains its significance in the opinion of Iranians. A national survey reports that 98% of Iranians uphold the family as one of the most important and influential factors in their lives (Azadarmaki et al., 2000). Despite the changes in functions of families in Iran (reduced economic and political function), they are still considered as central social and cultural institutions and do not fit the minimal obligations and function of a nuclear family (Azadarmaki & Bahar, 2006). Men still largely retain their position as head of the family and the decision maker as a study reports that 61.6% of participants identified fathers as the decision-making authority of the family (Azadarmaki & Bahar, 2006).

Moreover, although the World Values Survey in 2005 reports that 91% of Iranians (N = 2,667) considered themselves Shia Muslims, 8% identified themselves as Sunni Muslims, 0.6% reported belonging to no religious denomination, and an aggregate of less than 1% identified as belonging to all other denominations represented on the survey (World Values Survey Association, 2005), official statistics on religiosity among Iranians may not provide a fully accurate representation. For over 40 years, the current governing regime has sought to incorporate Shiite religious values into all aspects of society, including education, criminal justice, media, and popular culture (Mehran, 2007; Yarshater, 2004) and as expressing diversions from these values are persecuted by law responses to surveys that question religious values directly are quite influenced by potential anxiety about publicly reporting a lack of religious practice or belief (Davoodi et al., 2019).

Materials and Methods
Participants and Design
This original research was conducted under the approval of the Council of Graduate Studies at [TBA] University prior to data collection and was determined to be exempt from further ethical review due to the nature of the study (i.e., an anonymous survey). The Council of Graduate Studies consists of the Department’s Vice Chancellor for Research, a representative from the ethics committee, faculty members, and other members from the graduate office. University students (N = 300, 59% women, 41% men, M_{age} = 23 years, SD_{age} = 5 years) from four major universities in Iran voluntarily participated in this study. Participants were all of Iranian ethnicity and identified as Muslim at birth. Participants were Bachelor’s Degree undergraduate students (68%), Master’s Degree graduate students (28%), and Doctoral Degree (Ph.D. or M.D.) students (4%). The study was anonymous and no identifying information was recorded. Participants had complete privacy while filling out the questionnaires and the researchers were not present at this time. An informed consent form was provided and the experimenter verbally debriefed participants and answered any questions.

Procedure
The questionnaire used by Burnstein et al., (1994) was modified for this study. Participants were asked to imagine a risky helping scenario where (1) the recipient does not survive unless helped, (2) helping is accompanied with risks and the possibility of harm to the helper, and (3) there is only sufficient time and resources to help one person. Participants were told that they had to make a choice between two individuals to save and were given an example that the individuals are sleeping in

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different rooms of a rapidly burning building, and the participant only has time to save one of them. Participants responded to this scenario 32 times, in 12 of the scenarios the target individuals varied in genetic relatedness \((r = 0, .125, .25, .50)\) and age was held constant at about 28 (27–30) years, in 20 scenarios genetic relatedness was held constant at \(r = .25\) and the targets varied by age (1, 10, 18, 45 and 75 years old). The Burnstein et al., (1994) questionnaire was modified in three ways. First, that target gender was also balanced within the conditions, e.g. a female cousin was paired with both a niece and a nephew. Second, the \(r = 0\) target was changed from “acquaintance” to “friend” as non-relatives with whom one has long term relationships of reciprocity would likely be considered a friend and not merely an acquaintance. Third, the confidence scale for the likelihood of risking one’s life for each target was expanded from three options in the original questionnaire (definitely, very likely, and probably) to a ten-option scale anchored by “No confidence” and “Full confidence.” After these items were completed, participants answered the Belief in Afterlife Scale-Form B (Osarchuk & Tatz, 1973), 10 items (\(\alpha = .900\)) with a range of agreement between 0% and 100% for each item on a decile scale.

**Statistical Analyses**

Cumulative scores for the confidence in the likelihood of risking one’s life to help were computed across the scenarios based on genetic relatedness \((r)\) and by the age of target. Following from the study design, there were separate sets of total scores based on genetic relatedness \((r)\) and age of target (e.g., all scores for cousin targets were summed into one variable, all scores for 18-year-old targets were summed into one variable). Total scores for Belief in Afterlife were computed and examined with descriptive statistics. A Pearson correlation examined the relationship between the total confidence in the likelihood of helping across characters and Belief in Afterlife to test H1. A 4 (genetic relatedness) \(\times\) 2 (participant sex) ANCOVA for Mixed Designs and a 5 (target age) \(\times\) 2 (participant sex) ANCOVA for Mixed Designs tested H2 and H3, respectively for data on targets varying by genetic relatedness and targets varying by age, with Belief in Afterlife as a continuous covariate. Simple effect sizes (Cohen’s \(d\)) were computed to examine significant effects. Tukey’s b post hoc comparisons examined differences between participants with high (70–100, 71.7%), medium (40–60, 13.7% of sample), and low (0–30, 14.7% of sample) scores on Belief in Afterlife to further understand effects related to H3.

**Results**

Participants’ Belief in Afterlife ranged from 0 to 100, with a Mean score of 71.6 \((SD = 30.6, Median = 80)\). Scores were negatively skewed \((-1.21, SE = 0.14)\) with a Kurtosis of 0.36 \((SE = .28)\), 75% of participants scored 90 or above, though 21.3% of participants scored 50 or below. Belief in the Afterlife predicted the aggregate confidence in the likelihood of risky helping, \(r(300) = .446, p < .001,\) confirming H1 (see Figure 1). The confidence in risky helping significantly varied by genetic relatedness (see Table 1 and Figure 2), largely reproducing previous results and confirming H2. There were large effects in the expected direction between \(r = .5\) targets and \(r = .25\) targets, \(t(299) = 15.87, p < .001, d = .92,\) and \(r = .25\) targets and \(r = .125\) targets, \(t(299) = 21.95, p < .001, d = 1.64.\) However, there was a small effect in the other direction for helping friends \((r = 0)\) compared to \(r = .125\) targets, \(t(299) = 3.96, p < .001, d = .23.\) There was no main effect for participant sex, however there was an interaction between participant sex and genetic relatedness with the target (see Table 1). Men were more confident in helping cousins \((r = .125)\) than women, \(t(298) = 3.60, p < .001, d = .42,\) and had a small trend approaching significance, \(t(298) = 1.88, p = .062, d = .22.\) For greater confidence in helping siblings. Women were more confident than men in helping friends, \(t(298) = 2.24, p = .026, d = .26\) and had a nonsignificant trend for greater confidence in helping moderately distant relatives (i.e., nephews, nieces, etc.; \(r = .25; \ t(298) = 1.28, p = .201, d = .15.\) Thus, women appeared more confident in helping friends than cousins, \(r = .125; \ t(175) = 5.74, p < .001, d = .43,\) whereas there was no difference for men, \(t(123) = 0.28, p = .978, d = .03.\)

The confidence in risky helping significantly varied by age-based reproductive value on (see Table 1 and Figure 3), reproducing previous results and confirming H2. Confidence in risky helping declined with age. There was a small effect favoring 1-year-old targets over 10-year-old targets, \(t(299) = 4.47, p < .001, d = .26,\) a large effect favoring 10-year-old targets over 18-year-old targets, \(t(299) = 19.29, p < .001, d = 1.11,\) a large effect favoring 18-year-old targets over 45-year-old targets, \(t(299) = 21.21, p < .001, d = 1.22,\) and a small effect favoring 45-year-old targets over 75-year-old targets, \(t(299) = 4.82, p < .001, d = .28.\) Belief in the Afterlife significantly interacted with genetic relatedness (see Table 1 and Figure 2) and with age-based reproductive (see Table 1 and Figure 3), confirming H3. There was no main effect for, or any interactions with participant sex.

There were no differences in the confidence in risky helping for friends \((r = 0, p > .05, ds \leq .27)\) or \(r = .125 (p > .05,\)
ds < .36) targets by Belief in the Afterlife. Those with high Belief in the Afterlife were more likely to help \( r = .25 \) targets than those with medium \( (p < .05, d = .41) \) and low beliefs \( (p < .05, d = .78) \). Those with high \( (p < .05, d = .79) \) and medium \( (p < .05, d = .40) \) Belief in the Afterlife were more likely to help \( r = .5 \) targets than those with low beliefs. Those with high Belief in the Afterlife were more likely to help 1-year old targets than those with low beliefs \( (p < .05, d = .70) \) and medium \( (p < .05, d = .46) \) Belief in the Afterlife were more likely to help 10-year-old targets than those with low beliefs. Those with high \( (p < .05, d = .68) \) and medium \( (p < .05, d = .53) \) Belief in the Afterlife were more likely to help 18-year-old targets than those with low beliefs. There were no differences in the confidence in risky helping for 45-year-old or 75-year-old targets by Belief in the Afterlife \( (p > .05, d < .24) \). Across all targets, participants with high Belief in the Afterlife were more likely to help than those with medium beliefs \( (p < .05, d = .52) \), and those with medium beliefs were more likely to help than those with low beliefs \( (p < .05, d = .54) \).

### Discussion

The results generally confirmed the study’s hypotheses, successfully reproducing previous results with participants in a non-Western nation and identifying a novel factor influencing helping intentions in life-or-death rescue scenarios. Confidence in risking one’s life to save another was a function of both the genetic relatedness with and the age of the target individual. Close relatives and those with higher reproductive value, based on their age, were more likely to be helped. It is notable that stronger belief in an afterlife increased the confidence in helping close kin and targets with higher reproductive value, rather than increasing the likelihood of helping distant kin and individuals with lower reproductive value or increasing the confidence in helping equally across all targets. Thus, the results of this study are more consistent with models of religious systems and beliefs aligning with other mechanisms encouraging behavior promoting inclusive fitness (see Crespi & Summers, 2014), rather than promoting a broader spread of benevolence through fictive kin relationships (e.g., Jones, 2000; Steadman & Palmer, 1997). Religious belief systems do not explicitly advise followers to prioritize closer kin over distant kin, help.

### Table 1. Descriptive Statistics.

| Demographic Variables                  | N  | Minimum | Maximum | Mean    | Std. Deviation |
|----------------------------------------|----|---------|---------|---------|----------------|
| Age of Participant                     | 300| 18      | 39      | 22.72   | 4.645          |
| Belief in the Afterlife                | 300| 0       | 100     | 71.60   | 30.560         |
| Total Tendency to help                 | 300| 52      | 530     | 437.09  | 75.026         |
| Tendency to Help toward the 0% GR      | 300| 0       | 60      | 12.88   | 11.233         |
| Tendency to Help toward the 12.5% GR   | 300| 0       | 40      | 8.91    | 9.062          |
| Tendency to Help toward the 25% GR     | 300| 0       | 60      | 32.51   | 11.152         |
| Tendency to Help toward the 50% GR     | 300| 3       | 60      | 46.27   | 12.564         |
| Tendency to Help toward the 1 year olds| 300| 0       | 80      | 57.49   | 18.582         |
| Tendency to Help toward the 10 year olds| 300| 8       | 80      | 52.67   | 14.043         |
| Tendency to Help toward the 18 year olds| 300| 0       | 76      | 33.01   | 12.937         |
| Tendency to Help toward the 45 year olds| 300| 0       | 80      | 15.26   | 11.653         |
| Tendency to Help toward the 75 year olds| 300| 0       | 70      | 9.83    | 13.468         |
| Valid N (listwise)                     | 300|

### Figure 2. Confidence in helping by level of belief in an afterlife and genetic relatedness with the target with 95% confidence intervals.

### Figure 3. Confidence in helping by level of belief in an afterlife and target age with 95% confidence intervals.
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the young over the old, or to “love thy neighbors” more than your cousins but not more than your nephews and nieces. Previous literature has argued various possible and non-mutually exclusive manifestations of belief in the afterlife such as belief in moralizing “high gods,” defined as active in human affairs and specifically supportive of human morality (Swanson, 1960), beliefs that people will encounter their ancestors (Steadman et al., 1996), beliefs that people will encounter people they knew in life and who may judge them (in various forms of ancestor worship such as otiose, active, or supportive ancestor worship (Sheils, 1975). There is also ample argument on the possible mechanisms of how such beliefs have evolved (Nesse, 2002; Norenzayan & Shariff, 2008; Wilson, 2002) and could affect human behavior (Atkinson & Bourrat, 2011; Johnson & Kruger, 2004; Shariff & Norenzayan, 2011).

Although the scale used in the current study to measure belief in the afterlife includes content related to some of these possible mechanisms, for example, “We will never be united with those deceased whom we knew and loved,” it does not have adequate content to distinguish between these manifestations and mechanisms. Other items are very general, including “Religiously associated or not, beliefs in an afterlife will never be shown to be true, for afterlives are nonexistent” and “The life we now lead is but a pebble cast upon the sands of our future lives.” Hence, further research is needed for clarification of the roles of these mechanisms.

In the current study, confidence in helping friends ($r = .0$) was higher than helping moderately distant relatives (cousins, $r = .125$). This may initially appear to contrast with previous results (i.e., Burnstein et al., 1994), however, in the previous study the non-relative target was an “acquaintance” rather than a “friend.” The non-relative target was changed to “friend” in the current study because friends are more likely to have long-term relationships with a history of reciprocal altruism than a stranger or mere acquaintance. Thus, the comparatively higher scores for helping friends than acquaintances may be due to the additional effects of reciprocal altruism along with inclusive fitness and reproductive value. This finding is in agreement with the results of previous studies in other cultures (Essock-Vitale & McGuire, 1980; Kruger, 2003; Neuberg et al., 1997). For example, Stewart-Williams (2008) compared intentions to help siblings, cousins, acquaintances and friends in low-cost, medium-cost, and high-cost helping scenarios and reported that friends were helped more than others in low-cost helping scenarios, there were similar intentions to help friends and siblings in medium-cost helping scenarios, and siblings were more likely to be helped in high-cost helping scenarios. These results can suggest that the fitness benefits returned from reciprocal altruism with friends are comparable or superior to the inclusive fitness gained from cousins in high-cost altruistic situations such as a life-or-death scenario.

Younger individuals have higher potential reproductive capacity than their middle-aged or elderly counterparts (Buss, 2015). Thus, it is not surprising that this study reproduced the target age-related effects in previous research (Burnstein et al., 1994). A similar pattern of a decreasing likelihood of helping as a function of reproductive value has been observed in other primates (e.g., Hasegawa & Kutsukake, 2019). There was no difference in the confidence in helping 1- year-olds and 10- year-olds in the current study, suggesting that both infants and pre-pubescent children are perceived to have similar reproductive value.

Limitations

This study used imaginary scenarios to examine helping intentions, consistent with most of the literature in this area, though there are some studies of actual behaviors. For instance, Shavit et al., (1994) were able to study the help provided by friends and kin during gulf war in Israel and find that immediate and direct aid was overwhelmingly provided by kin rather than every day network of friends. Second, participants were sampled from one culture with relatively high beliefs in an afterlife. Studies in other populations with significantly different distributions of these beliefs could strengthen confidence in the reported effects. Third, this study, due to legal limitations for inquiry about individuals’ religious beliefs used a general measure of beliefs in an afterlife that does not distinguish between different potential explanations of the findings related to specific afterlife beliefs. Specific afterlife and other supernatural beliefs responsible for the identified relationships may also be different from those in other populations and/or those with different religious systems.

Conclusions

The results replicated previous patterns of adaptive helping tendencies for altruistic helping intentions in a non-Western sample of participants. Participants’ confidences in risking their lives to save another confirmed predictions based on inclusive fitness theory and age-based reproductive value. The study also identified a novel psychological influence on altruistic helping intentions, belief in an afterlife. In contrast with models of religious systems promoting benevolence broadly through fictive kin relationships, higher belief in an afterlife aligned with adaptive tendencies in promoting further favoritism towards close kin and younger targets with higher reproductive value.

Authors’ Note

This research was conducted without any specific funding. All participants were informed of the nature of the study and voluntarily participated.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.
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