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Personality Factors and Attitudes Toward Euthanasia in Iran: Implications for End-of-Life Research and Practice

Naser Aghababaei a, Jason Adam Wasserman b & Javad Hatami c

a Department of Clinical Psychology, Allameh Tabataba’i University, Tehran, Iran
b Department of Biomedical Sciences, Oakland University William Beaumont School of Medicine, Rochester Hills, Michigan, USA
c Department of Psychology, University of Tehran, Tehran, Iran

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Personality Factors and Attitudes Toward Euthanasia in Iran: Implications for End-of-Life Research and Practice

Naser Aghababaei
Department of Clinical Psychology, Allameh Tabataba’i University, Tehran, Iran

Jason Adam Wasserman
Department of Biomedical Sciences, Oakland University William Beaumont School of Medicine, Rochester Hills, Michigan, USA

Javad Hatami
Department of Psychology, University of Tehran, Tehran, Iran

This article reports on the relationship of personality and euthanasia attitudes. Results from a survey of 165 Iranian students showed that religiosity, honesty–humility, agreeableness, and extraversion were related to negative attitudes toward euthanasia, whereas openness was related to acceptance of euthanasia, with the unconventionality facet driving this relationship. Moreover, openness explained additional variance when added to a multivariate model containing religiosity and HEXACO factors. This study illustrates the possibility of accounting for variation beyond the traditional group level predictors of attitudes toward euthanasia and promoting future cross-cultural studies into personality and end-of-life issues and informing end-of-life conversations at the bedside.

This article reports on the relationship between personality characteristics and attitudes toward euthanasia. Advances in medical technology have brought about the ability to sustain life, but with it, increasingly complex social and ethical questions. Debate over euthanasia has grown remarkably, attracting the attention of experts from varied disciplines such as medicine, psychology, psychiatry, ethics, sociology, and philosophy. Policymakers and practitioners continue to struggle with balancing patient autonomy and professional strictures, while at the same time end-of-life counseling has become a high priority concern. That is, despite a murky debate, practitioners are increasingly expected to have conversations with patients that are intended to help them clarify their end-of-life preferences. In addition, euthanasia presents an opportunity to study moral judgment around a dilemma that is not artificial, but rather holds deep personal significance. Insofar as the results of this article indicate that measurable personality characteristics significantly correlate with attitudes toward euthanasia, they provide empirical information that can contribute to these bedside conversations (see also Klessig, 1992). In addition, this article contributes to the growing body of research on euthanasia attitudes and preferences, particularly a relatively nascent literature emerging in non-Western contexts.

Practitioner and public dispositions make up a large portion of research on attitudes toward euthanasia, with the vast majority focusing on key sociological variables that predict higher or lower levels of support (e.g., Blackhall et al., 1999; Caralis, Davis, Wright, & Marcial, 1993; Cohen et al., 2006; Wasserman, Clair, & Ritchey, 2005). However, evidence indicates that individual differences also are predictive of ethical

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Address correspondence to Jason Adam Wasserman, Ph.D., Department of Biomedical Sciences, Oakland University William Beaumont School of Medicine, O’Dowd Hall 131, Rochester Hills, MI 48309. E-mail: wasserman@oakland.edu
judgment, reasoning, activities, and dispositions (e.g., Berenguer, 2010; Cokely & Feltz, 2009; Markowitz, Goldberg, Ashton, & Lee, 2012). Personal variation in judgment reflects adaptive, environmentally tuned goals, processes, and representations (Cokely & Feltz, 2009). In turn, the approach used here provides a valuable tool allowing for a higher fidelity identification of proximal judgment and performance mechanisms related to attitudes toward euthanasia. This is a particularly important focus because it speaks more directly to features manifest in actual patient care, offering a potential bridge from an epidemiological scale to the bedside.

In addition, reliably establishing an empirical relationship between personality factors and attitudes toward euthanasia in multiple cultural contexts is a first step toward research on the subject with genuinely cross-cultural potential. As Klessig (1992, p. 316) noted in her study of the effect of ethnicity on end-of-life decisions, “To assume that a patient will react in a particular way can be as detrimental to the physician–patient relationship as ignoring the fact that differences exist among patients.” Accordingly, the individual differences approach used here can add texture to cultural-level understandings of attitudes toward euthanasia. This is a particularly important turn, the approach used here provides a valuable tool allowing for a higher fidelity identification of proximal judgment and performance mechanisms related to attitudes toward euthanasia. This is a particularly important focus because it speaks more directly to features manifest in actual patient care, offering a potential bridge from an epidemiological scale to the bedside.

In addition, reliably establishing an empirical relationship between personality factors and attitudes toward euthanasia in multiple cultural contexts is a first step toward research on the subject with genuinely cross-cultural potential. As Klessig (1992, p. 316) noted in her study of the effect of ethnicity on end-of-life decisions, “To assume that a patient will react in a particular way can be as detrimental to the physician–patient relationship as ignoring the fact that differences exist among patients.” Accordingly, the individual differences approach used here can add texture to cultural-level understandings of attitudes toward euthanasia that can help strike this balance in the physician–patient relationship.

In what follows, the literature on attitudes toward euthanasia is reviewed with a particular focus on studies related to personality. Results suggest that there are key dimensions of personality that predictably correlate with euthanasia attitudes. We then discuss implications of these results for bedside care and advancing cross-cultural research.

**ATTITUDES TOWARD EUTHANASIA**

There has been a good deal of work focused on attitudes toward end-of-life issues, including euthanasia (see a review by Emanuel, 2002). Although certain key predictors such as race or other sociopolitical attitudes have been relatively consistent across various studies, religiosity (or spirituality) has been perhaps the strongest predictor to emerge and it tends to be negatively correlated with attitudes toward euthanasia (e.g., Aghababaei, Hatami, & Rostami, 2011; Ahmed & Kheir, 2008; Bas Aslan & Cavlak, 2007; Cohen et al., 2006; Tanida, 2000; Wasserman et al., 2005).

Attitudinal research on euthanasia had been largely conducted in the United States and Europe, particularly as those countries began debating public policies on its legalization (see review of U.S. data by Emanuel, 2002; see also Cohen et al., 2006; Miccinesi et al., 2005). More recently, studies have emerged from Iran, Turkey, Japan, Hong Kong, Sudan, India, and Pakistan (Abbas, Abbas, & Macaden, 2008; Ahmed & Kheir, 2008; Aghababaei et al., 2011; Akabayashi, 2002; Bas Aslan & Cavlak, 2007; Chong & Fok, 2005; Karadeniz et al., 2008; Tang et al., 2010; Tanida, 2000).

However, with a few notable exceptions, there has been little work that directly compares attitudes toward euthanasia across countries or cultures. Klessig (1992) found dramatic differences among ethnic groups in the United States for starting and stopping life-support, noting that the influence of culture, including norms with a religious foundation, explains key differences. Of particular note here, the Iranian subgroup in her study was among the most supportive of starting life support and the most disapproving of stopping it. Klessig attributed this to cultural norms derived from Islamic law but did not present any information that verified this assumption. Cohen et al. (2006) found significantly different attitudes between Eastern and Western European countries and that age, class, and education predicted attitudes. Similarly, in Miccinesi et al. (2005), “country” explained the largest proportion of the variance in euthanasia support among physicians in seven European countries.

Although it is difficult to make statistically reliable comparisons across studies conducted in different countries and cultures, emerging work seems to suggest that some Western trends in predicting attitudes toward euthanasia are holding up in these other contexts. For example, attitudes toward euthanasia are affected in the same direction by religiosity and cultural norms in Muslim countries as predominantly Christian ones (see above). Although this conforms to intuitive expectations, it also highlights important cross-cultural similarities, not only in the manifest structure of attitudes toward euthanasia per se, but also in core dimensions of the social and ethical debates surrounding the end of life. Studies using personality could potentially advance cross-cultural research in this area. We next examine the concept of personality, its functional role vis-à-vis attitude, and the different observable dimensions that have emerged from empirical studies of it.

**PERSONALITY**

Personality relates to both attitudes and behaviors (see, e.g., Aghababaei et al., 2011; Chirumbolo & Leone, 2010; Cokely & Feltz, 2009; Markowitz et al., 2012). Sociological variables such as religious affiliation or class may be related to personality, but it is reasonable to think of these more macro social factors as one step removed from attitudes, with personality mediating the relationship (see Saroglou’s [2002, 2010] analyses of religion and personality factors). In essence, social context sets a stage for individual experiences that create dispositional tendencies in people. These, in turn,
manifest in attitudes toward particular issues. This helps explain why sociological variables that, in the abstract, have nothing to do with a particular phenomenon, nonetheless display stable tendencies toward not just single issues, but related sets of issues. For example, being African American predicts lower levels of support toward euthanasia, participating in clinical trials, and organ donation, among other things (see, e.g., Blackhall et al., 1999; Caralis et al., 1993; Cohen et al., 2006; Crawley, 2001; Garrett, Harris, Norburn, Patrick, & Danis, 1993; Lichtenstein, Alces, Corning, Bachman, & Doukas, 1997; Shavers, Lynch, & Burmeister, 2000; Wasserman et al., 2005). In sum, the observable tendencies of sociological variables seem to suggest that experience—or at least belonging to a group likely to have some shared experiences—is influential in the formation of general dispositional frameworks that correspond to whole sets of attitudinal outcomes. However, measuring personality directly provides a higher fidelity picture of individual attitudes that can then be examined for associations with particular attitudinal outcomes.

Empirical work on personality is expansive. Perhaps the most popular construct to be validated with a number of different areas is the Big Five: (a) openness, (b) conscientiousness, (c) extraversion/introversion, (d) agreeableness, and (e) neuroticism/emotional stability (see McCrae and Costa, 2008, for a review of the construct). Each of these represents a key personality domain typically measured on a bipolar scale. More recently, Lee and Ashton (2004; Ashton & Lee, 2009, 2010) have found six personality factors using data from different languages. Their resulting HEXACO Personality Inventory includes the following dimensions centering on the listed facets for each (from Lee & Ashton 2004):

- Honesty-humility: sincerity, fairness, greed avoidance, modesty
- Emotionality: fearfulness, anxiety, dependence, sentimentality
- Extraversion: social self-esteem, social boldness, sociability, liveliness
- Agreeableness: forgiveness, gentleness, flexibility, patience
- Conscientiousness: organization, diligence, perfectionism, prudence
- Openness to experience: aesthetic appreciation, inquisitiveness, creativity, unconventionality

Although these appear somewhat similar to the Big Five, they may capture important dimensions that it obscures. Confirmatory factor analyses have provided statistical evidence that supports the six HEXACO dimensions (Lee & Ashton 2004), particularly in cross-cultural settings. Chirumbolo and Leone (2010), for example, found that in their study of Italian citizens' voting behavior, the HEXACO inventory explained additional variance when added to a five-factor model, but the reverse was not the case. Put simply, the HEXACO inventory appeared to capture all of the variance of the Big Five model and then some.

There is a dearth of research specifically examining the relationships among personality factors and attitudes toward euthanasia. However, evidence suggests that personality is a relevant consideration. Rogers (1996) hypothesized that four individual characteristics play an important role in determining and understanding attitudes toward right-to-die constructs including euthanasia. These included personal experience with right-to-die-related behaviors and death, death anxiety, religiosity, and locus of control. Lester, Hadley, and Lucas (1990) reported relationships between personality factors and multiple “pro-death” attitudes. Specifically, they said, “Viewing euthanasia as moral was associated with lower lie scale scores” (p. 1183). We now turn to hypotheses rooted, in part, in the above reviewed literature.

**HYPOTHESES**

Based on prior research on personality and our intuitive expectations, we made specific hypotheses for certain personality dimensions. Previous research by two of authors tested hypothesized relationships between the Big Five personality dimensions and euthanasia attitudes, but found only agreeableness and conscientiousness to be negatively related (Aghababaei et al., 2011). Most surprising was that openness was not correlated with euthanasia attitudes. This prompted a new iteration of the study using the HEXACO, which, as noted, has been shown to capture additional variance missed by the Big Five. Notably, the openness dimension of HEXACO contains the facet of Unconventionality, which is lacking in the previously used Big Five scale (i.e., Goldberg’s 50-item International Personality Item Pool; Aghababaei et al., 2011). Based on the notion that those more open to experiences are more likely to think independently and be less influenced by social norms we formulated the following hypothesis:

\[ H_1: \text{Openness is positively correlated with euthanasia attitudes.} \]

We suspected that the unconventionality facet could operate as the primary driver for this relationship, but that other factors also could contribute, even if they had not been significant in studies using the Big Five. This is because the HEXACO measures might partition the variance in other ways that affect the proportional contribution of other facets. Thus, we did not make
facet-specific hypotheses, even though we did expect unconventionality to hold a significant share of the explanatory power on this dimension.

In an effort to further develop the hypothesized relationship above, we hypothesized that curiosity, which might correspond to the openness, could be related to attitudes toward euthanasia in the same direction:

**H2:** Curiosity trait is positively correlated with euthanasia attitudes.

The agreeableness dimension of the Big Five was previously established as a correlate of attitudes toward euthanasia (Aghababaei et al., 2011). Despite the fact that the agreeableness dimension of the Big Five and that of the HEXACO differ somewhat in content, this finding and the fact that the HEXACO facets suggest that those high in agreeableness adapt to life circumstances and perhaps are more willing to endure suffering, we formulated hypothesis three:

**H3:** Agreeableness is negatively correlated with euthanasia attitude.

Similarly, the conscientiousness dimension of the Big Five was found in a previous study to be negatively correlated with attitudes toward euthanasia (Aghababaei et al., 2011). Because of this prior research and because the facets of conscientiousness suggest greater adherence to prevailing rules (including religious ones that are against euthanasia), we formulated the following hypothesis:

**H4:** Conscientiousness is negatively correlated with euthanasia attitudes.

Because honesty-humility is related to sociopolitical attitudes, and these often correspond to moral positions such as attitudes toward euthanasia, and because this factor of HEXACO is positively related to religiosity/spirituality (Saroglou, Pichon, Trompette, Verschueren, & Dernelle, 2005) we hypothesized:

**H5:** Honesty-humility is negatively correlated with euthanasia attitudes.

Because a host of studies (see above) have found various measures of religiosity to be negatively correlated with attitudes toward euthanasia we formulated Hypothesis 6:

**H6:** Religiosity is negatively correlated with euthanasia attitudes.

**METHOD**

Data were collected from students at the University of Tehran (N = 165) who volunteered to participate in this study. The mean age of participants was 23.3 years (SD = 3.4); 35.2% were women and all participants were Muslim. This study was announced orally and through advertisements on campus.

**Measures**

**HEXACO Personality Inventory**

We administered the 60-item version of the HEXACO Personality Inventory (Ashton & Lee, 2009). This scale contains 10 items for each of the six scales from the longer HEXACO Personality Inventory–Revised (Ashton & Lee, 2009; Lee & Ashton, 2004). These scales show satisfactory levels of internal reliability (with coefficient alphas ranging from .73 to .80 for the six domains) and factor analysis revealed that the facet scales loaded on six distinct dimensions (Ashton & Lee, 2009). In this study, the reliability coefficients were slightly lower on some measures. In particular, the alpha values for emotionality, conscientiousness, and openness are .68, .67, and .57 respectively. Some of this is the result of using the shorter 60-item version and reflects a similar pattern in reliability analysis between long and short versions of the Big Five scales (Ghorbani, Gharamaleki, & Watson, 2005). This is likely the case with emotionality and conscientiousness, in particular, where the coefficients are only slightly lower than in larger studies. For the Openness dimension, compounding the limitations introduced by the shorter version of the questionnaire, there may be linguistic and cultural factors. However, the initial translation was checked both by an independent native speaker and back-translated for review by an independent English-speaker (Palahang, Neshatdoost, & Moolavi, 2010). Nonetheless, higher variability on the openness factor could be a manifestation of conflicting traditional and progressive influences more prominent among Iranian youth. Furthermore, in spite of manifesting a marginally low internal reliability score, this dimension shows construct validity regarding previously established gender differences and has convergent validity with the Big Five measures. Most importantly, a factor analysis of Persian translation of these measures replicated the discrete six-factor structure of the HEXACO-60 (Palahang et al., 2010)

**Curiosity and Exploration Inventory**

We used the Curiosity and Exploration Inventory-II (CEI-II) to measure trait curiosity (Kashdan et al., 2009). Kashdan, Rose, and Fincham (2004) found that only openness on the Big Five inventory correlated with their Curiosity and Exploration scale, and even then, only explained 39% of the variance. This suggests that, “there is variance associated with curiosity beyond that
which could be attributed to the Big Five” (Kashdan et al., 2004, p. 300).

**Spirituality Self-Rating Scale**

To assess spirituality, the Spirituality Self-Rating Scale (SSRS) was used. This 6-item measure designed to reflect an intrinsic (as opposed to a more external socially related) orientation to religiosity/spirituality (Galanter et al., 2007). Items include “I try hard to live my life according to my religious beliefs” and “I enjoy reading about my spirituality and/or my religion.” Validation studies have shown that internal reliability for the SSRS was satisfactory among a variety of populations (alpha ranging from .82 to .91; see Galanter et al., 2007). Previous studies have shown a correlation between religiosity and spirituality, particularly where both predict attitudes toward euthanasia in the same direction (see Wasserman et al., 2005). We chose this measure, rather than others that operationalize religiosity per se, not only because it is valid and efficient, but primarily because it uses an individual differences approach that goes beyond simple affiliation or attendance measures. It therefore was well-suited for this study.

**Euthanasia Attitude Scale**

The original EAS scale (Tordella & Neutens, 1979) contains 21 items. However, the item, “I have faith in the medical system to implement euthanasia properly,” was omitted because it is implicitly a double-barrel question (where both those lacking sufficient faith in the medical system and those disapproving of euthanasia will score low) and because euthanasia is not currently legal in Iran. Thus, the paradigm of the question was not appropriate for the context in which the survey was delivered. The remaining 20-item scale was used to assess social values and ethical judgments about euthanasia. Higher scores indicate more positive attitudes toward euthanasia. In a relatively recent modification (Chong & Fok, 2005), the EAS’s items were grouped under four domains: ethical considerations (e.g., “Inducing death for merciful reasons is wrong”), practical considerations (e.g., “Euthanasia will lead to abuses”), treasuring life (e.g., “One’s job is to sustain and preserve life, not to end it”), and naturalistic beliefs (e.g., “Natural death is a cure for suffering”). Because further analyses did not validate the four-factor structure, we made no specific hypotheses related to those individual domains (e.g., see Aghababaei, 2012; Tang et al., 2010). However, these studies did show that internal reliability for the EAS was satisfactory (alphas ranging from .81 to .88).

For all questionnaires, a 5-point Likert-type scale was used. We administered the Persian versions of these measures, all of which have been previously validated in previous Iranian samples (Aghababaei, 2012; Aghababaei et al., 2011).

**Analyses**

Initial bivariate correlations substantiated the above hypotheses. However, agreeableness and conscientiousness from the Big Five have been strongly associated with religiosity, but the comparative relationships have not been studied with the HEXACO. The latter differently partitions the personality constructs. Thus, we tested these in a stepwise model to see if the associations survive when added to a model containing the SSRS. We suspected that, like with the Big Five, agreeableness and conscientiousness from the HEXACO might no longer be significant when controlling for spirituality. The stepwise analysis was therefore performed as a post-facto exploration of the initial bivariate hypothesis tests of agreeableness and conscientiousness (H3 and H4).

**RESULTS**

Table 1 provides the means, standard deviations, and bivariate correlations of the EAS to the six HEXACO dimensions as well as curiosity and the SSRS. The bivariate tests support several of the hypotheses. Indeed, Openness was positively correlated with the EAS (H1), while Agreeableness and Honest-Humility were negatively correlated with the EAS (H3 and H5, respectively). Extraversion was found to be negatively related to the EAS. No significant relationship was found between CEI-II or Conscientiousness (H2 and H4, respectively).

As shown in Table 2, the ability of the HEXACO personality dimensions to explain variance in the EAS can be more specifically located in particular facets. For example, per our above expectation, the unconventional facet was the key predictor for the openness to experience dimension.

For agreeableness, all but the flexibility facet was negatively correlated (see Table 2). For honesty-humility, two facets were related to negative attitudes toward euthanasia. For extraversion, the social self-esteem and liveliness facets were negatively correlated.

Also of note, several facets demonstrated significance, despite an overall non-significant relationship of the dimension in which they are nested. For example, although conscientiousness was not significantly related to the EAS, its prudence facet was negatively correlated (see H4).

In a stepwise regression, we added the dimensions of the HEXACO scale that demonstrated bivariate correlations with the EAS to a model that already contained the SSRS. Previous research indicated that spirituality
This study examined the relationships among personality traits and attitudes toward euthanasia. We found that, in our sample of Iranian students, pro-euthanasia individuals are high in openness but low in religiosity/spirituality, honesty-humility, agreeableness, and extraversion. In addition, when controlling for religiosity/spirituality, honesty-humility, agreeableness, and extraversion were no longer significant.

The negative relationship between religiosity and euthanasia attitudes was consistent with numerous previous studies from around the world (see above). Islamic strictures, like many Christian traditions, embody a “sanctity of life” perspective that forbids a variety of death-related actions, including the termination of a patient’s life (Bülöw et al., 2008). It thus appears that there is an important connection among general religious context at the social level, intrinsic disposition toward religious or spiritual beliefs, and attitudes toward euthanasia. Moreover, this relationship generally appears to hold across cultures. In addition, although the EAS scores in our sample tended to be disapproving, they were not decided against euthanasia. This is a phenomenon that also appears to cross cultural boundaries, where religious adherents often deviate from the strictures of their religions (e.g., Catholics who nonetheless support euthanasia).

### DISCUSSION

TABLE 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>a</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<tbody>
<tr>
<td>Honesty-humility</td>
<td>3.51</td>
<td>.69</td>
<td>.77</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
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<td>Emotionality</td>
<td>3.09</td>
<td>.68</td>
<td>.10</td>
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<td></td>
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</tr>
<tr>
<td>Extraversion</td>
<td>3.46</td>
<td>.67</td>
<td>.78</td>
<td>.21**</td>
<td>−.23**</td>
<td>1.00</td>
<td></td>
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<tr>
<td>Agreeableness</td>
<td>3.37</td>
<td>.72</td>
<td>.31**</td>
<td>−.09</td>
<td>.28**</td>
<td>1.00</td>
<td></td>
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<tr>
<td>Conscientiousness</td>
<td>3.44</td>
<td>.59</td>
<td>.67</td>
<td>−.18’</td>
<td>.36**</td>
<td>.11</td>
<td>1.00</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Openness</td>
<td>3.53</td>
<td>.56</td>
<td>.71</td>
<td>−.07</td>
<td>.37**</td>
<td>.02</td>
<td>.25**</td>
<td>1.00</td>
<td></td>
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</tr>
<tr>
<td>Curiosity</td>
<td>3.52</td>
<td>.62</td>
<td>.79</td>
<td>−.22**</td>
<td>.49**</td>
<td>.10</td>
<td>.20**</td>
<td>.34**</td>
<td>1.00</td>
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<tr>
<td>SSRS</td>
<td>3.59</td>
<td>1.02</td>
<td>.88</td>
<td>.27**</td>
<td>.01</td>
<td>.21**</td>
<td>.32**</td>
<td>.13</td>
<td>−.08</td>
<td>−.01</td>
<td>1.00</td>
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<tr>
<td>EAS</td>
<td>2.86</td>
<td>.81</td>
<td>.90</td>
<td>−.23**</td>
<td>.03</td>
<td>−.15**</td>
<td>−.29**</td>
<td>−.14</td>
<td>.21**</td>
<td>.06</td>
<td>−.49**</td>
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</table>

Note: SSRS = Spirituality Self-Rating Scale; EAS = Euthanasia Attitude Scale.
*p < .05. **p < .01.

TABLE 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>EAS</th>
<th>Variable</th>
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<tr>
<td>Honesty-humility</td>
<td>Agreeableness</td>
<td>Sincerity</td>
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<td>Gentleness</td>
<td>−.22**</td>
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<tr>
<td>Greed avoidance</td>
<td>−.11</td>
<td>Flexibility</td>
<td>−.14</td>
</tr>
<tr>
<td>Modesty</td>
<td>−.16’</td>
<td>Patience</td>
<td>−.21**</td>
</tr>
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<td>Emotionalinty</td>
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<td></td>
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<tr>
<td>Fearfulness</td>
<td>−.01</td>
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<td>−.14</td>
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<td>Perfectionism</td>
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<td>Sentimentality</td>
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<td>Prudence</td>
<td>−.16’</td>
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<tr>
<td>Extraversion</td>
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<tr>
<td>Social self-esteem</td>
<td>−.16’</td>
<td>Aesthetic appreciation</td>
<td>.03</td>
</tr>
<tr>
<td>Social boldness</td>
<td>.02</td>
<td>Inquisitiveness</td>
<td>.11</td>
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<tr>
<td>Sociability</td>
<td>−.11</td>
<td>Creativity</td>
<td>.02</td>
</tr>
<tr>
<td>Liveliness</td>
<td>−.23**</td>
<td>Unconventionality</td>
<td>.37**</td>
</tr>
</tbody>
</table>

Note: EAS = Euthanasia Attitude Scale.
*p < .05. **p < .01.

TABLE 3

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>β</th>
<th>R²</th>
<th>F ratio</th>
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<td>Step 1</td>
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<tr>
<td>SSRS</td>
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<td>−.49’</td>
<td>.24</td>
<td></td>
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<tr>
<td>Step 2</td>
<td></td>
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<tr>
<td>SSRS</td>
<td>−.31</td>
<td>−.38’</td>
<td>.31’</td>
<td>4.20’</td>
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<tr>
<td>Honesty-humility</td>
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<td>−.11</td>
<td></td>
<td></td>
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<tr>
<td>Extraversion</td>
<td>−.12</td>
<td>−.10</td>
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<tr>
<td>Agreeableness</td>
<td>−.15</td>
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</tr>
<tr>
<td>Openness</td>
<td>.34</td>
<td>.24’</td>
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SSRS = Spirituality Self-Rating Scale.
*p < .01.

Significant increase in R² at p < .01.
Klessig (1992, p. 317) similarly noted in her cross-cultural study, “There appears to be little difference in the responses of the Muslims and the Christians in the study group.” Although Islam is typically viewed as categorically prohibiting euthanasia, there is a statement in the Islamic law (Shariah) that says that if the victim forgives the criminal before he or her death, the criminal cannot be prosecuted (at least not to the full extent of the law to which they would have been otherwise subjected). This is now part of Iran’s penal law and has been interpreted by some as a justification for voluntary euthanasia (see Parsapour, Hemmati Moghaddam, Parsapour, & Larijani, 2008). This highlights the complex and dynamic relationship between broad cultural norms and particular moral problems. Certainly, understanding the cultural foundations of particular attitudes and positions is important and informative. However, variation within groups with a shared culture provides support for using an individual differences approach, which is important for explaining both the notable variation within the group-level tendencies and where culturally distinct groups appear to manifest the same tendencies.

There was a significant negative relationship between the EAS and three personality dimensions: agreeableness (H3), honesty-humility (H5), and extraversion. The significant facets of agreeableness assess reactions to perceived conflict with others. Those reactions may be immediate (low patience) or ongoing (low forgiveness), or represent a low threshold for evaluating others’ actions negatively or critically (low gentleness; Ashton & Lee, 2007). In contrast, the facets associated with honesty-humility assess the tendency to exploit others (low fairness) and to feel entitled and motivated to profit by exploiting others (low modesty). Thus, facets of honesty-humility and agreeableness, which are associated with acceptance of euthanasia, probably reflect altruistic tendencies, though these facets operate from different social and interpersonal loci (Ashton & Lee, 2007). Altruism, a tendency involving willingness to benefit and unwillingness to harm others (Ashton & Lee, 2007), is negatively related to a range of death-related actions. As demonstrated in our data, this probably includes euthanasia.

Finally, although we made no original hypothesis related to extraversion, we offer a tentative post-facto explanation of the relationship manifest in the data in that high scorers on extraversion usually experience a sense of optimism and high spirits (Lee & Ashton, 2004). People with high social self-esteem are more satisfied with themselves (and with their social image)—they tend to report higher score in items like “I feel reasonably satisfied with myself overall” (Ashton & Lee, 2009). Moreover, being happy and satisfied with oneself (presumably higher positive affect, lower negative affect) seems to be related to negative attitudes toward death and death-related issues, including euthanasia. Consistent with this, Ardelt (2003) found subjective well-being to be negatively related to fear of death and death avoidance.

In our study, the HEXACO dimensions of honesty-humility and agreeableness, and their facets, were related to religiosity. Because religiosity is the strongest correlate of attitudes toward euthanasia, it is understandable that acceptance of euthanasia is associated with religiosity-correlated personality factors. The religiosity data along with the personality data suggest that it is not only religious perspective that is important, but how intensely one feels bound to it. Moreover, those personality factors appear to capture most of the same variance as the SSRS (a measure of religiosity/spirituality that is closer to personality than group-level measures such as religious affiliation or attendance).

The positive relationship between openness and the EAS is not surprising because openness relates to an acceptance of change that is, in many ways, definitive of liberalism (Ashton & Lee, 2010). The Curiosity and Exploration Inventory was used as a potential measure to flesh out issues related to the openness factor. However, like the inquisitiveness facet of HEXACO, we did not find any relationship between this trait and the EAS. It may be that the Curiosity and Exploration Inventory taps into information-seeking behaviors that are simply unrelated to openness in regard to normative, moral questions.

Among the facets of the openness factor, unconventionality was the only positive correlate of acceptance of euthanasia. Having nonconformist opinions is definitive of the unconventionality facet and reflects a readiness to reexamine social, political, and religious values. Items of this facet do not refer to specific political attitudes or religious beliefs, but rather are expected to influence such attitudes (Lee & Ashton, 2004). Previous studies reported lower levels of unconventionality in older adults compared to middle-aged adults and also that older people tend to be less accepting of euthanasia (Cohen et al, 2006; Zimprich, Allemand, & Dellenbach, 2009). This is consistent with the positive relationship between the unconventionality and the EAS in our data, particularly insofar as our sample was relatively young and educated compared to the general population (i.e., this is a sample more likely to be “open” and “unconventional”).

The relationship between unconventionality and the EAS shows that individual differences (i.e., personality variables) serve an important function independent of culture. This is a key contribution of this study because it suggests a way to assess attitudes toward euthanasia that are related to sociological variables, but also explain additional variation. Moreover, this individual
differences approach is critical for conversations with individual patients at the bedside. Although group level variables are useful in identifying cross-cultural tendencies, personality predictors offer a higher fidelity explanation of differences and similarities. That is, examination of personality factors (such as Openness) offers insight into the heterogeneity of attitudes, even within particular cultural contexts where there are strong social norms against euthanasia.

**CONCLUSION**

The main limitation of this study concerns the sample. Students tend to be more liberal and open minded toward issues like euthanasia (Horsfall, Alcocer, Duncan, & Polk, 2001). They also appear to have a more intellectual orientation toward religion and spirituality and, therefore, tend to have higher scores on scales of intrinsic orientation toward religiosity. Future research should examine whether these findings generalize to the general population. In addition, future research could examine whether these same tendencies hold in other cultural contexts, particularly insofar as the HEXACO is amenable to cross-cultural studies. At the same time, students are an advantageous population in a number of ways. Although not generalizable to the wider Iranian population, the goals of this study were to test the relationships among personality dimensions and attitudes toward euthanasia, rather than estimate mean support for it. Moreover, although student samples are often considered merely convenient, here the sample represents a critical advantage for promoting comparable future research in other countries and cultures because it makes it easier for other researchers to replicate the study. In addition, the modest reliability of the HEXACO-60 suggests the longer version may be more suitable in similar populations. Finally, the comparability of the HEXACO-PI-R self- and observer reports.

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