Published online 2017 March 7.

**Original Article** 



# How Gender, Majors, Religion and Mental Health Affect the Justified Death Attitude?

Pouya Zandian,¹ Mojtaba Habibi,² Zahra Seydi,³ Benyamin Kleman,⁴ Nasrin Tayeri,⁵ Noban Fashandi,⁶ and Seyed Vahid Shariat<sup>7,\*</sup>

Received 2016 June 28; Revised 2016 December 04; Accepted 2017 February 17.

#### **Abstract**

**Background:** Death penalty and euthanasia are disputed practices in the world. However, they are considered "justified" by their proponents. We newly developed a scale for assessment of the attitude toward justified death, which determines "hot cognition" using a number of scenarios.

**Objectives:** This study aimed at assessing the effects of the major demographic items including gender, major, religion, and mental health on the justified death attitude.

**Methods:** A total of 481 participants including 419 university students and 62 seminarians participated in the study in Tehran, Iran. The Persian versions of the justified death attitude scale and the general health questionnaire-12 were used for data collection. Data were analyzed using the multivariate analysis of variance.

**Results:** Capital punishment was suggested more frequently for rape and drug trafficking and less frequently for murder, and infrequently for adultery. Men and religious subjects showed a more positive attitude toward execution. Furthermore, most of the subjects did not agree with euthanasia; surprisingly, active euthanasia was more acceptable than passive euthanasia. Finally, death penalty and euthanasia did not show an association with mental health.

**Conclusions:** Individual characteristics like gender, major, and religiosity could significantly affect the attitude of people toward justified death. Further studies including neuropsychological methods are suggested.

Keywords: Attitude to Death, Death Penalty, Euthanasia

# 1. Background

Both capital punishment and euthanasia have been highly disputed in recent decades and have their proponents and opponents internationally. The newly developed justified death attitude scale (JDAS) measures individuals' attitude toward death penalty and euthanasia. This scale includes a number of scenarios in which the subject should comment about the appropriate sentence of a criminal (rapist, murderer, drug trafficker, or adulterer) or about appropriateness of euthanasia (active or passive) (1). One possible strength of JDAS is assessment of attitude using scenarios with real life situations. Scenarios are expected to employ "hot cognition" (cognition colored by emotion) of the subject and result in a more accurate assessment of attitude.

The term "justified" here is value-neutral and does not denote that death penalty and euthanasia are acceptable, but to show that these kinds of killing have been claimed to be justified in some countries and are the only kinds of legally authorized killing.

Attitude toward capital punishment has been shown to be associated with several variables including race, gender, age, socio-cultural background, religiosity, job and training, general mental health, and emotion. These factors are among the main components of self (2-8). For example, both race and gender have been related with death penalty. Whites are more likely to support capital punishment in comparison to African-Americans, especially for deliberate murder (2). On the other hand, males' agreement on death penalty is generally more than that of fe-

<sup>&</sup>lt;sup>1</sup>Cognitive Psychologist, Clinical Psychologist, Tehran, Iran

<sup>&</sup>lt;sup>2</sup>Department of Addiction studies, Tehran Institute of Psychiatry, School of Behavioral Sciences and Mental Health, Iran University of Medical Sciences, Tehran, Iran

<sup>&</sup>lt;sup>3</sup>Department of Psychology, Kharazmi University, Tehran, Iran

<sup>&</sup>lt;sup>4</sup>Family Research Institute, Shahid Beheshti University, G. C., Tehran, Iran

<sup>&</sup>lt;sup>5</sup>Cognitive Psychologist, Tehran, Iran

<sup>&</sup>lt;sup>6</sup>Department of Law, Faculty of Humanities, Islamic Azad University of West Tehran, Tehran, Iran

Mental Health Research Center, Tehran Institute of Psychiatry- School of Behavioral Sciences and Mental Health, Iran University of Medical Sciences, Tehran, Iran

<sup>\*</sup>Corresponding author: Seyed Vahid Shariat, Mental Health Research Center, Tehran Institute of Psychiatry, Mansouri Lane, Niayesh St, Sattarkhan Ave, Tehran, Iran. Tel/Fax: +982144503402, E-mail: shariat.v@iums.ac.ir, Vahid.Shariat@gmail.com

males in America and Japan, but not in China (5-8).

Furthermore, culture, religion, job, and training can directly affect one's attitude toward death penalty. For instance, the rate of prodeath penalty in China is very high and stable, possibly because of the historical and cultural background and the collectivistic culture of willingness to sacrifice a few for the interest of the whole community (6). Interestingly, informing people about ineffectiveness of death row in preventing crimes changes opinions, but does not influence attitudes which is part of autobiographical self (2, 7, 9). This finding signifies that one's position on death penalty is mostly based on one's "hot cognition" and not merely knowledge. In fact, "cold cognition" is less important in assessment of strongly held and emotionally based opinions (2).

Secondly, euthanasia and physician assisted suicide are the other types of killing that are considered as "justified" and have been legalized in some countries and few states of the United State, (10-13). Euthanasia can broadly be classified into active and passive categories. The former refers to the direct administration of a lethal agent to the patient with a merciful intent, which itself could be voluntary or involuntary, and the latter refers to withholding supportive medical interventions that are used to lengthen patient's life (11, 14).

Several factors influence attitude toward euthanasia. For example, being western, young, well-educated, white, male, less religious, and living in a collectivistic society are associated with agreement with euthanasia. It is thus not surprising that the rate of agreement with euthanasia varies significantly in different countries. For example, in Greece, Germany, Britain, Switzerland, France, Finland, and Poland it has been reported to be 41%, 93%, 84%, 82%, 61%, 50%, and 64%, respectively (15).

# 2. Objectives

To our knowledge, no studies have yet evaluated the attitude of people towards euthanasia and death penalty using a scenario-based assessment tool like JDAS that could assess "hot cognition" as well as the effect of self-related attributes like gender, religion, nationality of the subjects on attitude. Therefore, this study was performed to assess the effect of the aforementioned variables as well as major and mental health status on the attitude of a sample of Iranian people toward death penalty and euthanasia.

# 3. Materials and Methods

#### 3.1. Study Design and Settings

The study had a cross sectional design, which was conducted in 2014. The students were selected using quota

sampling from 10 public universities of Tehran including University of Tehran, Shahid Beheshti University, Shahid Beheshti Medical University, Sharif University of Technology, Kharazmi University, Tehran University of Medical Sciences, Tarbiat Modares University, Amirkabir University of Technology, Iran University of Science and Technology, and Allameh Tabatabai University.

## 3.2. Participants

A total of 481 single individuals including 419 university students and 62 seminarians participated in the study. Additionally, 62 seminarians were selected to represent a more religious subgroup. The quota sampling method was considered in a way to include sample from each academic major (ie, arts, medicine, engineering, humanities, psychology, experimental sciences, arithmetic, and theology). However, due to the inadequate number of participants, sample of arts and humanities were combined with psychology. Participants studying arithmetic were also combined with those studying engineering.

Inclusion criteria included being student, to be in an age range of 18 to 32, and accepting to participate in the study and filling the required forms and questionnaires. Sample size was calculated based on the previous studies in the field and was expected to be higher than 400. Although not a representative sample of Iranians, the current sample was relatively heterogeneous included a wide variety of subjects, because Tehran, the capital of Iran, is a multi-ethnic city and many top universities of Iran are there. About one-fifth of Iranian students study in Tehran and many of these students come from all over the country.

Fifteen answer sheets were cancelled due to incomplete responses. The mean age of the sample was 23, and 202 participants were females.

# 3.3. Ethical Considerations

Participation was confidential and voluntary. The ethics committee of Iran University of Medical Sciences approved the study proposal.

#### 3.4. Instruments

#### 3.4.1. The Justified Death Attitude Scale

Characteristics of the JDAS are provided in detail elsewhere and the scale has been shown to have acceptable reliability and validity (1).

This scale has 59 questions that cover 6 subject subscales, including rape (11 questions), adultery (11 questions), murder (10 questions), drug trafficking (11 questions), and euthanasia for conscious (eight questions) and unconscious patients (eight questions) with painful and

terminal stage of malignant cancers. The first four subscales are designed to assess the attitude to death penalty and the last two refer to euthanasia. In the death penalty related subscales, each question includes a scenario in which someone has done something wrong (rape, adultery, murder, drug trafficking) that merits a punishment. Then, subject should decide about the kind of penalty that s/he thinks is appropriate for the perpetrator (painful execution, nonpainful execution, long-term prison, short-term prison, freedom). To quantify the ratings, each item gets a score in a decreasing order from painful execution (5) to freedom (1).

Each subscale scenario is rewritten for different situations to see if the perpetrator's characteristics like nationality (the same as or different from subject), race (the same as or different from subject), age (under or over 18), and religion (the same as or different from subject) would have an effect on the type of the decision that subject makes. Finally, each scenario has a question with a first person perspective, where the subject is asked to suppose that her/himself has been the perpetrator of the question and should decide about her/his own punishment.

The final two subscales on the attitude on euthanasia again have scenarios about a terminally ill patient with a malignant cancer and asks the subject to decide if the cancer patient should be given the chance for an active or passive euthanasia or everything must be done to prolong the life of the patient as far as possible. These items were also given a score of 1, 2, and 3 for active and passive euthanasia and treatment, respectively.

In the fifth scenario, patient is depicted as conscious and in the sixth scenario as unconscious. These two scenarios also include the characteristics like nationality, race, age, and religion of the patient, as well as the first person perspective as variables in various questions.

# 3.4.2. The General Health Questionnaire-12

The Persian version of the general health questionnaire (GHQ) is a tool for the assessment of mental health (16), which was used in this study. The general health questionnaire-12 is the shortest form of GHQ with 12 items that each item is scored in a four-point Likert scale. Alternatively, the items could be rated in a bimodal way of 0 or 1. Therefore, the total score could range between zero and 36 or zero and 12 based on the scoring method. The GHQ-12 has been reported to have a Cronbach's alpha coefficient of greater than 0.70. Montazeri et al. have assessed the factor structure of Persian version of GHQ-12 and showed a twofactor structure for this scale (16).

#### 3.5. Statistical Analysis

Multivariate analysis of variance (MANOVA) was performed to analyze the data using SPSS version 16.0.

# 3.6. Study Procedure

After providing written consent forms, all of the participants completed a demographic questionnaire, and the Persian versions of the GHQ-12 as well as JDAS.

#### 4. Results

Four hundred and sixty-six subjects (233 males, 233 females; the mean age = 23, age range: 18 - 32 years) from 10 public universities participated in this study. They were students of art (2), medicine (57), engineering (104), psychology (25), humanity science (115), experimental science (62), arithmetic (39), and seminaries (62). Most were Shiite (383) and 83 were Sunnis (Table 1). They got rollerball pen and signed an informed consent.

In the first scenario (rape) 196 subjects (42.1%) agreed with prison sentence and 265 (56.9%) with capital punishment (159 or 34.1% suggested painful death penalty and 106 or 22.7% nonpainful,  $\chi^2 = 10.14$ , df = 1, P < 0.001) (Table 2). In the second scenario (adultery) agreement with prison sentence was seen in 296 subjects (63.5%) and 97 subjects (20.8%) suggested death penalty (45 or 9.6% painful and 52 or 11.2% painless execution,  $\chi^2 = 0.71$ , df = 1, P < 0.001). In the third one (murder), 264 subjects (56.6%) agreed with prison sentence and 194 (41.6%) agreed with execution (32 or 6.9% painful and 161 or 34.6% painless,  $\chi^2 = 59.57$ , df = 1, P < 0.001). In the last legal scenario (drug trafficking), agreement with the prison sentence was observed in 134 subjects (28.8%) and with death penalty was reported in 322 subjects (69.1%) (133 or 28.5% painful and 189 or 40.6% painless execution,  $\chi^2$  = 8.82, df = 1, P < 0.001). In the fifth scenarios (euthanasia for conscious cancer patients), 181 subjects (39.4%) selected active euthanasia, 54 (11.8%) selected passive euthanasia and 224 (48.8%) suggested to treat the patient as far as possible. Active euthanasia had significantly more proponents than passive euthanasia ( $\chi^2 = 23.26$ , df = 1, P < 0.001). In the sixth scenario (euthanasia for unconscious cancer patients), 137 subjects (30.45%) selected active euthanasia, 74 (16.45%) selected passive euthanasia and 239 (53.1%) suggested to treat the patient as far as possible. Also, active euthanasia had significantly more proponents than passive euthanasia ( $\chi^2 = 12.07$ , df = 1, P < 0.001) (Table 3).

## 4.1. Intensity of Individual Responses to Scenarios

The multivariate analysis of variance was performed to compare responses to the first four scenarios. The subjects' responses were different toward rape (M=46.90, SD=9.34),

Table 1. Mean and Standard Deviation of the Score of the Justified Death Attitude Scale in Each of the Six Factors of JDAS in Male and Female Iranian Students<sup>a</sup>

Characteristics	Rape	Adultery	Murder	Drug trafficking	Euthanasia Conscious patient	Euthanasia Unconscious patient	Death Penalty	Euthanasi
Gender								
Female (n = 203)								
Mean	45.60	29.63	35.11	37.17	15.37	14.47	147.52	29.84
$\pm$ SD	9.28	11.36	7.97	8.00	6.42	6.12	26.14	10.65
Male (n = 203)								
Mean	45.45	28.44	37.43	36.81	15.49	14.33	148.15	29.83
$\pm$ SD	9.57	12.27	7.13	8.68	6.67	6.43	27.46	11.21
Major								
Humanity								
Mean (n = 143)	44.76	28.48	35.65	36.24	14.65	14.67	145.14	29.32
$\pm$ SD	8.93	10.67	7.76	7.23	6.54	6.32	24.08	10.88
Medical								
Mean (n = 57)	42.50	27.22	36.43	35.73	15.40	12.43	150.06	27.84
$\pm$ SD	9.28	11.71	7.47	9.25	6.42	5.49	27.21	10.10
Engineering								
Mean (n = 143)	46.10	29.66	36.86	37.43	15.75	12.43	150.06	30.20
$\pm$ SD	9.58	12.92	7.03	8.89	6.47	5.49	27.21	11.01
Experimental science								
Mean (n = 63)	48.66	30.46	36.20	38.85	16.50	15.47	154.19	31.98
$\pm$ SD	9.37	11.82	8.86	8.32	6.75	6.47	26.48	11.35
Other identity related variables								
Iranian								
Mean (n = 406)	45.52	29.03	36.27	36.99	15.43	14.40	147.83	29.83
± SD	9.42	11.82	7.64	8.34	6.54	6.27	26.78	10.92
Religious					1			
Mean (n = 60)	49.95	36.31	38.63	40.63	12.65	11.16	165.53	23.81
± SD	7.86	9.79	6.96	5.90	6.12	4.70	19.96	9.22
Mental health status								
Possibly disordered				J				
Mean (n = 144)	45.45	29.60	35.84	36.17	15.96	14.61	147.08	30.58
± SD	9.75	12.35	7.52	8.83	6.44	6.04	27.94	10.18
Possibly Healthy								
Mean (n = 262)	45.56	28.72	36.51	37.45	15.14	14.29	148.25	29.43
± SD	9.25	11.54	7.71	8.04	6.59	6.40	26.16	

Abbreviation: SD, Standard Deviation.

adultery (M = 29.97, SD = 11.83), murder (M = 36.57, SD = 7.59), and drug trafficking (M = 37.46, SD = 8.15), (F (3.46) = 347.21, P < 0.01 partial Eta squared = 0.69, P < 0.001). The pairwise comparison of scenarios, with Bonferroni correction, was significant for all scenarios (P < 0.01) except for the third and fourth scenarios (murder and drug trafficking). Thus, participants responded more aggressively to rape than drug trafficking, murder, and adultery. The results of MANOVA for the fifth (M=15.07, SD=6.55) and sixth (M = 13.98, SD = 6.18) scenarios (euthanasia) showed a significant effect as well (F (1.465) = 12.58, P < 0.01, partial Eta squared = 0.03, P < 0.001] and the individuals had a positive attitude toward euthanasia for conscious patients.

The mean score was also calculated for each scenario to evaluate the effects of gender in the six subscales of JDAS. The result of MANOVA showed a significant effect for gender (F (6,399) = 2.62, P < 0.001). Males significantly scored higher on scores of murder subscale (F (1,404) = 9.58, P < 0.01 partial Eta squared = 0.023).

Meanwhile, the JDAS mean score was compared in the following four groups of academic majors: humanities, medical sciences, engineering, and life sciences (Table 1). The result of MANOVA indicated a significant effect (F (18, 1123.37) = 1.75, P < 0.05]. Subsequent tests of between-subject effects illustrated that the major group (consisted of students across all majors) significantly scored differ-

an = Sample size; F test for comparison of means; PH = Boneferroni Post Hoc comparison. \*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001.

Table 2. The Agreement Rate with Different Options of Death Penalty Related Scenarios of the Justified Death Attitude Scale<sup>a</sup>

Crime	Decision					
	Freedom	Prison	Execution		Not specified	
			Painful	Painless		
Rape Valid (n = 466)	1(0.2)	196 (42.1)	265 (56.9)		4 (0.8)	
			159 (34.1)	106 (22.7)		
Adultery Valid (n = 466)	68 (14.6)	296 (63.5)	97 (2	97 (20.8)		
			45 (9.6)	52 (11.2)		
Murder	6 (1.3)	264 (56.6)	194 (41.6)		2(0.4)	
Valid n = 466			32 (6.9)	161 (34.6)		
Drug Trafficking Valid (n = 466)	6 (1.3)	134 (28.8)	322 (	69.1)	0	
			133 (28.5)	189 (40.6)		

<sup>&</sup>lt;sup>a</sup>Values are expressed as No. (%).

Table 3. The Agreement Rate with Different Options of Euthanasia Related Scenarios of the Justified Death Attitude Scale<sup>a</sup>

Situation	Decision						
	Active Euthanasia	Passive Euthanasia	Treatment				
Conscious Patients Valid (n = 459)	181 (39.4)	54 (11.8)	224 (48.8)				
Unconscious Patients Valid (n = 450)	137 (30.45)	74 (16.45)	239 (53.1)				

<sup>&</sup>lt;sup>a</sup>Values are expressed as No. (%).

ently on rape (F(1, 404) = 9.58, P < 0.01, partial Eta squared = 0.02). The Bonferroni's multiple comparisons of the four groups demonstrated a higher score of rape by the group of experimental sciences in comparison with humanities and physics (P < 0.001).

To evaluate the effects of religion on the six subscales of JDAS, the MANOVA was conducted. The result of MANOVA illustrated a significant effect, (F (6, 46) = 7.23, P < 0.001). Subsequent tests of between-subject effects showed that religious people, in comparison to others, scored significantly higher on rape (F (1, 464) = 11.98, P < 0.01, partial Eta squared = 0.02), adultery (F (1, 464) = 20.61, P < 0.01, partial Eta squared = 0.04), murder (F (1, 46) = 5.07, P < 0.01, partial Eta squared = 0.01), drug trafficking (F (1, 46) = 10.60, P < 0.01, partial Eta squared = 0.02), and lower on euthanasia for conscious patients (F (1, 46) = 9.60, P < 0.01, partial Eta squared = 0.02), and euthanasia for unconscious patients (F (1, 46) = 14.75, P < 0.01, partial Eta squared = 0.03).

To evaluate the effects of mental health status on the six subscales of JDAS, another MANOVA was performed. The result of MANOVA indicated a nonsignificant effect on first order factors, F(6,459)=1.16, P>0.05, and the second order ones, F(2,46)=1.15, P>0.05).

#### 5. Discussion

Most of the subjects of the study recommended capital punishment for rape and drug trafficking crimes, but not for murder and adultery, where prison sentence was the preferred punishment. The attitude toward euthanasia seems to be negative, but surprisingly more positive for active than passive euthanasia.

Iran has the highest amount of drug seizures in the world and its campaign against drug trafficking has cost more than 3,600 lives and 11,000 casualties for Iranian police forces in the recent decades (17-19). Therefore, it is not surprising to see such a negative attitude toward drug traffickers. Although drug crime showed the highest amount of agreement with death penalty in this study, painful death was suggested more frequently for rapists. This suggests that if execution is chosen, then a harsher method is devised for rapists than drug traffickers. Rape is one of the most heinous crimes that have created social ferment in Iran including the serial rape case in 1997 (5, 17-19).

According to the current results, the subjects take adultery not as serious as the other crimes. About two thirds recommended a prison sentence and about 15% suggested to free the perpetrator and only 20% voted for execution. Adultery is ethically unacceptable and legally prohibited,

but it is performed voluntarily and without exertion of force. This might have caused the subjects to choose a milder form of sentence.

Most of the subjects of the study did not agree with euthanasia and suggested that every effort should be done to keep the dying patient alive for some more days, regardless of untreatability of the disease and the patient's will. This might be due to the sacred nature of life for believers, which should not be lost for no good reason. Still, there is another belief that patient's suffering is a way to clean the soul from sins committed during one's life. These beliefs might have played a role in the observed low acceptability of euthanasia.

We did not expect active euthanasia to be more acceptable than passive euthanasia, because passive euthanasia is a more conservative option that could more easily be acceptable to law makers and ethicists. The reason for this finding needs further assessment and enquiry from the participants. However, it is possible that those subjects that agreed with euthanasia to shorten the suffering of the patient preferred active euthanasia that actively reduces the patient's life duration and, as a result, her/his suffering. Passive euthanasia has possibly had a less obvious role in reducing the suffering of the patient for these subjects.

Although previous studies illustrated that there was a relationship between both legal and medical decisions and mental health (24), no relationship was observed between them and JDAS, but a significant relationship was found between religiosity and IDAS decision which was due to the Islamic training, like other Abrahimic Faiths, reinforcing execution and being against euthanasia. Besides, participants in different academic majors verified such attitudes toward rape (8, 20). Gender differentiation of the justified death attitude also showed that harsher decisions for murder are significantly taken by males; that was the case for participants in experimental sciences in comparison with those in humanities and physics. In fact, men are more likely to be victims of murders. Thus, the agreement on death penalty for men is more than that for women (10, 21, 22).

#### 5.1. Limitations

This study faced several limitations, which should be taken into consideration. This was a cross sectional study, which only shows associations and not causation. Additionally, convenient sampling was utilized for data gathering. This could limit the generalizability of the findings. We also used seminarians to represent the religious group and did not use a specific measure of religiosity. Although this is not an exact method and cause imprecision in this variable, it was the most convenient way and seminarians generally are expected to be more religious because

of their studies and practices. Besides, attitude differentiations of sect, generation, end stage parents and end stage patients, rape, adultery, murder, and drug trafficking victims should have been evaluated. Next, biological determinants of participants could be assessed to find out whether somatic markers could influence their responses. Moreover, cultural differentiations of self can be different between even holistic process information, orientation, the analytic and feature-based style, and octamerous style (23). Thus, self-differentiation should be considered especially with neuropsychological tasks such as approach-avoidance, parallel processing, and modification of stroop tasks.

#### 5.2. Conclusions

The study shows that attitude toward execution is very different for the various crimes that all could be sentenced to death according to the current local laws. The attitude is harsh against rape and drug trafficking but more tolerant toward murder and adultery. Although euthanasia is not admitted by many of the subjects, nearly half of them agree with some kind of euthanasia regardless of the consciousness status of the patient. Finally, it seems that religious beliefs and gender have an effect on shaping the attitude toward justified death.

#### Acknowledgments

The authors would like to thank Mr. Faramarz Zandian for financial support of this research project.

#### **Footnotes**

Authors' Contribution: Pouya Zandian and Seyed Vahid Shariat designed the study. Pouya Zandian and Mojtaba Habibi performed the analyses. Pouya Zandian, Zahra Seydi, Benyamin Kleman, Nasrin Tayeri and Noban Fashandi collected the data. Pouya Zandian and Seyed Vahid Shariat prepared the draft of the manuscript. All of the authors read and made the necessary changes in the final manuscript.

**Declaration of Interest:** None declared.

**Funding/Support:** Mr. Faramarz Zandian financially supported the study.

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