ORIGINAL ARTICLE
A SURVEY OF DEATH ADJUSTMENT IN THE INDIAN SUBCONTINENT

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Background: The Death Adjustment Hypothesis (DAH) postulates two key themes. Its first part postulates that death should not be considered the end of existence and the second part emphasizes that the belief in immortal pattern of human existence can only be adopted in a morally rich life with the attitude towards morality and materialism balanced mutually. We wanted to explore Death Adjustment in the Indian subcontinent and the differences among, Indians, Pakistanis and Bangladeshis. We also wanted to find the relationship between death adjustment (i.e., adaptation to death), materialistic thoughts and death adjustment thoughts. **Methods**: This was a cross-sectional study, conducted from May 2010 to June 2013. Using a purposive sampling strategy, a sample of 296 participants from the Indian subcontinent [Pakistan (n=100), Bangladesh (n=98) and India (n=98)] was selected. Multidimensional Fear of Death Scale (MFODS) was used to measure death adjustment. The rest of the variables were measured using lists of respective thoughts, described in elaborated DAH. Analyses were carried out using SPSSv13. **Results**: The mean death adjustment score for Pakistani, Indian and Bangaldeshi population were 115.26±26.4, 125.87±24.3 and 114.91±21.2, respectively. Death adjustment was better with older age (r=0.20) and with lower scores on materialistic thoughts (r=-0.26). However, this was a weak relation. The three nationalities were compared with each other by using Analysis of variance. Death adjustment thoughts and death adjustment were significantly different when Indians were compared with Bangladeshis (*p*=0.00) and Pakistanis (*p*=0.006) but comparison between Bangladeshis and Pakistanis showed no significant difference. **Conclusions**: Subjects with lesser materialistic thoughts showed better death adjustment. There are differences between Muslims and non-Muslims in adjusting to death.

Keywords: Death Adjustment Hypotheses (DAH), Death adjustment, Materialism, Existence, Afterlife

INTRODUCTION

People from different cultural and religious backgrounds perceive death differently. This can potentially have an impact on adjustment to death. Depending on how one perceives death, its stress might range from adaptable to non-adaptable.[1] As for other natural phenomena, adaptation to death is healthier than being in constant discomfort about it.[2–5] In a nutshell, the knowledge of death acts as a profound source of stress. The Death Adjustment Hypothesis (DAH) is an attempt to understand this issue using Eastern Philosophical perspectives.[6] It identifies the prevailing perception of death, specifically, the "absolute end of existence". It also adds up the necessity of morality through restrained materialistic desire for optimal death adjustment.[7] The DAH tries to answer a few commonly asked questions, for example, "Why death is so fearful?" "How could there be no afterlife in the conscious perception of death while several religions denoting afterlife are in practice for centuries?" Exploration of these questions lead to the postulation of DAH as; (1) death should not be considered as the absolute end of existence, and, (2) morality with restrained materialism is required to reinstate the unending nature of death in society.[1] For brevity, these factors may be considered as (1) Materialistic thoughts (representing link of materialism with immorality) and (2) Death adjustment thoughts (representing unending nature of death and afterlife etc.).

Though epistemological in origin, Death Adjustment Hypothesis represents concept on death attitude and adjustment and a vast majority of the empirical studies on death, attitude towards death and belief systems related to death have been conducted in western society.[8] We decided to conduct a cross sectional survey in Indian subcontinent to measure the death adjustment scores among Indians, Pakistanis and Bangladeshis, and to explore the relationship between death adjustment, materialistic thoughts and death adjustment thoughts.

MATERIAL AND METHODS

This cross-sectional study was conducted between May 2010 to June 2013, and involved a total of 296

participants, purposively selected from the countries of Indian subcontinent namely Pakistan (n=100), Bangladesh (n=98) and India (n=98). Natives of the respective countries with ages ranging from 20–50 years, having at least 12th grade/ 'A' level education and not suffering from any diagnosed terminal physical illness or mental illness were included in the study. In order to better understand death adjustment, the population was restricted to the dominant religions of these countries, i.e., Hinduism and Islam. Implied verbal consent was obtained by distributing and asking to fill the self-assessment questionnaires/scale (containing sheets for assessing death adjustment, materialistic thoughts and death adjustment thoughts, respectively) at their convenience. No identity information except for age, gender and country was collected.

Measurements involved assessments of the following areas;

a. Death adjustment:

Multidimensional Fear of Death Scale total score (MFODS) is a 48 item, validated, scale representing eight different fears (Fear of dying process; Fear of the dead; Fear of being destroyed; Fear for significant others; Fear of the unknown; Fear of conscious death; Fear for the body after death; and Fear of premature death) related to death.[9,10] All the items are rated on Likert scale with responses ranging from 1 (strongly agree) to 5 (strongly disagree). MFODS score is usually used to asses fear of death or death anxiety (the lesser the score, the higher the anxiety or fear) but since it is difficult to measure death adjustment directly, it was decided to use this scale to measure death adjustment by inverting the interpretation of the scores (the higher the score, the better the death adjustment) with an assumption that death adjustment is inverse of death anxiety. MFODS total for each participant was calculated by adding up the values of their chosen responses. As a result, for this study, the total score from MFODS provided ordinal measure for individual's death adjustment.

b. Materialistic thoughts:

Materialistic thoughts were assessed on the following five items from DAH[7],
1. People remain forgetful about one's own death in everyday life.
2. Death means absolute end.
3. There is no limit to materialistic needs.
4. Moral obligations are barriers to achieve materialistic goals.
5. No matter what religious view one has (believer, nonbeliever or other), unconditional merging with soil (after death) is preferable to being judged for moral attitude (after death).

Responses ranging from 1 (strongly disagree) to 5 (strongly agree) were rated on Likert scale. For each participant, Materialistic thoughts' score was calculated by summing up scores on these five items. A higher score indicated higher materialistic thought.

c. Death adjustment thoughts:

Death adjustment thoughts were assessed on the basis of the scores on the following verbal statement from DAH[7],

"Life is a continuous process. Death is a point in time in this life, but it is not necessarily the end. After death there is some kind of existence. The quality of existence before death from moral point of view should be important as quality of existence after death might depend upon it. A moral life with moderate materialism should therefore ensure a peaceful life forever as well as a less fearful death in it that can enhance wellbeing by lessening death anxiety, therefore, enhancing death adjustment."

Responses ranging from 1 (strongly disagree) to 5 (strongly agree) were rated on Likert scale. A higher score indicated higher death adjustment thoughts.

The data were analysed using SPSS version 13. In between group differences were calculated using ANOVA and *t*-test. Pearson's correlation coefficient was calculated to assess the correlation between various study variables. The level of statistical significance was kept at *p*<.05 for all these tests.

RESULTS

The overall mean death adjustment score was 118.66 (±24.55). There was a positive correlation between age and death adjustment (r=0.20). However, there was no significant difference in materialistic thoughts, death adjustment thoughts, and death adjustment between 162 men and 134 women, based on gender.

Nationality influenced death adjustment thoughts and death adjustment but not materialistic thoughts and the mean scores for all these variables across all the nationalities are given in table 1.

The three nationalities, Indians, Bangladeshis and Pakistanis, were compared with each other by ANOVA. Death adjustment thoughts and death adjustment were significantly different when Indians were compared independently with Bangladeshis (*t* values=-4.74 and 3.38; *p*=0.00 and 0.001) and Pakistanis (*t* values=-2.83 and 2.81; *p*=0.006 and 0.006) but comparison between Bangladeshis and Pakistanis did not show such significance (Table 2). None of the three groups showed any significant difference in materialistic thoughts.

Materialistic thoughts had negative correlation with death adjustment (r=-.26) [Table 3].

Table-1: Mean scores on Materialistic thoughts, Death adjustment thoughts and Death adjustment

Measures	Indian (n=98)	Bangladeshi (n=98)	Pakistani (n=100)	F	p
Materialistic thoughts	18.27±3.18	17.79±3.16	17.40±3.37	1.77	0.17
Death adjustment thoughts	3.72±1.01	3.39±0.94	4.14±1.08	10.65	0.0001
Death adjustment	125.87±24.3	114.91±21.2	115.26±26.4	6.57	0.0016

Table-2: Comparing Materialistic thoughts, Death adjustment thoughts and Death adjustment independently among the three nationalities

	Measure	T	Df	Significance (2 tailed)
Indian and Bangladeshi participants	Materialistic thoughts	1.129	97	0.262
	Death adjustment thoughts	-4.743	97	0.000
	Death adjustment	3.385	97	0.001
Bangladeshi and Pakistani participants	Materialistic thoughts	0.942	97	0.348
	Death adjustment thoughts	1.559	97	0.122
	Death adjustment	-0.178	97	0.859
Indian and Pakistani participants	Materialistic thoughts	1.899	97	0.061
	Death adjustment thoughts	-2.832	97	0.006
	Death adjustment	2.810	97	0.006

Table-3: Correlations of Materialistic thoughts, Death adjustment thoughts and Death adjustment across the total sample (n=296)

Measures	Materialistic thoughts	Death Adjustment thoughts	Death Adjustment
Materialistic Thoughts	-	-0.092	-0.259**
Death adjustment Thoughts		-	0.000
Death adjustment			-

**Correlation is significant at the <0.05 level (2-tailed).

DISCUSSION

The results of this study indicate that as humans grow older their death adjustment improves. A study conducted on death anxiety and aging also showed similar results.[11] It is interesting to note that differences in nationality, and therefore the religions, that might indicates differences in religiosity for this study did not make any difference in materialism.

We should also keep in mind that at least in India many Muslims and other religions live and therefore these groups might not be homogenous or at least their beliefs might be influenced by each other. This can be explained by the difference in extrinsic and intrinsic religiosity in the same person and therefore making misleading impression about a person's core religious beliefs.[12] Also universality

of materialistic desire irrespective of nationality, religion or race could be another indication from the same finding. These interpretations are grossly in line with Death and Adjustment Hypotheses. But still there are several aspects of the study that appear unresolved when we target DAH for verification. A potential reason behind these can be attributed to the fact that apparent presence of a single thought might not parallel the actual thought in force as expressions are not always in keeping with inner belief system. Misinterpretation of philosophies including those from religions can be another factor influencing disproportionate results in low education communities.

Lack of previous studies on this exact issue on one hand makes this study the pioneering one to represent the subject and on the other hand, it becomes hard to satisfy the readers to satisfy by integrating its results with other research findings and make them acceptable. Future progression on the same topic would lessen this burden gradually.

This study was conducted in search of any relationship between death adjustment and perception of the nature of death as ending or unending, materialism and morality. It was expected that the factors representing higher materialism would reflect lower morality while factors representing death adjustment thoughts would reflect the thoughts of unending nature of death with better morality. It is not practically feasibly, we therefore need numerous similar studies to explore such relationships with better methodology. We also need to keep in mind that no single study can answer the questions that have been raised by this study.

Participants belonged to the predominant religions of the sub-continent's population (Hinduism and Islam) and not from other religions practiced locally. The study did not confound for other variables that may affect the relationship like previous death related stressors in life, type of family or community support, strength of religious faith especially related to afterlife, etc. The MFODS scale was administered in English which also is a potential limitation. Questions derived from DAH were not psychometrically evaluated.

CONCLUSION

Death adjustment was better with higher age, and with lesser materialistic thoughts, although, these correlations were not strong. Death adjustment thoughts and death adjustment were significantly different when Indians were compared independently with Bangladeshis and Pakistanis. Further studies with wider representative participation, robust measures and improved methodology are required.

AUTHORS' CONTRIBUTIONS

MSH conceived and designed the study and carried out the data collection. MI drafted the manuscript and supervised the write up of the study with substantial input in its improvement. YPSB, NAG and SNS did help in data acquisition and reviewed the manuscript. All authors read and approved the final manuscript

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