Effect of Combinational Mortality Salience Interventions on Self-Esteem Regarding to Time Interval Considerations

[1]Mahmood Amirbeigi, [2]Sara Akbarzadeh, [1]Jamil Mansouri and [3]Hamidreza Gharibi
[1]Department of Psychology and Educational Science, University of Tehran, Tehran, Iran
[2]Department of Educational Psychology, University of Allameh Tabatabaie Tehran, Iran
[3]Department of Health Psychology, University of Tehran, Tehran, Iran

Abstract: Terror management theory believes that death threat is the most fundamental and important source foradaptive and maladaptive psychological structure like high and low self-esteem. In this study, combination of two methods of mortality salience was used on self-esteem. To have more accessibility to death thoughts, it is advised to use a 3-5 min time interval. The main purpose of the present study is to investigate effect of combinational mortality salience interventions on self-esteem. Moreover,as a secondary goal, adding or eliminating time interval was evaluated after interventions in self-esteem level. In order to test the two hypotheses, a 45-member sample including female students of Tehran University was placed in 3 groups randomly. Obtained results indicated that there is no significant difference between control group and experimental group without time interval ($p = 0.001$, $H(2) = 24.57$) although, mean value of the two groups is in significant difference from mean value of experimental group with time interval ($p>0.05$). In general, obtained results can be explained in this manner that creating a time interval can be along with reduction of proximity defenses (distraction, denial, etc.) and increase in accessibility of unconscious thoughts of death that can result in unconscious defenses in level of self-esteem.

INTRODUCTION

A historical thinking line that has antiquity to beginning of thought book emphasizes integration of death and life. The clearest reality of life is that everything is mortal and people are afraid of destruction and despite to facing fear and destruction, people should continue living (Zare, 2011).

In view of some scholars and theorists of social psychology, death psychology has special attractions and it has been assessed by them through different manners. For example, one can refer to studies of Solomon, Greenberg, Pyszczynski who have studied role of death in routine life of people through inspiration of cultural and anthropologist theorist, Ernest Becker. Pyszczynski et al. (2004) have organized their studies to answer two fundamental questions: why do people have a strong tendency to love themselves and why do they avoid whom are not similar to them?

Solomon et al. (2004) have answered the questions in frame of Terror Management Theory (TMT). Terror Management Theory claims that emotions, cognitions and behaviors of human can be motivated against terror of death and survival and mental structures grow in people as defensive mechanisms against the crippling terror. The mental structures in two defensive styles of distal and proximal styles protect person against conscious and unconscious thoughts related to death; thoughts that remind inevitability and certainty of death and existential fragility of people and are along with anxiety and terror. Death related conscious thoughts with proximity defensive style can be collapsed and forgotten through deny, delay and distraction and death-related unconscious thoughts with distal defensive style can be collapsed through faith in a cultural worldview and gaining self-esteem, so that they can protect individuals against existential threat. In fact, according to theorists, terror management is attempt to gain and preserve self-esteem and one of the mechanisms that protects people against anxiety resulted from death, i.e., they consider the root of the psychological structure same fear of "inexistence" (Pyszczynski et al., 1999).

According to terror management theory, self-esteem is a degree that people consider themselves as a valuable member in their culture based on it (Pyszczynski et al., 1999). Since childhood, people gain criterion for true and

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Corresponding Author: Mahmood Amirbeigi, Department of Psychology and Educational Science, University of Tehran, Tehran, Iran

false behaviors from their culture. When behavior of children is desired by culture, they get support, reward and encouragement. However, when they go toward ways that are not accepted by their culture, they would be humiliated or punished. As a result, the belief is formed in children that behaving based on laws and accepted social norms is good and behaving in opposite manner is bad. Through this, people can gain positive or negative about themselves through contribution in cultural beliefs. Pyszczynski *et al.* (2000) believe that until the time that people think they are valuable in cultural worldview; they follow their daily activities with the sense of confidence and security. Culture can create positive feelings of self in people and can result in growth and formation of self-esteem. If individuals consider themselves as valuable creatures in a systematic and meaningful world, they would be never afraid of death (Solomon *et al.*, 2004). Hence, self-esteem can be considered as a barrier against death anxiety. People with higher self-esteem suffer from lower anxiety.

Hence, terror management theory believes that if people are placed under condition of thinking about their death, they will show different levels of anxiety and the most important adjusting variable for it can be self-esteem (Greenberg and Arndt, 2011). In order to assess the hypothesis empirically (effect of self-esteem on defense against death anxiety), scholars of Terror Management Theory have adopted various studies. According to evidences, high level of self-esteem can decline anxiety and relevant defensive behaviors (Pyszczynski and Kesebir, 2011).

Terror management theory believes that reminders of own death enhance trying to enhance self-esteem. According to the mentioned theory, under conditions of mortality salience, people with high self-esteem indicate effort to enhance their self-esteem and less accessibility of relevant thoughts of mortality compared to others (Pyszczynski *et al.*, 2004). Moreover, self-esteem can decline defense of cultural worldview against reminding effects of mortality. Consistent results with this idea (Harmon-Jones *et al.*, 1997) indicate that people with high self-esteem won't show defense of cultural worldviews in response to mortality reminders; although people with average level of self-esteem act reversely when facing mortality reminders. In fact, they attempt to defend against threatening thoughts of mortality to support and defend cultural worldview. Hence, it could be mentioned that high self-esteem can facilitate collapse of mortality thoughts.

With the existence of numerous studies that have indicated that after mortality salience, people enhance their self-esteem to manage their anxiety; recent studies in

Iran have gained different results. At the present study, the intention is to investigate effect of mortality salience on self-esteem. As in study of Amirbeigi (2014) and Mohammadi (2007) in Iranian community, death reminder driver has had no impact on self-esteem; the present study has combined two types of mortality salience interventions to assess changes in self-esteem. Moreover, effect of placing time interval after intervention to measurement of self-esteem has been also investigated. In general, the research question is thatcan stronger mortality salience interventions change self-esteem of Iranian trials? And if time interval is considered between mortality salience intervention and self-esteem level to enhance unconscious thoughts of mortality, is any difference created?

MATERIALS AND METHODS

The present experimental study is adopted in frame of a project with three groups (2 experimental groups and 1 control group) with posttest. A sample consisting 45 female MA students of Tehran University was selected and they were placed in three groups each group with 15 members randomly.

In order to measure effect of intervention on self-esteem, Rosenberg scale is applied. Rosenberg self-esteem scale includes 10 items scored in likert 5-point scale. Cronbach alpha coefficient is obtained to 0.81 in a 250-member sample of students (Goldenberg *et al.*, 2002). Retest coefficients of the scale with time interval of one, two and three weeks is obtained, respectively to 0.77, 0.73 and 0.78. Cronbach alpha coefficient for this study is obtained to 0.81.

In order to make mortality salient, mortality salience interventions (Rosenblatt *et al.*, 1989) are applied to recall relevant thoughts of own death to focal attention of trails in experimental group. The method has been applied in most of the similar experiments (Arndt *et al.*, 2004). To call the thoughts, trials were asked to answer two open questions about own death. The two questions included: how do you feel when thinking about your death; explain clearly that what would happen to your body after death? In control group, relevant thoughts of an anxious subject irrelevant to death was presented using two similar questions. Pyszczynski *et al.* (1999) suggest creation of an interval (3-5 min) between mortality salience and measurement of dependent variable to enhance mortality thoughts accessibility. The study has also asked trials to read a text with neutral topic that needed time about 5 min. The aim by neutral topic is a text that creates no unusual excitement and worriedness, especially anxiety in trials. The topic for this study was a simple prose about history of cinema.

For trails of experimental groups, firstly, a video of burial ceremony was displayed and then, they were asked to answer the two above-mentioned questions and finally trace a line and write their birth on one end and death on the other end of line and specify that how much time they have to their death. After this step, experimental group 1 fulfilled Rosenberg self-esteem scale. Experimental group 2 also took same way with the difference that they read a neutral text before fulfilling the scale. Control group answered two questions about their feelings and emotions in relation to Defense of thesis. The group fulfilled also their self-esteem scale after doing the experiments and creation of time interval.

RESULTS AND DISCUSSION

Participants of the study were all woman educating in MA level of Tehran University. Hence, gender, educational level and universityof education site were controlled in this study. Moreover, according to results of variance analysis to compare mean age range of experimental group 1 (x = 13/20; SD = 1.30), experimental group 2 (x = 20.20; SD = 1.32) and control group (x = 17.20; SD = 1.29), the three groups were not significantly different in terms of mean age range (p>0.05, F-0.02). As a result, effect of variables such as gender, education level and age was controlled in this semi-experimental project.

In order to compare mean values of three groups, firstly it should be decided to use parametric or nonparametric tests. For this purpose, Kolmogorov-Smirnov test was used to test normality of data distribution, Levene test was used to determine homogeneity of variances and the results are presented in tables.

According to Table 1, K-S test for score of self-esteem is significant for no groups without interval with interval and control group (p = 0.56; p = 0.39; p = 0.51) and hence, self-esteem in all groups is normal. Moreover, results of Levene Test for homogeneity of variances are presented in Table 2.

According to Table 2, Levene test for homogeneity of variances is significant statistically (p = 0.001<0.05). As a result, variances have not been significantly different in three studied groups in this study. On the other hand as sampling is done non-randomly, to compare difference of groups, nonparametric tests should be used instead of parametric tests. In addition, due toexistence of three independent groups in this study, nonparametric Kruskal-Wallis test is applied. Based on obtained results from Kruskal-Wallis test (p = 0.001, H(2) = 24.57), mean ranks for group without interval was obtained to 15.50; for group with interval to 35.80 and for control group is obtained to 15.73. As a result, it could be found that there

Table 1: L K-S test values to determine normality of self-esteem distribution in three groups (without time interval) (with interval) and (control)

Variables	Mean	SD	Z K-S	p-values
Self-esteem in (without interval) group	3.83	0.75	0.79	0.56
Self-esteem in (with interval) group	4.70	0.11	0.90	0.39
Self-esteem in control group	4.01	0.40	0.82	0.51

Table 2: Relevant values of Levene test for homogeneity of variances

Variables	F-values	df1	df2	p-values
Self-esteem	8.24	2	41	0.001

is significant difference among groups with interval, without interval and control group. On the other hand, comparison of mean ranks using Mann Whitney in two with groups of without interval and control group (p = 0.52>0.05) also indicates lack of significant difference between without interval and control groups. As a result, significant difference in Kruskal-Wallis test is resulted from difference of the two groups with the group with interval. As a result, research hypotheses based on score of people in with interval and control groups are not significantly different and that score of self-esteem in the group with interval is higher than two other groups are confirmed. As a result, according to semi-experimental research design in this study, change in score of the group resulted from interval intervention is evaluated.

The present study has been adopted in frame of terror management theory for purpose of empirical assessment of mortality salience hypothesis and one of the two important hypotheses of the theory in Iranian sample. Obtained results indicate that mortality salience for people or creation of relevant thoughts of mortality in trails can lead to enhancement of self-esteem level compared to control group. Therefore, the hypothesis of this study is confirmed. Increase in mean scores of self-esteem in experimental group was led to confirmation of TMT that has considered self-esteem as a structure to manage mortality anxiety and reminding source of anxiety, searching, following, and enhancing self-esteem. The findings confirm results of studies (Arndt *et al.*, 2004; Dechesne *et al.*, 2003) on effect of reminders of mortality on self-esteem.

Obtained results from the study and relevant studies in frame of TMT have provided empirical evidence based on impact of mortality terror on psychological structures. For example, Yalom (2008) as one of the brilliant existential psychologists has considered mortality terror as the most important concern in his Psychotherapy sessions.

Accordingly, the issue of mortality is the first source for anxiety and many psychological disorders and recognition of their features and effects is important in process of recognizing mental features and treatment of mental disorders.

An important issue here is assessment of mortality salience hypothesis in TMT theory in Iranian samples. In two previous studies by Amirbeigi (2014) and Mohammadi (2007), mortality salience theory is rejected. Previous discriminations used to be also explained around a basic axis and as variable of mortality salience has been an iterative issue in mind of an Iranian trail because of cultural and positional context, mortality would not become so salient through proposed interventions of TMT. Hence, the present study that has been in contrary to findings of Iranian samples but in consistence with findings of western samples (Burke *et al.*, 2010), several mortality salience interventions have been used in combinational form. In other words, if the experimental experience of death is applied on trial intensely and close to mortality salience, some structures begin their activity in the trail to return him/her to balanced mode. Hence, there is not significant difference between findings of this study and previous studies.

One reason that can be expressed in discrimination of findings is using female trials in study. Positional self-esteem of the participants compared to male trials was changed significantly through intervention of salience and the way would be paved for exact measurement of findings.

Lateral finding of the study was that mortality salience could change self-esteem, when there is an interval between intervention and self-esteem evaluation. In other words, for significant changes in level of self-esteem as a result if mortality salience, an interval should be considered between presentation of death reminding driver and measurement of self-esteem. In studies of Hass, Gardiner-parks (Leary and Schreindorfer, 1997), the time interval was eliminated and it was observed that the participants were not significantly different in terms of self-esteem. In fact, the time interval could be presented because of increased accessibility of relevant thoughts of mortality. In case of presenting a time interval, subject of relevant thoughts of mortality go out of conscious domain and trials use distal defenses (here increasing self-esteem). In case of lack of supplying time interval, trials use only proximity defenses (distraction, denial and delay) (Pyszczynski *et al.*, 2011). In general, creation of a time interval can be along with decrease in proximity defenses and increase in accessibility of unconscious thoughts, when it results in unconscious defenses in self-esteem level.

CONCLUSION

As the results are related to a sample of BA students at Tehran University Faculty of Education and psychology, some considerations may be required in case of generalization of results. On the other hand, it seems better for further studies to use other variables like self-control, self-regulation, self-compassion, mindfulness and attachment styles to assess adjusting role or mediation between two variables of mortality salience and self-esteem. Further, studies can investigate role of mortality salience in other variables too. As religion plays key role as an important concept in Iranian society, it seems that in further studies, evaluation of the concept can be useful to measure relationship between mortality salience and other variables.

REFERENCES

Amirbeigi, M., 2014. Effect of mortality reminding driver on self-esteem according to self-compassion and self-recognition structures. M.A. Thesis, Tehran University, Tehran.

Arndt, J., S. Solomon, T. Kasser and K.M. Sheldon, 2004. The urge to splurge: A terror management account of materialism and consumer behavior. J. Consumer Psychol., 14: 198-212.

Burke, B.L., A. Martens and E.H. Faucher, 2010. Two decades of terror management theory: A meta-analysis of mortality salience research. Personality Social Psychol. Rev., 14: 155-195.

Dechesne, M., T. Pyszczynski, J. Arndt, S. Ransom, K.M. Sheldon, A. Van Knippenberg and J. Janssen, 2003. Literal and symbolic immortality: The effect of evidence of literal immortality on self-esteem striving in response to mortality salience. J. Personality Social Psychol., 84: 722-737.

Goldenberg, J.L., C.R. Cox, T. Pyszczynski, J. Greenberg and S. Solomon, 2002. Understanding human ambivalence about sex: The effects of stripping sex of meaning. J. Sex Res., 39: 310-320.

Greenberg, J. and J. Arndt, 2011. Terror management theory. Handbook Theories Social Psychol., 1: 398-415.

Harmon-Jones, E., L. Simon, J. Greenberg, T. Pyszczynski, S. Solomon and H. McGregor, 1997. Terror management theory and self-esteem: Evidence that increased self-esteem reduced mortality salience effects. J. Personality Social Psychol., 72: 24-36.

Leary, M.R. and L.S. Schreindorfer, 1997. Unresolved issues with terror management theory. Psychol. Inquiry, 8: 26-29.

Mohammadi, M., 2007. Experimental assessment of effect of mortality salience on self-esteem due to self-recognition and narcissism. M.A. Thesis, Tehran University, Tehran.

Pyszczynski, T. and P. Kesebir, 2011. Anxiety buffer disruption theory: A terror management account of posttraumatic stress disorder. Anxiety Stress Coping, 24: 3-26.

Pyszczynski, T., J. Greenberg and S. Solomon, 1999. A dual-process model of defense against conscious and unconscious death-related thoughts: An extension of terror management theory. Psychol. Rev., 106: 835-845.

Pyszczynski, T., J. Greenberg and S. Solomon, 2000. Proximal and distal defense a new perspective on unconscious motivation. Curr. Directions Psychol. Sci., 9: 156-160.

Pyszczynski, T., J. Greenberg, S. Solomon, J. Arndt and J. Schimel, 2004. Why do people need self-esteem? A theoretical and empirical review. Psychol. Bull., 130: 435-468.

Rosenblatt, A., J. Greenberg, S. Solomon, T. Pyszczynski and D. Lyon, 1989. Evidence for terror management theory: I. The effects of mortality salience on reactions to those who violate or uphold cultural values. J. Personality Soc. Psychol., 57: 681-690.

Solomon, S., J. Greenberg and T. Pyszczynski, 2004. The Cultural Animal. In: Handbook of Experimental Existential Psychology, Koole, S., J. Greenberg and T. Pyszczynski (Eds.). Guilford Press, New York.

Yalom, I., 2008. Staring at the Sun: Overcoming the Terror of Death. Jossey-Bass, San Francisco, USA.

Zare, M., 2011. Thinking about Death of Gilgamesh to Camus. NegaheMo'aser Press, Tehran.