Lay people's conceptualizations regarding what determines fear of death

Nicole Cantisano, Virginie Ferraud, María Teresa Muñoz Sastre, Etienne Mullet

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Nicole Cantisano, María Teresa Muñoz Sastre

Jean-Jaurès University, Toulouse, France

&

Etienne Mullet,

Institute of Advanced Studies, Paris, France.

Correspondence concerning this article should be addressed to Etienne Mullet:

etienne.mullet@wanadoo.fr

Abstract

We explored the determinants of fear of death from lay people's perspective. Two hundred French participants aged 18-83 were presented with 48 realistic stories that depicted a terminally-ill older patient, and assessed the probable level of the patient's fear of death in each case. The stories were composed according to a five within-subject factor design: (a) whether the person believes in God or not, (b) whether social support is available or not, (c) the level of the person's life accomplishment (low, intermediate or high), (d) whether unresolved conflicts with family members still persist or not, and (e) whether the person's end of life wishes will be respected or not. Three different positions were found. Nine percent of participants expressed a *Not Much Fear* position; their ratings were always low. Sixty-three percent expressed a *Depends on Circumstances* positions; their ratings predominantly varied as a function of two factors: respect of end of life wishes and unresolved conflicts with family members. Sixteen percent expressed a *Fear Always Present* position; their ratings were always high. This set of positions suggests that, among lay people, three rival conceptualizations of fear of death may exist: (a) fear of death is a myth, (b) fear of death is an overwhelming phenomenon, and (c) fear of death is an emotional but reasonable response to a more or less stressful situation.

Key words: fear of death, lay views, determinants, France

Lay People's Conceptualizations Regarding What Determines Fear of Death

The death of relatives and the death of close friends are common and painful experiences among people of all ages. Many people have accompanied a dying person until the very last moment. This experience may have raised durable questionings (Becvar, 2001). In many cases, dying persons seem to be at peace with themselves. They accept the idea of their imminent death and they may even call it in the hope of alleviating their caregivers' burden – the "escape acceptance" in Cicirelli's (2003, p. 67) terms. In some cases, however, dying persons seem to fear death extremely, until the last moment. Why do these persons fear death so much? Am I going to experience such a level of fear when my time will come?

Fear of death has been defined as "the anxiety experienced in daily life caused by the anticipation of the state in which one is dead" (Cicirelli 1999, p. 569). Its determinants have been extensively examined (Neimeyer 2015). Several aspects of fear of death have been distinguished, whether, for example, it is fear of non-existence or fear of the process of dying (Neimeyer, Wittkowski, and Moser 2004). Although the impact of these determinants vary as a function of the specific aspect considered, it can be stated that, generally speaking, young people and females report fear of death to a greater extent than older people and males (Pierce, Cohen, Chambers, and Meade 2007).

Studies conducted in the framework of Terror Management Theory (TMT) have shown that fear of death was strongly linked with cultural values and self-esteem, and that, when activated, fear of death had an impact on a huge set of attitudes and behaviors such as prejudice and nationalism, interpersonal attraction and romantic love, or pro-war attitudes and legal decision making, to quote only a few (for a review, see Pyszczynski, Greenberg, Solomon, and Maxfield 2006). It has also been shown to be associated with other personality constructs such as locus of control (Cicirelli 1999), with psychopathology (Thiemann et al.

2015), and with physical problems (Fortner and Neimeyer 1999). Some authors suggest that it may have negative consequences on mental health and well-being (Iverach, Menzies, and Menzies 2014). Finally, religious people report fear of death either more (Power and Smith 2008) or less (Daaleman and Dobbs 2010) than non-religious people, depending on a number of context factors, namely religious involvement (Jong and Halberstadt 2016) and religious affiliation (Abdel-Khalek, Lester, Maltby, and Tomás Sábado 2009; Ellis, Wahab, and Ratnasingan 2013).

The present study was conducted in France, a country in which life expectancy at birth is about 82 (INSEE 2017) and where people, in their majority, die in hospitals or medical homes (Lalande and Veber 2009). In this country, patients' wishes regarding support care are protected by law (Legifrance 2016). As most studies reported above, the present study explored the determinants of fear of death but the perspective that we adopted was different: It explored fear of death from lay people's perspective. By lay people we mean people who are not experts in the field of study under consideration. In the present study the term refers to persons who were neither professional psychologists nor psychiatrists. As lay people usually don't read scientific psychology journals, and as the media are largely silent regarding findings reported by these journals, they have no other way to understand fear of death (expressed by loved ones or casual acquaintances) than to rely upon their own views about it. These views are primarily derived from personal feelings -- one's own attitude towards death, but also from personal experience, word of mouth, and the popular press.

In order to examine people's conceptualizations of what determines fear of death, a scenario technique was used (Anderson 2008, 2018). A realistic story that depicted a terminally-ill female older patient was written by an experienced nurse. This story provided information regarding the way this patient considered her life accomplishments, the quality of social support available to her (e.g., presence of a close relative), the existence of unresolved

conflicts with family members, her beliefs in an afterlife, and her level of assurance that her end of life wishes would be respected by the medical team. The choice of information included in the scenarios was partly guided by Abdel-Khalek's (2002) list of reasons to fear death: losing worldly involvements, parting from loved ones, transgressions and failures, and fear of pain. From this basic scenario, additional scenarios were composed by systematically varying the levels of the five factors mentioned above. Participants were presented with the whole set of vignettes and asked to judge of the level of fear experienced by each patient in each vignette.

As suggested by Neimeyer et al. (2004, p. 311), "human responses to the contemplation of or confrontation with death are remarkably varied, ranging from stark fear and threat to neutral acceptance or approach." As fear of death dramatically vary from one person to another and as a function of context (see also Pyszczynski et al. 2006), we expected to find different positions regarding what determines fear of death among participants. Some of them – probably a minority – would, as suggested by Becker (1973) in his early book on the subject, blatantly deny that fear of death may be experienced by the terminally-ill patient; that is, their ratings would always be low, and circumstantial factors (e.g., unsolved conflict with family members) would play no role. In contrast, other participants would, on the basis of their own experience, consider that fear of death is always present and strong (Juhl and Routledge 2015); their rating would always be high but circumstantial factors would, for similar reasons, play no role. In these two cases, fear of death would, therefore, be conceptualized either as a myth or as an overwhelming phenomenon. Finally, other participants would, in the same way as most of Abdel-Khalek's (2002) participants, consider that fear of death may vary as a function of the situation in which death takes place. Their ratings would change as a function of the levels of the five factors listed above. In other words, fear of death would, in this third case, be conceptualized as a situational construct.

We also expected that people's positions would be associated with their demographic characteristics. We expected that (a) males, older participants, and regular attendees to the church or the temple would, more often than other participants, express a "no fear" position, and (b) females, younger participants, and atheists would, more often than others, express an "always strong" position (Fortner and Neimeyer 1999).

Method

Participants

Participants were unpaid volunteers. The study was conducted in the area of Toulouse, France. Authors contacted people walking along city sidewalks, explained the study, asked them to participate, and, if they agreed, arranged where and when to administer the experiment. Of the 400 individuals who were contacted, 212 (53%) participated. Authors tried to enroll people from both sexes (131 females and 81 males) and different ages (M = 41.46, SD = 16.87, range = 18-83 years).

Participants indicated whether (a) they were regular attendees to the church or the temple, believers in God, or atheists/agnostics, (b) they had a university degree (tertiary) or not (primary and secondary), (c) they were currently students, blue collars (persons who perform manual labor), white collars (persons who work in an office environment), unemployed, or retired. Detailed demographic characteristics are shown in Table 1.

----- Table 1 about here -----

Material

The material consisted of 48 vignettes containing a short story (a few lines), a question, and a response scale. The stories were composed according to a five within-subject factor design: (a) whether the person believes in God or not, (b) whether social support is available or not, (c) the level of the person's life accomplishment (low, intermediate or high), (d) whether unresolved conflicts with family members still persist or not, and (e) whether the

person's end of life wishes will be respected or not. Other information was held constant: All patients were identified as "Mrs.", and they were all suffering from final stage cancer.

An example of vignette is: "Mrs. Kellerman is currently suffering from cancer. She is aware that she is in the final stage. Mrs. Kellerman does not believe in God. She thinks that after death, the body immediately discomposes and that all we leave behind us after death are memories and personal accomplishments. Mrs. Kellerman is well supported by her children. She knows that at the time of death, at least her oldest daughter will accompany her until the end. Mrs. Kellerman has lived a somewhat disorganized life. Her feeling is that she has not always fulfilled her duties regarding her family and society. She feels however that she has accomplished certain good deeds and that she has put her own house in order. She has discussed her last wishes with her children. Mrs. Kellerman doesn't have any unresolved conflict with anybody. She has reconciled with the people she could have harmed in the past. The medical team in charge of Mrs. Kellerman has assured her that they will do everything to alleviate pain and suffering, and fully respect her last wishes. To what extent do you think that Mrs. Kellerman is currently experiencing fear of death?" The response scale was an 11-point scale with a left-hand anchor of "Not a lot" and a right-hand anchor of "Terribly."

Procedure

The site was either a vacant classroom in the local university or the participant's private home. The procedure followed Anderson's recommendations (2008, 2018) for this kind of study. Each participant was tested individually. Firstly, the experimenter explained to participants that they were about to read a certain number of stories depicting a terminally-ill patient, and, for each story, they had to indicate the degree to which they feel that this patient may experience fear of death. Secondly, participants were presented with 12 stories taken randomly from the set of 48. They read each of them and made their ratings. Thirdly, they were allowed to go back at their responses, compare them, and make changes. The main

purpose of this familiarization phase was to enable the participants to develop a frame of reference for the task. Fourthly, during the following experimental phase, the whole set of 48 stories were presented one by one to the participants. The order of the vignettes was random and different for each participant. They made their ratings at their own pace, but they were no longer allowed to go back and make alterations. It took 30-40 minutes to complete the ratings.

By obtaining informed consent and maintaining strict anonymity, the study conformed to current law in France and to the Declaration of Helsinki. The study was approved by the Ethics Committee of the University of Toulouse. The Committee required only oral consent by the participants. Informed consent was given orally, once participants had fully understood the nature of the study.

Data Analysis

A cluster analysis was performed on the raw data in order to group participants into a reduced set of conceptualizations (Hoffmans 2013). Four clusters were identified. ANOVAs were performed on the data from each cluster, with the following design: Beliefs x Support x Accomplishment x Conflicts x Wishes, 2 x 2 x 3 x 2 x 2. In light of the multiplicity of comparisons, the level of significance was set at .005. Chi² were computed in order to assess the relationship between type of conceptualization and demographic characteristics.

Results

A four-cluster solution was retained (Sheperd and Hoffmans 2009). The four clusters are shown in Figure 1. The main results from the ANOVAs are shown in Table 2. In this table, all main effects but only significant interactions have been reported.

The first cluster (9% of the sample) was the expected *Not Much Fear* cluster. All ratings were low (M = 1.41). They were, however, slightly higher when respect for last wishes was not expected (M = 1.66) and all conflicts were not resolved (M = 1.56) than in the alternative cases (M = 1.16 and 1.27, respectively). Older participants (over 55 years), and

retired participants were more often members of this cluster than younger participants (less than 40 years) and students or white collars.

----- Figure 1 and Table 2 about here -----

The second cluster (63%) was the expected *Depends on Circumstances* cluster. Ratings were higher when respect of last wishes was not expected (M = 5.29), all conflicts were not resolved (M = 5.29), social support was inexistent (M = 5.07), and the patient did not believe in God (M = 4.95) than in the alternative cases (M = 3.90, 3.90, 4.12, and 4.23 respectively). Ratings were lower when life accomplishments were high (M = 3.77) than when they were moderate (M = 4.48) or low (M = 5.54). White collars were more often members of this cluster than blue collars, students, and retired participants.

The third cluster (16%) was the expected *Fear Always Present* cluster. All ratings were higher than the middle of the response scale (M = 7.16). Ratings were slightly higher when respect of last wishes was not expected (M = 7.88), all conflicts were not resolved (M = 7.63), and social support was inexistent (M = 7.65) than in the alternative cases (M = 6.43, 6.68, and 6.67 respectively). Ratings were lower when life accomplishments were high (M = 6.61) than when they were moderate (M = 7.11) or low (M = 7.75). The effect of life accomplishment was stronger when social support was absent (7.36 – 6.00 = 1.36) than when it was present (8.14 – 7.24 = 0.90). Females, very young participants (less than 25 years), students and atheists were more often members of this cluster than males, participants older than 25, white collars or retired participants, and regular attendees.

The fourth cluster (12%) was not expected; it was called *Undetermined* since all ratings were close to the middle of the response scale (M = 4.70). Ratings were, however, slightly higher when respect of last wishes was not expected (M = 5.10), than in the alternative cases (M = 4.31). Male participants were more often members of this cluster than female participants.

Discussion

As expected, a "not much fear", minority conceptualization was found. This conceptualization was more frequently endorsed by older participants and by retired participants than by younger participants and by non-retired participants, which suggests that it did not necessarily correspond to an attitude of denial but was, rather, based on personal changes regarding attitudes towards death experienced by adult participants through their own aging process -- the target was always an older person. This result was consistent with Neimeyer et al.'s (2004, p. 314) suggestions that "death anxiety decreases from mid-life to old age." This position was, however, not more often endorsed by males or by religious participants than by females and atheists.

As also expected, a "fear always present", minority position was found. For about one person out of eight in this sample, fear of death was considered as an irrepressible emotion that is present in everybody, and that is only slightly attenuated (a) when fear of terminal pain is reduced through assurance that the medical team will do everything possible to alleviate suffering and (b) when feelings of guilt are reduced through the resolution of conflict with others. As a result, it can be suggested that this position reflects genuine fear of death as conceptualized in TMT (Pyszczynski et al. 2006).

This position was frequently endorsed by very young participants (18-25-year olds) and by students, which was consistent with the view that it is the personal experience of a change in death attitude experienced as people grow older that matters when assessing fear of death. It was also frequently endorsed by females and by atheists, which suggests that this personal change (a) may be more pronounced among males than among females, and (b) may be fueled by beliefs in a corporal afterlife.

The majority position was the expected "depends on circumstances" position. Most participants considered that when a dying person thought that her life could be, for ideological

motives, maintained beyond the reasonable (e.g., using futile treatments) or her physical suffering would not be alleviated using strong painkillers (e.g., opioids), or when the dying person considered that her life has been a mess and she will be left alone, her fear of death could be intense. In other words, these participants – mostly white collars –considered that fearing death was not an irrepressible emotion but a reasonable attitude in extreme cases when physical suffering (pain) and/or psychological suffering (intense regret, solitude) had to be expected.

This view was consistent with Bonin-Scaon et al.'s findings (2009, p. 21) who reported that, in France, terminally ill patients' end-of-life preferences were articulated around the following factors: "leaving one's affairs in order, enjoying life until the last moment, feeling at peace with God, remaining able to oppose unwanted treatment, keeping close to loved ones, benefiting appropriate care, inspiring respect, being at peace with significant others." When these conditions are met, fear of death would be minimal.

The "undetermined" position was not expected but it was instructive. Some participants – more often males – admitted that they were not able to predict another person's level of fear. These participants may have felt uneasy to think about death (Tete 2010). This finding provides a methodological lesson. If the participants in this cluster had given only one response—to a single scenario or to a generic question —their responses would have been considered as expressing moderate fear of death. Having them respond to multiple stories allowed researchers distinguishing absence of opinion (or unease) from moderate level of fear; that is, it suggested that participants in this group did not actually make judgments, but merely put marks at the same place (more or less) in each case. Groups of participants without any definite views about important death issues have already been reported (e.g., Kamble, Ahmed, Sorum, and Mullet 2014).

Implications

Only a small minority of participants viewed fear of death as an overwhelming phenomenon. Most participants considered that people tend to strongly fear death when it is likely to occur in undesirable circumstances (e.g., after a long agony or in complete solitude) but don't fear it much in circumstances that, in the Western world at least, are considered as normal (e.g., pain treatment, presence of close family members).

As people's conceptualizations regarding fear of death are likely to be based on personal feelings about death and the dying process, and upon discussions with close relatives, the existence of three clearly contrasted positions suggests that lay people conceptualize fear of death either as a myth, or as a terrifying reality that reflects our own mortal condition, or as an emotional response to a more or less stressful situation; that is, as a reasonable response each time circumstances are far from what the dying person would wish.

It can thus be suggested that when assessing fear using conventional tools (e.g., questionnaires), the circumstances of death are systematically specified. Generic items assessing attitude (positive or negative) to the process of dying as part of everyone's life are likely to trigger very different ratings whether this process would take place at home, with the assistance of a competent medical team and the social support offered by family and friends or would take place in the ditch by the road.

Future studies should examine the link between people's conceptualizations of fear of death and personality variables such as self-esteem. As stated early, self-esteem has been shown to be strongly associated with existential fear of death (Pyszczynski et al. 2006). As a result, it may be expected that people who conceptualize fear of death as a myth would have a much higher level of self-esteem -- a fundamental anxiety buffer -- than people who conceptualize fear of death as an overwhelming phenomenon. Future studies should also examine the link between people's conceptualizations of fear of death and specific forms of death representations (Testoni 2015), specific aspects of personal values (Schwartz et al.

2012), or particular bioethical beliefs (Stolt, Liss, Svensson, and Ludvigsson 2002). Finally, and as the cultural dimension may strongly influence the ways in which the dilemmas around death and dying are handled, future studies should compare lay people's views regarding fear of death across different religions and cultures; that is among Jews (e.g., Lazar, 2006), Muslims (e.g., Dadfar, Lester, and Bahrami 2016), Taoists (e.g., Zeyrek, and Lester 2009), Hinduists, Buddhists, and Animists, to quote a few.

Limitations

Our study has limitations. First, since we studied a convenience sample of adults in one area of France, our findings must be generalized with care and need to be confirmed both in France and, as indicated earlier, in other cultures. Second, the character in the vignette was always an older woman. Future studies show explore whether the current findings can be replicated using other characters such as an older man or a younger patient. Third, the list of reasons that inspired the scenarios was borrowed from a study (Abdel-Khalek 2002) that was conducted on a sample of Kuwaiti participants whereas the present study was conducted in France. Future studies should ensure that reasons for fear of death that would be specific to French people or westerners in general, have not been missed. Finally, information regarding participants' specific occupation was not assessed; hence, some participants in the present study might have been exposed to this type of scenarios in their profession.

Ethical approval: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent: Informed consent was obtained from all individual participants included in the study.

Conflict of interest: On behalf of all authors, the corresponding author states that there is no conflict of interest.

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Table 1. *Demographic Characteristics of the Sample and of Each Cluster*

	Cluster				
	Not Much Fear	Depends on Circumstances	Fear Always Present	Undeterm.	Total
Gender: Chi² (3) = 13.55, p < .01					
Male	10 (13)	52 (64)	5 (6)[a]	14 (17)[a]	81
Female	9 (7)	81 (62)	30 (23)[a]	11 (8)[a]	131
Age: Chi² (9) = 25.66, p < .01					
18-25 Years	3 (6)[a]	29 (55)	18 (34)[abc]	3 (5)	53
26-40 Years	2 (4)[b]	39 (72)	7 (13)[a]	6 (11)	54
41-55 Years	4 (8)	34 (67)	5 (10)[b]	8 (16)	51
55+ Years	10 (19)[ab]	31 (57)	5 (9)[c]	8 (15)	54
Religious Involvement: Chi² (6) = 8.20, p = .22					
Regular Attendees	3 (9)	24 (70)	1 (3)[a]	6 (18)	34
Believers in God	5 (10)	34 (68)	7 (14)	4 (8)	50
Atheists/Agnostics	11 (9)	75 (58)	27 (21)[a]	15 (12)	128
Educational Level Chi² (3) = 5.55, p = .14					
Primary and Secondary	12 (13)	50 (56)	15 (17)	13 (14)	90
Tertiary	7 (6)	83 (68)	20 (16)	12 (10)	122
Professional Status: Chi² (12) = 38.73, p < .01					
Student	3 (5)[a]	34 (56)[a]	21 (34)[ab]	3 (5)	61
Blue Collars	4 (10)	24 (58)[b]	7 (17)	6 (15)	41
White Collars	5 (6)[b]	60 (77)[abc]	3 (4)[b]	10 (13)	78

Unemployed	1 (10)	5 (50)	2 (20)	2 (20)	10
Retired	6 (27)[ab]	10 (45)[c]	2 (9)[a]	4 (18)	22
Total	19 (9)	133 (63)	35 (16)	25 (12)	212

Note : Regular attendees = Regular attendees to the church or to the temple. Undeterm. = Undetermined.

Table 2. *Main Results of the ANOVAs Performed at the Cluster Level. Only significant interactions have been reported.*

Cluster and Factor	*df*	*MS*	*F*	*p*	η^2_p
Cluster Not Much Fear					
Wishes	1	55.51	12.56	.001	.42
Conflicts	1	18.08	11.36	.001	.40
Life	2	8.45	4.03	.03	.19
Social	1	8.76	9.14	.01	.35
Religion	1	4.31	2.82	.11	.14
Cluster Depends on Circumstances					
Wishes	1	3 077.82	159.88	.001	.55
Conflicts	1	3 036.14	304.60	.001	.70
Life	2	1 679.36	193.66	.001	.60
Social	1	1 429.94	142.91	.001	.52
Religion	1	819.02	42.92	.001	.25
Cluster Fear Always Present					
Wishes	1	880.15	63.43	.001	.65
Conflicts	1	380.95	61.60	.001	.64
Life (L)	2	181.63	33.30	.001	.49
Social (S)	1	406.12	71.95	.001	.68
Religion	1	0.00	0.00	1.00	.00
L x S	2	8.02	7.74	.001	.19
Cluster Undetermined					
Wishes	1	175.78	18.79	.001	.45

Conflicts	1	34.72	6.49	.02	.22
Life	2	31.86	4.55	.02	.17
Social	1	58.68	4.18	.05	.15
Religion	1	410.89	9.15	.01	.28

Figure Caption

Figure 1. Patterns of judgments corresponding to three of the four observed clusters. In each panel, anticipated fear of death is on the vertical axis. The four curves correspond to four combinations of circumstances involving two factors: conflict with family members, and respect of last wishes factors. The three levels of life accomplishment are on the horizontal axis.