

RESEARCH ARTICLE

Death Anxiety and Extra-role Performance in Military and Non-military employees: A Predictive Study

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Abstract

Death awareness in the military context has received little research attention despite the high exposure of military employees to death. Drawing on Terror Management Theory (TMT), Meaning Management Theory (MMT), and Conservation of Resources Theory (COR), this study investigated the impact of death anxiety on organizational citizenship behaviors (OCB) and counterproductive work behaviors (CWB) through meaningful work (MW). It also investigated the moderating role of type of profession (military vs. non-military) and death reflection on the relationship between death anxiety, on one hand, and OCB and CWB, on the other hand. Data were collected through self-reports from 177 employees from an Air Force military organization (N = 81) as well as non-military professions (N = 96) using a time-lagged research design. The most obvious finding was the positive relationship between meaningful work and OCB. Our data did not provide empirical support for the other hypotheses developed. The implications of these findings are presented and future research directions are proposed.

Keywords

death anxiety, death reflection, organizational citizenship behaviors, counterproductive work behaviors, meaningful work, military vs. non-military profession

Introduction

Many professions that require help and support (such as those in the medical field –

doctors, nurses, or those who are part of safety and public order – military, law enforcement, and firefighting) are more prone to fatality rates than those in other fields (e.g., teachers,

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programmers, engineers; Jacobsen & Beehr, 2022; Rațiu et al., 2021; Sliter et al., 2014). These employees may come into contact both directly (e.g., military personnel performing their military service in various theaters of operations) and indirectly (e.g., assisting in the death of others) with the signs of mortality, putting their own lives at risk while carrying out their jobs (Maftai & Holman, 2021; Rațiu et al., 2021). Death awareness has two distinct forms: death anxiety and death reflection (Belmi & Pfeffer, 2016; Yuan et al., 2019). Death anxiety refers to an individual's tendency to develop negative emotions as a result of existential worries about mortality (Sliter et al., 2014), while death reflection refers to "*an individual's deliberate cognitive processing of [their] mortality that focuses on the positive aspects of death, which encompasses concrete behavioral intentions to realize such positive aspects*" (Yuan et al., 2019, p. 419).

Although death awareness has an important role for employee outcomes, the literature has paid little attention to its role in the military contexts (e.g., Taubman & Findler, 2006). Moreover, the lack of explicit consensus on the conceptualization of death anxiety and death reflection makes it difficult to understand the mixed results related to employees' desirable behaviors such as helping behavior (as a facet of employee organizational citizenship behavior) and the extent to which these constructs can be investigated simultaneously. To our knowledge, only one study simultaneously examined the two facets of death awareness (i.e., death anxiety and death reflection) and helping behavior (i.e., Jacobsen & Beehr, 2022). Also, the literature does not clearly highlight how the effects of death anxiety leave a mark on employees' dark behaviors such as counterproductive work behaviors (CWB). There is only one study that investigated the extent to which distal defenses evidenced by the Terror Management Theory (Greenberg et al., 1986), such as strong identification with the organization and support from the supervisor, mitigate the detrimental effects of the threat of death on job satisfaction and CWB in healthcare professionals (Rațiu, et al., 2021).

Moreover, the empirical literature has not explored the effects of death anxiety in relation to meaningful work (MW), organizational citizenship behaviors (OCB), and CWB for military professionals compared to employees working in other fields.

Lack of understanding of the consequences of death anxiety on individual-level outcomes, such as MW, OCB, and CWB may hinder the identification of ways to influence these outcomes, both in military and non-military organizations. Last but not least, although there is a constant call for research (Yuan et al., 2019), there is little empirical evidence in the literature regarding the relationship between death reflection and employee behaviors, particularly how and when these relationships occur (Belmi & Pfeffer, 2016). The literature reveals the impact that death reflection has on special occupations such as firefighters (Yuan et al., 2019) however, the relationship between death reflection and OCB, CWB is still limited especially in the military context. Our study aims to fill this gap in the literature by employing a time-lagged design with two data collection moments. Considering the tenets of the Terror Management Theory (TMT; Pyszczynski et al., 1999), the Meaning Management Theory (MMT; Wong, 2013), and the Conservation of Resources Theory (COR; Hobfoll, 1989), our study examined the impact of death anxiety on OCB and CWB through MW. In addition, it investigated the moderating role of profession type (military vs. non-military) and death reflection on the relationship between death anxiety, on one hand, and OCB and CWB, on the other hand.

Our paper seeks to contribute to the literature on death awareness in military and non-military contexts in several ways. Specifically, it adds knowledge to the few empirical attempts to study the facets of death awareness in the military context (e.g., Taubman & Findler, 2006), in particular, in military aviation, and its impact on employee attitudes and behaviors. Also, the study seeks to understand the implications of the two facets of death awareness – death anxiety and death reflection, on employees' MW OCB, and CWB. Our study used a time-lagged design, which can provide strong clues

regarding the directionality of the relationships investigated in the present study (Edmonds & Kennedy, 2016).

From a practical perspective, the present study could provide information for both leaders and their followers regarding the role that death anxiety and death reflection have on employees' MW and other job-related behaviors.

Theoretical framework

Death anxiety and meaningful work

TMT asserts that thoughts about death cause intense anxiety (Solomon et al., 1991). Death anxiety is the outcome of emotional processing related to one's own mortality (Pyszczynski et al., 1999). The experience of death anxiety leads to aversive emotions such as fear and panic, which impacts employees' mental health, with an increased risk of poor work performance (Yuan et al., 2019).

In addition, there is a growing body of literature that recognizes the importance of questioning the meaning and purpose of work (e.g., Steger et al., 2012; Zhang et al., 2019). MW is the subjective perception that one's work is significant, contributes to the greater good, and encourages personal growth (Steger et al., 2012). Three dimensions of meaningful work are distinguished including positive meaning, greater good motivation, and meaning making (Steger et al., 2012). Positive meaning refers to the employees' subjective perception that their work has personal significance. Greater good motivation depicts how employees perceive that they can have a positive impact on others through the work they do. Meaning making refers to the perceived role of work in supporting personal growth and self-actualization.

MW has not been integrated into the TMT literature, but its role can be informed by similar constructs such as meaning in life (Zhang et al., 2019). Recent research reported a positive relationship between death anxiety and experienced meaning through search for meaning singly (Chang et al., 2021). Instead, other studies identified a negative relationship between death anxiety and variables related to the evaluation of meaning and significance.

For instance, Routledge and Juhl (2010) found that those participants who were confronted with mortality cues and who rated themselves as having less meaning and significance in life were more likely to experience stronger death anxiety. Similarly, Zhang et al. (2019) showed that the attributes of meaning in life (presence of meaning, search for meaning, and self-esteem) were negatively related to death anxiety. Consistent with TMT referring to the awareness of death and its potential to create debilitating anxiety, we hypothesize that:

Hypothesis 1a: Death anxiety is negatively related to meaningful work.

Death anxiety and OCB

Organizational citizenship behavior reflects one's commitment in extra-role activities and which are beneficial to employees to accomplish the tasks (Podsakoff et al., 2000). OCBs are a form of discretionary behaviors of employees that are not a part of the formal job description but facilitate the achievement of organizational responsibilities (Podsakoff & MacKenzie, 1997). OCB has two dimensions: OCB-O (OCB directed towards the organization such as helping behavior, sportsmanship, organizational loyalty, compliance, and civic virtue) and OCB-I (OCB directed towards the individual such as individual initiative and self-development; Podsakoff et al., 2000). The literature on TMT suggests that employees who face death anxiety are less likely to engage in any form of OCB, because they are strict about the individuals they help (Greenberg et al., 1986). To provide support, these individuals need the organization and other members to share the same worldview. Employees with death anxiety can protect themselves from the existential threat of death by maintaining their own values as well as those of the community they belong to and by manifesting behavior that promotes their worldview or self-esteem (Greenberg et al., 1986; Lambert et al., 2014). These behaviors can take two distinct forms: from destructive behaviors, such as negative evaluation of individuals who oppose their worldview (McGregor et al., 1998), to apparently constructive behaviors that promote their worldviews (Jonas et al., 2002), such OCB. Based on TMT tenets, we argue

that there is a rather negative relationship between death anxiety and OCB. Employees who encounter death anxiety will be less likely to achieve OCB, because they need direct guidance on the ways by which they can be able to sustain and maintain the levels established by their worldview. Thus, we issue the following hypothesis:

Hypothesis 1b: Death anxiety is negatively related to OCB.

Death anxiety and CWB

The relationship between death anxiety and CWB can be framed using the Conservation of Resources Theory (COR; Hobfoll, 1989). CWB describes employees' deliberate actions that are harmful to the organization's interests and important rules, threatening the organization itself and/or its members (Spector & Fox, 2006). According to the COR theory, death anxiety can lead to stress because it undermines or diminishes resources such as "*objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as a means for attainment of these objects, personal characteristics, conditions or energies*" (Hobfoll, 1989, p. 516). Individuals are driven to acquire or preserve these resources. Additionally, individuals may have a limited reservoir of resources. An individual would typically adopt a defensive mode in response to stress and resource loss to protect against further resource loss. Employees who face death anxiety are more likely to have negative thoughts and feelings related to death, which requires an abundance of cognitive and emotional resources to remove or suppress them.

Moreover, although the TMT converges towards the idea that death anxiety induces stress and tension and can lead to engagement in defensive behaviors, empirical studies provide mixed results. For instance, Rațiu et al. (2021), in a sample of 253 health professionals, found no significant association between death anxiety and CWB but a positive relationship was found between the two variables in the sample comprising participants from other occupations. Furthermore, the mortality threat did not mediate the association between death anxiety and CWB.

According to COR theory, when employees experience mortality cues, they are more prone to resource depletion and higher levels of death anxiety. Studies on the exposure of military personnel in the context of war (Vinokur et al., 2011) and forensic doctors' experience of mortality cues and stressors (van der Ploeg et al., 2003) support the idea that traumatic stressors and mortality cues can be related to burnout. In a sample of firefighters and nurses, Sliter et al. (2014) found that employees exhibiting elevated levels of death anxiety were more likely to experience burnout. In essence, being exposed to more salient mortality cues at work, employees are more likely to withdraw from work, as a self-protective strategy driven by anxiety. Taking this into account, we propose the following:

Hypothesis 1c: Death anxiety is positively related to CWB.

Meaningful work and OCB

The literature reveals that employees who perceive their work to be meaningful have desirable attributes for every organization, such as greater involvement in voluntary work and OCB behaviors (Im & Chung, 2018; Safitri & Sulistiyorini, 2022). When employees find their work valuable and enjoyable, they show a stronger sense of identity with their work and perceive it as an extension of themselves, and are more likely to engage in behaviors that are not rewarded by their organization. Indeed, meta-analytical findings showed a small to moderate positive correlation between MW and OCB (Allan et al., 2019). Thus, we expect that:

Hypothesis 2a: Meaningful work is positively related to OCB.

Meaningful work and CWB

Previous research investigating meaningful work reveals that intrinsic motives such as task significance, meaningful work and commitment may discourage employees from involving in unethical workplace practices, cynicism (Cartwright & Holmes, 2006), withdrawal intentions (Steger et al., 2012) and cyberloafing (Usman et al., 2019). In addition, COR (Hobfoll, 1989) and MMT theories

(Wong, 2013) suggest that if employees perceive the value and contribution of their work to others, they remain connected by completing tasks showing increasing high levels of energy and effort, avoiding engagement in behaviors that would rather harm the organization and its members. Thus, we expect that:

Hypothesis 2b: Meaningful work is negatively related to CWB.

The mediator role of meaningful work between death anxiety and OCB and CWB

When employees encounter signs of mortality at work, death anxiety increases and they will tend to respond with efforts to reinforce the sense that their work is meaningful and contributes to a purpose (Pyszczynski et al., 2003) while also diminishing their involvement in OCB. By contrast, TMT theory has largely focused also on the negative emotional responses that individuals experience when facing death anxiety. However, individuals can restructure their world when they meet signs of mortality or think of death (Tedeschi & Calhoun, 2004). A shared world refers to a general set of beliefs and premises about the world that guide behavior, help interpret information as well as events, and assign them purpose and meaning (Janoff-Bulman, 1992; Tedeschi & Calhoun, 2004). As such, we predict that:

Hypothesis 3a: Meaningful work mediates the relationship between death anxiety and OCB.

Employees who display high levels of meaningful work are discouraged from engaging in dysfunctional behaviors (Allan et al. 2019), such as absenteeism, tardiness and intentions to leave the organization, and other CWBs. In addition, employees who perceive that their work contributes to a higher purpose are more content and dedicated to their work (Geldenhuys et al., 2014), are more engaged in meeting organizational objectives and demonstrate prosocial behaviors (Khari & Sinha, 2017) at the expense of destructive and unethical workplace practices and behaviors (Demirtas et al., 2017). According to the predictions of the TMT (Pyszczynski et al.,

1999) and MMT (Wong, 2013), we consider that employees' perception of meaningful work will foster a shared worldview and ultimately reduce the impact of death anxiety on engagement in CWB. Thus, we predict that:

Hypothesis 3b: Meaningful work mediates the relationship between death anxiety and CWB.

OCB might be differently understood in the context of professions. Compared to other occupational groups in civilian settings, OCB in military organizations is particularly valuable for accomplishment of challenging missions. It is expected for military personnel to comply with the cultural norms of selfless service and duty (Woodruff, 2022). Moreover, some OCB which are discretionary in the civilian context can be compulsory in military organizations (Rose et al., 2017). Given the lack of empirical studies on the relationship between death anxiety and OCB, we further advance the following hypothesis:

Hypothesis 4a: The type of profession (military vs. non-military) moderates the relationship between death anxiety and OCB, in the sense that this relationship becomes weaker in the case of military profession.

Military personnel are a unique occupational segment (Demerouti et al., 2019) that performs complex missions that require physical and mental effort, overtime hours, and often work in shifts, compared to a regular job. We expect that these employees can lose their personal resources and can no longer cope with professional requirements in an efficient way. Unlike other contexts, in the military context, the exposure to trauma and death is high (e.g., the death of co-workers; Byron & Peterson, 2002; Grant & Wade-Benzoni, 2009) leading employees in military occupations to be more prone than other jobs to death anxiety, emotional exhaustion, and absenteeism. Similarly, Jermier et al. (1989) found that physical threats in police work linked objective hazards to death anxiety, which was related to greater burnout and disinterest in the organization. The literature shows that those employees who perceive high levels of workplace danger are more likely to report strong intentions to resign, leave the organization, or be absent (Zaccaro & Stone,

1988). Consequently, when faced with death anxiety employees will be more likely to engage in behaviors such as behavioral disengagement through facets of absenteeism, tardiness, or even leaving the organization (Harrison et al., 2006). Moreover, on the other side, military personnel report significantly lower engagement in CWB, showing that other factors, perhaps related to adherence to different professional ethics, military regulations, explain non-involvement in CWB. Thus, we predict that:

Hypothesis 4b: The type of profession (military vs. non-military) moderates the relationship between death anxiety and CWB, in the sense that this relationship becomes weaker in the case of military professions.

Moderation role of death reflection between death anxiety and OCB and CWB

The literature to date investigating the relationship between death anxiety and OCB (Jacobsen & Beehr, 2022) describes that employees who are anxious about death prioritize helping others. This prioritization may act as a buffer against the negative emotions generated by death anxiety. According to Meaning Management Theory (MMT; Wong, 2013), individuals seek meaning and make meaning following two essential conditions: to live and discover means and goals to life (Wong, 2013). According to MMT, finding meaning in life is the most appropriate approach to reducing death anxiety. Furthermore, in order to set a defense mechanism against death anxiety, it is quite preferable to focus mainly on positive growth, because it is important for individuals to have a meaningful and significant life. Moreover, if individuals consider that their way of life is meaningful and play an active role in the community in which they live, then they may not feel the threat of inevitable mortality (Routledge et al., 2010). In general, TMT states that employees facing death anxiety can protect themselves from the threat of death by highlighting their own beliefs and the group they belong to, engaging in prosocial behavior such as OCB. In employees whose work regularly involves confronting

mortality cues, high death reflection may be associated with a stronger motivation to help other people (e.g., community members, co-workers, patients; Yuan et al., 2019), prosocial behaviors such as OCB and willingness to volunteer and mentor (Grant & Wade-Benzoni, 2009). Also, these employees tend to show more sustained effort and persistence in tasks that favor other people (Grant, 2007).

From the COR theory (Hobfoll, 1989), employees who reflect on death tend to realize that time is limited and therefore pay more attention to how they allocate their resources. Previous literature reveals that death reflection encourages employees to decide on tasks, goals, and activities based on their own values (Lykins et al., 2007). Using a sample of 387 employees in China, Wei et al., (2021) found that death reflection triggered by the Covid-19 pandemic is positively related to role performance and OCB. It seems that employees in high death reflection redesign their jobs and take the initiative to provide more help or guidance, resulting in higher levels of OCB (Wei et al., 2021). Moreover, the positive impact of death reflection on OCB is revealed by the contingency model of death awareness (Grant & Wade-Benzoni, 2009), which states that employees who are high in death reflection are given a sense of meaning and identity when helping others (Grant & Wade-Benzoni, 2009). Thus, these employees will invest more time, effort and resources and will be more involved in OCB.

Together, TMT and MMT predict that reflecting about death in a rational and conscious manner usually leads individuals to distance themselves from their own person and to help others, leaving behind a desirable long-term outcome (i.e., individuals become more productive, prosocial, and engaging in helping behaviors, such as OCB). We hypothesize that:

Hypothesis 5a: Death reflection moderates the relationship between death anxiety and OCB, in the sense that this relationship becomes weaker with increased death reflection.

When it comes to their work, employees are more likely to adopt behaviors that are in accordance with the rules, regulations, and

procedures of the organization; therefore, they are less likely to engage in behaviors that inhibit performance at work and the achievement of work-related objectives, such as CWB (Zaghini et al., 2016). Therefore, employees who reflect on death will transcend the defensive attitude in front of mortality cues and will rather focus on the prosocial aspects of their work (Yuan et al., 2019), helping others and saving lives, at the expense of engaging in CWB behaviors. According to TMT predictions (Solomon et al., 1991), mortality indices trigger distal defenses, favor commitment to the common worldview, and, later, reduce engagement in CWB (Rațiu et al., 2021). We, therefore, hypothesize that:

Hypothesis 5b: Death reflection moderates the relationship between death anxiety and CWB, in the sense that this relationship becomes weaker with increased death reflection.

Method

Participants and procedure

This study employed a time-lagged survey to reduce the effect of the common method variance (CMV; Podsakoff et al., 2003). Usable data were collected in the two waves (one month gap) from 177 participants. In order to obtain the necessary matches in the responses of the two waves, each respondent generated his/her distinct code according to instructions provided by the researchers.

Our convenience sample included 81 military employees from the Romanian Air Force, and 96 participants derived from non-military professions (e.g., education, IT). The age of participants from the military sample ranged from 21 and 51 years ($M = 37.39$; $SD = 7.84$), while the participants' age from non-military professions ranged from 20 and 60 years ($M = 40.15$; $SD = 11.17$). Within the military sample, most of the participants were male (71; 87.70%), while within the non-military sample, most of the participants were female (72; 75.00%).

First, for the military sample we have granted the permission of the military organization to collect the data, in the pencil-and-paper format. Online data collection using Google Forms was employed to obtain data

from non-military sub-sample. Second, informed consent was provided by each of the participants. Participants were informed that the participation was voluntary and data were anonymous and confidential. Data were collected in two moments (T1 and T2) with a lag of one month. At T1 death anxiety, death reflection, and meaningful work were measured, while T2 included measures OCB and CWB. Participation was voluntary and the data were analyzed at the individual level.

Measures

Death anxiety was measured with the six-item scale described in Belmi and Pfeffer (2016). A sample item is “*I am very much afraid to die*”. Answers were recorded on a five-point Likert-type scale ranging from 1 (“*Fully disagree*”) to 5 (“*Fully agree*”) ($\alpha = .96$).

Death reflection was measured with the fifteen-item scale developed by Yuan et al. (2019). Although this instrument has five subscales measuring motivation to help (e.g., “*When I think about death, I feel like I should do more for the world*”), motivation to live (e.g., “*When I think about death, I make plans for my life*”), putting life in perspective (e.g., “*When I think about death, I can let go of the little problems*”), personal legacy (e.g., “*When I think about death, I think about what legacy I will have left behind*”), and connection to others (e.g., “*When I think about death, I want to spend more time with the people I care about*”), in our study we considered the overall mean of the items. Answers were recorded on a five-point Likert-type scale ranging from 1 (“*Fully disagree*”) to 5 (“*Fully agree*”). For this scale, $\alpha = .96$.

Meaningful work was evaluated with ten items from Steger et al. (2012). A sample item is “*I have found a meaningful career*”. Answers were recorded on a seven-point Likert-type scale ranging from 1 (“*Totally disagree*”) to 7 (“*Totally agree*”) ($\alpha = .90$).

Organizational citizenship behaviors were measured with the ten items from Podsakoff and colleagues (1990) (e.g., “*I consume a lot of time complaining about trivial matters*”). The answers were recorded on a seven-point Likert-type scale ranging from 1 (“*Fully disagree*”) to 5 (“*Fully agree*”) ($\alpha = .92$).

CWB was measured with the ten items scale developed by Spector et al. (2006). A sample item is “You stayed home instead of going to work and said you were sick, even though you weren’t”. The answers were recorded on a five-point Likert-type scale ranging from 1 (“Never”) to 5 (“Daily”) ($\alpha = .87$).

Control variables

Respondents' gender (1, “male”, 2, “female”), age and personality traits (e.g., neuroticism and agreeableness) were controlled as these variables are susceptible to influence the perception of death anxiety and death reflection (Jacobsen & Beehr, 2022). For instance, Neimeyer and Moore (1994) found that younger people report higher levels of death anxiety than older people. In addition, women are susceptible to higher levels of death anxiety than men (Belmi & Pfeffer, 2016).

Neuroticism was evaluated using the six-item short form from the neuroticism scale introduced by Soto and John (2017) containing items such as: “I am a person that worries a lot”. The answers were recorded on a five-point Likert-type scale ranging from 1 (“Fully disagree”) to 5 (“Fully agree”).

Agreeableness were evaluated using the ten-item short form of the personality scale introduced by Gosling et al. (2003) containing items such as: “Extraverted, enthusiastic”. The answers were recorded on a seven-point Likert-type scale ranging from 1 (“Disagree strongly”) to 7 (“Agree strongly”). Cronbach alpha for neuroticism was .78, while for agreeableness .65. If these variables are not controlled, they can inflate the results of the study.

Data analysis

To test the hypotheses, two mediation-moderation analyses were conducted with the PROCESS v3.5 macro (in IBM SPSS v24), using a customized model derived from model 5 (Hayes, 2018). The customized model included one predictor (death anxiety), one outcome (OCB, CWB), four control variables (age, gender, neuroticism, and agreeableness), and two moderators (type of profession and death reflection).

Results

The means, standard deviations and correlations are presented in Table 1.

Table 1. Means, standard deviations and correlations (N = 177)

	Mean	SD	1	2	3	4	5	6	7	8	9
1. Death anxiety T1	2.23	.97	1								
2. Death reflection T1	3.50	.74	.28***	1							
3. Meaningful Work T1	5.50	.99	-.07	.13	1						
4. OCB T2	4.60	1.08	-.11	-.06	.25***	1					
5. CWB T2	1.99	1.00	.18*	.18*	-.001	-.32***	1				
6. Age T1	38.89	9.86	.16*	.12	.08	.10	.14	1			
7. Gender T1	-	-	.18*	.16*	.20**	-.11	.24***	.06	1		
8. Neuroticism T1	2.30	.65	.40***	.11	-.16*	-.14	.14	.05	.21**	1	
9. Agreeableness T1	3.73	.55	-.15	-.06	.30***	.13	-.06	.02	.13	-.35***	1
10. Type of profession T1 (0- military vs. 1- non-military)	-	-	.26***	.23**	.23***	-.25***	.44***	.14	.63***	.19*	.04

** . Correlation is significant at the .01 level (2-tailed).

The results of the mediation analyses revealed no significant relationship between death anxiety, on one hand, and meaningful work ($b = -.04, p = .64$), OCB ($b = .09, p = .55$), and CWB ($b = -.09, p = .46$), on the

other hand. Thus, Hypotheses 1a-1c were not empirically supported.

We found that meaningful work was positively associated with OCB ($b = .34, p = .001$), supporting Hypothesis 2a. In

contrast, meaningful work was not significantly negatively associated with CWB ($b = -.12, p = .13$). Thus, Hypothesis 2b was not empirically supported. We found that meaningful work was not a mediator of the relationship between death anxiety, on one hand, and OCB ($-.01, 95\%CI [-.08; .04]$) and CWB ($.00, 95\%CI [-.02; .03]$), on the other hand. Hypotheses 3a and 3b did not receive empirical support.

Contrary to our expectations, the type of profession (military vs. non-military) did not moderate the relationship between death anxiety, on one side, and OCB ($b = -.11, R^2 = .003, p = .54, 95\%CI [-.45; .23]$) and CWB ($b = .16, R^2 = .003, p = .33, 95\%CI [-.16; .46]$), on the other side. Hypotheses 4a and 4b did not receive empirical support. Also, we found that death reflection does not moderate the relationship between death anxiety and OCB ($b = -.09, R^2 = .002, p = .43, 95\%CI [-.32; .14]$), so Hypothesis 5a did not receive empirical support. Similarly, death reflection did not moderate the relationship between death anxiety and CWB ($b = .10, R^2 = .004, p = .36, 95\%CI [-.11; .30]$), and consequently, Hypothesis 5b was not empirically supported.

Discussion

This study aimed to investigate the impact of death anxiety on organizational citizenship behaviors and counterproductive work behaviors through meaningful work. It also investigated the moderating role of type of profession (military vs. non-military) and death reflection on the relationship between death anxiety, on one hand, and OCB and CWB, on the other hand.

Contrary to our hypothesis, data showed that death anxiety was not positively associated with meaningful work. Previous research (Routledge & Juhl, 2010; Zhang et al., 2019) reports a negative relationship between death anxiety and variables related to the evaluation of meaning in life. Moreover, between death anxiety and meaningful work other distal defenses (appropriate interpersonal relationships, affiliation) may emerge to support self-esteem to cope with the salience of death (Pyszczynski et al., 2021).

Hypothesis 1b, according to which death anxiety is negatively related to OCB, has not been empirically supported. Our findings contradict those from the literature that evidence that death anxiety is negatively related to OCB (OCB-I and OCB-O factors; Jacobsen & Beehr, 2022).

Death anxiety was not positively associated with CWB, and this hypothesis H_{1c} was not empirically supported. In the literature, we find similar evidence (Rațiu et al., 2021).

Our data empirically support the positive relationship between meaningful work and OCB (H_{2a}) which is consistent with previous empirical studies (Hulshof et al, 2020; Raub & Blunschi, 2014) that used employee samples from civilian jobs. Hypothesis (H_{2b}) was not empirically supported, as there was no statistically significant correlation between meaningful work and CWB. The results are quite surprising as other studies revealed meaningful work and CWB were in a negative relationship (Usman et al., 2021). We can conclude that, in our sample, employees are adherent to normative prescriptions and workplace regulations which negatively predict engagement in CWB.

In addition, the mediation models in our study were not empirically supported (Table 2). A plausible explanation could be that employees call on other proximal defenses that are likely used to alleviate death anxiety. Employees can strengthen their defense mechanisms by acquiring certain occupations and responsibilities, engaging in OCB to lessen the negative effects of workplace death anxiety and CWB behaviors. To be able to adapt to this reality, employees must seek and give meaning to both their lives and their work (Kahraman & Er kent, 2022; Langs & Giovacchini, 2018). In this study, hypotheses 5a and 5b were not supported by the data (Table 2). There is evidence in the literature that employees who engage in death reflection are more likely to engage in prosocial behaviors such as OCB and have a high availability to volunteer and mentor (Grant & Wade-Benzoni, 2009). Regarding hypothesis 5b, one possible explanation is that CWB behaviors are not tolerated in the workplace, especially in workplaces where individuals' lives are exposed to danger (e.g.,

military, firefighters, doctors, etc.). Employees are likely to feel pressure to go to work on time even when they have encountered signs of work-related fatalities (Sliter et al., 2014), and felt that they lacked

resources (e.g., energy, well-being) because absenteeism or being late would put their colleagues' lives at risk.

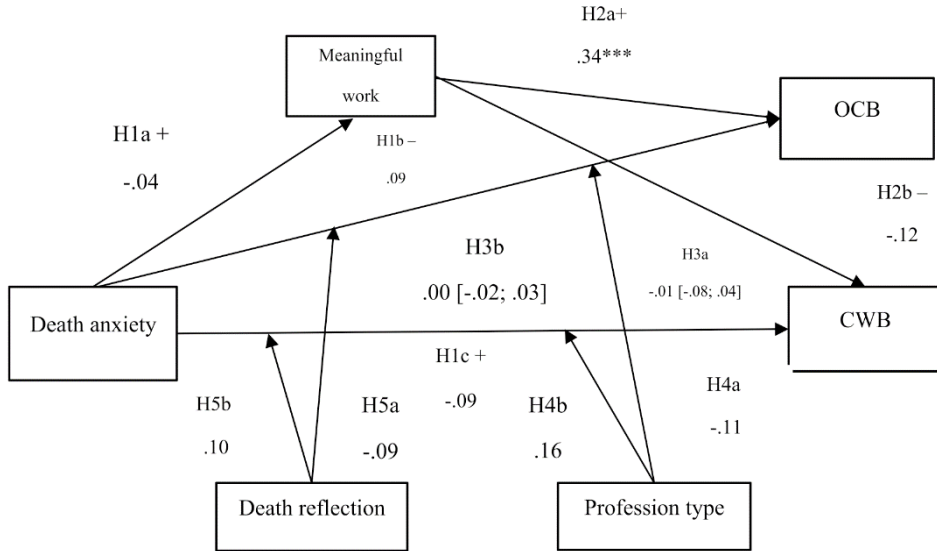


Figure 1. The overall mediation moderated model

Table 2. Hierarchical Regression Results for Testing Mediation and Moderation Effects of Type Profession, Death Reflection on the Death Anxiety, OCB and CWB Relationship

Relationships	Model 1 (Mediation effect)	Model 2 (Moderation effect)	Supported
H3a: Death anxiety → Meaningful Work → Organizational citizenship behaviors	(-.01; 95% CI = [-.08; .04])		No
H3b: Death Anxiety → Meaningful Work → Counterproductive work behaviors	(.00; 95% CI = [-.02; .03])		No
H4a: Death Anxiety × Type Profession → Organizational citizenship behaviors		$b = -.11$; $R^2 = .003$, $p = .54$, $95\%CI [-.45; .23]$, $p > .05$	No
H4b: Death Anxiety × Type Profession → Counterproductive work behaviors		$b = .16$, $R^2 = .003$, $p = .33$, $95\%CI [-.16; .46]$, $p > .05$	No
H5a: Death Anxiety × Death Reflection → Organizational citizenship behaviors		$b = -.09$, $R^2 = .002$, $p = .43$, $95\%CI [-.32; .14]$, $p > .05$	No
H5b: Death Anxiety × Death reflection → Counterproductive work behaviors		$b = .10$, $R^2 = .004$, $p = .36$, $95\%CI [-.11; .30]$, $p > .05$	No

Theoretical and practical implications

Our work is one of the first empirical attempts to compare military professionals with others by investigating the relationship between death anxiety and death reflection, OCB, CWB, and MW. In the attempt to explain the relationships between the variables, we integrated three essential theories, namely TMT (Pyszczynski et al., 1999), MMT (Wong, 2013) and COR (Hobfoll, 1989). To highlight the relationship between death anxiety and MW we used the MMT theory (Wong, 2013) which suggests that the best approach to reduce death anxiety is to rationalize the acceptance of mortality, to seek meaning and to make sense. Furthermore, in the present study the relationship between MW and CWB was not supported. In the literature (Usman et al., 2019), this relationship is negative and is supported by the COR theory. By investigating the relationship between death anxiety and death reflection in two different occupational contexts (military and non-military), we broaden the scope of domains in which employees may identify with these two workplace experiences.

We answer existing calls for research for the simultaneous investigation of death anxiety and death reflection (Jacobsen & Beehr, 2022) in different occupational settings.

Based on these findings, interventions can be designed and implemented within organizations to target increased perceptions of meaningful work which will subsequently translate into more OCB behaviors. In these interventions leaders can be encouraged to provide sufficient contextual resources (such as social and instrumental support) in the performance of work activities, in order to diminish the feelings of inequity of "non-essential" employees compared to their peers "essential" (Ouwkerk & Bartels, 2022). Our findings revealed that the type of profession (military vs. non-military) did not moderate the relationship between death anxiety, on one hand, and OCB and CWB, on the other hand. This suggests that interventions aimed at promoting meaningful work can be implemented similarly in different

occupational settings (e.g., mountain rescuers, and electrician maintenance).

Limitations and future research directions

Our study has several limitations. Although we used a predictive design with two waves, having one month apart between them prevents us from drawing strong conclusions about cause-effect relationships. Future studies could use research designs that could provide stronger information about causal relationships, such as (quasi-) experimental designs. In this regard, vignettes could be used to better particularize death anxiety and death reflection given their different outcomes in terms of attitude, motivation, and work behavior (Grant & Wade-Benzoni, 2009).

Except for the type of profession, all variables included in our study were measured using self-reports. In our study, the agreeableness scale had a Cronbach alpha below the accepted level of .70, namely .65, which could influence the relationship between the variables. Future research could use a more precise assessment of death anxiety and death reflection by asking participants to report or detail events in which they encountered mortality cues from their workplace (e.g., after an airplane incident among aircrew).

Our study used both pencil-and-paper data collection methods for the military sample, as well as online methods such as Google Forms for the non-military sample. This could introduce methodological variations. Future studies should consider using the same procedure to collect data from different occupations.

Another limitation might be the composition of the sample. We used employees derived from a single military unit and only a few non-military occupations (e.g., IT programmers, educators, teachers). Future research could replicate our findings using larger groups, different military units' occupations to increase the generalizability of the findings. Additionally, we focused on a specific work context characterized by a number of job requirements that make employees more prone to mortality rates

(military sample). However, this does not mean that other work environments are free from mortality cues. Future research could investigate death anxiety and death reflection in groups of employees in other settings such as mountain rescuers, electrician maintenance and repair or construction workers to reinforce the conclusions drawn from this study and to further generalize the results. One reason for the lack of significant results may be the fact that the two time points with a one-month interval between them were too short to fully capture significant relationships. Furthermore, Podsakoff et al., (2003) point out that a short lag, such as ours of one month, may not help avoid common method bias, since respondents may remember their previous answers and relate to current responses which may contaminate the outcomes. As such, we encourage future studies to extend the time interval between the measurements.

Engaging in OCB behaviors may be one of the ways through which employees can gain the self-esteem needed to cope with salience of death (e.g., Jonas et al., 2011), as well as important interpersonal resources that can act as a buffer against death threats (Pyszczynski et al., 2021). Thus, we propose as a future research direction to investigate the role of mechanisms such as self-esteem and other personal resources in explaining the indirect relationship between OCB and death anxiety. Future studies may also investigate whether commitment to and trust in shared beliefs about life, death, and death in employee social groups could explain the indirect relationship between death anxiety and OCB.

Further studies are needed to establish the potential influence of death reflection and death anxiety on meaningful work. Researchers could consider potential mechanisms which could explain the relationship between death reflection, respectively death anxiety on meaningful work such as the initiation of feelings of regret, thoughts about the meaninglessness of death (Tomer & Eliason, 1996; Bergman et al., 2018) as well as optimism. All suggested mechanisms could serve as protective functions against death anxiety.

Conclusions

This paper adopted several theoretical lenses to investigate the impact of death anxiety on employees' meaningful work and behaviors as conditioned by death reflection and the occupational context (military vs. non-military context). We identified a significant positive relationship between meaningful work and OCB. Contrary to our expectations, meaningful work is not a key mediator in the relationship between death anxiety, OCB and CWB. Also, type of profession (military vs. non-military) and death reflection were not moderators of the relationship between death anxiety, OCB and CWB. These findings are of interest to both organizations and employees to know to what extent to promote the perception of meaningful work in order to increase engagement in OCB behaviors.

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