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Abstract

Abstract Death psychology refers to the complex psychological state encompassing cognition, emotion, and behavioral intention that arises when humans confront death and related events. Currently, Terror Management Theory (TMT) stands as the most comprehensive and scientific framework for investigating death psychology. However, this theory is subject to several controversies: (1) Regarding fundamental cognition of death, TMT yields inconsistent research findings, such as whether death is independent of uncertainty, whether death elicits fear responses, and whether individual survival constitutes a core concern for humanity; (2) At the sociocultural level, the cultural background of TMT's originators demonstrates a prevailing attitude of death denial, whereas cross-cultural research indicates that other cultural contexts exhibit attitudes of acceptance or defiance toward death; (3) The research findings of TMT display considerable contradictions, suggesting that important moderating factors remain unaddressed. Based on these considerations, potential research directions in death psychology are proposed to be systematically reviewed across three dimensions: cognitive, behavioral, and social. Future research on death psychology should uphold the principle of integrating scientific rigor with cultural sensitivity, and by examining both the content and processes of death psychology, focus on the psychological patterns of groups confronting death, while developing intervention research on physical and mental health outcomes influenced by death psychology.

Full Text

Controversies in Terror Management Theory and Their Implications for Research on the Psychology of Death

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Abstract

The psychology of death represents a complex psychological state encompassing cognition, emotion, and behavioral intentions when humans confront death and death-related events. Currently, the most comprehensive and scientific framework for studying death psychology is Terror Management Theory (TMT). However, TMT faces several controversies: (1) Regarding fundamental cognitive aspects of death, the theory presents inconsistent findings on whether death is independent of uncertainty, whether death necessarily elicits fear, and whether individual survival constitutes a core human concern; (2) At the sociocultural level, the cultural background of TMT's originators reflected a general attitude of death denial, yet cross-cultural research demonstrates that other cultural contexts approach death with attitudes of acceptance or even contempt; (3) TMT research results exhibit numerous contradictions, suggesting that important moderating factors remain unaddressed. Based on these controversies, potential research directions in death psychology can be organized across cognitive, behavioral, and social dimensions. Future research should uphold the principle of valuing both scientific rigor and cultural context, integrate content and process in death psychology, examine psychological patterns among groups facing death, and develop intervention studies on physical and mental health under the influence of death psychology.

Keywords: death psychology, Terror Management Theory, indigenous psychology, cultural background, content-process

Introduction

With the medicalization of death and the continuous emergence of new life-extending technologies, the dying have become a new social category (Tradii & Robert, 2019). China has one of the world's largest cancer populations and is the only country with over 100 million elderly citizens. Confronted with this vast population of dying individuals, how to live physically and mentally healthy lives during the process of approaching death has become a new topic for psychological research. The most comprehensive and scientific theoretical framework for studying death psychology in academia is Terror Management Theory (TMT). TMT was proposed by Greenberg, J. and colleagues based on Becker, E.'s works, particularly *The Birth and Meaning of Death* (1962), *The*

Denial of Death (1973), and *Escape from Evil* (1975) (Greenberg et al., 1986; Greenberg et al., 1997; Solomon et al., 1991). After more than three decades of development, TMT has become a classic paradigm in death psychology research, facilitating integration across seemingly unrelated domains such as end-of-life care, intimate relationships, self-esteem, and creativity. However, as research has deepened, controversies surrounding the theory have gradually increased, focusing primarily on three aspects: (1) fundamental cognitive understanding of death; (2) the theory's cultural dilemmas; and (3) contradictory research findings. How should systematic death psychology research proceed in the future? How can indigenous death issues be integrated with modern psychological research? No existing literature has comprehensively addressed these questions. This paper attempts to depart from TMT and its controversies to identify potential research pathways in death psychology from cognitive, behavioral, and social perspectives, concluding with future research prospects to provide useful references for death psychology studies.

2. Introduction to Terror Management Theory

Terror Management Theory posits that humans possess an awareness of mortality, termed death awareness, while simultaneously harboring instincts to ensure individual survival. The conflict between these two drives produces death anxiety and reduced well-being (Juhl & Routledge, 2016). According to TMT, the continuous defense against death anxiety motivates numerous human behaviors, such as building temples, writing books, establishing families, and accumulating wealth (Becker, 1973). Early TMT proposed two death anxiety buffer mechanisms: worldview defense and self-esteem striving. A worldview is a shared psychological structure that imbues life with meaning, order, and permanence (Greenberg, Schimel, et al., 2001). Through identification with and commitment to a worldview, individuals gain positive self-esteem, achieve transcendence of the self, and obtain symbolic "immortality" and peace. Later scholars proposed that investment in close relationships could also alleviate death anxiety (Mikulincer et al., 2003). TMT designates experimental manipulations that trigger death awareness as mortality salience (MS). The resulting worldview defense, self-esteem striving, or close relationship investment are collectively termed mortality salience effects.

In the mid-1990s, TMT researchers combined psychodynamics with cognitive science to propose the Cognitive Dual-process Model (Greenberg et al., 1994; Pyszczynski et al., 1999). This model explores TMT's cognitive processes at the micro level, proposing that people employ two mechanisms to defend against death awareness: proximal defenses and distal defenses, with proximal defenses operating at the conscious level and distal defenses at the unconscious level (Greenberg, Arndt, et al., 2001; Hayes et al., 2010; Kosloff et al., 2019; Pyszczynski et al., 1999).

2.1 Proximal Defenses

Certain experiences can trigger death awareness, including: (1) daily life events (medical visits, news reports of violent conflicts, abortion, death-related multimedia materials, etc.); (2) contemplating and answering open-ended questions about one's own death (Rosenblatt et al., 1989); and (3) completing death-related questionnaires. Following mortality salience, individuals consciously expend cognitive resources to eliminate the vulnerability and fear produced by death awareness, primarily employing strategies such as denial, rationalization, and distraction. This process is called proximal defense, whose function is to push death thoughts out of conscious awareness.

2.2 Death Thought Accessibility (DTA)

In laboratory studies, researchers typically have participants complete one or more distraction tasks after mortality salience, with the purpose of making death thoughts more stably disappear from consciousness. Common distraction tasks include completing the Positive and Negative Affect Schedule (PANAS, Watson, Clark, & Tellegen, 1988) or its extended version (PANAS-X, Watson & Clark, 1992), as well as completing unrelated questionnaires, anagram tasks, or other emotion scales (Burke, Martens, & Faucher, 2010). After distraction tasks, death-related thoughts, though pushed out of conscious awareness, become more easily retrieved by consciousness again—that is, Death Thought Accessibility (DTA) increases.

In addition to distraction tasks, researchers have found that three other types of tasks also increase DTA: (1) high cognitive load tasks after mortality salience (such as remembering an 11-digit number) (Arndt et al., 1997); (2) subliminal priming with death-related concepts (such as rapidly presenting death-related words on screen); and (3) threats to death anxiety buffer mechanisms. Changes in DTA can be measured through word stem completion tasks, lexical decision tasks, and ambiguous figure interpretation (Arndt et al., 1997; Gailliot et al., 2006).

2.3 Distal Defenses

Increased DTA activates distal defenses, unconsciously triggering three anxiety buffer mechanisms that motivate people to engage in defensive behaviors that appear unrelated to death on the surface, such as maintaining worldviews, enhancing self-esteem, or promoting intimate relationships (Jonas et al., 2013; Pyszczynski et al., 1999; Schae & Willis, 2010). Recent research has found that the three anxiety buffer mechanisms have a hierarchical priority: when DTA increases and buffer mechanisms conflict, people prioritize close relationships, then worldview defense, and finally self-esteem seeking (Lu, 2019). The function of distal defense is to reduce death thoughts below baseline levels, thereby quelling them.

After decades of development, TMT has received support from hundreds of

empirical studies (Ben-Ari et al., 1999; Burke et al., 2010; Hayes et al., 2010; Routledge & Vess, 2018; See & Petty, 2006). However, alongside its rapid development, TMT has also generated some controversies.

3. Controversies in Terror Management Theory

3.1.1 Is Death Unrelated to Uncertainty?

TMT assumes that death is unrelated to uncertainty because death is one of the few certain events in the world (Landau et al., 2010; Pyszczynski et al., 2015). However, Yavuz and van den Bos (2009) found that 28% of participants experienced uncertainty under mortality salience. Compared to self-determined death (imagining controlling one's death through suicide), mortality salience increased individuals' need for control (Fritsche et al., 2008). These studies indicate that mortality salience triggers uncertainty. In fact, apart from the certainty of death itself, the dying process contains numerous unknown factors, such as when, where, and how one will die, and what happens after death.

Uncertainty-identity theory challenges TMT regarding the cause of defensive mechanisms (Yang et al., 2020). This theory posits that uncertainty produces paralysis and painful experiences, activating avoidance motivation that drives individuals to seek strategies to reduce uncertainty, such as group identification strategies (Hogg, 2007, 2010). Here, group identification functions not to buffer death anxiety but to reduce uncertainty, with mortality salience merely being one form of triggering uncertainty. The need for certainty explains the initiation of distal defenses following mortality salience (Hogg, 2010). Uncertainty also increases outgroup rejection. A study of Turkish university students found that, compared to the mortality salience group, the uncertainty salience group gave stronger criticism to documents that denied their country's customs and legal systems (Yavuz & van den Bos, 2009). Thus, the anxiety buffer mechanisms proposed by TMT may ultimately aim to alleviate uncertainty rather than death anxiety.

3.1.2 Does Death Necessarily Cause Fear?

TMT proponents argue that thinking about death produces implicit and explicit fear. It is certain that death more readily generates negative emotions such as anxiety, fear, and disgust compared to other matters, with related fMRI research supporting this view (Lu, 2017; Quirin et al., 2011; Seligman & Hager, 1972). However, a recent physiological arousal study of 115 participants found that both mortality salience and control groups (describing toothache) produced physiological arousal, with Bayesian factor analysis of nine physiological indicators including heart rate (HR), mean arterial pressure (MAP), and respiration rate (RR) showing no significant differences between groups (Klackl & Jonas, 2019). Some studies have even found that emotions triggered after mortality salience were more positive than non-death reminders (DeWall & Baumeister, 2007), and that awareness of death can promote inner growth (Wei et al., 2015).

Early TMT research used the PANAS scale, typically completed immediately after mortality salience (Watson et al., 1988). Later, to clarify emotional states following mortality salience more precisely, researchers integrated emotional measurement with self-reports, implicit measures, misattribution paradigms, and emotion regulation strategies, either directly or indirectly, but results still did not show stable and significant emotions (Lambert et al., 2014; Webber et al., 2015). Emotion is a crucial component of the death psychology process, but given the contradictory results in current research, the emotions triggered by death appear unpredictable, requiring researchers to develop more targeted measurement procedures.

3.1.3 Is Seeking Individual Survival the Core Issue?

From an evolutionary perspective, TMT proposes that seeking individual survival is humanity's primary task, and the belief in death's inevitability may produce crippling anxiety that makes sustained goal-directed behavior impossible, thus necessitating a defense system against mortality to ensure biological survival (Greenberg et al., 1997; Pyszczynski et al., 2003). However, modern evolutionary theory's inclusive fitness theory suggests that the primary purpose of biological evolution is not individual survival or avoiding individual death, but the differential reproduction of genetic information (Bonin et al., 2019; Hamilton, 1964). Evolutionary success is measured not only by the number of offspring an individual produces (regardless of who raises or supports them) but also by the number of offspring an individual raises, rescues, or supports through other means (regardless of who bears them). Natural selection does not merely aim to make organisms feel better, happier, or safer; natural selection is blind to internal states or feelings unless these states lead to adaptive or maladaptive consequences (Kirkpatrick & Navarrete, 2006). Although death is unpleasant, it is essentially a neutral phenomenon—neither adaptive nor maladaptive. Organisms may even actively engage in life-threatening behaviors to increase offspring survival chances (Hamilton, 1964; Navarrete & Fessler, 2005), such as salmon risking death to spawn upstream or parents risking their lives to rescue children from fire. Tradii and Robert (2019) argue that we must distinguish between individual and societal collective attitudes toward death because society “does not deny death but organizes around it.” Research on reciprocal altruism and kin selection also indicates (Smith, 1964; Trivers, 1971) that individuals may sacrifice their lives for altruistic behavior even with distant or no genetic kinship, as seen in helping behaviors during earthquakes, tsunamis, and plagues. Thus, the goals of many human adaptive behaviors are established beyond individual survival, and seeking individual survival is not humanity's core issue.

3.2.1 Cultural Background of the Theory's Proponents

The belief system underlying TMT originates from the North American Christian worldview of the post-WWI 20th century, belonging to the ideology of Western white middle-class culture, which generally adopts an attitude of death

denial. Freud et al. (1918) first expressed the idea of death denial in *Reflections on War and Death*, arguing that everyone (including modern and primitive people) subconsciously believes in their own immortality. Early Western sociologists and anthropologists also endorsed this view; Gifford (1969) believed that primitive people's denial of death facilitated the birth of religion and philosophy. From the late 1950s, Western rejection of death extended from academia to society at large, making death the "new taboo and obscenity" second only to sex (Gorer, 1955). With the rise of the biomedical model in Western society, the dying increased medical help-seeking behaviors driven by both physical illness and death rejection, gradually dismantling traditional funeral customs and increasing deaths in hospitals. Compared to the early 20th century, typical deaths today result from chronic diseases such as cancer, heart disease, or circulatory problems. Meanwhile, beautification and embalming of corpses, avoiding public discussion of death, isolating the dying in care centers, and bureaucratization of death procedures all symbolically and practically deny death (Mellor & Shilling, 1993; Tradii & Robert, 2019; Trompette & Lemonnier, 2009; West et al., 2017).

However, death pervades family, religion, entertainment, and medical domains, and the popularity of violent films and killing video games seems to prove that people's attitudes toward death are not simply rejection (Wong & Tomer, 2011). Wong et al. (1994) divided individual death attitudes into five dimensions: fear of death, death avoidance, neutral death acceptance, approach-oriented death acceptance, and escape-oriented death acceptance. From a group perspective, Hayslip (2003) argued that death attitudes are socially constructed, with human societies treating death through denial, contempt, or acceptance. TMT constructed within a death-denying cultural background seems unable to define more universal patterns of human attitudes toward death. Researchers must also guard against the flattening of humanity's psychological landscape caused by the singularization of death psychology research (Watters, 2010).

3.2.2 Different Evidence from Cross-Cultural Studies

Culture powerfully molds human beings. Even the "self-evident truth" that death necessarily causes fear manifests differently across cultures. For example, a study of Costa Rican rural residents found that social isolation produced greater ingroup norm identification than mortality salience, while the opposite was true in North American samples because Costa Rican rural residents valued interpersonal connection more and considered social isolation a more terrible challenge (Navarrete et al., 2004). Mortality salience among Irish participants did not produce the defensive reactions hypothesized by TMT because in Irish tradition, familiarity with death and awareness of its naturalness are important; people often joke about death and celebrate it as an important life transition (Dunne et al., 2015). Similar results have been found in studies of Indians and Iranians (Zhang, 2006; Fernandez et al., 2010). Even within death-rejecting cultural backgrounds, subcultural groups' reactions to death differ. A recent study of Chinese youth found that youth from families where death could be freely

discussed had significantly lower death anxiety than those from families that avoided death topics (Meng & Li, 2019). This suggests that different cultures have different value standards for death, which may explain the disordered state of emotional measurement. The different evidence from TMT cross-cultural studies reminds researchers to increase theoretical reflexivity and consider more possibilities in death psychology research (Visser, 2017).

3.3 Controversies in Research Results

Some researchers argue that TMT itself is unfalsifiable, with numerous uncertain or even contradictory conclusions filling the literature (Martin & Van den Bos, 2014). TMT holds that mortality salience increases the probability of behaviors that maintain one's worldview and reject outgroups (Kosloff et al., 2019; Rosenblatt et al., 1989). In an early TMT study, participants were divided into mortality salience and TV program writing groups, with both asked to engage in a worldview-violating behavior—American participants were asked to clean up oil spills with the American flag. The hypothesis predicted that mortality salience participants would be less likely to use the flag because doing so would desecrate a symbol of their worldview. Results showed that although the mortality salience group reported more anxiety, both groups used the flag to clean the oil spill (Greenberg et al., 1995). This may be due to social desirability effects influencing worldview defense behavior, but the results did not support TMT's hypothesis. In another study, researchers attempted to prove that mortality salience increases desire for offspring because children serve both close relationship defense and symbolic immortality functions. Results showed that mortality salience increased Dutch men's desire for children but not Dutch women's (Wisman & Goldenberg, 2005). Fritsche et al. (2007), however, found that mortality salience increased Germans' desire for children with no significant gender differences. A meta-analysis of TMT found significant variation in effect sizes across studies, indicating that important moderating factors have not been addressed, such as time intervals between mortality salience and outcome measurement, types of mortality salience control conditions, participant types, research team cultural backgrounds, behavioral factors, etc. (Burke et al., 2013; Burke et al., 2010; Yen & Cheng, 2013). Future research requires more rigorous verification to enhance theoretical persuasiveness.

4. Implications and Extensions for Death Psychology Research

Based on the controversies in TMT, researchers have expanded death psychology research primarily from cognitive, behavioral, and social perspectives, proposing a series of models and hypotheses.

4.1.1 Uncertainty

When facing death, people often experience anxiety and uncertainty, prompting them to obtain accurate information or enhance self-efficacy to reduce this state (Fitri et al., 2020; Lowe & Harris, 2019). Kruglanski et al. (2011) divided uncertainty into self-uncertainty and environmental uncertainty. Previous research has focused primarily on self-uncertainty. Studies have found that death-induced self-uncertainty triggers participants to imitate others and increases ingroup identification (Troian et al., 2020). Uncertainty salience is often compared with mortality salience, but their relationship has remained unresolved for years. Scholars generally agree that certain mediating factors between uncertainty salience and mortality salience need clarification, such as trait self-uncertainty and need for cognitive closure (Rubin, 2018; Yang et al., 2020). Future research on uncertainty and death should emphasize several factors. First, how does uncertainty differ between real-world death and laboratory mortality salience? Future research could focus on the relationship between environmental uncertainty and death. Second, uncertainty brought by death may still relate to unclarified variables, such as self-esteem levels. Subsequent research should verify current findings in relation to other potential variables. Finally, cultural influences are also factors researchers must consider. For example, individuals in collectivist cultures have high needs for accurate information and social identity, which may interfere with research on death and uncertainty. Future cross-cultural studies should address this.

4.1.2 Meaning in Life

Another important variable related to death is meaning in life. Researchers have found that individuals with weaker meaning in life experience death anxiety, while those with greater meaning in life better accept death (Routledge & Juhl, 2010). A study of older adults found that meaning in life significantly negatively predicted fear of death (Zhang et al., 2019). The Meaning-Making Model (MMM) posits that people have a need to construct meaning; death destroys human existence meaning, prompting people to seek meaning in four domains—self-esteem, belonging, certainty, and symbolic immortality—to restore balance (Heine et al., 2006). Wong (2007) proposed Meaning Management Theory (MMT), arguing that the core of overcoming death anxiety and living a happy life lies in the ability to reconstruct meaning (Neimeyer, 2001; Tomer et al., 2008). In summary, life meaning has a strong theoretical connection with death, but the relationship between life meaning and cultural worldviews, as well as the internal connection between death and meaning, remain unclear and represent key areas for subsequent research.

4.1.3 Belonging

Belongingness theory posits that death anxiety stems from death's threat to individuals' sense of belonging (Baumeister & Leary, 1995). Previous research on belonging has primarily examined two angles: alleviating death anxiety and

preventing suicide risk. On one hand, many scholars have linked death anxiety with fear of loneliness, finding that death anxiety mainly stems from separation from significant others rather than uncertainty (Kim & Choi, 2014; Kuru et al., 2018; Li et al., 2018). Enhancing belonging can alleviate death anxiety, such as dying for one's country or returning to one's roots. Derrick et al. (2009) proposed the social surrogacy hypothesis from the perspective of parasocial relationship interaction (PSRI), finding that when participants watched favorite TV programs, loneliness significantly decreased and belonging significantly increased. Clinical practice has also found that when clients immerse themselves in film, painting, or music, death anxiety lessens. On the other hand, increased belonging can alleviate suicidal ideation (Lin, 2019). According to the interpersonal theory of suicide (Joiner et al., 2005), when individuals simultaneously feel burdensome and have unmet belonging needs in interpersonal relationships, suicidal ideation intensifies. O'Keefe et al. (2015) found through research on seven groups including college students, older adults, and military personnel that unmet belonging resulting from social exclusion is a strong predictor of suicidal ideation. Future research could further explore the effects of different forms of belonging satisfaction on death psychology while considering moderating factors such as emotion and interpersonal density.

4.2.1 Embodied Cognition

The embodied cognition perspective holds that understanding or representation of things is not merely a pure and abstract cognitive processing process but is grounded in our sensorimotor states and corresponding perceptual experiences, with the body and movement shaping cognition in concrete environments (Anderson, 2007). Koole et al. (2014) experimentally demonstrated that death anxiety has embodied properties. The study found that death anxiety increased low self-esteem individuals' desire for touch; researchers touching participants' shoulders and participants holding teddy bears both alleviated death anxiety. Therefore, we need to examine previous death psychology research from an embodied cognition perspective. Studies have found that mortality salience leads to reduced physical distance between participants, a result considered validation of TMT's close relationship defense (Wisman & Koole, 2003). However, from an embodied cognition perspective, this result can also be interpreted as mortality salience activating abstract concepts related to "separation" in participants' cognition, thereby causing changes in physical action. In past embodied cognition research, scholars have primarily focused on the interaction between individual bodies and cognitive processes and between these and the physical environment, paying less attention to interaction with sociocultural environments (Wang et al., 2018). Therefore, combining indigenous cultural backgrounds to explore embodied cognition experimental research related to death psychology is an essential step in establishing indigenous death psychology theories and an excellent path for introducing embodied cognition research into cultural systems.

4.2.2 Ritual

Ritual is a universal human phenomenon. Today, increasing numbers of psychologists and cognitive scientists are exploring the potential cognitive and emotional foundations of ritual (Bell, 1997). Death-related rituals serve cultural functions, encompassing emotional comfort, promoting harmonious interpersonal relationships, disseminating group norms, and achieving social control (Ran, 2018). Previous research indicates that death-related rituals, through a series of conventional, rigid, integrated, and repetitive language and behaviors, limit the availability of individual cognitive resources. On one hand, this increases participants' feelings and experiences of collective concepts; on the other hand, it transfers cognitive resources for memory formation to emotion regulation, thereby inhibiting negative emotional expression (Schjoedt et al., 2013). Over the past century, death-related ritual research has focused primarily on macro-level domains such as cultural anthropology and sociology. Indigenous empirical research on death rituals remains scarce, and researchers know little about the impact of death-related rituals on individuals at the micro level. Overall, research on the functions and underlying mechanisms of death-related rituals can follow two paths: first, bottom-up, examining how the physical characteristics and physiological foundations of ritual behavior affect death psychology; second, top-down, examining how the cultural meanings of ritual behavior affect death psychology.

4.3.1 Death Psychology in Cultural Studies

When facing death, different cultures and religions have their own complete systems of meaning and practice. Based on the unity of knowledge and action, these systems enable people to achieve both internal and external dynamic balance when facing death while also serving moral education functions (Ye & Li, 2002). Taking Confucian culture as an example, Chinese people reject and avoid death at the ideological level (Yang, 1980). However, death concepts are closely related to ancestor worship, causing emotional reactions to death to be “awe” rather than simple fear. Moreover, Confucian culture generally approaches death at the collective level; lacking offspring, especially male offspring, leads not only to individual extinction but also to the death of the entire family. Different clans resist death anxiety through continuous descendant inheritance while obtaining symbolic immortality (Gao, 2019). Behaviorally, Confucius said: “If one day you can conquer yourself and return to ritual, the world will return to benevolence.” The so-called “ritual” here shares the same connotation as ritual (He, 2018). Confucian classics *Yili*, *Liji*, and *Zhouli* record strict clan and funeral systems; people believe that strict adherence to ritual procedures can ensure the deceased' s quality of life in another world. Even long after the deceased' s passing, various regions have their own “ancestor worship rituals” to connect blood relatives and inherit ancestral spirits. Confucian “ritual” thus forms a complete death psychology coupling system through interaction between the body' s perceptual-motor system and concepts.

Taoist attitudes toward death can be summarized as adaptation and openness (Liu, 2010). Zhuangzi considered death a natural law that should be accepted and adapted to; death is not disappearance for living beings but merely a change in existence state. This concept blurs the boundary between life and death, bringing emotional experiences of openness where “sorrow and joy do not enter.” Examining the death coping process, Taoism ignores traditional Confucian rituals, expressing a transcendent attitude toward death behaviorally through “singing before corpses,” “singing while beating pots,” and “not burying the dead.”

From traditional customs, Chinese people have the concept of the “seventh day” after death and festivals related to death such as Qingming and “Sending Winter Clothes.” Other countries also have corresponding rituals, such as Mexico’s Day of the Dead and Western countries’ Halloween. The content and process of death psychology across cultures can be abstracted into a series of core dimensions to predict and intervene in practice. For example, research on grief found that framework, sacred symbols, sociability, and uniqueness are key attributes of personal grief rituals (Sas & Coman, 2016). Thus, the mechanisms of cultural influence on death psychology urgently need more empirical research support.

4.3.2 Death Psychology in Contemporary Society

From a cultural foundation perspective, Wang and Li (2019) argue that contemporary Chinese society is influenced by three factors: traditional culture, Western culture, and Chinese Marxist culture. Among these multiple influences, traditional culture and practical experience remain the primary concerns for Chinese people when facing death. In end-of-life medical care, people tend to adopt supernatural explanations for cancer and death, often using self-help and folk remedies, reflecting the conflict between Western medical concepts and Chinese traditional culture (Hsu et al., 2009). In the treatment process, individuals in collectivist cultures are influenced by moral and interpersonal pressures, causing family members to exhibit large amounts of overtreatment in end-of-life medical decisions to avoid being judged as immoral, which in turn exacerbates medical resource waste and doctor-patient conflict risks. After individual death, traditional death rituals are characterized by formalization, redundancy, solidification, and opaque causality (Kapitány & Nielsen, 2015), lacking scientific basis while containing religious superstition, and sacrificial rituals place significant pressure on the ecological environment, failing to meet the specific needs of contemporary society and individuals.

Since the founding of the People’s Republic of China, the Party and state’s movement to transform funeral customs, combined with the impact of Western pragmatism, have made people’s attitudes toward death more diverse. However, the cultural tradition of “thin care, thick burial” has also made funeral policy reform difficult. The question of how to effectively face death during the dying process remains unresolved, leading Chinese people to exhibit characteristics of collective avoidance, explosiveness, and vulnerability in anxiety buffer mecha-

nisms when facing death (Lei, 2017). Our psychological preparation for facing death is somewhat insufficient, making scientific research on the content and coping processes of contemporary Chinese death psychology urgently necessary.

5. Future Prospects

TMT has effectively connected death with numerous seemingly unrelated psychological concepts and stimulated related research. However, death psychology itself is complex, and many questions remain unresolved. Therefore, this paper proposes the following recommendations for future death psychology research:

5.1 Dual Scientific-Cultural Nature of Death Psychology Research

Death psychology is a complex psychological state of cognition, emotion, and behavioral intention produced when humans face death and related events, generated through mutual regulation of internal and external individual factors. However, whether death triggers fear, anxiety, trauma, or contemplation of life's meaning remains undetermined. Therefore, the primary task of death psychology research is to conduct systematic reviews and clarify concepts and research scope. Based on the foregoing review, we believe death psychology research should encompass dual attributes of science and culture. On one hand, future basic research on death psychology can employ more objective measurement indicators such as heart rate, skin conductance, cortisol, and brain imaging technology. Currently, domestic research on the brain mechanisms of death psychology is essentially blank. Therefore, research on death psychology brain mechanisms conducted with older adult and cancer populations will have profound impacts on scientific and clinical fields. Quirin et al. (2019) proposed Existential Neuroscience based on existential philosophy and brain science, dedicated to exploring the brain mechanisms of five existential issues: death, meaning, loneliness, identity, and freedom. However, research in this field is still in its infancy. Whether brain regions for different issues overlap and how brain regions connect remain to be verified and represent future research priorities. Additionally, cellular and genetic level research needs attention because increasing evidence indicates that mitochondria are targets and mediators of stress-related responses. The interaction between mitochondrial, endocrine, and epigenetic pathways constitutes the physiological basis of stress, meaning mitochondrial dysfunction is associated with stress-related mental disorders (Daniels et al., 2020; Trumpff et al., 2019). In-depth exploration of mitochondria may reveal the physiological basis and genetic pathways of death-related stress.

On the other hand, death psychology is inseparable from culture. Researchers should consider using traditional but undervalued methods to supplement laboratory research limitations, such as qualitative research, case studies, and longitudinal investigations. Research objects can expand from people to media news, scripts, poetry, novels, epitaphs, obituaries, and other death narratives, potentially yielding more ecologically valid and theoretically profound results than

quantitative research. Researchers can also increase real-world scenario simulation designs, using virtual reality to allow participants to observe and participate from a first-person perspective to compensate for qualitative research paradigm limitations.

5.2 Content-Process Integration in Death Psychology Research

Contemplation of death and ritualized behaviors have followed human development for over 500,000 years. During this process, different cultural groups have developed their own content and process systems for coping with death. Death psychology research should emphasize the integration of content and process factors.

First, death psychology content is the cognitive construction of death ontology by collectives or individuals, including two aspects: (1) death propositions—cognition, beliefs, and expectations about death obtained from social knowledge systems; and (2) death experiences—phenomenological features of death perceived by subjects in reality, such as near-death experiences, trauma, loss, and grief. People's death psychology content directly determines their emotional states when facing death.

Second, death psychology process research includes procedures and behaviors that collectives or individuals use to cope with death across cultures, which are both functional and symbolic. At the macro level, it involves social policies or rituals for coping with death; at the micro level, it involves individual behavioral schemas related to death.

Death psychology content and process are not binary divisions but organically integrated wholes. Most current research operates independently between the two, with most focusing on death psychology content and less exploring death psychology processes. From a research perspective, focusing on process suggests researchers should explore death psychology formation mechanisms by stages, influencing factors at different stages, and their interactions. Meanwhile, how death psychology content and process transform into each other and their internal mechanisms require more in-depth research.

5.3 Group Psychological Patterns in Facing Death

Since the 19th century, the modern medical system has initially integrated with Chinese society. With continuous medical technological progress and popularization of pathological knowledge, contemporary Chinese attitudes toward terminal diseases such as cancer have shifted from disgust to avoidance, with reduced disgust levels, but people still turn pale at the mention of death (Lou & Liu, 2020). How then has modern society constructed a defense system against death? How do groups face different forms of death such as socially valued death, death from illness, and suicide? How do death narratives evolve? These questions are difficult to study in laboratory settings. However, with the widespread application

of information technology and big data in scientific research, methodological solutions may be found.

Death is an individual event, a social event, and even a political event. Therefore, the death psychology of special groups such as doctors and soldiers also needs attention. In public safety events, soldiers, police, and medical personnel often display courageous and fearless behavior. Conversely, cowardly behavior resulting from fear of death suffers both legal and moral punishment. The conflict between death-induced psycho-physiological reactions and social expectations is also a theme in death psychology research (Rubin et al., 2016), while grief research on relatives such as children, bereaved parents, and pet death also deserves attention.

5.4 Intervention Research on Physical and Mental Health Under Death Psychology Influence

Death's characteristics of somatic functional failure, universality, and irreversibility (Noppe, 1997) can easily cause fear and anxiety in exposed individuals or groups, with severe cases even developing mental disorders such as PTSD, often comorbid with chronic physical diseases. However, the clinical mechanisms of this process remain unclear. At the individual level, death is not a crisis everyone faces constantly due to its prospective nature. However, scholars studying time management have found that after mortality salience, people tend to focus more on the future, showing positive adaptive responses in time management rather than avoidant defenses (Wang et al., 2019). Research on Consideration of Future Consequences (CFC) has found that high CFC individuals, by considering future consequences of behavior more, help cultivate healthier lifestyles such as healthy eating (Gick, 2014), physical exercise (Ouellette et al., 2005), and safe sex (Appleby et al., 2005). In this sense, appropriate understanding of death may itself bring healthy life changes, with similar results found in posttraumatic growth (PTG) research. However, death education, as a meaning system with preventive properties, lacks systematic frameworks in form, content, and evaluation due to the dual influence of cultural traditions and disciplinary evolution, representing a future research focus. Insights may be drawn from psychological intervention strategy research. For example, when death-related scenes are presented through psychodrama, the dual effects of group and surplus-reality reduce individuals' sense of loss and grief (Testoni et al., 2019). This suggests that social support and ritual may be core factors in death psychology intervention, a view also confirmed in numerous anthropological studies.

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