Eötvös Loránd University

Faculty of Education and Psychology Institute of Psychology

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Relationships of Internalizing Symptoms with Different Death Attitudes and Coping Styles in Cross-Cultural Context

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List of Abbreviations

TMT: Terror management theory

BDI-II: The Beck Depression Inventory

STAI: The State-Trait Anxiety Inventory

DAS: The Death Anxiety Scale

DAP-R: The Death Attitude Profile-Revised

DASS-21: The Depression, Anxiety and Stress Scales

IES-R: The Impact of Event Scale-Revised

FD: Fear of Death

DA: Death Avoidance

NA: Neutral Acceptance

AA: Approach Acceptance

EA: Escape Acceptance.

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List of Publications That The Dissertation Is Based

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Abstract

The present dissertation examined relationships of internalizing symptoms with different death attitudes and coping styles among different countries; Hungary, Norway and Turkey. With this aim, three studies have been conducted and they have been published in rigorously peer-reviewed prestigious journals in the field; OMEGA - Journal of Death and Dying and Frontiers in Psychology. The dissertation consists of an introduction to the problem in general and the current state of the field in particular, and that the research part which follows this, will be based upon the three studies.

In study 1, we investigated the relationship between death anxiety and depressive and anxiety symptoms among Norwegian and Turkish female psychology students. For this purpose, 304 participants were recruited, of whom 127 (41.8%) were Norwegian and 177 (58.2%) were Turkish. Participants' ages ranged from 18 to 35 years. The Beck Depression Inventory, the trait anxiety subscale of the State-Trait Anxiety Inventory, and the Death Anxiety Scale were used to examine these relationships. The findings showed that death anxiety was significantly related to depressive and anxiety symptoms in both countries. Furthermore, Turkish participants scored higher on both death anxiety and depressive and anxiety symptoms than their Norwegian counterparts.

In study 2, we examined the association between death attitudes and depressive and anxiety symptoms among Norwegian and Turkish women. 304 participants were recruited (Norwegian=127 [41.8%]; Turkish=177 [58.2%]). The Beck Depression Inventory, the trait anxiety subscale of the State-Trait Anxiety Inventory, and the Death Attitude Profile-Revised were administered. The results showed that Fear of Death was positively correlated with anxiety symptoms among Turkish respondents; Approach Acceptance was negatively correlated with depressive and anxiety symptoms among Norwegian participants; and none of the death attitudes had significant negative associations with depressive and anxiety symptoms among Turkish participants. The analysis showed that Escape Acceptance was the only death attitude positively associated with depressive and anxiety symptoms for both countries.

In study 3, we investigated mental effects of coronavirus disease 2019 (COVID-19) and its relationship with death attitudes and coping styles among Hungarian, Norwegian, and Turkish psychology students. A total of 388 participants from Hungary (N = 122, 31.4%), Norway (N = 96, 24.7%), and Turkey (N = 170, 43.8%) were recruited during the pandemic. The Depression, Anxiety and Stress Scales, the Impact of Event Scale-Revised, the Carver Brief COPE Inventory, and the Death Attitude Profile-Revised were used. The results indicated that Escape Acceptance might be the most maladaptive death attitude during COVID-19, as it was related to poorer mental health among the Hungarian, Norwegian, and Turkish psychology students. Self-blame, behavioral disengagement, self-distraction, and substance use coping styles were also related to poorer mental health, whereas positive-reframing (only among the Hungarian and Turkish participants) and humor (only among the Norwegian participants) were related to better mental health in our sample in the context of COVID-19.

In general, the findings from the three studies implied that death anxiety and other death attitudes and coping styles may differ in their influence on mental health among different countries. These differences were discussed in detail in the general discussion part. Further research is needed to clarify these associations in a cross-cultural frame. Based on the results, we may hypothesize that Escape Acceptance death attitude might be the most maladaptive death attitude and using some dysfunctional coping styles (self-blame, behavioral disengagement, self-distraction, and substance use) may be related to lower mental health, particularly, during COVID-19. Practitioners can pay more attention to clients with these death attitude and coping styles.

Key words:

Death anxiety, Death attitudes, Coping strategies, COVID-19, Cross-cultural comparison, Mental health

1. General Introduction

Death is an ultimate reality for all the living beings, yet human beings are the only living creature that aware of this fact and have to live with this existential anxiety till the end of their lives (Wong, 2009). The cognitive ability to be conscious of death has influence on almost every aspect of our lives such as the meaning we attribute to our lives, psychological well-being and so on (Wong, 2009). As a result of this, death anxiety — that is, anxiety related to mental characterizations of death— is a substantially researched subject.

1.1 Death anxiety and mental health

One of the first theorists that dwelled on the topic of death anxiety was Freud (Furer & Walker, 2008). He argued that people show fear of death as a response to deal with unresolved childhood conflicts rather than fear of death itself, since he was considering that human being is lack of the ability to accept death (Furer & Walker, 2008).

Freud expressed his thoughts on this topic clearly in his paper 'Thoughts for the Times on War and Death' (Furer & Walker, 2008), Freud (1952) stated that "*Our own death is indeed unimaginable, and whenever we make the attempt to imagine it we can perceive that we really survive as spectators. Hence the psycho analytic school could venture on the assertion that at bottom no one believes in his own death, or to put the same thing in another way, in the unconscious every one of us is convinced of his own immortality.*" (p. 761).

Freud claimed that the unconscious is the main source of thought and behavior and according to Freud as our unconscious does not believe in its own death, fear of death does not exist in deeper level. Hence we cannot truly mention about death anxiety as the main source of anxiety (Blass, 2014; Furer & Walker, 2008).

On the other hand, Melanie Klein argued that the main source of the anxiety is fear of death (Spillius et al., 2011). According to this Klein stated that: "*I put forward the hypothesis that anxiety is aroused by the danger which threatens the organism from the death instinct; and I suggested that this is the primary cause of anxiety. . . anxiety has its origin in the fear of death*'' (Blass, 2014).

In a similar manner, more recent researchers considered death anxiety as a fundamental fear underlying the development and maintenance of many psychological disorders (Becker, 1973; Yalom, 1980). In fact, Iverach et al. (2014) argued that death anxiety can be regarded as one of the transdiagnostic structures. Based on a psychological view, a transdiagnostic structure is a symptom or a predisposition that occur in various psychological problems. This symptom or predisposition is considered to play a part in the development and maintenance of these psychological issues (Iverach et al., 2014). The transdiagnostic facet of death anxiety can be seen in several psychological issues. Iverach et al. (2014) stated that transdiagnostic aspect of death anxiety can be noticed in depression, anxiety, stress and PTSD and that death anxiety can be an important factor during the development and severity of the symptoms for these psychological diseases.

There are several studies that exhibited a relationship between death anxiety and poor mental health (Menzies et al., 2019; Menzies et al., 2018). For example, Menzies et al. (2019) conducted a study where they searched the relationship between death anxiety and severity of mental illnesses. According to the results of the research death anxiety was a strong predictor of psychopathology. The study's authors also reported large, positive correlations between death anxiety and the number of lifetime diagnoses, medications, hospitalizations, distress/impairment, depression, anxiety, and stress.

In their research, White and Handal (1991) also found that higher death anxiety was significantly related to higher distress and lower satisfaction with life. Furthermore, Ongider and Eyuboglu (2013) reported significant positive correlation between depression and death anxiety. In their research, they divided patients diagnosed with depressive disorder into three subgroups; high, moderate and low levels of depression. The analyses of the study exhibited that the high and moderate level depression groups had higher death anxiety than the low level depression group.

Moreover, death anxiety is found related to several types of anxiety disorders (Iverach et al., 2014; Menzies & Dar-Nimrod, 2017; Menzies et al., 2018). For example, Lowe and Harris (2019) reported that death anxiety is related to Social Anxiety Disorder (SAD). The authors also stated that death anxiety is related to negative affect, intolerance of uncertainty and lower self-esteem.

In a similar vein, Strachan et al. (2007) conducted three studies to investigate the possible influences of priming participants with death related thoughts on phobic, compulsive behaviors and social anxiety. The result of the study 1 showed that reminders of death triggered affective and avoidant responses. According to the findings, when people who are spider phobic primed with death related thoughts, they had higher levels of fear when they were shown spider pictures. In line with this finding, they were avoiding to looking at the spider pictures more by spending significantly less time voluntarily looking at them than the control group.

In their second study, the researchers searched if reminding people of their own mortality increase compulsive behaviors in people with Obsessive-Compulsive Disorder (OCD) tendencies. The findings of the study showed that when participants primed with death related thoughts, they spend more time washing their hands and using more paper towels to dry their hands (Strachan et al., 2007)..

In the last study, the researchers examined a condition which has no clear connection with death. For this purpose, they investigated if reminding participants their own mortality, increase their level of social anxiety. According to this, the researchers chose people with high (vs. low) levels of social anxiety and subjected them to death reminders or an aversive control topic (i.e., thoughts of dental pain). After this, the researchers observed their avoidance of a staged group interaction. In the study the dependent variable was the amount of time the participants choose to spend to involve in a group discussion. The findings showed that participants with high social interaction anxiety gave themselves less time participating in to the group discussion when they were primed with death related thoughts (vs. dental pain) (Strachan et al., 2007).

Along similar lines, Menzies et al. (2017) reported that higher fear of death was related to higher OCD symptoms. Another study revealed that one of the precipitating factors of Agoraphobia can be fear of death (Foa et al., 1984). Especially, traumatic events about particularly by an actual or expected death of a close person or by the psychological concomitants of disease, the awareness of one's own physical vulnerability can cause fear of death which can trigger the onset of agoraphobic symptoms (Foa et al., 1984).

In line with the findings above, Psarros et al. (2017) argued that how one evaluates his/her possibility of death is an important factor while developing psychopathology. For instance, in

their study, Psarros et al. (2017) reported that higher perceived fear of imminent death during the firefighting operation found to be related to more PTSD among the firefighters, even though they did not have elevated levels of feelings of threat during the firefighting operation and they were equally in danger with the others. Therefore, it might be argued that rather than the objective threat itself, the subjective threat of death/danger can be related to lower mental health.

In fact, Ehlers and Clark (2000) who created a cognitive model for PTSD that follows the principals of classical cognitive theory argued that subjective interpretation of the danger rather than the situation itself is the main contributing factor for developing PTSD. To investigate this association, Pinto et al. (2015) conducted a study in which they searched the relationship of psychopathology and four different characteristics of traumatic events namely; number, recency, frequency, and perceived threat with PTSD symptoms among Portuguese firefighters. The researchers reported that when the perceived threat was included into the model, the significant relationship between the other three characteristics of the traumatic events and the dependent variable disappeared, and an additional increase of variance was observed to account for PTSD symptoms and only the perceived threat and psychopathology remained significantly associated with PTSD symptoms. Additionally, the authors found that in the study for the participants who expressed higher perceived threat, the strength of the relationship between psychopathology and PTSD symptoms was higher than it was among the participants who reporter lower level of perceived threat. The authors stated that this finding implies that lower perceived threat might buffer the relationship between psychopathology and the severity of PTSD symptoms.

In line with this Declercq et al. (2011), examined the frequency of exposure to traumatic events and the subjective appraisal of this exposure in predicting PTSD symptoms among military nurses and ambulance personnel. Findings of the study revealed that the subjective appraisal of fear/horror in response to the traumatic events was related to development of PTSD symptoms. On the other hand, the results of the research showed that the frequency of getting exposed to the traumatic event was not associated with PTSD.

Health anxiety was also found associated with death anxiety (Furer & Walker, 2008). Noyes et al. (2002), for instance, found death anxiety related to somatization, health anxiety and hypochondriacs. However, the direction of this association is still undetermined that is; if being occupied with physical health causing to death anxiety or whether death anxiety is leading to

health anxiety and makes people paying excessive attention to their bodily symptoms is still not clear. Thus future studies are still needed to clarify the nature of this relationship (Noyes et al., 2002).

In line with this, Schütte et al. (2016) conducted a comprehensive study in which they investigated how fear of death, fear of dying, coping strategies are related to patients who are suffering from hypochondriacs, panic disorder, depression and among non-clinical, healthy participants. According to this, the authors reported that that respondents with hypochondriasis and those with panic disorder were higher on fear of death and dying than healthy controls and subjects with depression. However, there were no significant differences between levels of fear of death and fear of dying in any of the four groups.

Based on the findings above, death anxiety can be a significant characteristic of several mental disorders, however, it might be more prominent in some mental disorders than the other ones. For example, similar to Schütte et al. (2016), Furer et al. (1997) also reported that participants who are suffering from panic disorder were significantly higher on the level of death anxiety than participants with social anxiety and healthy control groups. Additionally, the researchers stated that almost half of the participants (48%) with panic disorder were found to be suffering from hypochondriasis as well, while only 5% of the participants with social anxiety were also suffering from hypochondriasis. According to the study, those participants who met the criteria for both panic disorder and hypochondriasis were significantly higher on death anxiety. Therefore, based on these results, we may conclude that death anxiety might be both underlying factor of different ranges of anxiety disorders and it can be the reason for more severe manifestations of several anxiety disorders.

As it can be seen from the discussed literature above, there are numerous studies showed that death anxiety and traumatic events which can elevate fear of death might be related to lower mental health. However, death anxiety and traumatic events do not necessarily associated with low mental health. In fact, there are theories and body of literature reported that death anxiety and traumatic events can also bring positive changings into people's lives, increase their psychological well-being and lead to a positive growth (Furer & Walker, 2008; Splevins et al., 2010; Tedeschi & Calhoun, 1996).

One of these theories, for example, is called Posttraumatic Growth Theory (PTG) (Tedeschi & Calhoun, 1995, 2004). It is one of the most comprehensive theories that work on posttraumatic growth (Ng et al., 2021; Splevins et al., 2010). Although posttraumatic growth as a phenomena that is 'great good can come from great suffering' has been used previously (Tedeschi et al., 2004, 2018), the specific term PTG was first published and used by Tedeschi and Calhoun (1995) and a scale 'The Posttraumatic Growth Inventory (PTGI) was developed by Tedeschi and Calhoun (1996). The theory posits that even though traumatic, highly stressful situations shatter a person's assumptive world, create dissonance and leading to severe psychological distress and schematic chaos, aftermath of the trauma a surprising positive changing may occur (Splevins et al., 2010; Tedeschi et al., 2004).

These positive outcomes might manifest itself in different aspects of our lives; an increased appreciation for life in general, more meaningful interpersonal relationships, an increased sense of personal strength, changed priorities, and a richer existential and spiritual life (Ng et al., 2021; Tedeschi et al., 2004). These changings can also be observed during the natural process of the life which can be approached as normative development; however the way the changings in PTG took place after the trauma creates the difference between the normative development and the growth after the traumatic events (Tedeschi et al., 2018).

In PTG, the individual first tries to struggle with the trauma to protect himself/herself or to survive. Therefore, the person does not try to cope with the trauma to grow or change in the first place; the growth is coming after this struggle to survive unexpectedly. The growth in PTG therefore, can be considered as a byproduct of this struggle to survive. As a result, posttraumatic growth is not taken place during the event or immediate aftermath of the event, it generally takes a longer time from days to years in which the person can create a new way of thinking, feeling and behaving, as the trauma that the individual gone through does not allow him/her to turn back to previous assumptive worldviews (Tedeschi et al., 2018).

In addition, Slade et al. (2019) conducted a qualitative study with 77 participants to observe PTG in people with psychosis and other severe mental health problems. Based on the results of the study, authors reported PTG in 64 participants (83%). According to that PTG was observed in six areas.

The first one was self-discovery (having a fuller and deeper understanding of oneself) which involves four subtitles; (1) emotional life, (2) self-knowledge, (3) self-acceptance, (4) self-responsibility. The second category which was identified in the study was sense of self (development of a more positive sense of self, including integration and valuing of illness experiences) with three subcategories; (1)pride in self, (2) integration of experiences, (3) valuing of experiences. The third category was about life perspective (new or renewed appreciation of or gratitude about aspects of life.). This category was involving four subtitles; (1) appreciation of life, (2) appreciation of support, (3) meaningful suffering, (4) survivor mission (new growth of political consciousness or use of illness experiences to benefit others). The fourth category was about well-being (more active engagement in, and management of, one's own well-being and lifestyle.) with two subsets; (1) motivation and (2) being active. The fifth category was observed in relationships (more actively choosing and valuing relationships with others.) which was including two subsets; (1) choosing relationships, (2) valuing relationships. The sixth which was the last category was identified in spirituality (deeper engagement with spirituality, religious and existential endeavors.). This category was also including two subtitles; (1) spiritual awareness and (2) spiritual engagement (Slade et al., 2019).

Along similar lines, existential perspective also posits that fear of death can bring authenticity and meaning to ones live, if the person can face his/her own mortality (Hoelterhoff, 2015). Many existentialist philosophers such as Martin Heidegger, Søren Kierkegaard and Jean-Paul Sartre argued that although death brings anxiety and terror to our lives, if we can manage to confront ourselves with it, we may live a much more fulfilling, meaningful life and we can manage to diminish the anxiety that death brings (Hoelterhoff, 2015).

In addition, several existential philosophers and researchers argued that denying and avoiding death also lead us to live an unauthentic life and dissatisfied life (Hoelterhoff, 2015). In fact, some of the researchers reported that avoiding and denying death might contribute to a lower mental health in the later stages of the person's life (Hoelterhoff, 2015, Yalom, 1980). For example, in their study, Port et al. (2002) reported that lower death acceptance was related to higher PTSD levels and a greater increase in PTSD symptoms over an average of 4 years among older ex-prisoners of war. Similar to this finding, Harding et al. (2005) also found in their study

that participants who can come to terms of their own mortality and consciously accept it, show lower level of fears toward death.

A relatively more recent study (Surall & Steppacher, 2018) reported death acceptance as fully mediated the relationship between satisfaction with oneself and death anxiety. According to the results of the study, higher satisfaction with oneself was significantly related to higher levels of death acceptance. Furthermore, the authors of the study reported that there was not any direct correlation between satisfaction with oneself and death anxiety, however, the researchers observed a significant decrease in death anxiety levels when there is a higher satisfaction with oneself along with an accepting attitude toward death .

Another researcher who emphasized the importance of facing with one's own mortality is an American existential psychiatrist Irvin D. Yalom (Yalom, 1980). Yalom (1980) approaches the topic of death anxiety from an existentialist point of view. Yalom was the first to propose a methodology and a manual in its field 'Existential Psychotherapy' that includes theoretical structure and practical techniques for psychologists, counsellors for helping the clients to improve healthier coping strategies to deal with life's main existential dilemmas (Smith, 2012; Yalom, 1980).

According to this, Yalom identifies four "ultimate concerns of life"—death, freedom, isolation, and meaninglessness. Yalom places death and dying at the forefront of the four ultimate concerns (Smith, 2012; Yalom, 1980). According to him, people need to confront with these four ultimate concerns. He argued that although facing with any of these four existential concerns elevate anxiety, only in this way one can achieve a meaningful, authentic and a fulfilling life (Yalom, 1980).

In a similar vein, Wong (2008) mentioned about two main protecting factors in the face of death. He claimed that both death acceptance and finding a meaning/mission to live are protective factors for death anxiety. In fact, he developed a theory called 'Meaning Management Theory (MMT)' in which he explains the roles of these two important protective factors on the fear of death. Throughout the article, the researcher points out that finding a meaning in life and focusing on how to live a life in an authentic, fulfilling way is the most effective coping strategy to diminish death anxiety and hence to have higher psychological well-being. For example, he wrote

"*MMT maintains that the most effective way to protect oneself against death anxiety is to focus on how to live a vibrant, meaningful life… finding meaning and benefits makes it easier for us to accept death and face life with hope*."

In addition, according to MMT, meaning provides the best protection against the fear of death also by conscious transformation of the negatives about death into positive thoughts (Wong, 2008). Therefore, according MMT, focusing on self-actualization and death acceptance via meaning is a better strategy than approaching to fear of death via defensive mechanisms such as, denial. Based on this, Wong (2008) argued that death anxiety can bring both positive and negative mental health consequences. If the person approaches to death with defensive modes of denial and self-preservation and considers death as a terror then it might lead to a lower mental health. On the other hand, if the person considers death as a master who teaches and reminds us to live authentically then it may lead to self-actualization, self-transcendence and death acceptance which eventually bring a more positive mental state.

As being different from existential perspective, there are some other researchers who discussed the topic of death anxiety based on essentialist perspective (Waterman, 2014). For example, Erikson (1963) developed the psychosocial theory which includes eight psychosocial stages; (1) trust vs. mistrust, (2) autonomy vs. shame and doubt, (3) initiative vs. guilt, (4) industry vs. inferiority, (5) identity vs. role confusion, (6) intimacy vs. isolation, (7) generativity vs. stagnation and (8) ego integrity vs. despair.

According to this, Erikson (1963) argued that each individual goes through these eight stages and in each stage the person confront with a conflict. If the person successfully deals with the conflict then the person has higher psychological strengths and mental well-being.

Erikson (1963) stated that once the person reaches the stage eight and successfully deals with the conflict then the individual gains the ego integrity. The person who reaches this stage is able to discover and fulfill the meaning and purpose of his/her life. Therefore, he/she can come to terms with his/her life and accept life and death more easily. As a result, when the person reaches the ego integrity, he/she would not show fear of death and has greater mental well-being (Nehrke et al., 1978). On the other hand, if the individual fails to resolve the conflict in this stage, falls in to state of despair where he/she shows high level of death anxiety, considers life as too short, does

not accept death and shows denial and avoidance that might result in lower mental health (Erikson, 1963). To test this assumption, Nehrke et al. (1978) conducted a study in which they found significant positive relationship between higher life satisfaction, greater internal locus of control and lower levels of death anxiety among participants who are over sixty years of age.

There are also some other theoretical approaches that perceive the effect of death anxiety on mental health in a rather more neutral aspect. For instance, Cognitive-Behavioral perspective sees death anxiety as a normal emotion just like any other types of anxiety. Therefore, according to this approach death anxiety is not a concern as long as it is not disturbing the functionality of the person in his/her daily life (Furer & Walker, 2008; Hoelterhoff, 2015). For example, a person might develop a health anxiety because of the fear of death and can spend an excessive time to control his/her bodily symptom changings to prevent a possible deathly disease. The time that the person spend might be on an extent that he/she may not be able to continue to do his/her job effectively anymore, spend time with his/her family or avoid going out and meeting his/her friends (Furer & Walker, 2008).

To be able to differentiate whether the level of death anxiety is in a normal level or not, psychologists who follow Cognitive-Behavioral approach may ask some of these questions to their clients (Furer & Walker, 2008); "*Could you tell me more about your worries about death? How often do these worries come to you? How do you react when you experience these worries? When did you notice that you started to have more concerns about death than most people? Were there any extra stresses in your life at that point? Are there situations you avoid because of concerns about death? How do you cope when you are dealing with anxiety about death?* ". As it can be seen from the questions, the cognitive perspective would focus on if the fear of death comes frequently to the person and how is she/he coping with it.

Similar to the pervious theories that have been discussed, the cognitive approach also considers that death avoidance is a maladaptive coping strategy and evaluate death acceptance and facing with it as the most powerful coping style (Furer & Walker, 2008). In fact, according to this approach if avoiding certain activities/situations due to the fear of death become extreme and disabling the person, then fear of death might be considered in the level of psychopathology (Hoelterhoff, 2015).

In addition, Cognitive-Behavioral approach considers that similar to the other anxiety disorders, exposure technique is the best way to reduce excessive death anxiety which related to psychopathology. The technique includes either gradual/partial or complete exposure to the feared situation/object. However, one of the most efficient ways is to adjust the pace of the confrontation in such a way that the client will be able to recognize the progress and realize that his/her attitude is changing toward fear of death gradually, yet he/she will not get drained by the very sudden confrontation (Furer & Walker, 2008). For example, Furer and Walker (2008) mention some of the exposure techniques for a client who is avoiding certain situations due to fear of death. These techniques include; reading the obituaries in the newspaper, reading literary accounts of death and loss, and watching television and movie programs with themes related to death.

Since confrontation with fear of death is also viewed as one of the most adaptive strategies in cognitive perspective, the exposure techniques are among the most used techniques in Cognitive Behavioral Therapy (CBT) and several studies showed its efficiency (Furer & Walker, 2008).

Another intervention techniques that helps clients to diminish their death anxiety level and increase their psychological well-being is cognitive reappraisal. In this technique, therapists are focusing on some common unrealistic beliefs that elevate the fear of death in an excessive way and may result in lower mental health in some clients (Furer & Walker, 2008).

In their article, Furer and Walker (2008) provided some of the most common unrealistic beliefs and thoughts; *(1) "If I find out that I am going to die, I will not be able to cope with my feelings"; (2) "Dying is likely to involve terrible pain and suffering"; and (3) "If I die before my children are grown, it will ruin their lives forever.*" One of the main purposes of cognitive reappraisal technique is to balance these maladaptive beliefs with more realistic thoughts and beliefs. For instance, the researchers also provided examples that correspond to the unrealistic thoughts above; (*1) "Many people are understandably frightened when they find out that death is approaching. They manage to cope with these emotions as time goes on, and most people approach the end of life with dignity"; (2) "People have help to deal with the illness and pain and are able to get through this with a good deal of support. Relief of pain is now a high priority in treatment of the dying"; and (3) "Leaving my children behind will be difficult, but there are other people who care about them who will help them. It is important to do the best job possible*

of parenting now. Part of this job is making sure that the children have others who care about them."

Cognitive reappraisal is considered as one of the cornerstone techniques in CBT and one of the most crucial contributions of Aaron T. Beck's to CBT (Clark, 2022). In fact, numerous studies (Clark, 2022; Boden et al., 2012; Moore et al., 2008) showed that cognitive reappraisal is effective in emotional regulation and related to higher mental health and lower levels of psychopathology in situations which death anxiety plays role. For instance, Boden et al. (2012) found that using cognitive reappraisal coping strategy was related to lower PTSD symptoms and higher mental health among military veterans demanding treatment for PTSD. The researchers reported an interesting additional outcome as well; the buffering effect of cognitive reappraisal on PTSD symptoms was partly related to one's emotional clarity (ability to understanding of one's emotion). Therefore, if someone has higher emotional awareness then the efficacy of cognitive reappraisal coping strategy is increasing more and hence the psychological well-being. If the person does not have high emotional clarity then he/she may misinterpret and exaggerate the bodily symptoms that accompany to emotional arousal and this can lead to choosing maladaptive coping strategies such as avoidance (Boden et al., 2012). This might be an important implication regarding the studies dealing with death anxiety and mental health.

Based on these and previous findings, one might suggest that people who have higher emotional clarity and using adaptive coping strategies can have lower death anxiety and greater mental health. Some studies, on the other hand, suggested that being aware of one's own emotions may not be enough for psychological well-being. For example, Moore et al. (2008) reported that expressive suppression (suppressing one's own emotional reactions in order to not to make those emotions visible to other people) is related to stress, depression, anxiety and PTSD symptoms among the trauma exposed participants. Based on this result, one can claim that emotional awareness about death anxiety may not be enough by itself and one needs to be able to also express this emotion to the other people without suppressing it.

Another approach which can be dwelled on while investigating the relationship of death anxiety with mental health can be Acceptance and Commitment Therapy (ACT) which is a third-wave behavior therapy and promising to eliminate some of the drawbacks that traditional CBT have including existential topics (Bunting & Hayes, 2007; Wilms, 2016). Even though it is the third-

wave behavior therapy, it has more similarities with humanistic and existential approaches than traditional behavioral or cognitive therapy (Bunting & Hayes, 2007). Therefore, the way ACT approaches to the issue of death is also similar to existential view in some aspects (Bunting & Hayes, 2007; Wilms, 2016). For example, according to the ACT, discovering one's own values may help the acceptancy of certain difficult thoughts and emotions and based on these values, the painful thoughts and emotions can find a new meaning which can help to increase one's mental health (Bunting & Hayes, 2007). From this perspective, we may argue that after the individual finds his/her own values in this life and lives accordingly, he/she may accept the reality of death more easily and those values may help the individual to see death from a more meaningful window which in return might increase the psychological well-being of the person.

Moreover, some studies (Bunting & Hayes, 2007; Wilms, 2016) suggest that certain coping strategies which are used in ACT might be helpful for fear of death. Among them cognitive defusion seems one of the most efficient ones (Bunting & Hayes, 2007; Davazdahemami et al., 2020; Wilms, 2016). Cognitive defusion includes techniques that focus on the context of the thoughts and it teaches people to perceive thoughts as merely being thoughts that are created from words, sentences, images and sounds rather approaching them as having literal meanings (Harris, 2013). Thus, while techniques such as cognitive reappraisal focuses on changing the form of the thoughts; challenging the negative thoughts by searching for counter-evidences, controlling the frequency or situational sensitivity of the thoughts, techniques that include cognitive defusion attempt to change individual's relationship with thoughts in such a way that the person does not need to challenge them but just observing them as the way they are The researchers who follow ACT claim that this process eventually helps the person to accept their thoughts in a neutral manner without engaging the thoughts and taking them seriously (Harris, 2013).

In their recent research, Davazdahemami et al. (2020) found that cognitive defusion technique was able to diminish death anxiety levels of the participants significantly. In addition, in the same study the authors reported decreases in OCD symptoms in patients who practiced cognitive defusion. The authors claimed that cognitive defusion technique might be beneficial to decrease both death anxiety and OCD symptoms significantly. In fact some relatively recent studies (Larsson et al., 2015) suggested that cognitive defusion might be more efficient than cognitive

reappraisal in decreasing the influence of negative thoughts. For example, Larsson et al. (2015) reported that participants who used cognitive defusion reported a shifted from rating their thoughts as believable, uncomfortable, and unwilling to unbelievable, comfortable, and willing. In addition, in the same study, cognitive defusion was related to lower believability, increased comfort and willingness to have the target thought, and increased positive affect significantly more than the control and cognitive restructuring.

As it can be understood, there are numerous studies and theories in the literature which investigated the relationship of death anxiety with mental health. Based on the literature review, we may conclude that higher fear of death might be related to lower mental health and disables people from functioning well. Particularly, most of the theorists argued that death avoidance and suppression might be potential risk factors in terms of elevating the influence of death anxiety. However, even though they approach to the topic of death anxiety from different perspectives, most of the researchers and theorists implied that death acceptance, discovering our own meanings and values in life can be a protective factor against the fear of death and in fact one can turn the influence of fear of death around and use it to grow, self-actualize, self-transcend and fulfill his/her potential.

1.2 Death anxiety and its effect on human behavior

In addition to the studies and theories mentioned above, there are also several experimental studies regarding death anxiety and its effect on human behavior by implementing Mortality Salience (MS) based on Terror management theory (TMT). Terror management theory is one of the prominent and the most distinguished theoretical approaches to understanding the influence of death anxiety on people (Finch et al., 2015). The theory based on to the work of cultural anthropologist Ernest Becker (1973) who influenced most of the modern theorists with his existential view of death (Furer & Walker, 2008).

TMT posits that people are showing two types of defenses against the anxiety that is triggered by the awareness of the inevitability of death. These are proximal and distal modes of defense (Pyszczynski et al., 1999). Proximal defenses are dealing with conscious thoughts of death. This type of defense tries to suppress/push death related thoughts out of conscious or into the distant future. One of the most common strategies which are used for this purpose is self-distraction. For

instance, a driver who was just passing through next to an appalling car accident may turn up to voice of the radio or can pay an excessive attention to the plans for the evening (Pyszczynski et al., 1999).

Another example of suppressing death related thoughts out of conscious was mentioned by Greenberg et al. (1994). In their research, when participants were induced with death related thoughts, there were no increases in the accessibility of death-related themes right after the experiment. However, the increase of the accessibility emerged after a delay or distraction. The researchers suggested that this might have occurred as a result of an active suppression of death related thoughts.

In addition to this, rationalization cognitive strategies might be also used to deny one's own vulnerability to disease and premature death (Niemiec et al., 2010; Pyszczynski et al., 1999). For example, a person can keep reassuring himself/herself that he/she goes to gym regularly, eats healthy, gets enough sleep, does not smoke, drink alcohol or use any types of drugs. On the other hand, even if the person does not follow these healthy routines, he/she can find other 'evidences' which promises him/her a long life expectancy or assuring himself/herself to do what he/she can in the future to prolong his/her life expectancy (e.g., I'm going on a diet next week, quitting smoking, and starting an exercise program) (Pyszczynski et al., 1999).

In all these examples, the aim of the coping strategies is to deal with the death anxiety by either distracting oneself from the triggering death related thoughts or convincing oneself that the threat is not immediate or in the near future (Pyszczynski et al., 1999). To be able to accomplish this, the person uses directional motives which influence the information processing in a biased way to attain the desired outcome. The person searches, pay attention only to the 'evidences' that matches with his/her beliefs. Therefore, while ignoring the vast majority of the proofs that shows the person might be vulnerable to a disease or premature death, the person is only focusing on and overestimating the counter-evidences. This process provides the illusion that the information which the person obtained is rational and objective (Pyszczynski et al., 1999).

Pyszczynski et al. (1999) emphasized that it is crucial for the person to find his/her conclusion as objective and rational for the defense to work efficiently. For example, people may refuse to believe the results of the numerous studies that show detrimental effects of heavy caffeine

consumption. People may find the test results as invalid or less reliable or they may consider a disorder as less serious than the evidence shows (Pyszczynski et al., 1999).

For example, Jemmott et al. (1986) conducted an experiment to investigate influence of perceived prevalence and personal relevance on participants' judgments of seriousness about a health disorder. For this purpose, researchers introduced a fake health disorder (a fictitious enzyme deficiency) to participants. The participants were 'tested' to see if they were suffering from this fictitious enzyme deficiency. Accordingly, some of the subjects were informed that based on the test results they were suffering from the disorder (deficiency-present subjects) and some of them have been told that they were not suffering from it (deficiency-absent subjects). In addition, some of the participants were told that 1 out of the 5 participants were tested as deficiency-present (low-prevalence subjects) and some of the them have been informed that 4 out of 5 people among the participants were tested as deficiency-present (high-prevalence subjects). According to the results, deficiency-present subjects considered the disease as less serious than the deficiency-absent subjects. In addition, the deficiency-present subjects evaluated the test to be less accurate than did the deficiency-absent subjects (Jemmott et al. 1986).

In the lights of these findings, one can argue that deficiency-present participants might be using proximal defenses to diminish uncomfortable feelings (Pyszczynski et al., 1999). In addition, low-prevalence subjects rated the disease as more serious than the high-prevalence subjects, however, they were not differentiating in seeking additional information related to disease (Jemmott et al. 1986). Therefore, although the low-prevalence subjects perceived the disease that they thought they were suffering from significantly more serious than the high-prevalence subjects, they were not curious about the further explanation regarding the disease. Jemmott et al. (1986) argued that this might have been the case, since the subjects with low-prevalence may have evaluated the disease as incurable and therefore, they might have avoided to facing with it.

Jemmott et al. (1986) also put forwarded some possible explanations as to why low-prevalence subjects might have rated the disease as more serious than the high-prevalence subjects. According to this, researchers claimed that participants might have assumed that common diseases are targeted more and taken seriously more by the medical science to find the cure for these diseases which makes them less concerning. Similar to the aforementioned strategies, the participants again might have been using the proximal defenses in order to banish the 'evidences'

that suggest their vulnerability to a serious disease or using rationalization cognitive strategies to diminish the seriousness of the threat.

Croyle and Sande, (1988) conducted a very similar experiment including a fictitious enzyme deficiency to investigate the effects of the diagnosis on the participants. Similarly, researchers reported that when participants got positive diagnostic test result, they evaluated the disease as less serious and assessed the test as less reliable than the participants who obtained a negative test result. According to these results of the study, the researchers stated that participants used two coping strategies; denial and hypothesis-confirming search.

The researchers observed that the participants used denial coping strategy in three different forms; (1) minimization of the health threat that disease would cause by diminishing the perceived seriousness of the disease, (2) skepticism by denying/questioning the validity of the test results, (3) lastly, the researchers stated that denial of affect might have taken a place, as there was not any significant mood differences among the experimental groups. In addition participants, who were diagnosed with the disease and evaluated it as less serious as well, reported less worry than people who use skepticism form of denial. Authors stated that it seems like people do not use the different forms of denial at the same time. The study results also support this claim, as based on the results among the diagnosed participants; the association between seriousness judgments and test inaccuracy judgments was not significant (Croyle & Sande, 1988).

Another coping strategy which was used by some of the participants in the same study was hypothesis-confirming search. For example, some of the participants who received positive test results were able recall behaviors which were classified as risk factors for the disease, while the participants in the deficiency-absent group were not able recall risky behaviors (Croyle & Sande, 1988).The authors suggested that this might have provided a sense of control over the disease for the participants and also this might have made them feel safer for their future health, as by being aware of the risky behaviors that they think they were doing, they might get a relief by the idea that they can also choose to stop these behaviors.

The distal defenses, on the other hand, are dealing with unconscious thoughts of death. The distal defenses are used to buffer anxiety that is triggered by death in two ways; (1) Cultural

worldviews; people use culture as a way to reach symbolic immortality. According to this view, culture helps people to attain a sense of personal value and meaning and eventually transcending death either literally or symbolically. (2) Self-esteem, on the other hand, helps individuals to buffer their death anxiety by providing the belief that one is meeting the standards of one's cultural worldview (Pyszczynski et al., 1999). Therefore, fulfilling the standards of value of the culture provides literal and/or symbolic immortality in return (Greenberg et al., 1997).

Literal immortality was described as spiritual themes such as, life after death or immortal soul whereas; symbolic immortality was illustrated as identification with assets that are beyond the self and lasting longer than the self such as, the nation, culture. Symbolic immortality can be reached also via the things that are continuous reflection of one's existence such as, children, money and so on (Greenberg et al., 1997). Therefore, in distal defenses the threat is not managed directly but rather indirectly by providing the sense of safety through making one's life seem meaningful, valuable, and enduring (Pyszczynski et al., 1999).

Several experiments by different researchers in numbers of countries implemented to investigate the hypotheses that were put forwarded by TMT (Greenberg et al., 1997; Pyszczynski et al., 1999). In these studies participants were primed with death related thoughts. For example, participants are asked to write a few sentences regarding what they think will happen to them when they physically die, and the feelings that the thought of their own death triggers in them (Greenberg et al., 1997).

Results of these experiments demonstrated that when subjects are reminded with death related thoughts, their attachment to their own cultural worldviews become greater and this is making them to give more positive reactions to the things or to the people that are sharing or supporting their ideas and values whereas, they begin to give more negative reactions to the things or to the people that are not sharing or threatening their cultural worldviews (Pyszczynski et al., 1999). For example, in their study, Harmon-Jones et al. (1996) found that after the participants were primed with death related thoughts, subjects rated their in-group more positively than out-group. .

Another two experiments was conducted by Pyszczynski et al. (1996) to investigate the influence of MS on perceived consensus for one's culturally relevant beliefs. The authors conducted the experiments in two different countries (Germany and the U.S). In both of the experiments,

participants were asked to predict the level of social consensus regarding some culturally related beliefs. To differentiate the MS effects, the subjects were asked these questions while 100 m before passing a funeral home, 100 m after passing a funeral home, or right in front of a funeral home. In the study which was run in Germany, participants were asked to guess the percentage of Germans that shared their views about the application of a political decision related to the immigrants and the participants from the U.S were asked to predict the percentage of Americans who shared their views about teaching of Christian values in the public schools.

Based on the results of the studies, authors reported that participants, who held the minority position on the topics which were asked, overestimated the social consensus for the opinion that they supported if they were asked the question right in front of a funeral home than when they were asked either before or after passing it. The researchers argued that overestimating social consensus for one's culturally related beliefs might be increasing one's confidence about how correct his/her opinion which in return increases the efficiency of cultural worldview defense (Pyszczynski et al., 1996).

There are also numbers of studies including both correlational and experimental designs (Greenberg et al., 1992; Zhang et al., 2019) which support the TMT that self-esteem also provides protection against death anxiety. In line with this, studies also showed that possible threats to self-esteem elevate anxiety and the person engages in various coping strategies to restore his/her threatened self-esteem (Greenberg et al., 1992). For instance, Greenberg et al. (1992) conducted three experiments to understand the effect of self-esteem on anxiety buffering.

In the first experiment, the researchers were interested in if higher self-esteem was related to lower levels of anxiety in case of an induced threat. For this purpose, the participants were primed with death related thoughts by watching a video including death related scenes. Before watching the video, participants were given a fictitious personality test. Based on the 'results' of the test the subjects were given either a highly positive feedback or neutral feedback. For example, in the neutral feedback group, the participants were told: "*while you have some personality weaknesses, you are generally able to compensate for them*" and "*some of your aspirations may be a bit unrealistic*." With a little difference, in the positive feedback group, participants were informed: "*while you may feel that you have some personality weaknesses, your personality is fundamentally strong*" and "*most of your aspirations tend to be pretty realistic*."

According to the results, participants with positive feedback group did show higher self-esteem than the neutral feedback group. Therefore, the self-esteem manipulation worked successfully (Greenberg et al., 1992). In addition, the authors reported that the main hypothesis was also confirmed, that is, participants in the neutral feedback self-esteem group showed significantly higher anxiety than the positive feedback self-esteem group and the video did not show any effect on the mood at all for the positive feedback group.

In the second study, the researchers were interested in if the buffering effect of self-esteem valid for the other triggers rather than only Mortality Salience. To measure that this time researchers investigated if high self-esteem reduce the anxiety in participants who are expecting a painful electric shock. This time participants have been 'tested' with a fake verbal intelligence test and the anxiety was measured via physiological arousal (Greenberg et al., 1992). Based on the findings, participants who were in the positive feedback condition, showed significantly less physiological arousal than the neutral feedback group, especially, while they were anticipating the electric shock. Authors reported that there was a significant higher increased arousal in the neutral feedback group.

The researchers conducted a third study which was very similar to the second one to provide further evidences and the results were the same. Therefore, the authors concluded that the buffering effect of self-esteem may not be unique to death threat but it might be extended to the other types of threats as well (Greenberg et al., 1992). On the other hand, Greenberg et al. (1994) showed that defense of the cultural worldview, however, is only triggered via death related thoughts and it is not triggered by other unpleasant thoughts. For example, when participants were exposed to death related thoughts, they were showing a clear biased toward foreign student who wrote positive essay about the United States. However, this relationship did not exist when they were asked to think about the prospect of giving a speech in front of a large audience or experiencing intense physical pain (Greenberg et al., 1994). In addition, when considering other situations that lead to increased threat and negative affect in participants, inducing Mortality Salience did not produce the same result (Simon et al., 1997).

Therefore, as being different than the anxiety buffering effect of self-esteem, defense of the cultural worldview might be unique for only mortality salience. However, Greenberg et al. (1994) also reported that the effect of Mortality Salience is revealed only when the death related

thoughts are outside of the current focal consciousness. In addition, relatively subtle reminders of death create stronger effects than more intense and impactful ones. When participants were forced to keep thinking about death related thoughts and when these thoughts present in the active memory or if the mortality salience is too intense, the researchers did not observe the defense of the cultural worldview. The effect was prominent only when the subjects were distracted or after a delay (Greenberg et al., 1994).

Moreover, studies (Greenberg et al., 1994; Pyszczynski et al., 1999) implied that when participants primed with death related thoughts, first proximal defenses are activated to suppress/push the mortality thoughts away from the conscious. After a delay or distraction, the distal defenses start to become activated to deal with fear of death in the long term. Therefore, the authors concluded that increased defense of the cultural worldview (also the distal defenses in general) occurs when the death related themes are highly accessible, yet are outside of current focal attention. Thus, one may argue that thinking about death consciously may not be influencing human behavior or interpersonal judgements directly, but implicit knowledge of inevitability of death might be affecting human behavior and interpersonal judgements significantly (Greenberg et al., 1994).

In line with this, Simon et al. (1997) run several experiments to investigate how experiential thinking mode and rational thinking mode differentiate in terms of the activation of cultural worldview defense. In the study experiential thinking mode was defined as an emotional way of thinking which is more effortless, unconscious and automatic, while rational thinking was defined as logical, conscious, deliberate and more effortful thinking mode. The results of the study exhibited that when participants are in the experiential thinking mode, they react to mortality salience with higher world view defense and higher accessibility of death-related thoughts, while subjects in a rational mode did not use world view defense in response to mortality salience. Based on the results, the authors stated that approaching to mortality salience with a rationally based mode of thinking might have decreased the world view defense in the participants, since intellectualizing the issue of death might have decreased its influence in those participants.

Additionally, further studies (Arndt et al., 1997) showed that increased cognitive load such as, doing multitasks that overwhelm mental resources, prevents someone to be able to use the

proximal defenses and suppress death related thoughts initially. Therefore, high cognitive load increases the effects of Mortality Salience and hence, worldview defense may occur immediately after MS in this circumstance (Arndt et al., 1997; Harmon-Jones et al., 1997). For example, Arndt et al. (1997) run three experiments to understand the role of cognitive load in MS and defense of the cultural worldview. According to the findings of the experiments, participants with high cognitive loads group, showed immediate increased in worldview defense in response to MS. The researchers reported that when participants drained with high cognitive loads, attempts to suppressing death related thoughts were failed and death related thoughts stayed highly accessible right after MS which in return increased worldview defenses in the participants.

The authors reported another finding that is, if the participants were given the chance to apply their worldviews by defending their country against the writer who criticizes their country, the death accessibility of the death related thoughts were decreasing. On the other hand, the death related thoughts stayed highly accessible for the participants who were not given such a chance (Arndt et al., 1997). The researchers concluded that cultural worldview defense reveal in reaction to the high accessibility of mortality related thoughts, however the process of practicing the defense diminish this elevated accessibility to the same level as that of subjects who were never asked to think about mortality.

In addition, Harmon-Jones et al. (1997) conducted also a series of experiments to see the interactive influence of self-esteem and Morality Salience on the defense of worldview. According to the results of the experiments, participants with positive self-esteem feedback group did not react to induced death anxiety with higher defense of the worldview and therefore, did not show any preference bias toward the author who wrote positive things about the U.S. On the other hand, subjects with neutral self-esteem feedback group exhibited increased defense of the worldview and responded with higher preference toward the author who wrote positive feedbacks about the U.S. Additionally, based on the results of the experiments, Harmon-Jones et al. (1997) claimed that higher self-esteem might be decreasing the possibility of need to using worldview defense after inducing death related thoughts by decreasing death anxiety. The researchers suggested that the reduced death anxiety in return might be decreasing the accessibility of death related thoughts and participants may not be feeling the need to use worldview defenses.

As it is discussed above, numerous studies which were conducted to test TMT via Mortality Salience suggested that people incline to response defensively when they primed with death related thoughts which may include; denying of personal vulnerability to death, trying to sustain faith in one's own cultural worldview, trying to increase self-esteem, and inhibiting mortality thoughts. However, relatively more recent studies emphasized that people may differ in their response to Mortality Salience (Ma-Kellams & Blascovich, 2012; Niemiec et al., 2010). For instance, some people may show more defensive responses and suffer from low mood and anxiety, while other people may see death as an opportunity for attaining a more meaningful life (Niemiec et al., 2010). Therefore, these studies claim that less defensive way of handling Mortality Salience is also possible (Ma-Kellams & Blascovich, 2012).

For example, Niemiec et al. (2010) conducted seven different experiments to assess if more receptive processing of the issue of death can decrease proximal and distal defensives in response to mortality salience that TMT proposed. For this, the researchers compared participants with more mindful and less mindful. In the study, mindfulness was defined as experiential mode of conscious processing which is a more receptive state of the mind. This state of mind was defined as being opposite to cognitive manipulations that include appraisals, judgments and distortions. Therefore, based on the operational definition of mindfulness in the study, this state represents a more neutral way of observing/approaching to internal and external stimulus around the person. Based on the results of the first three experiments, higher mindfulness state was related to lower world view defense. According to this, participants with more mindful showed less world view defense in response to morality salience than less mindful participants. Particularly, less mindful subjects in response to MS exhibited more pro-U.S. prejudice (Study 1), more pro-White prejudice (Study 2), and more rigid judgments of social transgressions (Study 3) than more mindful participants.

In the fourth study, the researchers found that more mindful participants did not show any world view defense toward the values related to mindfulness under MS, therefore, they did not show worldview defense depends on biased favoritism against the values that support their worldview. However, less mindful participants showed preference biased under such condition (Niemiec et al., 2010).

In their fifth experiment, the researchers investigated if the self-esteem defense is used more by less mindful participants under MS than the more mindful participants did under MS. Based on the findings, the authors reported that when participants induced with death related thoughts, subjects with higher in trait body esteem, yet lower in trait mindfulness exhibited more appeal of physical sex (comparted to personal connection), while subjects with higher in both trait body esteem and trait mindfulness reported less appeal of physical sex (compared to personal connection) (Niemiec et al., 2010). The researchers interpreted these results as less mindful participants show higher self-esteem striving defense under MS than more mindful participants. Therefore, the researchers concluded that both distal defenses (worldview and self-esteem) were used more by the less mindful participants than the more mindful participants under MS.

In addition to this, in their sixth and seventh experiments, the researchers also checked the function of proximal defenses among the same participants. According to these experiments, the authors stated that participants with more mindful trait spent longer time to write their thoughts about their own death than the less mindful trait participants (experiments 6^{th}) after induced with death related thoughts. Since the previous studies (Greenberg et al., 1994) showed that participants who use proximal defenses, try to push/suppress death related thoughts immediately after MS, Niemiec et al. (2010) interpreted this result as participants with more mindfulness trait might be using less proximal defenses than the subjects with less mindfulness trait. In fact, in the seventh experiment, the researchers investigated this possibility particularly and found participants with less mindful trait suppress death related thoughts significantly more than the participants with more mindful traits. Therefore, similar to the aforementioned studies which were discussed in the previous section related to the relationship of death anxiety with mental health and coping strategies, the researchers also suggested that death acceptance, facing with the existential threats may be a more functional ways of coping with fear of death rather than death avoidance.

In a similar vein, Lykins et al. (2007) conducted series of experiments where they compared Posttraumatic Growth Theory with Terror Management Theory to observe which factors play role in positive growth when people encountered with life threatening situations. According to the results of the experiments, in PGT condition, the researchers observed a shift from extrinsic values (including superficial satisfying needs; e.g. making more money, being attractive) to

intrinsic values (meaningful and essential satisfying needs; e.g. creating intimate relationships, altruistic behaviors) which leads to better mental state. In MS condition, on the other hand, the authors claimed that there is an increased in extrinsic goals.

The authors argued that this difference may result from the duration of death reminders. For example, usually studies concerning with PGT investigate naturally occurred situations such as cancer survivors, however studies focusing on TMT deals with the experimentally induced death related thoughts which lasts for couples of minutes. In addition, in TMT studies, participants are not contemplating about their own death in a deep manner, whereas in PGT studies, participants are engaging their thoughts related to their own mortality deeply. Therefore, facing with life threatening situation for a short term or long term consistently and the type of processing death related thoughts (deep reflection vs superficial thinking) might be playing a role in positive outcomes when someone encounter with death related stimuli (Lykins et al., 2007).

Another series of experiments which were conducted by Routledge and Arndt (2009) showed that people may differ in their response to Mortality Salience. More specifically, the results of the experiments suggested that rather than responding to Mortality Salience with rigid, dogmatic, conservative, prioritizing their own worldview and considering that it is superior to other cultural worldviews and socially and personally maladaptive reactions, people might actually show more adaptive responses such as by becoming more open-minded, showing interest in exploring other cultural worldviews and using both socially and personally adaptive psychological defenses (Routledge & Arndt, 2009).

According to this, in their first experiment, researchers reported that after being reminded of death, subjects who were in the creative condition group (designing a T-shirt) showed higher interest in exploration of other cultures, for example, studying in a foreign country and learning about different theories and beliefs. In the second experiment the researchers reported a similar finding where the subjects who were in the creative conditions showed increased interest in the worldview-challenging films after being reminded of death. In the last experiment, the researchers primed half of the subjects with the idea that creativity is culturally valued and the other half was primed with the idea that creativity is not culturally valued. After that the researchers showed subjects two films which are including different aspects when compared with predominant cultural worldviews regarding religion in America. Based on the results, Routledge

and Arndt (2009) reported after being primed with death related thoughts, participants who read that creativity is culturally valued exhibited increased interest in the critical films than did the subject who read that creativity is not culturally valued.

1.3 Death anxiety and culture

As it was discussed in above section, Terror Management Theory and the experiments that were conducted to support the theory concluded that culture is used by people to buffer death anxiety. In connection with this several researchers have also draw attention to the effect of cultural differences on death anxiety (Byrant, 2003; Gire, 2014; Ma-Kellams & Blascovich, 2012; Moos & Schaefer, 1987; Schumaker et al., 1988).

Kübler-Ross (1975), for instance, articulated that there are major differences among cultures in terms of giving meaning to and explanations for death. These differences might results in various patterns of behaviors, attitudes towards death, dying and grieving (Ma-Kellams & Blascovich, 2012; Pentaris, 2011). For example, in cultures that follow Christianity, people believe that humans have very limited time on earth and at the end of this time, people are going to be 'judged' by God based on how they spent their lives on this earth (Pentaris, 2011).

In Taoism, on the other hand, death and life considered as the two facets of the same continuum. Death is seen as the transformation from the state of being to state of non-being. Therefore, people need to approach to death just as the same way they approach to life and accept it and conceptualize the value of the two (Pentaris, 2011).

In Buddhism, death is not the end of life; it is only the death of the body. The spirits maintains and switch to different forms based on the deceased's cumulative karma (Pentaris, 2011). Therefore, as it can be seen, depends on the religion aspect of the culture, the attitudes toward death and life might be very different.

There are also other dimensions of the culture that might influence the attitudes toward death and life. Many researches (e.g., Abdel-Khalek, 2002; Moos & Schaefer, 1987; Schumaker et al., 1988) have also indicated that these differences can be associated to the level of death anxiety and the experiences related to it. In fact, some researchers argued that some cultures might buffer death anxiety better than the other ones (Lehto & Stein, 2009; Ma-Kellams & Blascovich, 2012).

For example, some studies claimed that Eastern cultures tend to be more effective at buffering death anxiety than Western cultures (Gire, 2014; Kübler-Ross, 1975; Ma-Kellams & Blascovich, 2012; Mcmordie & Kumar, 1984; Westman & Canter, 1985). For instance, Ma-Kellams and Blascovich (2012) argued that death anxiety and the urge to cope with this anxiety might be a universal response, however, the particular coping strategies and cognitive styles in response to fear of death can differentiate between Eastern and Western cultures, as cultures influence the way people think about the world and their attitudes toward it.

In particular, Ma-Kellams and Blascovich (2012) stated that people who adapted Eastern cultures have a tendency to approach the world in a more holistic way, that is, they accept objects, relationships and ideas with their contradictory elements and do not evaluate the opposite features regarding to them as separate terms. For example, people with Eastern cultures accept both good and bad sides of the same subject and embrace both of the opposite sides when they think about a subject such as life and death.

On the other hand, people with Western cultures follow a more linear approach and perceive separately the opposite components of the same subject and hence, for instance, consider death and life as being two distinct entity, while people with Eastern cultural world view approach to life and death as being one entity (Ma-Kellams & Blascovich, 2012).

The authors also added that despite the fact that culture may have a major effect on death anxiety and coping strategies related to it, there is a lack of experimental research which particularly examine this. Due to this paucity in the field, Ma-Kellams and Blascovich (2012) conducted a series of experiments where they investigated the differences between Eastern and Western cultures in terms of their influence on fear of death.

In the first study, the researchers investigated if thoughts of life would be more prominent among Eastern participants than the Western participants when they primed with death related thoughts. The authors claimed that as Eastern cultures have holistic view and consider both positive and negatives sides of an issue as one entity, triggering them with death related thoughts would also activates thoughts of life. Results of the study confirmed the hypothesis of the authors and Eastern participants exhibited higher accessibility to life related thoughts after they exposed to death related thoughts. On the other hand, Western participants did not show any differences

regarding life related thoughts, after they were primed with death related thoughts (Ma-Kellams & Blascovich, 2012).

In a similar vein, Ma-Kellams and Blascovich (2012) run four more experimental studies. These studies showed that when both Eastern participants and Western subjects were reminded of their own death, subjects with Eastern cultural background showed higher interest in participating daily activities, such as movies, plays and novels. In addition, Eastern participants showed higher attempts to be funnier by using humor compared to the Western participants.

Moreover, in their 5th experiment, the researchers searched if priming participants with holistic view and linear view regardless of their cultural background, that is, including participants from both Eastern and Western cultural background would create similar results with regards to their previous experiments. The authors reported that participants primed with holism stated higher interest in enjoyable life activities after being reminded with their own mortality, compared to the subject primed with linear thinking.

Therefore, in their series of experiments, Ma-Kellams and Blascovich (2012) demonstrated that when samples from Eastern cultures primed with death related thoughts, they performed non-defensive approaches and showed higher life enjoyment in the face of death as contrast to their Western counterparts.

In addition to this, Bryer (1979) investigated the Amish culture in America to observe how different cultures, family systems, religions might influence the way people cope with death of their loved ones and with the fear of their own death. The Amish culture and rituals resemble to the characteristic of collectivistic culture. It might be considered that the Amish people seem to be living in their own circle by performing more collectivistic features in an individualistic country (Mcalister, n.d.). Bryer (1979) argued that cultures with more collectivistic characteristics may facilitate people to adapt and cope with death better through their family and community support systems.

In her study, Bryer (1979) claimed that in modern Western societies with nuclear families the ritual practices and meanings that people attribute to death have changed significantly which made it hard to cope with death. For instance, the author argued that ritual practices and belief systems which were once providing guidance to the people in the face of death, have now been

replaced by science and technology, majority of deaths are taken place in the hospitals and institutions rather than at home in the presence of family members and the increased rate of the nuclear family decreased the chances for experiencing life and death in an extended-network support system. The researcher claimed that in this way, death has been started to be perceived as an event that happens in a limited/particular times and places. As a result, people may have begun to feel free from death in other places and times. Therefore, especially recently, people may have stopped seeing death as a process and a natural situation that can happen at anywhere and anytime. According to the author this framework in Western cultures related to death, may lead people to deny death and hence, make it harder to cope.

On the other hand, in the Amish culture people are still following their old rituals and beliefs related to behaviors, attitudes towards death, dying and grieving (Bryer, 1979). Bryer (1979) summarized these rituals and attitudes in the Amish culture as follow; "*(a) the continued presence of the family, both during the course of the illness and at the moment of death; (b) open communication about the process of dying and its impact on the family; (c) the maintenance of a normal life-style by the family during the course of the illness; (d) commitment to as much independence of the dying person as possible; (e) the opportunity to plan and organize one's own death; (f) continued support for the bereaved for at least a year following the funeral, with long-term support given to those who do not remarry.*" The author argued that all these steps might be helping people in the Amish society in perceiving death in a more natural view and cope with it in a more calm and accepting way which in return they may have lower levels of death anxiety (Bryer, 1979).

Schumaker et al. (1988) also implied that the topic of death anxiety should be investigated both at individual level as well as at cultural level, as it is closely tied to the way of people are coping with the reality of death. Similar to the previous statements, the researchers also implied that people with Western cultural background might be coping with death anxiety by avoiding it. For example, people in Western societies have been claimed to be covering sickness and not feeling comfortable with elderly people, as they are the reminders of death (Schumaker et al., 1988). The authors indicated that this coping strategy can either increase the death anxiety further or diminish the emotional cost of being reminded of death by avoiding it.

Based on this premise, the investigators conducted a study where they compared participants from both Eastern and Western cultures with regards to their levels of death anxiety. Accordingly, the researchers compared Malaysian participants with their Australian counterparts. Results indicated that Australian students have a significantly higher level of death anxiety than Malaysian students. Moreover, the researchers reported that the Malaysian students of Chinese descent did not differentiate significantly from Malaysian students of Indian descent. The authors explained that these differences might be an implication that cultures including more Eastern features may be buffering death anxiety better than the Western ones (Schumaker et al., 1988).

In accord with this view, Westman and Canter (1985) expressed that there are big differences between Eastern and the materialistic Western cultures when it comes to the definition of 'self'. According to this, the authors discussed that in Eastern cultures people do not necessarily connect the self with physical body; in fact, they perceive the self a transitory concept, an illusion that will still maintain its existence upon death. The authors added; "*Eastern emphasis upon self as extending beyond one's physical and psychosocial identity to include all other people in the world…one is an integral part of the Eternal within everything and so eternal and complete.*" On the other hand, materialistic Western culture treats self as equal to the physical body or significantly connected to one's body. Therefore, it might be considered that when physical body vanishes so does the self. Consequently, while in Eastern culture, people perceive the self as an on-going existence and complete with other people, in the materialistic Western culture people value the importance of self as being temporary, incomplete and separate from others and finite (Westman & Canter, 1985).

Westman and Canter (1985) argued that this approach might elevate the anxiety level related to death in people with Western oriented cultures. In order to investigate this association, the researchers conducted a study in which they searched the relationship of fear of death and the concept extended self. Based on the results of the study, the authors reported that participants who viewed self as beyond the physical body and extended to include any other person, showed negative correlation with death anxiety. On the other hand, they found death anxiety positively correlated with people who adapted the materialistic concept of self. Moreover, participants who approached death as final, unnatural, providing no meaning to life, and cold, reported higher fear of death. The authors interpreted the results as being similar to the aforementioned researchers

above that Eastern concept of death might be better at coping with fear of death when it is compared to the Western attitudes toward death. In accord with this view, Mcmordie and Kumar (1984) also exhibited in their research that Eastern participants lower on death anxiety level than Western participants.

Therefore, a number of studies in the literature suggested that Eastern cultures are more successful in buffering death anxiety than Western cultures. However, even though a numbers of studies have found these results, there are also some discrepant findings (Abdel-Khalek et al., 2009; Gashi, 2011; Yıldız, 1999). For instance, Schumaker et al. (1991) conducted another study where they investigated the death anxiety levels among Japanese and Australian participants. The results of the study was contradicting with their previous study (Schumaker et al., 1988) where they suggested that Eastern cultures cope with death anxiety more efficiently than Western cultures. Based on the outcomes of their latter study, Schumaker et al. (1991) found that Japanese participants have higher level of death anxiety than Australian participants. Therefore, according to the result of the study, participants from an Eastern culture showed higher fear of death than participants from a Western culture.

One plausible explanation for this outcome put forward by the investigators is that as every individual struggles with death anxiety, we all might react by trying to defend ourselves against that anxiety. In line with this explanation, the authors) argued that Australian respondents might have been more defensive and might have more closed attitude toward their fear of death than their Japanese counterparts. Moreover, the researchers added that Japanese participants in the study, on the other hand, might have been more open and less defensive when it comes to death anxiety which may then, resulted in higher death anxiety levels among the Japanese participants compared to their Australian counterparts(Schumaker et al., 1991).

A further example of contradictory results was when a study by Gashi (2011) exhibited that Turkish students got higher scores on death anxiety than Kosovar students. According to that Turkish students were higher on the fear of war, worries related to future, fear of time passing fast, thinking about death and fear of death than Kosovar students. In line with these results, Yıldız (1999) reported that Turkish participants got higher scores on death anxiety than their Bosnian counterparts.

In each of the two studies, similar possible explanation was put forward for these findings that is, since Bosnia and Kosovo went through war in recent times, participants from these two countries may have gotten lower scores on death anxiety. Yıldız (1999) argued that considering the Terror Management Theory, Bosnian participants might be more adapted to death and more attached to their culture as they experienced war, the death of loved ones, the risk of death, and the high likelihood of oncoming wars. To put it more clearly, these factors might have acted as Mortality Salience and triggered their death anxiety and they might have used distal defenses to decrease the anxiety. Therefore both triggered cultural world views defense mechanisms and adaptation to death anxiety through the recent experienced wars in Kosovo and Bosnia might have created these differences in the death anxiety levels between the Turkish and Bosnian and Kosovar participants. In accord with this view, Yıldız (1999) mentioned that the Bosnian participants, who lost a loved one during the war, reported significantly lower fear of death than the other Bosnian participants who did not experience any death of loved ones.

Another study which was done by Lonetto et al. (1980) also supports these findings. According to that Canadian students demonstrated higher anxiety about being afraid to die and thoughts of death than their counterparts from North Ireland. The researchers suggested that just before their study, in North Ireland many people were got killed during a civil disturbance, while Canada was considered as a peaceful and trouble free place. The authors claimed that this difference might have resulted in lower fear of death in Northern Ireland participants compared to the Canadian subjects, as their traumatic life experiences might have led to a growth and a deeper meaning in the Northern Ireland participants that might contribute to lower levels of death anxiety. Therefore, environmental factors in different countries seem like also playing a role in fear of death (Lonetto et al., 1980).

Contrary to these findings, Ayten (2009) reported that Jordanian participants scored higher on death anxiety than Turkish participants. He claimed that based on the results of the study, facing with death or death related events may not be the only explanation while comparing countries in terms of their death anxiety levels. He argued that social well-being, social equality and socioeconomic development in countries might be also influencing the level of death anxiety among different countries.In line with this he stated that the result of the research suggest that the

hypothesis that Eastern cultures buffer fear of death better than Western cultures was not confirmed .

In a similar vein Ellis et al. (2013) compared fear of death differences in Malaysian, Turkish and American participants. The authors reported that both Turkish and Malaysian respondents showed higher death anxiety scores than the American participants. In addition, Malaysian participants showed slightly higher death anxiety than the Turkish participants. Therefore, the results of the study also contradict with the previous literatures where Eastern culture was suggested as buffering death anxiety better than the Western culture.

Furthermore, Lester et al. (2007) investigated the studies in which the Templer's Death Anxiety Scale (DAS) has been administrated around the world and to search for cross-cultural differences in the mean scores of the participants. According to that, the researchers were able to identify 40 studies in which 24 of them was consisting of American samples and the rest were all around the world including; Egypt, Korea, Iran, Australia, Canada and so on . Based on the investigation, Qatar, Philippines and Kuwait were reported as among the highest in terms of fear of death. In addition, Turkey, Spain and Hong Kong were listed as among the lowest in related to death anxiety. The researchers reported that there seems to be no clear distinctive features of the countries which may anticipate their relative standing in terms of their death anxiety levels. Therefore, the authors encouraged further research to investigate death anxiety in cross cultural samples in order to identify the possible underlying characteristic of the differences in death anxiety levels in different countries.

In addition, Abdel-Khalek and Tomás-Sábado (2005) run a research where they compared the death anxiety scores of participants from Egypt and Spain. The researchers reported that they have used three different scales in the study which measure death anxiety scores of the participants. According to that in all of the scales, participants from Egypt showed higher levels of death anxiety than their Spanish counterparts. In the same study, the researchers also measured general anxiety levels of the subjects. Findings showed that Egyptian participants were also higher on the general anxiety levels than their Spanish counterparts. The researchers expressed that per capita income is lower in Egypt than in Spain which might influence the stress and anxiety levels in the participants.

Moreover, Abdel-Khalek et al. (2009) examined seven countries, together with Arab and Western countries; Egypt, Kuwait, Lebanon, Syria, Spain, the United Kingdom, and the United States. In the research, the Arabic Scale of Death Anxiety (ASDA) was used. Based on the findings, except from Lebanese men, all of the Arab participants had significantly scored higher on ASDA than the Western respondents.

In the article, numerous possible reasons were mentioned for these outcomes, for instance, the statements on the Arabic Scale of Death Anxiety questionnaire are very emotionally primed and contain intense episodes, such as, the torture of the grave, witnessing the burial procedure, subjecting a vital disease, seeing a dying person, looking at a corpse, and walking in the graveyard. The authors claimed that these experiences may have more emotional effects on Islamic cultures. The researchers mentioned that the torture of the grave may not be well-known apart from Islam. In the Islamic faith, between the moment of death and the burial ceremony the deceased answers the questions of two angels, Naker and Nukeer. This process is to separate believers and unbelievers. If the deceased fails to answer the questions correctly or if he or she has sinned during life then the grave is transformed into a torture-chamber for the deceased (e.g., beating by iron hammers, being attacked by horrible serpents, imprisoning, whipping/flogging) (Abdel-Khalek, 2004b). The authors also mentioned that Islamic graveyards usually connected with fear and in general with negative feelings, whereas Christian graveyards consist of lovely flowers, blossoms and trees. This might have influenced differently the participants from Arab countries and Western countries with regards the item "I dread walking in graveyards." Therefore, the item might have provoked anxiety more in participants from the Arab countries than the Western countries (Abdel-Khalek et al., 2009). Consequently, the investigators argued that these factors might have caused higher death anxiety scores in Arab countries than in Western countries.

In addition, there are also some studies which suggested that there is no significant difference among different countries when it comes to death anxiety levels. For instance, Abdel-Khalek and Thorson (2006) reported that there was no significant difference between American and Egyptian males with regards to their death anxiety levels. However, the researchers also examined the individual item differences between the two groups. Based on that they found American participants were significantly higher on the items related to physical pain involved in the dying

process and considering death as a deprivation of worldly engagements, for example, 'never thinking again', 'totally immobile' and 'missing out on things after they die'. On the other hand, the Egyptian participants were reported to be found significantly higher anxiety on the items related to coffins and afterlife, such as 'coffins make me anxious' and 'I am looking forward to a new life after I die.' The authors claimed that these results are showing the importance of cultural differences between the countries when it comes to coping with death anxiety. Another example to non-significant results in total death anxiety levels; Lebanese and American female participants also showed no differences in terms of their death anxiety levels (Abdel-Khalek, 1991).

As it can be seen from the literature review, although majority of the studies showed that Eastern cultures might be buffering death anxiety better than the Western cultures, a body of conflicted results are also exist. Similar to the previous explanations, researchers stated that these inconsistent results in the literature might be stemming from the issues related to scales and other variables such as socioeconomic status of the countries (Abdel-Khalek & Thorson, 2006; Ayten, 2009). These and other possible reasons were discussed in more detailed in the next part of the paper.

1.4 Death anxiety as a multidimensional concept: Different death attitudes

As it can be seen from the above literature review, there are several inconsistent and contradictory results, when it comes to comparing the effects of different cultures on death anxiety. As stated by some researchers, one of the main reasons for these inconsistent results might be that, while death is a multidimensional concept, several studies approached it as if it were a unidimensional term (Durlak & Kass, 1982; Lin, 2003; Wittkowski, 2001). Therefore, a number of studies have exclusively examined negative death attitudes, such as fear of death, without considering other kinds of attitudes to death, such as neutral and positive attitudes (Clements & Rooda, 2000; Gesser et al., 1988; Hoelter, 1979; Lin, 2003; Neimeyer, 1997-98).

Several researchers have posited that fear of death cannot be fully understood without considering other attitudes to death, such as death acceptance attitudes (Durlak & Kass, 1982; Neimeyer, 1994). Indeed, as it was emphasized in the previous parts, some studies have found that acceptance of death is not the opposite of death anxiety. Thus, one might be afraid of death

and, at the same time, accepting of death. Consequently, different death attitudes can coexist in one individual (Durlak & Kass, 1982; Esnaashari & Kargar, 2015; Ray & Najman, 1974).

Some researchers therefore developed multidimensional scales to measure death attitudes from a broader perspective (Collett & Lester, 1969; Florian & Kravetz, 1983; Hoelter, 1979; Ray & Najman, 1974). The Collett-Lester Fear of Death Scale (Collett & Lester, 1969), for instance, is one of the earliest scales that approach death anxiety in a multidimensional manner (Neimeyer et al., 2003). It differentiates between fears related to the state of death and to the process of dying. It also examines fear of death towards to the self and the other person. Therefore, the scale differentiating between these four fears; fear of death of self, fear of death of others, fear of dying of self, and fear of dying of others (Collett & Lester, 1969). However, the psychometric analysis of the instrument showed inconsistent results (Neimeyer et al., 2003).

Another example of multidimensional instrument to assess death anxiety is the Multidimensional Fear of Death Scale (Hoelter, 1979). The Multidimensional Fear of Death Scale was developed particularly to measure several facets of fear of death and dying (Neimeyer et al., 2003). There are eight subscales in the measurement (Hoelter, 1979); (1) Fear of the dying process, (2) Fear of the dead, (3) Fear of being destroyed, (4) Fear for significant others, (5) Fear of the unknown, (6) Fear of conscious death, (7) Fear for the body after death and (8) Fear of premature death. According to the existing literature, the scale has satisfying psychometric properties (Neimeyer et al., 2003). However, Neimeyer et al. (2003) stated that some of the items of the Multidimensional Fear of Death Scale might be carrying different meanings from culture to culture. For example, in their study, Roff et al. (2002), argued that the item, 'It doesn't matter whether I am buried in a wooden box or a steel vault' which is belong to Fear for the body after death subscale has not a significant meaning in the Lithuanian context, as steel vaults are used only occasionally in Lithuanian cemeteries.

Therefore, throughout the years, researchers have started to develop multidimensional scales to measure different death attitudes, yet these studies proved to have methodological problems as well, and their findings remained inconsistent (Lin, 2003). Related with these inconsistent results, Neimeyer and Fortner (1997) as cited in Esnaashari and Kargar (2015) also discussed three main drawbacks about the earlier research in death attitudes: (a) the lack of a theoretical foundation;

(b) a one-dimensional focus on death attitudes; and (c) measurement problems in terms of both validity and reliability.

Considering these drawbacks, Gesser et al. (1987) developed another multidimensional scale entitled as 'Death Attitude Profile (DAP)'. The scale was later revised and Wong et al.(1994) introduced the upgraded version of DAP which is called Death Attitude Profile-Revised (DAP-R). The scale measures positive, negative and neutral aspects of death. Thus, according to the DAP-R, there are five different death attitudes (Wong et al., 1994): (a) Fear of Death (experiencing feelings of fear on a conscious level that are triggered when faced with issues related to death); (b) Death Avoidance (avoiding thinking or talking about death in order to decrease death anxiety.); (c) Approach Acceptance (believing in a happy afterlife after death); (d) Escape Acceptance (believing that death is an escape from a painful life); and (e) Neutral Acceptance (perceiving death as a natural part of life).

Researchers argued that the DAP-R minimises the previously mentioned main drawbacks by taking an ontological view of death, and that, by measuring several death attitudes, it presents no problems with respect to validity and reliability (Neimeyer & Fortner, 1997; as cited in Esnaashari & Kargar, 2015). In addition, Neimeyer (1997–98) mentions that the DAP-R is currently one of the most psychometrically sound measures of death attitudes.

1.5 Different death attitudes and mental health

Based on the literature review, a limited number of studies have investigated the relationship between these five death attitudes and mental health. Some of these studies as follow; Wong et al. (1994), for example, report a positive association between Fear of Death and psychological distress and depression, which is significant for older adults only and not significant for young and middle-aged adults. Death Avoidance is reported as being related to psychological distress among middle-aged and older adults. Death Avoidance is also associated with depression, which is significant for older adults only. Moreover, Neutral Acceptance is reported as being positively correlated with psychological and physical well-being and negatively correlated with depression among young and middle-aged adults. Approach Acceptance is reported as having positive associations with subjective well-being, but this is valid for older adults only. Escape Acceptance is observed as being negatively related to physical well-being.

Taking into consideration all these associations the authors of the article claim that Neutral Acceptance appears to be the most adaptive attitude towards death in terms of well-being and decreased depression (Wong et al., 1994).

Esnaashari and Kargar (2015) found that the attitudes Approach Acceptance, Neutral Acceptance and Escape Acceptance are positively related to distress tolerance and negatively related to aggression and anger. Furthermore, with respect to the attitudes Fear of Death and Death Avoidance, they point out a negative relationship with distress tolerance and a positive association with aggression and anger. The researchers suggest that remembering death, facing it and accepting it are more adaptive attitudes that result in better mental health (.

In the course of research aimed at developing and validating the previous version of the DAP-R, Gesser et al. (1988) found that Fear of Death is negatively associated with happiness and positively related to hopelessness. Furthermore, Escape Acceptance is reported as being positively related to hopelessness but not related to happiness. Finally, they found that Neutral Acceptance is unrelated to hopelessness but positively related to happiness. Gesser et al. (1988) observed that the relationship between happiness and Neutral Acceptance can be mediated by successful coping strategies.

Reker et al. (1987) also provide findings related to Death Acceptance: according to them, the Death Acceptance scale is positively related to perceived mental and physical discomfort as well as to low psychological well-being. Reker et al. (1987) claim that — contrary to the view proposed by Erikson (1982), which supports the idea that acceptance of death is related to greater psychological well-being — the greater the satisfaction and purpose a person finds in their life, the greater their anxiety at giving it up.

Another study (Wittkowski, 2015) explored coping and attitudes towards dying and death among German adults using the Multidimensional Orientation Toward Dying and Death Inventory (MODDI-F; Wittkowski, 2001). The scale comprises eight attitudes towards death (Fear of one's own dying; Fear of one's own death; Fear of another person's dying; Fear of another person's death; Fear of corpses; Acceptance of one's own dying and death; Acceptance of another person's death; and Rejection of one's own death). The study found that, among both men and women, Emotional Dismay and Resignation (i.e. ruminating, expressing self-pity and self-blame,

a tendency to escape from the situation, withdrawal from others, giving up and feeling helpless) were positively associated with all types of fear of dying and death, and also negatively associated with acceptance attitudes. Furthermore, the author reports a positive relationship between the coping strategies Escape, Rumination and Self-pity and the Rejection of death attitude.

Tomer and Eliason (2005) studied the relationship between life regrets and death attitudes among college students. The findings indicate a positive association between both past-related and future-related regrets and Fear/Avoidance of Death. Similarly, the results suggest that locus of control was associated with Fear/Avoidance of Death. Therefore, a higher belief in chance as effecting life circumstance is related to higher Fear/Avoidance of death (Tomer & Eliason, 2005). In addition, based on the analysis the researchers reported that self-esteem might be influencing Fear/Avoidance of Death indirectly through past-related regret, as the evidence showed that increased self-esteem is related to decreased past-related regret and thus, to decreased Fear/Avoidance of Death.Unexpectedly, the results of the study also demonstrated that regret is positively related to acceptance of mortality. The authors provided some plausible explanations for this finding; it might be possible that while people revise their past mistakes or the things that they wish they could do but they have not done so, their regret related to past might increase. However, this might create a change in their mind-set as being more humble in such a way that might help them to accept mortality or it may encourage them even more to fixing some of the wrong things that they have done in the past or they might be looking forward to the 'life after death' to finding peace from their regrettable actions or asking for forgiveness for their wrong behaviours.

1.6 Correlations of different death attitudes among each other's

There are also studies in the literature on how the five death attitudes are related to one another. Wong et al. (1994), for example, report a moderately positive relationship between Approach Acceptance and Escape Acceptance; and a moderately negative relationship between Approach Acceptance and Fear of Death.

Similarly, Klug and Sinha (1988) suggest that there is a negative relationship between death anxiety and death acceptance. Furthermore, Death Avoidance is reported as being positively

correlated with Fear of Death, accounting for 22% of the variance, and negatively correlated with Approach Acceptance (4% of the variance) (Wong et al., 1994). These results are congruent with the findings of Gesser and his colleagues (Gesser et al., 1988).

According to Wong et al. (1994), the findings suggest that Death Avoidance and Fear of Death are relatively different from one another and, in the absence of any study focusing exclusively on this type of death attitude, the researchers emphasise the need for further investigations into Death Avoidance. Moreover, the authors recommend further research in order to understand how Death Avoidance and Fear of Death are related, and which variables are associated with these two distinct negative death attitudes.

1.7 Different death attitudes and culture

Similar to death anxiety, another very important variable in other different death attitudes is culture (Gire, 2014; Ho et al., 2010; Tomer & Eliason, 2005), which can influence the experiential, cognitive and emotional dimensions of death attitudes (Lehto & Stein, 2009). As it was mentioned previously, there are some studies in the literature on the relationship between death anxiety and different cultures (e.g. Abdel-Khalek, 1998; Abdel-Khalek, 2002; Schumaker et al., 1988; Schumaker et al., 1991). However, there are a very limited number of studies on how the five death attitudes in the DAP-R change in different cultures.

Some of these studies as follow: Lin (2003), for instance, investigated the relationship between spirituality, emotional support and religiosity and attitudes toward death among older American and Chinese adults. According to the author, spirituality was used in the study as a measure of a sense of well-being that includes the concept of life satisfaction and a sense of meaning and purpose, while religiosity was related to faith in God.

The author reports a negative association between spirituality and fear of death, suggesting that the greater a person's spirituality, the less intimidating death becomes for them, allowing them to achieve self-realisation and search for meaning in life. This finding was valid for both American and Chinese participants. However, the negative relationship between Death Avoidance and spirituality was valid for American participants only. The author explains that in Chinese culture there is a general aversion and uncomfortable attitude to talking about death. Thus, for Chinese

participants, avoiding talking or thinking about death may not mean that they are afraid of death, but is rather simply part of their culture.

Religiosity was found to be positively related to Approach Acceptance among both American and Chinese participants. In addition, a negative association was reported between spirituality and Approach Acceptance, although this was valid for American participants only. Furthermore, there was a positive relationship between Escape Acceptance and religiosity, while there was a negative relationship between Escape Acceptance and spirituality, which again was valid for American participants only (Lin, 2003).

Iranmanesh et al. (2010) also compared the attitudes of Iranian and Swedish nursing students toward death by using DAP-R. According to the research, Iranian students reported greater Fear of Death and Approach Acceptance than their Swedish counterparts. Moreover, the Swedish participants showed higher Neutral Acceptance than the Iranian students. The investigators stated that since the Iranian participants were coming from a society with a higher exposure to death, their levels of Fear of Death Attitude might be greater than the Swedish students. Furthermore, the researchers claimed that since Iranian students marked themselves as more religious, this might have influenced their beliefs about what happens after death.

There is another study on this topic that compares different ethnic groups in America (Anglo Americans, African Americans, Mexican Americans and Japanese Americans) (Hayslip & Peveto, 2005). In this study, attitudes towards one's own death and dying and the concept of an afterlife were measured using several questions. Some of these questions were as follow: " (1) *If you were told that you had a terminal disease and had six months to live, how would you want to spend your time until you died? (a) With a marked change in behavior (quit job, travel, etc.), (b) By withdrawing or focusing on Inner Life, (c) By showing concern for others (spending time with family, etc.), (d) By completing projects, (e) With no change in behavior, (f) Other*, (2) *Would you tend to accept death peacefully or fight death actively?* , (3) *If you were dying, would you want to be told?* " and so on.

The findings demonstrate that Asian Americans are more accepting of death than are other ethnic groups. For example, 57.1 % of Asian Americans and 51% of African Americans in the study reported that they would accept death peacefully, while these rates were lower for the other

ethnics groups. Accordingly, 51.2 % of Hispanic Americans reported that they would fight against death actively and 41.5 % of the Caucasian American participants reported that it 'depends' (Hayslip & Peveto, 2005).

1.8 Different death attitudes, coping styles and mental health

Based on the limited studies between the five death attitudes and mental health, coping styles might be an important variable while investigating the different death attitudes and its relationship with mental health. For example, as it was mentioned previously, Gesser et al. (1988) stated that the relationship between happiness and Neutral Acceptance might be mediated by successful coping strategies. Therefore, two individuals with the same death attitude might differentiate in terms of their mental well-being, as they have different coping styles. In fact, studies showed that different coping styles are related to different psychological responses that can either increase or decrease a person's psychological and physical well-being (Gurvich et al., 2020; Kasi et al., 2012; Monzani et al., 2015).

In addition, different death attitudes might be related to a range of different coping mechanisms (Wong, 2008) and this can have an influence on mental health (Menzies et al., 2018). For example, death avoidance attitude might lead to also developing other maladaptive coping strategies which can make it hard to deal with fear of death in a functional way and this may cause to a lower psychological well-being (Kastenbaum, 2000; Menzies et al., 2018). However, as it was discussed in the previous section of this paper, death anxiety may lead to adaptive coping strategies as well such as, following meaningful accomplishments and relationships (Menzies et al., 2017).

Furthermore, other death attitudes such as, escape acceptance, approach acceptance and neutral acceptance, might be associated with different coping strategies and people with different death attitudes can response with different coping mechanisms when they primed with death related thoughts and threatful situations (Wong, 2008). For instance, a person with escape acceptance death attitude can respond with higher suicidal ideations in case of being reminded by death related thoughts rather than responding with defense of world view or pursuit of self-esteem, as people with this death attitude consider that life is very painful and death is a way to escape from this miserable life. On the other hand, a person with neutral acceptance death attitude might be

motivated to fulfill his/her potential fully and pursuit a meaningful life when he/she primed with death related thoughts. Moreover, an individual with approach acceptance death attitude may rather take a neutral stand in response to a mortality salience, if the person believes that he/she fulfilled his/her duties and ready to meet with God in the life after death (Wong, 2008).

Wittkowski (2015) also reported some results related to the relationship of different death attitudes and coping strategies based on his research among German participants. According to the results of the study the findings are as follow; (1) distraction, search for self-affirmation, avoidance, escape, rumination, resignation, self-pity, self-blame and drug intake coping strategies were positively related to fear of one's own dying, (2) resignation, self-pity and drug intake coping strategies were positively related to fear of one's own death, (3) escape, resignation, self-pity and drug intake coping strategies were positively related to fear of another person's dying, (4) avoidance, escape, rumination, resignation, self-pity, self-blame and drug intake coping strategies were positively related to fear of another person's death, (5) escape, resignation, self-pity and drug intake coping strategies were positively associated with fear of corpses, (6) situation control, response control and positive self-instructions coping strategies were positively correlated with acceptance of one's own dying and death, (7) resignation, self-pity and drug intake coping strategies were negatively related to acceptance of one's own dying and death, (8) rumination, resignation, self-pity and drug intake coping strategies were negatively related to acceptance of another person's death, (9) escape, resignation, self-pity and drug intake coping strategies were positively related to rejection of one's own death.

Therefore, based on the literature review and the suggestions of the previous researchers, while investigating the relationships of death attitudes with mental health, different coping strategies may needs to be taking into the consideration as well.

1.9 Literature review regarding coping styles

According to the existing literature, cognitive appraisal of the encountered situation is very crucial when individual chooses the related coping style (Lazarus & Folkman, 1984). Lazarus and Folkman (1984) mentioned about the two different cognitive appraisals: namely, primary appraisal and secondary appraisal which are intertwined, however, non-linear stages. Therefore, one (primary appraisals) is not coming ahead in time from the other one (secondary appraisals).

In primary appraisal, the person asks the questions of 'Am I in trouble or being benefited, now or in the future, and in what way?'. Therefore, primary appraisal deals with the person's assessment of the encountered situation in terms of to what extent he/she will be influenced by the results of the encounter (Lazarus & Folkman, 1984). Thus, if the person considers that the situation is not related to his/her loved ones as well as his/her physical and emotional well-being, then the primary appraisal can be that the situation does not include a threat. On the other hand, if the person concludes that the situation has relevance to his/her loved ones as well as his/her physical and emotional well-being, then the primary appraisal can be that the encounter includes a potential threat, harm or challenge. The level of stress that the person confronted with the situations is influenced by this evaluation (Lazarus & Folkman, 1984).

The secondary appraisal concerns with the question of "What if anything can be done about it?" . When we encountered with a threat or challenge, we start to look for our options to deal with the situation. At this stage, secondary appraisal gets into focused where the person considers his/her coping strategy options (Lazarus & Folkman, 1984). In secondary appraisal the person evaluate the possibility of a chosen coping strategy to be successful and also if he/she has enough resource to apply the chosen strategy effectively. The interaction between the primary and secondary appraisals, therefore, forms the level of stress in the person (Lazarus & Folkman, 1984).

Lazarus and Folkman (1984) defined coping as "*Constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person.*" (p. 141). According to the researchers, people use different kind of coping strategies depending on the nature of the stressor and the efficacy of the same coping strategy, which may differ from one situation to another. Thus, how one perceives the situation (controllable vs. uncontrollable) may change the efficacy of the coping strategy (Lazarus & Folkman, 1984; Stanisławski, 2019).

Lazarus and Folkman (1984) conceptualized coping strategies in two main categories; problem-focused and emotion-focused coping. Problem-focused coping mostly serves in the situations where the person consider that he/she can do something to change the circumstance, thus, it is directed at handling or changing the issue which causes the stress . On the other hand, emotion-focused coping is used when the individual appraise that nothing can be done to change or manage the situation that cause distress. Therefore, the person uses coping strategies to regulate

his/her emotion rather than trying to focusing on changing the situation (Lazarus & Folkman, 1984).

In line with this, in their critical review, Parker and Endler (1992) also mentioned that most of the studies distinguished among two main coping strategies; problem-focused (task oriented; strategies used to solve the problem, reframe it (cognitively), or diminish its effect) and emotion-focused (person oriented; strategies that may consist of emotional response, self-preoccupation and fantasizing reactions). On the other hand, in addition to these two basic coping styles, the authors stated that a third basic coping dimension (avoidance coping style) was also identified by several researchers.

Avoidance coping styles can encompass both task oriented and person oriented strategies (Parker & Endler, 1992). For instance, a student might choose to going to a party with his/her friends (social diversion) rather than studying to the upcoming exam. Parker and Endler (1992) argued that this avoidance coping example includes person-oriented strategy where the person wanting to be with other people to 'lose himself/herself' by engaging with other people rather than focus on studying his/her upcoming exam. Additionally, avoidance can be employed via distraction . For instance, the individual can become involved in substitute tasks rather than dealing directly with the encountered stressful situation. For example, the person can decide to watching a TV show rather than studying the exam (Parker & Endler, 1992).

Moreover, Gol and Cook (2004) mentioned about two main coping strategy dimensions namely, approach-avoidance and emotional equilibrium-disequilibrium. Approach-oriented coping operates via cognitive effort to find a solution for the encountered situation, recognizing the source of the problem and accepting it. Avoidance-oriented coping strategy, on the other hand, operates via distracting oneself from the encountered (Stanisławski, 2019).

Emotional-disequilibrium is related to expressing of emotions in an impulsive way (e.g., "threw things," "got into a physical fight") or a cutting off of emotion (e.g., "suppressed emotion," "got quiet/closed up") . Lastly, emotional-equilibrium is associated with more controlled way of emotional expression which operates via more stable and calm ways of emotional release (Gol & Cook, 2004).

1.10 Coping styles and mental health

As it can be seen from the literature review, although there are several coping conceptualization proposals, there is still existing problem regarding the structure of coping and there is still no consensus about the main coping dimensions (Gol & Cook, 2004; Skinner et al., 2003; Stanisławski, 2019). There are still inconsistent results across the studies related to construct of coping scales (Stanisławski, 2019).

Notwithstanding these problems, in general, there is a consensus that problem-focused coping is related to higher mental and physical well-being, while emotion-oriented coping styles are associated with lower mental and physical well-being such as, depression, anxiety and somatic symptoms (Braun-Lewensohn et al., 2009; Parker et al., 1998; Sadaghiani & Sorkhab, 2013).

For instance, Pourmohamadreza-Tajrishi et al. (2015) reported that after providing problem-focused coping strategy training, there was an advancement of mental health and diminishing in psychological symptoms (phobia, depression, paranoid thoughts, psychosis, somatic complaints, interrelations sensitivity, obsession-compulsion, anxiety, and aggression) in mothers of children with Down syndrome.

Moreover, in their study, Braun-Lewensohn et al. (2009) also found a positive relationship between emotion-focused coping strategies and PTSD and other emotional and behavioral symptoms. On the other hand, the researchers found adolescents who use problem-focused coping strategies as dealing better in stressful situations and having higher mental well-being .

Along similar lines, Mayordomo-Rodríguez et al. (2014) revealed that problem-focused coping strategies were positively associated with psychological well-being, whereas, emotion-focused coping strategies were negatively related to psychological well-being.

On the other hand, for avoidance-orientation, the results are rather ambiguous. For example, while socializing with other people which is a social diversion-avoidance coping style was found as buffering the stress, distraction component of avoidance coping styles was related to lower mental and physical well-being (Jensen et al., 1991, as cited in Parker et al., 1998).

1.11 Coping strategies as trait or state?

Another debate in the literature regarding the conceptualization of coping strategies is about whether the coping strategies should be measured based on trait or state coping approach (Greenaway et al., 2015).

Based on the perspective of the trait coping approach, there are stable coping styles or predispositions which individuals are using when they face with a threat. Therefore, based on this concept, the person has already preferred coping strategies and when he/she face with a stressful situation, he/she directly use these strategies which are relatively stable across time and situation (Carver et al., 1989). This view allows researchers to make predictions about how people generally cope across stressors (Carver et al., 1989; Greenaway et al., 2015).

Lazarus and Folkman (1984), on the other hand argued that considering coping styles as stable and dispositional, underestimates the nature of coping strategies and does not apprehend the multidimensional essence of coping process. Therefore, this approach disregards diversity in behavior that is observed depends on each unique encountered situation. Thus, as it was mentioned in the previous part, Lazarus and Folkman (1984) consider coping strategies as a dynamic process which shows variation in people across stressors.

In the literature, there are numerous measurements that assess both dispositional (trait) and situational (state) coping strategies (Carver et al., 1989; Greenaway et al., 2015; Parker & Endler, 1992). Situational coping measurements assess how the person copes with a specific stressor and do not deal with how the person copes in general. Therefore, situational coping measurements are better at predicting the effects of coping strategies in specific situations than dispositional coping scales (Greenaway et al., 2015).

Some examples from the most widely used situational coping questionnaires are Coping Strategy Indicator (Amirkhan, 1990) and Ways of Coping Questionnaire (Folkman & Lazarus, 1988). In addition, Miller Behavioral Style Scale (Miller, 1987), Mainz Coping Inventory (Krohne, 1993), Coping Inventory for Stressful Situations (Endler & Parker, 1990, 1994) and COPE Inventory (Carver et al., 1989) are among one of the most widely used coping measurements (Greenaway et al., 2015) which assess dispositional coping strategies.

Dispositional questionnaires can be adapted to situational coping scales. Indeed, it is easy to transform dispositional questionnaires to situational measurements. While making the adaptation

the themes of the behavior which is described in items stay exactly the same. The only changing is made regarding the frame of reference (Carver et al., 1989). For example, when measuring trait coping styles, the questions in the scale are structured in a way that asks respondents what they do in general when they encountered with a stressor. On the other hand, when measuring state coping styles, the items are structured in a way that asks respondents what they did or are doing currently in a specific stressful situation or during a certain period of time (Carver et al., 1989).

1.12 Approach and avoidant coping

Another issue regarding with coping scales is that they are too long and takes a lot of effort and time for participants to complete it (Carver, 1997). Generally, measurements that assess different coping styles include 48 to 66 items (Monzani et al., 2015). For example, COPE Inventory (Carver et al., 1989) which is among one of the most widely used scales (Greenaway et al., 2015), has 60 items. Considering these already lengthy coping scales along with the fact that researchers also use multiple hypotheses to investigate the association between different variables and coping styles in the same sample, creates significant burden on the respondents (Carver, 1997). To prevent this drawback, Carver (1997) developed the Brief COPE which is a shorter version of the COPE Inventory (Carver et al., 1989). The Brief COPE is among one of the best validated and most widely used coping scales (García et al., 2018). It can identify 14 coping styles with 28 questions and 2 items per type. The scale includes two main coping style dimensions. These are Approach and Avoidant coping styles.

Avoidant Coping is characterized by the subscales of Denial (avoiding the fact that the threat exists or attempts to act as if the situation is not real. Example item of the subscale; ‘I've been refusing to believe that it has happened’), Substance-Use (using substance to manage the stressor. Example item of the subscale; ‘I've been using alcohol or other drugs to make myself feel better’), Venting (dwelling on the unpleasant feelings that the person experiencing during the situation and ventilating those feelings. Example item of the subscale; ‘I've been saying things to let my unpleasant feelings escape.) , Behavioral- Disengagement (decreasing efforts to handle the stressor to the extent that might include giving up to manage the situation. Example item of the subscale; ‘I've been giving up trying to deal with it.’), Self-Distraction (focusing on other things rather than the stressor itself to attempt to decrease the unpleasant feelings related to it. Example item from the scale; ‘I've been doing something to think about it less, such as going to movies,

watching TV, reading, daydreaming, sleeping, or shopping.') and Self-Blame (holding responsible oneself or criticizing regarding the stressor. Example item from the scale; 'I've been blaming myself for things that happened.') (Carver et al., 1989).

Approach Coping is characterized by the subscales of Active-Coping (taking active steps to eliminate the stressor or prevent it to happen or diminishing its effect. Example item from the scale; 'I've been concentrating my efforts on doing something about the situation I'm in.'), Positive-Reframing (reappraising the current circumstances by placing them in a positive frame. Example item from the scale; 'I've been trying to see it in a different light, to make it seem more positive.') Planning (dwelling on what steps to take and how best manage the stressor. Example item from the scale; 'I've been trying to come up with a strategy about what to do.'), Acceptance (accepting the reality of the circumstance. Example item from the scale; 'I've been accepting the reality of the fact that it has happened.'), Seeking Emotional Support (getting moral support, sympathy and understanding. Example item from the scale; 'I've been getting comfort and understanding from someone.') and Seeking Informational Support (searching for advice, assistance and information. Example item from the scale; 'I've been trying to get advice or help from other people about what to do.') (Carver et al., 1989).

In the questionnaire there are two additional coping styles that are belong neither approach nor avoidant coping strategies. These are Humor (making fun of the encountered. Example item from the scale; 'I've been making jokes about it.') and Religion (turning to religion during stressful situations. Example item from the scale; 'I've been trying to find comfort in my religion or spiritual beliefs.') coping styles (Carver et al., 1989).

Several studies (e.g. Eisenberg et al., 2011; Shamblaw et al., 2021; Taylor & Stanton, 2007) showed that Avoidant Coping is less effective at managing anxiety than Approach Coping. For instance, high avoidant coping and low approach coping are associated with emotional distress, disease morbidity, and mortality in heart failure patients (Eisenberg et al., 2011). Similarly, Klein et al. (2007) found that denial, self-distraction, and self-blame are related to higher depressive symptoms and lower quality of life. Another study demonstrated that denial, self-distraction, and behavioral disengagement are associated with lower physical functioning than the participants who adapt less avoidant coping styles (Eisenberg et al., 2011). Moreover, in their study, García et al. (2018) observed that active coping and acceptance were related to higher well-being and lower

stress. On the other hand, they found that self-blaming, behavioral disengagement and substance use were associated with lower well-being and higher stress. Another study also presented that self-distraction and self-blame coping styles were related to increased suicide risk (Lew et al., 2019).

1.13 Coping styles, COVID-19 and mental health

Based on the literature review, findings (e.g., Sim et al., 2010; Guo et al., 2020; Gurvich et al., 2020; Skapinakis et al., 2020; Zacher and Rudolph, 2020) suggested that in COVID-19 and similar outbreaks, coping strategies play a crucial role, as different coping styles are related to different psychological responses that can either increase or decrease the psychological and physical wellbeing of a person (Kasi et al., 2012; Gurvich et al., 2020).

Shamblaw et al. (2021), for instance, investigated the relationship of coping during the COVID-19 pandemic and its relations with mental health and quality of life. According to the findings of the study, avoidant coping strategies were related to higher depression and anxiety and lower quality of life, whereas, approach coping styles were related to lower depression and higher quality of life. In addition, Shamblaw et al. (2021) reported that positive reframing was the most useful coping style in terms of higher well-being during the pandemic.

In addition, several other studies (Chew et al., 2020; Fu et al., 2020; Skapinakis et al., 2020) showed that positive/active, approach/problem-focused coping strategies are more effective than negative/passive, avoidant/emotion-focused coping strategies in terms of adaptation to and mitigation of the mental effects of COVID-19.

For instance, Zacher and Rudolph (2020) investigated subjective well-being during COVID-19 in German population. The researchers reported that life satisfaction was positively related to active coping and positive reframing and negatively related to planning. Regarding the finding about planning, the authors explained that high levels of insecurity related to the outbreak might have turned future planning into an unpleasant experience. In addition, they reported that positive affect was positively associated with active coping, using emotional support and religion, and negatively associated with humor. Regarding the finding about humor, the authors concluded that during the outbreak using humor can be a less effective coping strategy and might rather

constitute gallows humor. Lastly, the authors stated that negative affect was positively correlated to denial, substance use, and self-blame, and negatively correlated to using emotional support.

Another research was conducted by Gurvich et al. (2020) regarding coping styles and mental health during COVID-19. The outcomes of the study showed that positive reframing, acceptance and humor were related to better mental health, whereas self-blame, venting, behavioral-disengagement and self-distraction were associated with poorer mental health.

1.14 Present Research

A thorough examination of the literature in the introduction led to the identification of five main research questions deemed essential to explore regarding the issue of death attitudes. These questions were deemed important due to the current shortage of extensive and high-quality research aimed at establishing consensus in the following areas; (1) Do some cultures buffer death anxiety better than the other ones? (2) What is the relationship between death anxiety and mental health among different countries? (3) What is the relationship of different death attitudes with mental health among different countries? (4) What role coping strategies play in the relationship of different death attitudes with mental health among different countries? (5) When people from different countries or cultures experience a stressful event, how do they differentiate in mental health and its relationship with death attitudes and coping styles?

Considering these research questions, we formulated several hypotheses and conducted three studies with the aim of addressing the existing gap in the literature and making meaningful contributions to the related field.

In the next part, background, aims and discussion parts of the three studies will be summarized and the procedure and results of these three researches will be given as they appeared in internationally accepted peer-reviewed academic journals. Therefore, the presentation of the three studies is not a one-to-one copy of the three published articles, is based on them, but with modifications (extensions, etc.). These publications will be indicated in chapter 2, chapter 3 and chapter 4.

2. Comparison of the Relationship Between Death Anxiety and Depressive and Anxiety Symptoms Among Norwegian and Turkish Female Psychology Students[1]

2.1 Background and aims

As it was stated in the general introduction part, culture is considered to be an important variable for the issue of death anxiety; however, there is a gap in the literature when it comes to comparing the effects of different cultures on death anxiety (Lester et al., 2007; Mcmordie & Kumar, 1984; Neimeyer et al., 2003). Given the limited and inconsistent literature on the topic, more studies are needed to examine the relationship between death anxiety and culture (Suhail & Akram, 2002).

With this in mind, our first aim in this study was to investigate the death anxiety of Norwegian and Turkish subjects. Very few data are available from Norway in relation to death anxiety (Lester et al., 2007). Furthermore, evidence suggests that Turkish culture tends to be different from Western cultures with regard to the meaning it accords to death and in relation to death rituals (Gedik & Bahadır, 2014; Güngör, 2007). As previous studies encourage further research to investigate different cultural perspectives and assess how they differ from Western cultures in relation to death anxiety, it therefore made sense to compare Turkish and Norwegian participants (Abdel-Khalek et al., 2009; Neimeyer et al., 2003; Suhail & Akram, 2002). Moreover, based on the literature review, this will be the first study to investigate this kind of a relationship between Turkey and Norway.

The second aim of the study was to investigate the relationship between death anxiety and depressive and anxiety symptoms. As previously mentioned, several researchers have examined this relationship and studies suggest that a higher level of death anxiety is connected to more depressive and anxiety symptoms (e.g., Abdel-Khalek, 1997; Abdel-Khalek & Tomás-Sábado, 2005; Gilliland & Templer, 1986). Although many studies have demonstrated this relationship between death anxiety and depressive or anxiety symptoms, most of these examined whether

[1] Chapter 2 is based upon the following study:
Oker, K., Schmelowszky, Á., & Reinhardt, M. (2019). Comparison of the relationship between death anxiety and depressive and anxiety symptoms among Norwegian and Turkish female psychology students. *OMEGA - Journal of Death and Dying, 83*(4), 816-830. https://doi.org/10.1177/0030222819868111

depressive and anxiety symptoms can predict death anxiety level or not (Hintze et al, 1993; Ongider & Eyuboglu, 2013; Saggino & Ronco, 1997).

Only a few studies investigated this correlation in a reverse way and emphasized the importance of death anxiety as a potential predictive factor of the level of depression and anxiety (Oranchak & Smith, 1989; Semenova & Stadtlander, 2016). According to Yalom (1980), however, death anxiety is a fundamental fear which underlies a set of mental disorders, including panic disorder, anxiety, and depression. In view of this existential perspective and the aforementioned transdiagnostic feature of death anxiety, in this study, we searched if depressive and anxiety symptoms can be predicted by death anxiety level of the participants. Moreover, the literature review illustrated that few studies are dealing with all the three variables in a cross-cultural framework. We therefore concluded that we would contribute to the literature by conducting research in this area.

Hypotheses of the Study

Based on our review of the literature, we predicted that Norwegian participants would score significantly higher on death anxiety than Turkish participants. There were several reasons for this prediction. First, as previously mentioned, Eastern cultures are considered to be better at buffering death anxiety than Western cultures (Gire, 2014; Kübler-Ross, 1975; Mcmordie & Kumar, 1984; Westman & Canter, 1985). Some studies claim that Turkish culture is closer to Eastern cultures than Western cultures (e.g., Gedik & Bahadır, 2014; Güngör, 2007; Hofstede, Hofstede, & Minkov, 2010; Mocan-Aydin, 2000). Moreover, a number of researchers suggest that Turkish culture tends to be different from Western cultures in relation to the meaning attributed to death and the explanations given for death, and that this may help Turkish culture to buffer death anxiety better than Western cultures (Gedik & Bahadır, 2014). As Turkey is considered to be closer to Eastern cultural norms, we therefore expected it to score significantly lower on death anxiety than Norway, which follows Western cultural norms.

In addition, for both countries, we expected death anxiety to be positively related to depressive and anxiety symptoms. As previously indicated, there is evidence of such a relationship (e.g., Abdel-Khalek, 1997; Abdel-Khalek & Tomás-Sábado, 2005; Gilliland & Templer, 1986). Nevertheless, replicating this association separately for both countries allowed us to observe if

this relationship was indeed valid for both countries. Furthermore, as mentioned previously, in this study, death anxiety was deemed a predictor variable, a key difference from other studies examining this relationship. This therefore enabled us to see whether this relationship was valid in both directions. In addition, we expected Norwegian participants to score higher on depressive and anxiety symptoms than Turkish participants.

2.2 Method[2]

Participants

Subjects (N= 304) were recruited online, mainly Facebook and e-mail (the e-mail addresses of the professors were reached via the websites of the universities). Participants were from Norway (N=127, 41.8%) and Turkey (N=177, 58.2%). Participants were aged between 18 and 35 years (categorized as 18–24, 25–29, and 30–35 years) and were all studying or had studied psychology. Although findings from age-related studies are inconsistent, we decided to restrict participants' ages to between 18 and 35 years, because several researchers have found that elderly adults have a significantly lower level of death anxiety (Gesser et al., 1988; Neimeyer, 1994; Suhail & Akram, 2002).

In addition, the convenience sampling method was used in the study. We had more access to the psychology students and they were more responsive and volunteer to participate in the research. For these reasons and also to keep the sample homogenous in terms of education and knowledge, only psychology department was chosen to recruit the participants for both of the countries. However, as the majority of students in psychology departments are female, we were not able to obtain enough data from male. Therefore, 70.9% of the participants from Norway were female (N=90) and only 29.1% were male (N=37). Similarly, for Turkey, there were 157 (88. 7%) female and 20 (11.3%) male.

Most of the previous studies reported that female have significantly higher death anxiety scores than male (e.g., Neimeyer et al., 1986; Rigdon & Epting, 1985; Templer et al., 1971). In the light of these findings and as we were unable to recruit a sufficient number of male subjects, data from

[2] Method and result parts of the Chapter 2 is taken from the following study:
Oker, K., Schmelowszky, Á., & Reinhardt, M. (2019). Comparison of the relationship between death anxiety and depressive and anxiety symptoms among Norwegian and Turkish female psychology students. *OMEGA - Journal of Death and Dying, 83*(4), 816-830. https://doi.org/10.1177/0030222819868111

the male samples were excluded from the study. The study therefore gathered data from 90 females from Norway and 157 females from Turkey.

Measures

The study questionnaire contained four scales. Original versions of the scales were used, and all the participants were given the English versions of the scales. All participants were fluent English speakers and their education language was also in English at their university. Participants were given a short demographic scale which included questions on their nationality, gender, and age. Detailed information can be found below regarding the other scales used.

The Beck Depression Inventory II

The Beck Depression Inventory-II (BDI-II) is an upgraded version of BDI-IA (Beck et al., 1996). It was developed by Aaron T. Beck. It includes (see Appendix-A) 21 items to measure the severity of self-reported depression in adolescents and adults for the last 2 weeks (Beck et al., 1996). Each item includes a 4-point scale from 0 to 3. BDI-II has very high reliability and validity scores. It has high test–retest reliability ($r = .93$, $p<.001$). Furthermore, it has high internal consistency ($a = 91$) (Beck et al., 1996). In this study, Cronbach's alpha for this test was also .91.

State-Trait Anxiety Inventory

State-Trait Anxiety Inventory (STAI) was developed by Spielberger et al. (1970). It was developed to measure state and trait anxiety in research and clinical practice. Although state anxiety refers to a temporary condition, trait anxiety is a relatively permanent feature (Spielberger et al., 1970). Each of the subscales includes 20 items.

Death anxiety was associated more with trait rather than state anxiety in several studies and findings from these studies suggested that death anxiety may be a trait in contrast to a state phenomenon (e.g., Abdel-Khalek, 1986; Abdel-Khalek & Omar, 1988; Gilliland & Templer, 1986; Pettigrew & Dawson, 1979). Therefore, in this study, only the trait anxiety subscale (see Appendix-B) was used. This subscale has good psychometric properties. Test–retest stability coefficients for the test range from .73 to .86. Moreover, alpha coefficients of the Trait-Anxiety

scale are high, with a median alpha of .90 (Spielberger et al., 1970). In this study, the test also showed high internal consistency (a = 93).

Death Anxiety Scale

The Death Anxiety Scale (DAS) was developed by Donald Templer in 1970 and is one of the tests most frequently used to measure death anxiety (Neimeyer, 1994). It includes (see Appendix-C) 15 true–false statements. The scale has .83 test–retest reliability and .76 internal consistency (Templer, 1970). In this study, the scale obtained .68 internal consistency. Although it was not high enough and questionable to a certain extent, it can be deemed almost acceptable.

Procedure

Participants were contacted online. The link to the survey was sent to various Facebook groups related to psychology departments in Norway and Turkey. In addition, e-mail was used to share the link to the survey with psychology lecturers, who were then asked to share it with their students. It was an online survey, therefore there was no face-to-face meeting with the participants. At the beginning of the survey, participants were given detailed written information about the study. Furthermore, ethical permission was obtained from the Institution of Review Board of ELTE Eötvös Loránd University. After demographic questions, participants were asked to complete three scales. Scales were given in a specific order, so participants were not able to choose the order at random. The first scale was the Beck Depression Inventory (Beck, Steer, Ball, et al., 1996), the second one was the Trait Anxiety Scale part of the State-Trait Anxiety Inventory (Spielberger et al., 1970), and the third one was the Death Anxiety Scale (Templer, 1970). This order was chosen to prevent the Death Anxiety Scale from having a priming effect on the participants which could potentially result in an increase in depressive and anxiety symptoms (Strachan et al., 2007).

2.3 Results

A one-way multivariate analysis of variance was run to investigate the differences between Norwegian and Turkish participants concerning their level of death anxiety. In addition to this, differences in depressive and anxiety symptoms in these countries were evaluated using the same analysis. The analysis brings out that nationality has a significant multivariate effect. This means

that there was a statistically significant difference between the countries (Norway and Turkey) in the combined dependent variables, F (3, 243) = 9. 03, $p < .0005$; Pillai's Trace = .10; partial η^2 = .10. The significant differences between the two countries suggest that Turkish participants expressed more death anxiety than Norwegian participants. Moreover, Turkish participants scored higher on depressive and anxiety symptoms than Norwegian participants. 2.3 Table 1 contains details of the means and standard deviations of this analysis, and 2.3 Table 2 includes the results of one-way multivariate analysis for nation.

2.3.Table 1. Descriptive Statistics Table of the scales for Turkish and Norwegian participants

Scale	Mean (SD) Turkey	Mean (SD) Norway
BDI-II	13.27 (8.86)	8.06 (6.77)
STAI	47.55 (10.77)	41.13(11.37)
DAS	7.38 (2.92)	6.27 (2.99)

Note. The maximum number of points that can be reached for BDI-II is "63," for STAI "80," for DAS "15." DAS=Death Anxiety Scale; BDI-II=Beck Depression Inventory-II; STAI=State-Trait Anxiety Inventory—Trait version; SD=standard deviation.

2.3 Table 2. Multivarite Test Results

Variable	Pillai's Trace	F	Hypothesis df	Error df	Sig.
Nation	0.100	9.033[a]	3.000	243.000	p <0.0001

a=Exact Statistic

In addition, two separate simple linear regressions were applied to predict depressive and anxiety symptoms from the Death Anxiety Scale for both countries. The findings of the analysis indicate that both Norwegian, F (1, 88) = 4.028, $p<.05$, $R^2 = .044$, and Turkish, F (1, 155) = 8.561, $p<.05$, $R^2 = .052$, participants' death anxiety was positively and significantly connected to depressive

symptoms. Furthermore, both Norwegian, F (1, 88) = 6.881, $p < .05$, $R^2 = .073$ and Turkish, F (1, 155) = 8.942, $p < .05$, $R^2 = .055$, participants' death anxiety was positively and significantly connected to anxiety symptoms. 2.3 Table 3 shows the details of correlation analysis results.

2.3 Table 3. Correlation Analysis Results for Turkish and Norwegian participants

	Turkish (n=157)			Norwegian (n=90)		
Scales	DAS	BDI-II	STAI	DAS	BDI-II	STAI
DAS	-			-		
BDI	.23**	-		.21*	-	
STAI	.23**	.81**	-	.27*	.79**	-

Note. *. Correlation is significant at p < .05 and **. Correlation is significant at p < .01
DAS = Death Anxiety Scale; BDI-II = Beck Depression Inventory-II; STAI = State-Trait Anxiety Inventory – Trait version.

2.4 Discussion

Our first hypothesis was that Norwegian participants would have a higher level of death anxiety than their Turkish counterparts. However, the hypothesis was not confirmed by the analysis, and Turkish subjects were found to have a higher death anxiety level. This finding contradicts those of several previous studies which claimed that Eastern cultures are inclined to be better at buffering death anxiety than Western cultures (Gedik & Bahadır, 2014; Gire, 2014; Güngör, 2007; Kübler-Ross, 1975; Mcmordie & Kumar, 1984; Schumaker et al., 1988; Westman & Canter, 1985).

Our second hypothesis looked at the relationship between death anxiety and depression and anxiety. As expected, our findings show that death anxiety is positively and significantly connected to depression and anxiety among both Norwegian and Turkish participants. This result was consistent with the literature (Abdel-Khalek, 1997; Abdel-Khalek & Tomás-Sábado, 2005; Gilliland & Templer, 1986; Iverach et al., 2014). Moreover, this hypothesis allowed us to investigate this relationship separately for Norwegian and Turkish participants.

The third and the last hypothesis compared depression and anxiety levels among Norwegian and Turkish participants. Similarly to the first hypothesis, the findings did not support our hypothesis, and Turkish participants were found to have higher on depression and anxiety levels.

The plausible explanations related to why might be the first and third hypothesis were not confirmed, were given in detailed in general discussion part.

3. Different Death Attitudes in Internalizing Symptom Context Among Norwegian and Turkish Women[3]

3.1 Background and aims

The purpose of the second study was to examine the association between death attitudes and depressive and anxiety symptoms among Norwegian and Turkish participants. As it was discussed in detail in the general introduction part, previous findings showed that attitudes toward death do not necessarily include only fear and anxiety. Thus, studies revealed that death anxiety is a multidimensional concept (Collett & Lester, 1969; Florian & Kravetz, 1983; Hoelter, 1979; Ray & Najman, 1974).

Consequently, the present research provides some important contributions to the existing literature. Firstly, besides Fear of Death, the other four death attitudes were also investigated; Death Avoidance, Approach Acceptance, Escape Acceptance and Neutral Acceptance. In this way, we were able to examine the relationships among these five death attitudes and their coexisting structures associated with the chosen variables — depressive and anxiety symptoms.

In the present study, we used a multidimensional scale that minimizes the aforementioned methodological drawbacks. Secondly, the study compares two different cultures on death attitudes with respect to depressive and anxiety symptoms. The earlier literature has emphasized the importance of investigating different cultures in order to obtain a better understanding of the nature of death attitudes.

The present study is another part of our first research, in which the same sample was used (Oker et al., 2019). However, it is not an extension of the previous study, as the presented findings related to death attitudes are completely new.

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[3] Chapter 3 is based upon the following study:

Oker, K., Reinhardt, M., & Schmelowszky, Á. (2020). Different death attitudes in internalizing symptom context among Norwegian and Turkish women. *OMEGA - Journal of Death and Dying, 85*(3), 650-668. https://doi.org/10.1177/0030222820952984

Hypotheses of the Study

Based on our literature review and to compare different death attitudes in internalizing symptom context among Norwegian and Turkish participants we came up with the following hypotheses: (1) For both countries, Fear of Death, Death Avoidance and Escape Acceptance attitudes were expected to be positively related to depressive and anxiety symptoms. (2) For both countries, Neutral Acceptance and Approach Acceptance were expected to be negatively related to depressive and anxiety symptoms. (3) For both countries, Fear of Death was expected to be positively related to Death Avoidance, while Neutral Acceptance, Approach Acceptance and Escape Acceptance were expected to be negatively related to Fear of Death and Death Avoidance attitudes.

In addition, for both countries we predicted that Approach Acceptance would be positively related to Escape Acceptance. (4) Fear of Death was predicted to be higher among Norwegian participants than their Turkish counterparts. This is because we found several studies in the literature suggesting that Eastern cultures tend to be more effective at buffering death anxiety than Western cultures (Gire, 2014; Kübler-Ross, 1975; Ma-Kellams & Blascovich, 2012; Mcmordie & Kumar, 1984; Moos & Schaefer, 1987; Schumaker et al., 1988; Westman & Canter, 1985). (5) Lastly, we predicted that the Turkish participants would score significantly higher on Approach Acceptance than the Norwegian participants. As it was stated before, some researchers claim that secularized Western cultures have a more materialistic evaluation of the concept of death — that is, the death of the body is considered as being also the death of the self (Westman & Canter, 1985). By contrast, in Eastern cultures death is regarded as being a transitory 'incident of ongoing existence'. Thus, it can be argued that the Eastern concept is closer to Approach Acceptance than the Western view.

3.2 Method[4]

Participants

[4] Method and results parts of the Chapter 3 is taken from the following study:
Oker, K., Reinhardt, M., & Schmelowszky, Á. (2020). Different death attitudes in internalizing symptom context among Norwegian and Turkish women. *OMEGA - Journal of Death and Dying, 85*(3), 650-668. https://doi.org/10.1177/0030222820952984

The present study involved a total of 304 participants from Norway (N=127; 41.8%) and Turkey (N=177; 58.2%). The Norwegian participants were selected from the University of Oslo and ELTE Eötvös Loránd University and the most of the Turkish participants were selected from the Middle East Technical University (METU). Inclusion criteria were based on the participant's age, whether they were studying or had studied psychology, and whether they were able to read and understand English. Several researchers have found that elderly adults have a significantly lower level of fear of death and are significantly more likely to accept death as an escape from life (Gesser et al., 1988; Neimeyer, 1994; Suhail & Akram, 2002). For this reason, we chose participants aged between 18 and 35 (categorised as 18–24, 25–29 and 30–35).

The convenience sampling method was used. There were several reasons for choosing psychology students. Firstly, we had greater access to psychology students and they were more responsive and more willing to volunteer to participate in the research. Secondly, our aim was to keep the sample homogeneous in terms of education and knowledge, thus we recruited only participants from departments of psychology in both countries. However, as the majority of students in psychology departments are female, we were unable to obtain sufficient data for men: while 70.9% of the respondents from Norway were female (N¼90), only 29.1% were male (N¼37). Similarly, in Turkey 157 (88.7%) of the participants were female and 20 (11.3%) male.

A large body of studies demonstrates that women have significantly higher death anxiety levels than men (e.g. Neimeyer et al., 1986; Rigdon & Epting, 1985; Templer et al., 1971). Based on this evidence and as we were unable to recruit a sufficient number of male participants, the data for the male participants were excluded from the research. The analyses are therefore based on data for 90 women from Norway and 157 women from Turkey.

Measures

The research was based on four scales, including a short demographic scale containing questions about the participants' nationality, gender and age. All respondents were given the English versions of the scales. Participants were fluent in English, as their language of education at their university was English.

The Beck Depression Inventory II (BDI-II). The BDI-II (see Appendix-A) is a 21-item scale that measures the severity of self-reported depression in adolescents and adults over the last two

weeks (Beck et al., 1996). Each item contains a 4-point scale from 0 to 3. The scale demonstrates very high reliability and validity scores. It has high test retest reliability ($r = 0.93$, $p < 0.001$) and internal consistency ($\alpha = 0.91$) (Beck et al., 1996). In the present research, Cronbach's alpha for this test was 0.90 for both countries combined and also for the Turkish participants only. For the Norwegian participants it was 0.88.

State-Trait Anxiety Inventory (STAI). The STAI was devised by Spielberger et al. (1970). The scale assesses both state anxiety and trait anxiety — state anxiety is a temporary condition, whereas trait anxiety is a relatively permanent feature (Spielberger et al., 1970). Both subscales comprise 20 items.

Several studies have shown that death anxiety is more related to trait anxiety than to state anxiety. Furthermore, there is evidence to suggest that death anxiety may be a trait rather than a state phenomenon (e.g. Abdel-Khalek, 1986; Abdel-Khalek & Omar, 1988; Gilliland & Templer, 1986; Pettigrew & Dawson, 1979). Since we were investigating death attitudes, we considered the trait anxiety subscale to be more relevant to our research. Thus, in the present study, only the trait anxiety subscale (see Appendix-B) was used.

The subscale has good psychometric properties. The test retest- reliability coefficients for the test range from 0.73 to 0.86. In addition, the alpha coefficients of the scale are high, with a median alpha of 0.90 (Spielberger et al., 1970). In the current research, the test also demonstrated high internal consistency for the both countries combined and for the Norwegian participants only ($\alpha = 0.93$) and it was 0.92 for the Turkish participants.

Death Attitude Profile-Revised (DAP-R). The DAP-R (see Appendix-D), developed by Wong et al. (1994), is an upgraded version of the DAP that was developed by Gesser et al. (1988). According to Neimeyer and Fortner (1997) as cited in Esnaashari and Kargar (2015), there are three main drawbacks to earlier research into death attitudes: (a) the lack of a theoretical foundation; (b) a one-dimensional focus on death attitudes; and (c) measurement problems in terms of both validity and reliability. They also mention that the DAP-R minimizes these weaknesses by taking an ontological view of death, and that, by measuring several death attitudes, it presents no problems with respect to validity and reliability (Neimeyer & Fortner,

1997; as cited in Esnaashari & Kargar, 2015). Furthermore, Neimeyer (1997–1998) mentions that the DAP-R is currently one of the most psychometrically sound measures of death attitudes.

In the present study, we therefore decided to use the DAP-R in order to minimize the flaws referred to above. It comprises 32 items and five attitudes: (a) Fear of Death; (b) Death Avoidance; (c) Approach Acceptance; (d) Escape Acceptance; and (e) Neutral Acceptance. The alpha coefficients of internal consistency for the scale published by the authors are 0.65 for Neutral Acceptance; 0.84 for Escape Acceptance; 0.86 for Fear of Death; 0.88 for Death Avoidance; and 0.97 for Approach Acceptance. Thus, overall, the DAP-R scales have good to very good reliability (Neimeyer, 1994).

In the present study, the internal consistencies in the subscales were as follows: Fear of Death α = 0.81(both countries combined), 0.87 (Turkish participants only), 0.78 (Norwegian participants only); Death Avoidance α = 0.87(both countries combined), 0.84 (Turkish participants only), 0.87 (Norwegian participants only); Neutral Acceptance α = 0.73(both countries combined), 0.75 (Turkish participants only), 0.66 (Norwegian participants only); Approach Acceptance α = 0.95(both countries combined), 0.94 (Turkish participants only), 0.95 (Norwegian participants only); and Escape Acceptance α = 0.88(both countries combined), 0.88 (Turkish participants only), 0.86 (Norwegian participants only).

Procedure

Participants were contacted via Facebook. In addition, a link to the survey was sent by email to some psychology lecturers, who were requested to share it with their students. As the survey was administered online, there were no face-to-face meetings with respondents. At the beginning of the survey, participants were given detailed written information about the research. Furthermore, ethical permission was obtained from the Institution of Review Board of ELTE Eötvös Loránd University.

3.3 Results

Two separate multiple linear regressions were applied to predict depressive and anxiety symptoms from the five death attitudes for both countries. The findings indicate that, among Norwegians, only the attitudes Approach Acceptance and Escape Acceptance significantly

predicted depressive symptoms F (5, 84) = 6.530, p < 0.01, R2 = 0.280. The results show that, among the Norwegian participants, Approach Acceptance was negatively associated with depressive symptoms, while Escape Acceptance was positively correlated with depressive symptoms. Among the Turkish participants, only Escape Acceptance significantly predicted depressive symptoms F (5, 151) = 3.201, p < 0.01, R2 = 0.096. Similarly, among Turkish participants there was a positive correlation between Escape Acceptance and depressive symptoms.

Furthermore, the results showed that among the Norwegian participants only, Approach Acceptance and Escape Acceptance significantly predicted anxiety symptoms F (5, 84) = 8.237, p < 0.01, R2 = 0.329. Among Norwegian participants, Approach Acceptance was negatively associated with anxiety symptoms, while Escape Acceptance was positively correlated with anxiety symptoms. Among the Turkish participants, only the attitudes Fear of Death and Escape Acceptance significantly predicted anxiety symptoms F (5, 151) = 5.208, p < 0.01, R2 = 0.147. According to this, among the Turkish participants both Fear of Death and Escape Acceptance were positively correlated with anxiety symptoms.

3.3 Table 1 shows the details of the multiple regression analysis for depression, and 3.3 Table 2 shows the details of the multiple regression analysis for anxiety.

3.3 Table 1. Summary of the multiple regression analysis for the prediction of depression in both countries

	Norway				Turkey			
Dimensions of DAP-R	*B*	*SE*(b_i)	β	Sig.	*B*	*SE*(b_i)	β	Sig.
FD	0.044	0.644	0.009	0.946	1.234	0.747	0.167	0.101
DA	0.498	0.690	0.086	0.473	-0.569	0.617	-0.086	0.358
NA	-1.145	0.955	-0.141	0.234	-0.648	0.717	-0.078	0.367
AA	-1.533	0.502	-0.335	0.003*	-0.707	0.504	-0.118	0.163
EA	2.737	0.502	0.550	0.000*	1.845	0.521	0.304	0.001*

Notes: * p<0.01; *B:* unstandardised regression coefficient; *SE* (b_i): standard error of the coefficient; β: standardised coefficient; Sig.: significance level; FD: Fear of Death; DA: Death

Avoidance; NA: Neutral Acceptance; AA: Approach Acceptance; EA: Escape Acceptance.

3.3 Table 2. Summary of the multiple regression analysis for the prediction of anxiety in both countries

	Norway				Turkey			
Dimensions of DAP-R	*B*	*SE*(b_i)	β	Sig.	*B*	*SE*(b_i)	β	Sig.
FD	0.711	1.044	0.085	0.498	2.211	0.883	0.246	0.013*
DA	1.547	1.120	0.159	0.171	-0.882	0.729	-0.110	0.228
NA	-2.290	1.550	-0.167	0.143	-0.139	0.846	-0.014	0.869
AA	-2.142	0.815	-0.279	0.010*	-1.023	0.595	-0.140	0.088
EA	5.063	0.814	0.606	0.000**	2.812	0.616	0.382	0.000**

Notes: * p<0.05, ** p<0.01; *B*: unstandardised regression coefficient; *SE* (b_i): standard error of the coefficient; β: standardised coefficient; Sig.: significance level; FD: Fear of Death; DA: Death Avoidance; NA: Neutral Acceptance; AA: Approach Acceptance; EA: Escape Acceptance.

A Pearson correlation test was also performed in order to identify the correlation among the five death attitudes (see 3.3 Table 3). In the Norwegian subsample, the findings indicated a positive association between Fear of Death and Death Avoidance attitudes, and a negative relationship between the Fear of Death and Death Avoidance attitudes and the Neutral Acceptance and Escape Acceptance attitudes. In addition, Neutral Acceptance was found to be negatively associated with Approach Acceptance. Lastly, Approach Acceptance was found to be positively associated with Escape Acceptance.

The analysis showed that, among the Turkish participants, all correlations were the same as among the Norwegian participants, except that for Turkish participants Neutral Acceptance was not significantly correlated with Approach Acceptance but was rather related significantly and positively to Escape Acceptance.

3.3 Table 3. Correlation analysis results

	Norway					Turkey				
Scale	FD	DA	NA	AA	EA	FD	DA	NA	AA	EA
FD	_					_				
DA	.58**	_				.55**	_			
NA	-.47**	-.31**	_			-.43**	-.21**	_		
AA	-.04	.15	-.37**	_		-.02	.01	.10	_	
EA	-.25*	-.25*	.12	.23*	_	-.20*	-.18*	.19*	.38**	_

Notes: *Correlation is significant at the 0.05 level (2-tailed); **Correlation is significant at the 0.01 level (2-tailed); FD: Fear of Death; DA: Death Avoidance; NA: Neutral Acceptance; AA: Approach Acceptance; EA: Escape Acceptance.

Finally, a one-way multivariate analysis of variance was used to investigate the differences between the Norwegian and Turkish participants in terms of their death attitudes. The analysis revealed that nationality has a significant multivariate effect. This means that there was a statistically significant difference between the countries (Norway and Turkey) in the combined dependent variables: F (5, 241) = 13.43, $p < 0.0005$; Pillai's Trace = 0.22; partial $\eta^2 = 0.22$.

According to this, the Turkish participants expressed greater Death Avoidance (*M* = 3.76, *SD* = 1.34 vs. *M* = 2.86, *SD* = 1.17), Approach Acceptance (*M* = 3.72, *SD* = 1.47 vs. *M* = 2.66, *SD* = 1.48) and Escape Acceptance (*M* = 3.62, *SD* = 1.46 vs. *M* = 3.10, *SD* = 1.36) than the Norwegian participants, while the Norwegian participants exhibited more Neutral Acceptance (*M* = 5.70, *SD* = 0.83 vs. *M* = 5.44, *SD* = 1.07) than the Turkish participants. There was no significant difference between the Turkish and Norwegian participants (*M* = 3.94, *SD* = 1.20 vs. *M* = 3.80, *SD* = 1.37) in relation to Fear of Death. Moreover, the Turkish respondents scored higher on depressive (*M* = 13.27, *SD* = 8.86 vs. *M* = 8.06, *SD* = 6.77) and anxiety (*M* = 47.55, *SD* = 10.77 vs. *M* = 41.13, *SD* = 11.37) symptoms than the Norwegian participants.

3.4 Discussion

The findings of the present study suggest that Escape Acceptance may be the most maladaptive death attitude among Norwegian and Turkish participants alike, as it was the only death attitude

that was found to be significantly positively correlated with depressive and anxiety symptoms for both countries.

We may also conclude that Approach Acceptance may be the most adaptive death attitude among Norwegian participants, since it was the only death attitude that has a significantly negative association with depressive and anxiety symptoms among Norwegian participants. Additionally, Death Avoidance was unrelated with depressive and anxiety symptoms for both countries.

Our results also show that, for both countries, there was a positive correlation between Fear of Death and Death Avoidance attitudes. However, for both countries only Neutral Acceptance and Escape Acceptance were negatively correlated with Fear of Death and Death Avoidance. In addition, in keeping with our hypothesis, for both countries Approach Acceptance was positively correlated with Escape Acceptance.

Based on these results, we may conclude that having a greater conscious fear of death-related issues is associated with greater suppression and greater avoidance of thinking or talking about death-related issues. Furthermore, the concept of death as an escape from a painful life is associated with belief in a happy afterlife. The concept of death as a neutral part of this life, or as an escape from a painful life, is related to less fear of death-related issues and less avoidance of talking or thinking about death-related topics.

4. Effects of COVID-19 on Mental Health and Its Relationship With Death Attitudes and Coping Styles Among Hungarian, Norwegian, and Turkish Psychology Students[5]

4.1 Background and aims

COVID-19 has caused a great deal of stress in almost all of the countries in the world (Gormsen & Koijen, 2020; Remuzzi & Remuzzi, 2020; Vahedian-Azimi et al., 2020; Xu et al., 2020). During the early stages of the pandemic, several studies were applied to understand how COVID-19 effected people's emotion and behavior and their antecedents based on psychological aspects

[5] Chapter 4 is based upon the following study:
Oker, K., Reinhardt, M., & Schmelowszky, Á. (2022). Effects of COVID-19 on mental health and its relationship with death attitudes and coping styles among Hungarian, Norwegian, and Turkish psychology students. *Frontiers in Psychology, 13*. https://doi.org/10.3389/fpsyg.2022.812720

(Guo et al., 2020; Li et al., 2020; Skapinakis et al., 2020; Wang et al., 2020; Zacher & Rudolph, 2020).

As it was mentioned in the general introduction, most of the studies that investigated the Terror Management Theory conducted Mortality Salience experiments under laboratory settings . However, from TMT perspective, COVID-19 provides a unique circumstance to observe the influence of death anxiety on individual's behavior and psychological well-being as a real life experience , since there are constant reminders of death during the pandemic, for instance, daily news regarding the numbers of dead because of the pandemic, indirect reminders of death via face masks, anti-bacterial sprays and wipes, social distancing, travel restrictions, curfews and so on (Menzies & Menzies, 2020).

Similarly, Pyszczynski et al. (2020) explained that irrespective of whether an individual consciously believes that COVID-19 is a significant threat to life or just a minor trouble, fear of death plays a big role in guiding one's attitudes and behavior regarding the virus.

Pyszczynski et al. (2020) argued that the unique situation regarding the pandemic has prevented people to use the usual coping strategies to deal with death anxiety. During the pandemic, the world has become even more unpredictable, therefore, people have troubles to prevent their worldviews, meaning and self-esteem from getting torn apart. On the top of it, they are losing their jobs, lacking of social supports and forced to stay isolated from their friends and families whom could provide emotional support in normal conditions when they need it . In addition, people keep hearing conflicted and confusing news from governments, scientists and health care institutions. Consequently, the world has become much more chaotic, unsafe and shaky planet for humans (Pyszczynski et al., 2020).

As a result, fundamental resources which people use generally in anxiety triggering situations, damaged significantly during the pandemic. Following this some people have started to use some maladaptive proximal and distal defenses. For example, in normal terms, people who are adapting proximal defenses try to suppress or deny death related thoughts and threats or they can involve in such behaviors that diminishes one's vulnerability (Pyszczynski et al., 2020). However, COVID-19 made this impossible, as there is constant exposure through television, social media and so on. Consequently, people started to use more dysfunctional proximal

defenses during the pandemic to distract themselves (Pyszczynski et al., 2020), such as alcohol consumption (Alpers et al., 2021), excessive eating (Cecchetto et al., 2021), and binge-watching television (Dixit et al., 2020).

In addition, the current pandemic is unique in terms of the number of countries affected (Gurvich et al., 2020). In fact, 220 countries, areas and territories have been diagnosed with cases (World Health Organization, 2020). Previous findings have suggested that for future studies, it is important to identify people prone to psychological disorders related to COVID-19 from different cultures, communities and countries, in order to deepen our understanding of psychological aspects of COVID-19 and eventually to develop adaptive psychological interventions (Salari et al., 2020; Zacher & Rudolph, 2020). Furthermore, studies have emphasized the need for follow-up studies (Xiong et al., 2020) to investigate the later stages of the pandemic in terms of its effect on mental health, in order to assess long-term effects of the pandemic.

Therefore, the current study aims to detect the mental effects of COVID-19 and its relationship with death attitudes and coping styles in different countries, by examining the samples of Hungarian, Norwegian and Turkish university students.

Moreover, this research aims to investigate when different countries/cultures experience a stressful event, how they may differentiate in mental health and its relationship with death attitudes and coping styles. As it was stated above, the pandemic provides a unique opportunity to observe the influence of death anxiety on individual's behavior and psychological well-being as a real life experience and it gave us a chance to conduct a cross cultural study in this regard.

Studies about COVID-19 showed that depression, anxiety, stress and PTSD are among the leading psychological problems in the context of the pandemic (Gurvich et al., 2020; Xiong et al., 2020). Moreover, student status is found to be associated with a greater psychological impact of the COVID-19 outbreak and higher levels of stress, anxiety and depression (Wang et al., 2020). Lee (2020) also reported that higher education is related to higher coronavirus anxiety. Lee (2020) stated that additional research about this population is needed.

Considering these factors, we decided to conduct our research among university students and examined their depression, anxiety, stress and PTSD levels. Based on our literature review, this will be the first study to investigate the mental effects of COVID-19 and its relationship with

death attitudes and coping styles among the three different countries (Hungary, Norway and Turkey).

These countries were selected for a number of reasons. Firstly, death attitudes may change from culture to culture (Gire, 2014), and this difference can play a critical role in buffering the anxiety, depression and stress related to COVID-19 (Jovančević & Milićević, 2020).

Moreover, before COVID-19, we had run our first two studies where we compared Turkish and Norwegian psychology students with respect to their death anxiety and different death attitudes and relationship of these variables with depressive and anxiety symptoms (Oker et al., 2020; Oker et al., 2019). Thus, we considered it would be worthwhile to examine the Norwegian and Turkish university student population again with the same variables during COVID-19.

In addition, according to the cultural dimensions of Hofstede et al. (2010), there are both similarities and differences between Hungary, Norway and Turkey:

Power Distance (Norway and Hungary=low, Turkey=high). Power Distance refers to the degree to which less powerful individuals of institutions and organizations in a society anticipate and accept decentralization of unequal power (Hofstede Insights, 2018).

Countries that score low on this dimension exhibit some common features, such as being independent, hierarchy for convenience only, equal rights, superiors accessible, coaching leader, management facilitates and empowers (Hofstede Insights, 2018).

Given their low scores on this dimension, Hungary and Norway can be considered to have a closer relationship with the aforementioned attributes above. On the other hand, Turkey scores high on this dimension, hence, characterizes more with being dependent, hierarchical and superiors often inaccessible and the ideal boss is a father figure. In Turkey, this pattern can also be seen in conventional family settings, where father serves as the patriarch to whom other family members comply (Hofstede Insights, 2018).

Individualism (Hungary and Norway=individualistic, Turkey=collectivistic). The main issue addressed by this dimension is the extent of interdependence a community sustains among its members. It is related to whether individuals' sense of self is defined primarily as an 'I' or 'We' (Hofstede Insights, 2018).

Members of individualistic cultures mainly focus on looking after themselves and their direct family only, while individuals that are belong to collectivistic cultures are part of their ‘in groups’ that look after each other in return for loyalty (Hofstede Insights, 2018).

According to the findings both Hungary and Norway are closer to the individualistic culture. Therefore, in these countries, we might observe that emphasis is more on the ‘I’ rather than ‘We’. Turkey, on the other hand, is associated more with collectivistic culture where people might tend to prioritize the needs of their in-groups and expect loyalty in return (Hofstede Insights, 2018).

Masculinity (Norway=low, Turkey=middle, Hungary=high). A high score (Masculine) on this dimension indicates that the society places a strong emphasis on competition, achievement, and success. Success is often defined by being the best in one's field and this value system can be observed both in educational system and in organizational life (Hofstede Insights, 2018).

Furthermore, a low score (Feminine) on this dimension implies that the society values caring for others and a focus on quality of life. In a feminine society, success is measured by one's overall well-being, while standing out from the crowd is not highly valued (Hofstede Insights, 2018).

The main issue being addressed in this dimension is what motivates people; whether it is the drive to be the best (Masculine) or the enjoyment of what you do (Feminine) (Hofstede Insights, 2018).

Norway scores 8 (low) on the Feminine cultural scale, making the country the second most feminized society, after Sweden. Therefore, Norway shows more softer sides of the culture in which environmental awareness is high, empathy and sympathy toward disadvantaged people and work-life balance are highly valued (Hofstede Insights, 2018).

Turkey is on the middle on this dimension and it is considered to be closer to the Feminine side of the cultural scale. This indicates that Turkey as a society places more emphasis on the softer aspects of culture as well. Moreover, leisure time is also significant among Turks, this provides an opportunity for familial, communal, and social gatherings to enjoy life (Hofstede Insights, 2018).

Hungary is considered a Masculine society with a high score on this dimension. Generally in these types of countries, work is considered as being more important than leisure, leaders are

expected to be assertive and decisive, there is an emphasis on fairness, performance, and competition, and conflicts are dealt by fighting them out (Hofstede Insights, 2018).

Uncertainty Avoidance (Hungary and Turkey=high, Norway=middle). This dimension is related to ambiguity which is inherent in life that might lead to anxiety and different cultures have established various mechanisms to cope with this anxiety. Therefore, the main issue that is addressed by this dimension is that to what extent the members of a culture experience unease in the presence of ambiguous or unknown situations and have developed beliefs and institutions to decrease this anxiety (Hofstede Insights, 2018).

Norway is in the middle on dimension which implies a neutral standing. This indicates that people in Norway does not have a strong tendency towards attempts to exert control over ambiguous situations or acceptance of uncertainty (Hofstede Insights, 2018).

Moreover, both Turkey and Hungary are high on this dimension implying an emotional need towards the establishment of laws and regulations to mitigate anxiety. To decrease uncertainty, individuals may engage in several types of rituals (Hofstede Insights, 2018).

Long-term Orientation (Hungary=high, Norway=low, Turkey=middle). This dimension posits that every society needs to sustain some degree of connection with its own past while dealing with the challenges of the present and future. Based on these, countries might show two different approaches; normative and pragmatic (Hofstede Insights, 2018).

A low score on this dimension indicates that the country shows normative approach. Societies with this aspect have inclination to prioritize the preservation of long-standing traditions and norms, while approaching societal change with criticism. A high score on this dimension implies that the society shows more pragmatic elements in which the members value thrift and investments in modern education as a means of preparing for the future (Hofstede Insights, 2018).

Norway got a relatively low score on this dimension indicating a cultural preference for tradition and following established norms over a pragmatic approach, whereas Hungary is considered as being high on this dimension which indicates an inclination towards rather a pragmatic approach. Turkey, on the other hand, is on the middle of this dimension which reflects a neutral preference,

as it does not show a significant cultural tendency towards both to a normative and a pragmatic approach (Hofstede Insights, 2018).

Indulgence (Hungary=low, Norway and Turkey=middle). This dimension deals with the degree to which members of a society attempt to regulate their desires and impulses based on their upbringings. Two subcategories are observed in this dimension; Indulgence (relatively weak control) and Restraint (relatively strong control) (Hofstede Insights, 2018).

Hungary is low on this dimension referring to a Restrained cultural approach which can be characterized by a tendency towards cynicism and pessimism. In these types of cultures members tend to place less emphasis on leisure time and attempt to restrict their satisfaction of their desires. Both Norway and Turkey, on the other hand, score intermediate, hence showing a neutral preference (Hofstede Insights, 2018).

Therefore, based on all these differences and similarities, we considered that it can be worthwhile to examine these three distinctive countries during the pandemic (Jovančević & Milićević, 2020).

We therefore, believe the present study will contribute to the literature in terms of providing deeper insight to our understanding of psychological aspects of COVID-19, and eventually will help to develop culture-specific adaptive psychological interventions. Additionally, to the best of our knowledge, the present study was unique in terms of examining the different death attitudes related to COVID-19 among the three countries.

As there is no previous research that compares these countries in the context of the pandemic related to death attitudes and coping strategies and due to the novelty of the virus, no specific hypotheses were drawn in the present study. Therefore, the current study is exploratory research.

The main aim of this study is to check how these three distinctive countries may differentiate in terms of the effects of COVID-19 on mental health and its relationship with death attitudes and coping styles.

More specifically, we are interested in examining the relationship of approach coping, avoidant coping, humor and religion coping styles with depressive, anxiety, stress and PTSD symptoms among the Hungarian, Norwegian and Turkish participants.

In addition, we are interested in exploring the relationship between the five different death attitudes (Fear of Death, Death Avoidance, Neutral Acceptance, Approach Acceptance and Escape Acceptance) and depressive, anxiety, stress and PTSD symptoms among the three countries.

Lastly, we are interested in investigating the relationship of approach coping, avoidant coping, humor and religion coping styles with the five different death attitudes among the three countries.

4.2 Method[6]

Participants

This study included a total of 388 (female = 328, 84.5% and male = 60, 15.5%) participants from Hungary (N = 122, 31.4%), Norway (N = 96, 24.7%), and Turkey (N = 170, 43.8%). The participants were students of psychology from different universities in Hungary, Norway, and Turkey. Participant age ranged from 18 to 60 years (M = 24.2, SD = 6). Inclusion criteria were based on participant age (equal to or over 18 years old), whether they were studying psychology, and whether they were able to read and understand English.

Convenience sampling method was used. There were several reasons for choosing psychology students. First, we had greater access to psychology students, and they were more responsive and more willing to volunteer to participate in the research. Second, our aim was to keep the sample homogeneous in terms of education and knowledge. 4.2 Table 1 presents the details of sample characteristics.

4.2 Table 1. Sample Characteristics

Characteristic	Hungary (N=122; 31.4%)	Norway (N=96; 24.7%)	Turkey (N=170; 43.8%)
Gender			
Female	101 (82.8)	75 (78.1)	152 (89.4)

[6] Method and results parts of the Chapter 4 is taken from the following study :
Oker, K., Reinhardt, M., & Schmelowszky, Á. (2022). Effects of COVID-19 on mental health and its relationship with death attitudes and coping styles among Hungarian, Norwegian, and Turkish psychology students. *Frontiers in Psychology, 13*. https://doi.org/10.3389/fpsyg.2022.812720

Male	21 (17.2)	21 (21.9)	18 (10.6)
Economic Status			
Below	8 (6.6)	13 (13.5)	5 (2.9)
Average	89 (73.0)	66 (68.8)	128 (75.3)
Above Average	25(20.5)	17(17.7)	36(21.2)
Missing	0	0	1(0.6)
Education			
BA	70 (57.4)	29 (30.2)	101 (59.4)
MA	43 (35.2)	55 (57.3)	40 (23.5)
PhD	9 (7.4)	12 (12.5)	29 (17.1)
Marital Status			
Married	5 (4.1)	8 (8.3)	15 (8.8)
Divorced	1 (0.8)	1 (1.0)	4 (2.4)
Single	60 (49.2)	47 (49.0)	99 (58.2)
With a partner	55 (45.1)	39 (40.6	51 (30.0)
Other	1 (0.8)	1 (1.0)	1 (0.6)
Relationship with the COVID-19			
Healthy	105 (86.1)	86 (89.6)	150 (88.2)
Suspicious case	5 (4.1)	3 (3.1)	4 (2.4)
Diagnosed case	2 (1.6)	3 (3.1)	2 (1.2)
Relatives or friends of suspicious case	12 (9.8)	1 (1.0)	5 (2.9)
Relatives or friends of diagnosed case	16 (13.1)	7 (7.3)	19 (11.2)
Other	1 (0.8)	0	1 (0.6)
History of chronic illness			
No	111 (91.0)	84(87.5)	137(80.6)
Yes	10 (8.2)	12(12.5)	33(19.4)
Missing	1 (0.8)	0	0
Current physical health condition			
Very poor	1 (0.8)	0	0
Poor	3 (2.5)	5 (5.2)	8 (4.7)

Average	41 (33.6)	30 (31.3)	40 (23.5)
Good	45 (36.9)	40 (41.7)	80 (47.1)
Very good	32 (26.2)	21 (21.9)	42 (24.7)

Measures

The research was based on five scales, including the demographic scale which was comprising questions about the participants' nationality, gender, age, education, economic status, marital status, current residential location, relationship with COVID-19, history of chronic illness and current physical health condition. All the respondents were given the English version of the scales. Participants were fluent in English, as the majority of participants' language of education in their university was English.

Mental health status was measured using the Depression, Anxiety and Stress Scales (DASS-21) (Lovibond and Lovibond, 1995). The scale (see Appendix-F) is a set of three self-report scales designed to assess the emotional states of depression, anxiety, and stress.

Items 3, 5, 10, 13, 16, 17, and 21 formed the depression subscale (example item: "I couldn't seem to experience any positive feeling at all"). The total depression subscale score was divided into normal (0–9), mild depression (10–12), moderate depression (13–20), severe depression (21–27), and extremely severe depression (28–42).

Items 2, 4, 7, 9, 15, 19, and 20 formed the anxiety subscale (example item: "I felt I was close to panic"). The total anxiety subscale score was divided into normal (0–6), mild anxiety (7–9), moderate anxiety (10–14), severe anxiety (15– 19), and extremely severe anxiety (20–42).

Items 1, 6, 8, 11, 12, 14, and 18 formed the stress subscale (example item: "I found myself getting agitated"). The total stress subscale score was divided into normal (0–10), mild stress (11–18), moderate stress (19–26), severe stress (27–34), and extremely severe stress (35–42).

In this research, Cronbach's alpha for the depression subscale was 0.91for Hungary, 0.92 for Norway, and 0.9 for Turkey. For the anxiety subscale, it was 0.81 for Hungary, 0.76 for Norway, and 0.75 for Turkey. Lastly, for the stress subscales, it was 0.82 for Hungary and 0.87 for Norway and Turkey.

The psychological impact of COVID-19 was measured using the Impact of Event Scale-Revised (IES-R; Weiss and Marmar, 1997). The IES-R (see Appendix-E) is a self-administered 22-item questionnaire (example item: “any reminder brought back feelings about it”). In this study, the participants were asked to reply to questions with respect to COVID-19. The total IES-R score was divided into 0–23 (normal), 24–32 (mild psychological impact), 33–36 (moderate psychological impact), and >37 (severe psychological impact) (Creamer et al., 2003). In this study, Cronbach’s alpha for this test was 0.90 for Hungary, 0.95 for Norway, and 0.93 for Turkey.

Coping styles were measured with the Brief COPE Inventory (Carver, 1997). The Brief COPE Inventory (see Appendix-G) can identify 14 coping styles with 28 questions and 2 items per type.

The scale includes two main coping style dimensions: approach and avoidant coping styles. Avoidant coping is characterized by the subscales of denial (a = 0.68 for Hungary; a = 0.8 for Norway; a = 0.7 for Turkey), an example item of the subscale is, “I’ve been refusing to believe that it has happened”; substance use (a = 0.95 for Hungary; a = 0.92 for Norway; a = 0.92 for Turkey), an example item of the subscale is, “I’ve been using alcohol or other drugs to make myself feel better”; venting (a = 0.51 for Hungary; a = 0.5 for Norway; a = 0.21 for Turkey), an example item of the subscale is: “I’ve been expressing my negative feelings”; behavioral disengagement (a = 0.74 for Hungary; a = 0.65 for Norway; a = 0.68 for Turkey), an example item of the subscale is: “I’ve been giving up the attempt to cope”, self-distraction (a = 0.63 for Hungary; a = 0.71 for Norway; a = 0.61 for Turkey), an example item of the subscale is, “I’ve been turning to work or other activities to take my mind off things”; and self-blame (a = 0.55 for Hungary; a = 0.75 for Norway; a = 0.52 for Turkey), an example item of the subscale is, “I’ve been blaming myself for things that happened”.

Approach coping is characterized by the subscales of active coping (a = 0.68 for Hungary; a = 0.72 for Norway; a = 0.64 for Turkey), an example item of the subscale is, “I’ve been taking action to try to make the situation better”; positive reframing (a = 0.81 for Hungary; a = 0.75 for Norway; a = 0.8 for Turkey), an example item of the subscale is, “I’ve been looking for something good in what is happening”; planning (a = 0.81 for Hungary; a = 0.75 for Norway; a = 0.5 for Turkey), an example item of the subscale is, “I’ve been thinking hard about what steps to take”; acceptance (a = 0.58 for Hungary; a = 0.83 for Norway; a = 0.6 for Turkey), an example

item of the subscale is, "I've been accepting the reality of the fact that it has happened"; use of emotional support (a = 0.8 for Hungary; a = 0.89 for Norway; a = 0.66 for Turkey), an example item of the subscale is, "I've been getting emotional support from others"; and use of instrumental support (a = 0.82 for Hungary; a = 0.89 for Norway; a = 0.77 for Turkey), an example item of the subscale is, "I've been getting help and advice from other people".

According to the scale, humor (a = 0.9 for Hungary; a = 0.9 for Norway; a = 0.85 for Turkey) and religion (a = 0.81 for Hungary; a = 0.72 for Norway; a = 0.78 for Turkey) coping styles do not belong to neither approach nor avoidant coping. An example item for the humor subscale is, "I've been making jokes about it" and for the religion is, "I've been trying to find comfort in my religion or spiritual beliefs".

In this study, the respondents were asked to read the statements and indicate how much they have been using each coping style to cope with COVID-19-related stress symptoms. With short scales (e.g., scales including less than 5 items), it is usual to observe low Cronbach's alpha (Briggs and Cheek, 1986). Because in the BRIEF COPE measurement each subscale includes only 2 items, some subscales showed low Cronbach's alpha in this study. However, since the subscales had only 2 items, we can consider an alpha score from 0.5 to 0.7 as showing moderate reliability (Hinton et al., 2014, p. 359). However, for the Turkish participants, the venting coping style subscale was lower than 0.5. Therefore, we excluded this subscale from further analysis.

Death attitudes were measured by the Death Attitude Profile- Revised scale (DAP-R; Wong et al., 1994). It comprises 32 items and five death attitudes: (a) fear of death (a = 0.85 for Hungary and Norway; a = 0.79 for Turkey), and an example item of the subscale is, "I have an intense fear of death"; (b) death avoidance (a = 0.91 for Hungary; a = 0.9 for Norway; and a = 0.81 for Turkey), an example item of the subscale is, "I avoid death thoughts at all costs"; (c) approach acceptance (a = 0.9 for Hungary; a = 0.93 for Norway; and a = 0.91 for Turkey), an example item of the subscale is, "Death is an entrance to a place of ultimate satisfaction"; (d) escape acceptance (a = 0.84 for Hungary; a = 0.89 for Norway; and a = 0.85 for Turkey), an example item of the subscale is, "Death will bring an end to all my troubles", and (e) neutral acceptance (a = 0.7 for Hungary; a = 0.69 for Norway; and a = 0.69 for Turkey), an example item of the subscale is "Death should be viewed as a natural, undeniable, and unavoidable event".

Procedure

Several psychology lecturers in different universities in Hungary, Norway, and Turkey were contacted to share our survey link with their students. The survey was administered online. Data were collected between July 2 and November 20, 2020. At the beginning of the survey, the participants were given detailed written information about the research, and informed consent was obtained voluntarily from all the participants. Ethical permission was obtained from the Institution of Review Board of ELTE Eötvös Loránd University (reference number: 2020/166).

Data analysis

Statistical Package for the Social Sciences (SPSS) 20.0 software was used to perform our analyses. Accordingly, descriptive statistics was used to summarize the sample characteristics of all the participants. In addition, four separate hierarchical multiple linear regressions were applied to predict depressive, anxiety, stress and PTSD symptoms from the five death attitudes and from the thirteen different coping styles for the three countries, after controlling for age and gender. The regression analyses were carried out in three steps: In the first step, age and gender control variables were entered as predictors. In the second step, the five different death attitudes were added. In the third step, the thirteen different coping styles were entered in the regression model. For the anxiety analysis part, case-wise diagnostic detected two outliers from Turkey (case numbers: 273 and 313). These cases were filtered out from the analysis and then the analysis was re-run. Lastly, a set of Pearson correlation tests were also run to assess the relationship between the five death attitudes and the thirteen coping styles.

4.3 Results

The findings indicate that among the Hungarians; none of the control variables were significantly correlated with stress in any of the steps. Moreover, Fear of Death and Escape Acceptance death attitudes were significantly positively related to stress in step 2, whereas only Escape Acceptance death attitude remained significantly related to stress in step 3. In addition, positive reframing and self-blame coping styles were significantly related to stress. Positive reframing was negatively associated and self-blame was positively associated with stress.

For the Norwegian participants; none of the control variables were significantly correlated with stress in step 1 and step 2. However, age was significantly and positively correlated with stress, after the coping styles were entered into the regression in Step 3. Furthermore, Fear of Death and Escape Acceptance death attitudes were significantly positively related to stress in step 2, while none of the death attitudes remained significantly correlated with stress in step 3. In addition, emotional support and self-blame coping styles were significantly related with stress. The analysis showed that both emotional support and self-blame coping styles were positively associated with stress among the Norwegians.

For the Turkish participants; age was significantly and negatively correlated with stress in all steps. In addition, Fear of Death and Escape Acceptance significantly positively predicted stress in step 2. Based on the results, both Fear of Death and Escape Acceptance death attitudes remained significantly associated with stress in step 3. Moreover, behavioral-disengagement, positive reframing and self-blame coping styles were also significantly correlated with stress among the Turkish participants. The analysis showed that self-blame and behavioral-disengagement coping styles were positively related to and positive reframing was negatively related to stress. 4.3 Table 2 presents the details of the hierarchical multiple regression analysis for stress.

4.3 Table 2. Summary of the Hierarchical Multiple Regression Analysis for the Prediction of Stress in the Three Countries.

	Hungary			Norway			Turkey		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Control variables									
Age	.01	-.02	-.10	-.07	.04	.19*	-.31**	-.25**	-.14*
Gender	.15	.15	.14	.13	.15	.04	.08	.08	.12
Independent variables									
Fear of Death		.26*	.17		.30*	.11		.23**	.21**
Death Avoidance		.10	-.02		.12	.10		-.06	-.10

Neutral Acceptance		-.07	-.14		.03	.05		.03	.01
Approach Acceptance		.03	.00		.02	.01		-.06	.05
Escape Acceptance		.42**	.28**		.21*	.09		.31**	.21**
Self- distraction			.11			.21			.11
Active coping			.14			-.02			.02
Denial			.01			.00			-.12
Substance use			.05			.08			.13
Emotional support			-.13			.34*			.08
Informational support			.16			-.21			-.08
Behavioral disengagement			.10			.13			.16*
Positive reframing			-.32**			-.22			-.22**
Planning			.18			-.02			.02
Humor			.00			-.13			-.08
Acceptance			.03			-.09			.01
Religion			.08			.11			.04
Self-blame			.30**			.52**			.35**
R^2	.02	.20	.49	.02	.18	.58	.11	.25	.50
Adjusted R^2	.01	.15	.39	.00	.11	.47	.10	.21	.43
R^2 –changed	.02	.17	.29	.02	.15	.40	.11	.14	.25
F	1.40	3.96**	4.84**	1.14	2.71*	5.20**	10.28**	7.57**	7.30**
N	122	122	122	96	96	96	170	170	170

Notes: Figures shown are standardized coefficients (i.e. beta values).

*p < 0.05, **p < 0.01

Furthermore, the findings indicate that for Hungarians; none of the control variables were significantly correlated with depression in any of the steps. In addition, only Escape Acceptance

death attitude was significantly positively related to depression in both step 2 and step 3. Substance use and self-blame coping styles were also significantly positively related to depressive symptoms among the Hungarian respondents.

For the Norwegian respondents; age was significantly and negatively correlated with depression in step 1, but it was not in step 2 and step 3. Moreover, only Escape Acceptance death attitude was significantly positively related to depression in both step 2 and step 3. Behavioral-disengagement and self-blame coping styles were also significantly positively related to depressive symptoms.

For the Turkish sample; age was significantly and negatively correlated with depression in step 1 and step 2, but it was not in step 3. Furthermore, Fear of Death and Escape Acceptance death attitudes were significantly and positively correlated with Depressive symptoms in both step 2 and step 3. Self-distraction, behavioral-disengagement, self- blame coping styles were significantly positively related to and positive-reframing significantly negatively related to depressive symptoms among the Turkish participants. 4.3 Table 3 presents the details of the hierarchical multiple regression analysis for depression.

4.3 Table 3. Summary of the Hierarchical Multiple Regression Analysis for the Prediction of Depression in the Three Countries.

	Hungary			Norway			Turkey		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Control variables									
Age	-.01	-.07	-.09	-.24*	-.17	-.04	-.31**	-.26**	-.11
Gender	-.06	-.06	-.10	.02	.11	.00	-.02	-.01	.02
Independent variables									
Fear of Death		.17	.04		.17	.06		.20*	.17*
Death Avoidance		.10	-.07		.10	.03		-.09	-.12
Neutral Acceptance		-.08	-.15		.09	.07		.03	.02
Approach		-.09	-.04		-.11	-.08		-.11	.04

Acceptance									
Escape Acceptance		.46**	.30**		.44**	.31**		.35**	.20**
Self- distraction			.06			.09			.16*
Active coping			-.06			.05			-.07
Denial			.16			.03			-.01
Substance use			.26**			-.02			.03
Emotional support			-.06			.08			.05
Informational support			.01			-.13			-.13
Behavioral disengagement			.04			.33**			.26**
Positive reframing			-.15			-.20			-.23**
Planning			.12			-.11			.02
Humor			-.02			-.09			.00
Acceptance			.02			-.01			.02
Religion			-.01			.07			.01
Self-blame			.32**			.43**			.30**
R^2	.00	.18	.49	.06	.24	.56	.10	.25	.52
Adjusted R^2	-.01	.12	.39	.04	.18	.44	.09	.22	.46
R^2 –changed	.00	.17	.32	.06	.18	.32	.10	.15	.27
F	0.20	3.46**	4.90**	3.03	4.00**	4.74**	8.99**	7.69**	8.21**
N	122	122	122	96	96	96	170	170	170

Notes: Figures shown are standardized coefficients (i.e. beta values).

*p < 0.05, **p < 0.01

For the Hungarian participants, analysis related to anxiety revealed that; gender predicted anxiety significantly in all steps and age was significantly and negatively related to anxiety only in step 3. In addition, only Escape Acceptance death attitude was significantly positively related to depression in both step 2 and step 3. Substance use, self-blame coping and active-coping styles

were significantly positively related to and emotional support and positive reframing were negatively related to anxiety.

For the Norwegian participants; none of the control variables were significantly correlated with anxiety in any of the steps. Similarly, none of the death attitudes were significantly correlated with anxiety in both step 2 and step 3, whereas self- blame and religion coping styles were significantly positively related to and humor coping style was significantly negatively related to anxiety.

For the Turkish sample; age was significantly and negatively correlated with anxiety in all steps. Moreover, Fear of Death and Escape Acceptance death attitudes were significantly and positively correlated with anxiety in step 2. However, in the third step, Fear of Death was not significantly related to anxiety; instead, Neutral Acceptance and Escape Acceptance death attitudes were significantly and positively correlated with anxiety in step 3. Moreover, only behavioral-disengagement coping style was significantly positively correlated with anxiety. 4.3 Table 4 presents the details of the hierarchical multiple regression analysis for anxiety.

4.3 Table 4. Summary of the Hierarchical Multiple Regression Analysis for the Prediction of Anxiety in the Three Countries.

	Hungary			Norway			Turkey		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Control variables									
Age	-.15	-.16	-.28**	-.17	-.10	-.03	-.28**	-.23**	-.18*
Gender	.21*	.19*	.18*	.13	.12	-.01	.06	.06	.11
Independent variables									
Fear of Death		.16	.06		.15	.08		.21*	.16
Death Avoidance		.14	.00		.14	.03		-.12	-.13
Neutral Acceptance		.00	-.08		-.03	-.03		.15	.16*
Approach		.04	.02		.08	.03		-.02	.09

Acceptance									
Escape Acceptance		.42**	.28**		.13	-.06		.30**	.22**
Self- distraction			-.06			.03			-.04
Active coping			.27**			.01			.02
Denial			-.06			.20			.10
Substance use			.20*			.17			.05
Emotional support			-.23*			.04			.03
Informational support			.09			-.04			-.04
Behavioral disengagement			.14			.20			.32**
Positive reframing			-.22*			-.12			-.04
Planning			.12			.12			.10
Humor			.00			-.21*			-.04
Acceptance			.00			-.01			.02
Religion			.10			.22*			-.02
Self-blame			.37**			.36**			.07
R^2	.06	.21	.54	.05	.15	.55	.08	.22	.39
Adjusted R^2	.04	.16	.45	.03	.08	.43	.07	.18	.31
R^2 –changed	.06	.15	.33	.05	.09	.41	.08	.13	.18
F	3.78*	4.35**	5.96**	2.48	2.14*	4.61**	7.62**	6.31**	4.73**
N	122	122	122	96	96	96	170	170	168

Notes: Figures shown are standardized coefficients (i.e. beta values).

*p < 0.05, **p < 0.01

The analysis related to PTSD symptoms demonstrated that for the Hungarian participants; gender predicted PTSD symptoms significantly in step 1 and step 2, but the significant relationship disappeared in step 3. Contrary to gender, age was not significantly related to anxiety in step 1 and step 2, however, it was significantly and negatively related to PTSD symptoms in step 3. In addition, Fear of Death, Death Avoidance and Escape Acceptance were significantly positively

related to PTSD symptoms in Step 2. However, Fear of Death and Death Avoidance were not significantly correlated with PTSD symptoms in Step 3; instead, Approach Acceptance was significantly negatively related to and Escape Acceptance was positively related to PTSD symptoms in step 3. Moreover, Self-blame, substance-use, religion and active-coping were significantly positively related to PTSD symptoms.

For the Norwegian respondents; age was significantly and negatively correlated with PTSD symptoms in step 1 and step 2, but it was not in step 3. In addition, only Escape Acceptance death attitude was significantly positively related to PTSD symptoms in step 2. However, none of the death attitudes were significantly correlated with PTSD symptoms in step 3. On the other hand, self-distraction, behavioral-disengagement and self-blame coping styles were significantly positively related and humor was negatively related to PTSD symptoms.

For the Turkish participants; age was significantly and negatively correlated with PTSD symptoms in all steps. In addition, Fear of Death and Escape Acceptance death attitudes were significantly and positively correlated with PTSD symptoms in step 2, whereas none of the death attitudes were significantly correlated with PTSD symptoms in step 3. Lastly, behavioral-disengagement and self-blame coping styles were significantly positively related to and positive-reframing was significantly negatively related to PTSD symptoms. 4.3 Table 5 presents the details of the hierarchical multiple regression analysis for PTSD.

4.3 Table 5. Summary of the Hierarchical Multiple Regression Analysis for the Prediction of PTSD symptoms in the Three Countries.

	Hungary			Norway			Turkey		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Control variables									
Age	-.12	-.10	-.18*	-.29**	-.23*	-.07	-.28**	-.23**	-.14*
Gender	.23*	.21*	.13	.10	.12	-.03	.00	.00	.05
Independent variables									
Fear of Death		.24*	.13		.09	-.07		.19*	.12

Death Avoidance		.23*	.04		.15	.03		.03	-.01
Neutral Acceptance		.11	.05		.06	.02		.05	.06
Approach Acceptance		-.10	-.21**		.01	.02		-.12	.12
Escape Acceptance		.36**	.19*		.19*	-.04		.26**	.12
Self- distraction			.14			.26*			.05
Active coping			.32**			-.12			.11
Denial			.05			.09			.03
Substance use			.18*			.13			.12
Emotional support			-.15			-.03			.16
Informational support			.15			.04			-.04
Behavioral disengagement			.16			.36**			.34**
Positive reframing			-.08			.01			-.16*
Planning			-.06			.15			.06
Humor			-.01			-.20*			-.01
Acceptance			-.05			.01			-.08
Religion			.16*			.01			-.13
Self-blame			.33**			.25*			.19*
R^2	.06	.22	.64	.10	.16	.62	.08	.19	.53
Adjusted R^2	.04	.18	.57	.08	.09	.52	.07	.16	.46
R^2 –changed	.06	.16	.42	.10	.06	.46	.08	.11	.34
F	3.70*	4.69**	9.16**	5.05*	2.37*	6.13**	6.95**	5.44**	8.34**
N	122	122	122	96	96	96	170	170	170

Notes: Figures shown are standardized coefficients (i.e., beta values).

*p < 0.05, **p < 0.01

In addition, a set of Pearson correlation tests were run to assess the relationship between the five death attitudes and the thirteen coping styles (see 4.3 Table 6). According to the analysis, the

significant correlations are as follows; for the Hungarian subsample: Death Avoidance was positively associated with denial and behavioral-disengagement and negatively correlated with acceptance coping styles. Neutral Acceptance was positively associated with humor. Approach Acceptance was positively correlated with emotional support and religion. Escape Acceptance was positively correlated with behavioral-disengagement.

For the Norwegian subsample, Fear of Death was associated positively with self-distraction, emotional support, informational support, behavioral-disengagement and self-Blame. Death Avoidance was positively correlated with self-distraction, informational support and self-blame, whereas it was negatively correlated with humor. Neutral Acceptance was negatively correlated with emotional support and positively correlated with acceptance. Approach Acceptance was positively associated with positive reframing and religion. Escape Acceptance was positively associated with denial and humor.

For the Turkish subsample, Fear of Death was associated positively with self-distraction, emotional support and denial. Death Avoidance was positively associated with self-distraction. Neutral Acceptance was negatively correlated with denial and positively correlated with acceptance. Approach Acceptance was negatively associated with substance-use and behavioral-disengagement, whereas it was positively correlated with religion and positive-reframing. Escape Acceptance was negatively associated with active coping, positive-reframing and acceptance, while it was positively associated with behavioral-disengagement and humor.

4.3 Table.6 Correlation Analysis Results.

	Hungary					Norway					Turkey				
	Death attitudes					Death attitudes					Death attitudes				
Coping Styles	FD	DA	NA	AA	EA	FD	DA	NA	AA	EA	FD	DA	NA	AA	EA
Self-distraction	.03	.10	.05	.03	.13	.39**	.25*	-.07	.16	.13	.15*	.17*	.01	.07	.01
Active coping	-.09	-.09	.07	.14	-.03	.16	.13	-.01	.17	.03	.02	.09	.02	.03	-.17*
Denial	.15	.30*	-.08	.03	-	-.05	.12	-.03	.19	.23*	.22*	.13	-	-.04	.07

		*			.13						*		.33**		
Substance use	.15	.17	.03	-.04	.09	.00	-.08	-.07	-.04	.13	.15	.14	-.02	-.22**	.04
Emotional support	-.05	-.08	.06	.22*	.05	.26**	.09	-.20*	.10	.02	.18*	.04	-.05	.05	.01
Informational support	.04	.01	.03	.15	.02	.25*	.22*	-.19	.16	.03	.11	.03	-.03	.01	-.01
Behavioral disengagement	.08	.23**	-.08	.10	.21*	.21*	.14	-.07	.03	.19	.07	.07	.00	-.16*	.20*
Positive reframing	-.08	-.05	.12	.06	-.01	.10	.02	.10	.28**	.15	.03	-.02	.08	.30**	-.16*
Planning	-.07	-.08	.17	-.05	.05	.15	.14	.02	.14	.17	.12	.03	.08	.06	.02
Humor	-.10	-.06	.31**	-.01	.14	-.11	-26*	.14	.15	.23*	.13	-.06	.08	-.02	.16*
Acceptance	-.07	-.22*	.10	-.09	.03	-.08	-.09	.29**	-.11	.02	-.01	.01	.25**	.12	-.16*
Religion	-.04	-.01	.01	.40**	.06	.01	-.16	-.04	.42**	.19	.01	-.10	-.11	.58**	.03
Self-blame	.15	.12	.03	-.03	.14	.21*	.24*	.03	.10	.11	.10	.05	-.01	-.03	.15

Notes: *Correlation is significant at the 0.05 level (2-tailed); **Correlation is significant at the 0.01 level (2-tailed); FD: Fear of Death; DA: Death Avoidance; NA: Neutral Acceptance; AA: Approach Acceptance; EA: Escape Acceptance.

Lastly, a one-way multivariate analysis of variance was used to investigate the differences between the three countries in terms of their level of depression, anxiety, stress, PTSD and death attitudes[7]. The analysis revealed that nationality has a significant multivariate effect. This means

[7] The table in Chapter 4; '**4.3 Table.6** Correlation Analysis Results' and the results related to that are an addition and not belong to the following study:

that there was a statistically significant difference between the countries (Hungary, Norway and Turkey) in the combined dependent variables: $F(18, 656) = 5.135$, $p < .0005$; Wilks' $\Lambda = .768$; partial $\eta^2 = .123$.

Tukey post-hoc test revealed that there were not significant differences for depression and stress among the three countries. However, the Turkish participants were higher on anxiety (M = 10.2, SD = 8.1; M = 7.2, SD = 7.4) than the Norwegian participants and there were not significant differences between the Turkish and Hungarians (M = 9.2, SD = 9.0) and also there were not significant differences between the Hungarian and Norwegian participants in their anxiety levels.

In addition, both Turkish and Hungarian respondents were higher on PTSD symptoms than their Norwegian counterparts (M = 24.0, SD = 16.1; M = 22.0, SD = 14.0; M = 16.2, SD = 16.0) and there was not significant difference between the Turkish and Hungarian participants on their PTSD levels.

Moreover, Turkish participants were significantly higher on Death Avoidance than the Hungarian and Norwegian participants (M = 3.9, SD = 1.4; M = 3.2, SD = 1.5; M = 3.2, SD = 1.5) and there were not any significant differences between Hungarian and Norwegian participants.

Furthermore, Turkish and Hungarian participants were higher on Approach Acceptance than Norwegian participants (M = 3.4, SD = 1.4; M = 3.6, SD = 1.3; M = 2.6, SD = 1.3) and there were not any significant differences between Turkish and Hungarian participants.

In addition, there were not any significant differences among the countries for Fear of Death, Neutral Acceptance and Escape Acceptance death attitudes.

4.4 Discussion

The results of the current study suggest that Escape Acceptance might be the most maladaptive death attitude among the Hungarian, Norwegian and Turkish participants in the context of COVID-19, since it was the only death attitude that was found to be significantly correlated with poorer mental health among the three countries alike during COVID-19.

Additionally, Fear of Death was significantly related to higher stress among the three countries alike in step 2. However, this relationship was not significant, after the coping styles were entered into the regression in Step 3 among the Hungarian and Norwegian participants. On the other hand, Fear of Death remained significantly and positively related to stress and depression among the Turkish individuals in step 3.

The analyses of the current study exhibited that self-blame, behavioral-disengagement, self-distraction and substance-use coping styles were related to poorer mental health during COVID-19 in our sample. We may conclude that self-blame might be the most maladaptive coping style, as it was associated with poorer mental health among the three countries alike during COVID-19. This result was consistent with the previous studies (Gurvich et al., 2020).

In addition, behavioral-disengagement can be particularly risky for the Turkish participants during COVID-19, as it was related to higher stress, depression, anxiety and PTSD symptoms among them. Similarly, substance-use might be particularly risky for the Hungarian participants during COVID-19, as it was related to higher depression, anxiety and PTSD symptoms among them.

Positive-reframing might be the most adaptive coping style among the Hungarian and Turkish participants, since it was related to better mental health among them. Accordingly, positive-reframing was related to lower stress, depression and PTSD symptoms among the Turkish participants. Moreover, positive-reframing was related to lower stress and anxiety among the Hungarian participants. For the Norwegians, however, humor can be the most successful coping style in the context of COVID-19, as it was related to lower anxiety and PTSD symptoms among the Norwegian respondents.

5. General Discussion

The three studies presented above yielded some findings and implications that we considered to be worthy to dwell on in more detail. For example, some of the results were contradicting with the existing literature; in the first study, the Turkish participants were found to have higher death anxiety level then the Norwegian participants. As previously mentioned, Turkish culture was posited to be closer to Eastern culture, and the findings of this study contradict those of several

previous studies which claimed that Eastern cultures are inclined to be better at buffering death anxiety than Western cultures (Gedik & Bahadır, 2014; Gire, 2014; Güngör, 2007; Kübler -Ross, 1975; Mcmordie & Kumar, 1984; Schumaker et al., 1988; Westman & Canter, 1985).

There are some possible explanations for why Turkish participants scored higher on death anxiety than Norwegian participants in this study. The characteristics of the participants may have affected the results. In this study, participants were university students who are studying or had studied psychology. Therefore, the meaning Turkish female psychology students attribute to death and their death rituals may differ from that of the general population. This difference may have an influence on the results of the study.

Another possible explanation is that other aspects of culture might have been more related to death anxiety than whether it is Western or Eastern, such as the country's socioeconomic status. For example, large body of literature showed that higher socioeconomic status is related with lower level of depression, anxiety, and death anxiety (Freeman et al., 2016; Iverach et al., 2014). As socioeconomic status of Norway is higher than Turkey, we can consider the possibility of the influence of this gap on the outcome.

In addition, as mentioned by Schumaker et al. (1991), death anxiety is universal and therefore all human beings defend themselves against death anxiety. In this study, Turkish participants may have been more open and less defensive when answering the questions than Norwegian participants. Consequently, they may have obtained higher scores on the Death Anxiety Scale.

Finally, as mentioned in the general introduction, Gashi (2011) and Yıldız (1999) found that Turkish students scored higher on death anxiety than Kosovar and Bosnian students. In both of the studies, the same explanation was given for this outcome, that is, as both of these countries (Bosnia and Kosovo) experienced war in the recent past, subjects from these countries scored lower on death anxiety.

Other studies have obtained similar results. For instance, Abdel-Khalek (1991) found that although there was a civil war in the recent past of Lebanon, the Lebanese samples had either the same or a lower mean score on death anxiety than their Arab and U.S. peers. This result was explained via the psychotherapeutic principle of flooding as a sequence of continuous exposure to an insecure environment (Abdel-Khalek, 2004a).

Looking at these findings, one might have assumed that Turkish participants would obtain lower death anxiety scores than Norwegian participants, because of the current threats of war and terrorism in Turkey. However, Abdel-Khalek (2004a) found the opposite results for this, and according to the outcome of that study, past war experiences and death-related threats actually increased people's level of death anxiety. He interpreted these results in the light of Templer's (1976) two-factor theory of death anxiety. Templer (1976) stated that there are two basic determinants of the degree of death anxiety: (1) the person's overall psychological health and (2) the person's death-related life experiences. The second factor means that death anxiety can be influenced by events and intimate personal interactions (Abdel-Khalek, 2004a).

Based on Templer's theory of death anxiety and the findings of Abdel-Khalek (2004a) as well as other similar findings (e.g., Roshdieh et al., 1999), one may think of the possibility that because Turkey is very close to one of the most volatile areas on the globe at the moment, tragic effects of this vicinity might have significantly undermined those cultural norms which might buffer better otherwise the death anxiety.

There were some inconsistent results between our studies as well. For instance, in the second study the findings implied that Approach Acceptance may be the most adaptive death attitude among Norwegian participants, since it was the only death attitude that has a significantly negative association with depressive and anxiety symptoms among the Norwegian participants. However, in the third study, Approach Acceptance was not related significantly to better mental health in any of the steps among the Norwegian participants during the pandemic. This inconsistent result might be related to the fact that the third study was conducted during the pandemic and the influence of this global threat might have significantly undermined the efficiency of Approach Acceptance death attitude which might buffer otherwise mental health significantly among the Norwegian participants.

In addition, although Approach Acceptance (believing in a happy afterlife) was negatively related to PTSD symptoms among the Hungarian participants in the third study, religion coping style was related to higher PTSD symptoms in the Hungarian sample and higher anxiety in the Norwegian sample. In the literature, religiosity was divided into two dimensions (Neimeyer et al., 2004): (1) extrinsic religiosity, which displays a utilitarian perception of religion, and (2) intrinsic religiosity, in which people put faith at the center of their lives. Studies have demonstrated that

intrinsic religiosity was related to lower death anxiety, whereas extrinsic religiosity was related to higher death anxiety (Neimeyer et al., 2004). Therefore, in our study, if the participants had mostly extrinsic religiosity, this may have increased their death anxiety, which may have led to higher levels of anxiety and PTSD symptoms.

There were also some consistent results between the second and the third studies. For instance, Approach Acceptance scores were higher for the Turkish participants than for the Norwegian participants in both our studies (2nd and 3rd one). These results were consistent with our hypothesis in the second research and with the previous literature that the Eastern concept can be closer to Approach Acceptance than the Western view.

These findings were also consistent with the results of Iranmanesh et al. (2010) where they found Iranian participants higher on Approach Acceptance than for Swedish participants. However, although the Turkish participants were higher on Approach Acceptance scores, this death attitude was not related significantly to better mental health among the Turkish participants both in the second and the third articles and as it is mentioned before, Approach Acceptance death attitude was related to better mental health among the Norwegian participants in the second research, although they had lower scores than the Turkish participants on this death attitude. This might be explained by our earlier argument — namely, that the difference in socioeconomic status between the two countries might be a potential mediator variable for the association between Approach Acceptance and mental health.

In addition, in one study (Morris & Mcadie, 2009), in which participants were asked about life after death, some Muslim participants reported that they did not know if they were good Muslims or not and were thus uncertain of their ultimate fate — that is, whether they would go to heaven or hell. However, in the same study, the Christian participants focused on the themes of heaven and eternal life. Considering our participants' cultural background — that is, Turkey is predominantly Muslim, while Norway is Christian — we might consider the possibility that the Norwegian respondents, if they believe in an afterlife, may be focusing on heaven and eternal life, which may result in fewer depressive and anxiety symptoms.

Another consistent result between the second and third studies was that there was no significant difference between Turkish and Norwegian participants in terms of the level of Fear of Death in

the second study and similarly, there were not any significant differences among the Hungarian, Norwegian and Turkish participants in Fear of Death attitude. However, the Fear of Death attitude was related to higher anxiety symptoms among the Turkish participants, while it was not significantly related to anxiety symptoms among the Norwegian participants in the second study. Similar to this, in the third study analyses revealed that Fear of Death was significantly related to higher stress among the three countries alike in step 2. However, this relationship was not significant, after the coping styles were entered into the regression in Step 3 among the Hungarian and Norwegian participants. On the other hand, Fear of Death remained significantly and positively related to stress and depression among the Turkish individuals in step 3.

One of the plausible explanations for this discrepancy between the Turkish and Hungarian individuals can be that for the Turkish people, Fear of Death attitude was associated with some dysfunctional coping styles, namely self-distraction and denial. However, for the Hungarian participants, Fear of Death attitude was not correlated with any dysfunctional coping styles. Therefore, having both Fear of Death attitude and some dysfunctional coping strategies among the Turkish respondents might have created this difference between the Turkish and Hungarian participants. With respect to the difference between the Turkish and Norwegian participants, this might be explained by our previous argument again— that is the difference in socioeconomic status between the two countries might be a potential mediator variable for the association between Fear of Death and anxiety symptoms.

In addition, the Turkish participants were higher on anxiety than the Norwegian participants and there were not significant differences between the Turkish and Hungarians and also there were not significant differences between the Hungarian and Norwegian participants in their anxiety levels. Moreover, both Turkish and Hungarian respondents were higher on PTSD symptoms than their Norwegian counterparts in the third study. Similarly, Turkish participants were found to have higher depression and anxiety levels than the Norwegian participants in the first study. As it is discussed earlier, Turkish participants were also higher on death anxiety than the Norwegian participants in the first study. This finding was consistent regarding the relationship between death anxiety and mental health (Abdel-Khalek, 1997; Abdel-Khalek & Tomás-Sábado, 2005; Gilliland & Templer, 1986; Iverach et al., 2014) that is higher death anxiety was connected to

lower mental health. As death anxiety was higher among the Turkish participants, the result was consistent in this regard.

In addition, the results of the second research suggested that Escape Acceptance may be the most maladaptive death attitude among Norwegian and Turkish participants alike, as it was the only death attitude that was found to be significantly positively correlated with depressive and anxiety symptoms for both countries. Similarly, the findings of the third research suggest that Escape Acceptance might be the most maladaptive death attitude among the Hungarian, Norwegian and Turkish participants in the context of COVID-19, since it was the only death attitude that was found to be significantly correlated with poorer mental health among the three countries alike during COVID-19. Therefore, these outcomes implied that Escape Acceptance death attitude might be a risk factor for both during the pandemic and before the pandemic.

As mentioned by Wong et al. (1994), people with an Escape Acceptance death attitude are generally unable to cope effectively with the pain and problems of existence. Thus, in our sample in the second study, it is also possible that participants with this death attitude may not have effective coping strategies for dealing with depressive and anxiety symptoms, resulting in significantly more depressive and anxiety symptoms. In fact, analyses of our third study showed that Escape Acceptance was correlated with some dysfunctional coping styles, such as behavioral-disengagement among the respondents. Consequently, having both Escape Acceptance death attitude and ineffective coping styles can be the plausible explanation for significantly lower mental health in our sample with high Escape Acceptance death attitude.

As it can be seen above, the results of the second study raised the possibility of the association of coping strategies with death attitudes and their influence on mental health. In line with this, evidences from the second study showed that even though Neutral Acceptance was the most prominent death attitude among the Turkish and Norwegian respondents, it was unrelated with depressive and anxiety symptoms for both countries. This result contradicts the findings of Wong et al. (1994), according to which Neutral Acceptance was the most adaptive death attitude. However, as it was stated before, Gesser et al. (1988) put forward the hypothesis that the association between happiness and Neutral Acceptance can be mediated by successful coping strategies. For instance, an individual with Neutral Acceptance can be encouraged by successful coping strategies to make their life as full and meaningful as possible, and this can increase their

well-being (Gesser et al., 1988). From this perspective, we may consider that, in order for there to be a significant negative relationship between Neutral Acceptance and depressive and anxiety symptoms, a person also needs to have successful coping strategies or related resources to encourage them to make their life meaningful alongside their neutral attitude towards death.

In our third study, we were able to observe the possible associations between death attitudes and coping strategies and their influence on mental health during the pandemic. For example, as it was mentioned above, Fear of Death was significantly related to higher stress among the three countries alike in step 2. However, this relationship was not significant, after the coping styles were entered into the regression in Step 3 among the Hungarian and Norwegian participants. On the other hand, Fear of Death remained significantly and positively related to stress and depression among the Turkish individuals in step 3. We had discussed that this discrepancy between the countries might be stemming from the different coping strategies that our participants were using during the pandemic. In addition, emotional support was related to higher stress among the Norwegians, whereas it was related to lower anxiety among the Hungarians.

One of the possible explanations for this discrepancy between the Norwegian and Hungarian participants can be that emotional support was positively correlated with Approach Acceptance among the Hungarian participants. However, emotional support was positively correlated with Fear of Death and negatively correlated with Neutral Acceptance among the Norwegian participants. Thus, these two death attitudes might mediate the relationship between emotional support and stress among the Norwegian participants and having both emotional support coping style and Approach Acceptance death attitude may reduce anxiety among the Hungarian respondents. Another finding related to this was that Neutral Acceptance death attitude was positively correlated with anxiety among the Turkish participants. For the Turkish participants, Neutral Acceptance was positively correlated with acceptance coping style. However, this coping style was not associated with the mental health of our participants. Thus, it is possible that, for our Turkish sample having only Neutral Acceptance death attitude without some functional coping styles (e.g., positive-reframing), might not be effective in buffering anxiety during COVID-19.

Moreover, the analyses of the third study revealed some other results when we compared the relationships between the five death attitudes and the thirteen coping styles among the three

countries which can be important to discuss. For instance, among the Norwegian and Turkish participants informational support seeking was positively correlated with Fear of Death, and for the Norwegian participants it was also positively associated with Death Avoidance. Some studies showed that obtaining information through social media was increasing anxiety among people during COVID-19, as this news mostly includes distressing and unreliable information (Xiong et al., 2020). Therefore, while seeking informational support, our Norwegian and Turkish participants might have been confronted with distressing and unreliable information, which might have resulted in higher fear of death and additionally, higher death avoidance for the Norwegian sample.

In addition, emotional support was positively correlated with Fear of Death and negatively associated with Neutral Acceptance among the Norwegian respondents. Some studies showed that stress may increase one's likelihood of seeking emotional support (Joo et al., 2020). Therefore, in our Norwegian sample the relationship between emotional support and Fear of Death and Neutral Acceptance may be the other way around; that is, the participants' higher Fear of Death level might have triggered their involvement in emotional support, and people with higher Neutral Acceptance may not feel the need to engage in emotional support.

Lastly, humor was positively associated with Escape Acceptance for both Turkish and Norwegian participants. We may conclude that viewing death as an escape from a painful life was associated with using humor coping style among these participants.

The analyses of the third study revealed some other important results regarding with coping styles. For example, the findings exhibited that self-blame, behavioral-disengagement, self-distraction and substance-use coping styles were related to poorer mental health during COVID-19 in our sample. We may conclude that self-blame might be the most maladaptive coping style, as it was associated with poorer mental health among the three countries alike during COVID-19. This result was consistent with the previous studies (Gurvich et al., 2020). Items of self-blame in the questionnaire included the statements "I've been criticizing myself" and "I've been blaming myself for things that happened." Therefore, criticizing and appraising oneself as responsible for the possible unfortunate outcomes of COVID-19 can be destructive for the individual's mental health.

In addition, behavioral-disengagement can be particularly risky for the Turkish participants during COVID-19, as it was related to higher stress, depression, anxiety and PTSD symptoms among them. Similarly, substance-use might be particularly risky for the Hungarian participants during COVID-19, as it was related to higher depression, anxiety and PTSD symptoms among them.

Positive-reframing might be the most adaptive coping style among the Hungarian and Turkish participants, since it was related to better mental health among them. Accordingly, positive-reframing was related to lower stress, depression and PTSD symptoms among the Turkish participants. Moreover, positive-reframing was related to lower stress and anxiety among the Hungarian participants. Therefore, it seems that reappraising the current circumstances by placing them in a positive frame was useful for the Turkish and Hungarian participants during COVID-19. This finding was consistent with previous studies (Gurvich et al., 2020; Zacher & Rudolph, 2020).

For the Norwegians, however, humor can be the most successful coping style in the context of COVID-19, as it was related to lower anxiety and PTSD symptoms among the Norwegian respondents. This finding was consistent with the results of Gurvich et al. (2020), who found humor associated with better mental health among the Australian population. However, Zacher and Rudolph (2020) found humor negatively related to positive affect among German participants. These conflicted results suggest that the function of humor coping style may change from culture to culture. Additionally, the style of the humor (e.g., affiliative, aggressive, self-enhancing or self-defeating humor) might influence the effectiveness of this coping style. Future studies may investigate this in more detail.

The findings yielded some other results with regard to the coping styles that might be important to dwell on. Active-coping, for instance, was positively related to anxiety and PTSD symptoms among the Hungarian participants. As it was discussed before, according to Lazarus and Folkman (1984), people use different kind of coping strategies depending on the nature of the stressor and the efficacy of the same coping strategy, which may differ from one situation to another. Thus, how one perceives the situation (controllable vs. uncontrollable) may change the efficacy of the coping strategy (Lazarus & Folkman, 1984; Stanisławski, 2019). Our results suggest that active-coping might have increased anxiety and PTSD symptoms among Hungarian participants,

because the situation they were in was not changing, despite the efforts they made to change it. However, Lazarus and Folkman (1984) also stated that the efficacy of the coping strategies may change in the long run. Thus, a coping strategy might be successful in the short term but then lose its efficacy in time, or the other way around (Sadaghiani & Sorkhab, 2013). Therefore, active-coping style might be dysfunctional temporarily for the Hungarian participants, yet it can develop into being functional in the long term. Future researchers may run longitudinal studies to investigate these possible associations.

Another outcome was that as it was mentioned previously emotional support was related to higher stress among the Norwegians, whereas it was related to lower anxiety among the Hungarians. Another plausible explanation might be also discussed as being different than our previous explanation. According to this, Sasaki and Yamasaki (2007) found situational emotional support seeking related to higher somatic symptoms, anxiety and insomnia. They explained that since emotional support seeking does not focus on decreasing the stressor directly, the stressor can persist and may get even more powerful. Considering this explanation, our Norwegian participants might have used emotional support coping style; yet, as the pandemic continues to interrupt their daily lives, their stress levels might have continued to increase. However, similar to our previous explanation, this may change in the long run and emotional support coping style may become efficient in time.

Another possible explanation might be that the Norwegian participants in our study may not have gotten a right kind of social support when they needed it. Some researchers argued that sometimes an attempt to provide social support might result in higher psychological distress, as it can be experienced as intrusive, controlling, and directive by the recipient or the social support providers might give poor advice or fail to meet the certain needs of the person. For example, if the person needs emotional support and, instead of this, gets only advice, then this can result in higher psychological distress (Taylor, 2012).

Lastly, the analyses of the third study for the control variables exhibited that the three countries also differentiate in terms of the relationship of age and gender with depressive, anxiety, stress and PTSD symptoms. For example, after the independent variables were entered into the regression in the final step, age was significantly and positively correlated with stress among the Norwegian participants, whereas age was significantly and negatively correlated with stress

among the Turkish participants. On the other hand, age was not related to stress among the Hungarian participants.

In addition, the Hungarian female participants reported significantly higher levels of anxiety than the Hungarian male participants in all steps. However, gender was not a significant predictor among the Norwegian and Turkish participants in any of the steps.

Previous studies showed inconsistent results regarding the effect of gender on coronavirus anxiety (Spitzenstätter & Schnell, 2020). As it is discussed above, in our study, both gender and age variables show inconsistent outcomes among the three countries as well. Therefore, further studies are needed to examine the effect of these variables on mental health with regard to the pandemic.

6. Conclusions, Implications and Future Directions

The studies shed some light on the topic of if different countries/cultures buffer death anxiety better than the other ones and the relationship between death anxiety and mental health among different countries which were our first and second research questions that were mentioned at the end of the introduction part. According to this the first study Turkish participants scored higher on death anxiety than their Norwegian counterparts and Norwegian participants were lower on both depressive and anxiety symptoms than the Turkish participants. As we discussed previously, this may not be explained solely by the cultural differences. Many other variables might be playing role on this such as, socioeconomic differences and multidimensional nature of death attitudes.

Therefore, in our second and third studies, we also included different death attitudes as well apart from fear of death. This was the interest of our third research question; ‘what is the relationship of different death attitudes with mental health among different countries?’ According to this both the second and the third studies showed believing that death is an escape from a painful life (Escape Acceptance death attitude) might be the most maladaptive death attitude, as it was related to lower mental health for Hungarian, Norwegian and Turkish participants. Further studies might investigate this relationship in greater detail, and practitioners in the field might pay

closer attention to patients with higher Escape Acceptance. As Victor Frankl (1959/1992) observed, attitudes towards death can be changed even when we are suffering and in pain.

In addition, our second study results raised the possibility of the presence of another potential mediator variable namely coping strategies. Therefore, in our third research we included this variable to the research as well which was the interest of our fourth research question; 'What role coping strategies play in the relationship of different death attitudes with mental health among different countries?' In addition, our fifth and the last research question was; 'when people from different countries or cultures experience a stressful event, how do they differentiate in mental health and its relationship with death attitudes and coping styles?' As it was stated before, the pandemic provided a unique opportunity to observe the influence of death anxiety on individual's behavior and psychological well-being as a real life experience and it gave us a chance to conduct a cross cultural study in this regard. According to this, we may conclude that apart from Escape Acceptances death attitude, some of the coping styles (self-blame, behavioral-disengagement, self-distraction, and substance-use) were also dysfunctional, as they were related to lower mental health during COVID-19 in our sample. Practitioners in the field might pay closer attention to patients who use dysfunctional coping styles.

In addition, our findings implied that death attitudes and coping styles may differ in their efficacy among different countries. For instance, Fear of Death attitude and behavioral-disengagement coping style can be particularly risky for the Turkish participants. Therefore, practitioners in Turkey can pay more attention to this death attitude and to behavioral-disengagement while working with patients during COVID-19. In addition, substance-use might be particularly risky for the Hungarian participants. Similarly, practitioners in Hungary can pay more attention to this coping style while working with patients during COVID-19. Furthermore, positive-reframing can be more functional among the Turkish and Hungarian participants, while humor might be more effective for the Norwegian participants. Therefore, practitioners may encourage their clients by using techniques involving positive-reframing in Turkey and Hungary and in Norway they might provide techniques involving humor.

Lastly, our analyses indicated that using active coping can be related to lower mental health in the short term, but might become functional in the long term among our Hungarian sample. Thus, practitioners should be cautious when working with clients with this coping style, and alert them

to this possibility. We consider that the practical implications of our third study can be useful in other similar contexts as well as in possible future outbreaks. Further studies can be conducted to investigate the relationship of mental health with death attitudes and coping styles, considering their long term efficacy among different countries.

7. Limitations

Several limitations should be considered when interpreting the outcomes of the first and the second studies. The first limitation was that convenience sampling was used to recruit the participants. Although convenience sampling is easy to apply and helped save both money and time, it limits the extent to which the findings can be extrapolated to the populations that were studied. For instance, in these two studies, the participants were university students who are studying or had studied psychology. The findings can therefore not be extrapolated to the entire populations of Norway and Turkey.

A second limitation was that because of the low number of male participants, we were only able to analyze female participants. This makes it difficult to make generalizations about our findings for both male and female. In addition, we were not able to investigate gender differences.

A third limitation was that it was a correlational study. It is therefore not possible to discuss causal interpretations in this study based on the relationship between our dependent and independent variables.

Finally, before the recruitment process began, two terrorist attacks occurred in Turkey and one of them was on October 10, 2015, which killed many people. This may have led to an increase in the levels of death anxiety, depression, and anxiety among the Turkish participants. Furthermore, a terrorist attack also occurred in Paris and more than 100 people were killed. This may also have led to an increase in the levels of death anxiety, depression, and anxiety among both Norwegian and Turkish participants.

The third study was also including the same drawbacks namely; convenience sampling and correlational research. In addition to these, the relatively small sample size used in third study might have increased the chance of committing a type II error (a false negative: rejecting statistically significant relationships when in fact there are). Therefore, one must be cautions

while interpreting the results of this research. Thus, we may base the results of this study as exploratory. As a result, the significant findings may still be useful and give us some direction for future studies. Therefore, we encourage further research to replicate our study with larger sample size. Furthermore, the inconsistent results mentioned in the discussion part related to gender and age differences might be due to unbalanced samples in this study. Similarly, further studies with more balanced sample are needed to make these findings sounder.

Notwithstanding these limitations, the first and the second studies were unique in terms of investigating death anxiety and other different death attitudes related to mental health among the Turkish and Norwegian participants. In addition, the third study was also unique with regards to investigating the different death attitudes related to COVID-19 among the Hungarian, Norwegian and Turkish participants. Furthermore, by checking the effects on mental health and coping styles of the participants, we were able to see how the three variables (different death attitudes, coping styles, and mental health) might be related to each other and to COVID-19 among our sample in the three countries.

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9. Appendices

Appendix A- Beck Depression Inventory

This questionnaire consists of 21 group of statements. Please read each group of statement carefully, and then pick out the one statement in each group that best describes the way you have been feeling during the past two weeks, including today. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. For example if you think 2 and 3 are equally representative of your condition, choose statement 3. Be sure that you do not choose more than one the answers are based on one statement for any group, including Item 16 (Changes in Sleeping Pattern) and Item 18 (Changes in Appetite).

1. Sadness

0. I do not feel sad.

1. I feel sad much of the time.

2. I am sad all the time.

3. I am so sad or unhappy that I can't stand it.

2. Pessimism

0. I am not discouraged about my future.

1. I feel more discouraged about my future than I used to.

2. I do not expect things to work out for me.

3. I feel my future is hopeless and will only get worse.

3. Past Failure

0. I do not feel like a failure.

1. I have failed more than I should have.

2. As I look back, I see a lot of failures.

3. I feel I am a total failure as a person.

4. Loss of Pleasure

0. I get as much pleasure as I ever did from the things I enjoy.

1. I don't enjoy things as much as I used to.

2. I get very little pleasure from the things I used to enjoy.

3. I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings

0. I don't feel particularly guilty.

1. I feel guilty over many things I have done or should have done.

2. I feel quite guilty most of the time.

3. I feel guilty all of the time.

6. Punishment Feelings

0. I don't feel I am being punished.

1. I feel I may be punished.

2. I expect to be punished.

3. I feel I am being punished.

7. Self-Dislike

0. I feel the same about myself as ever.

1. I have lost confidence in myself.

2. I am disappointed in myself.

3. I dislike myself.

8. Self-Criticalness

0. I don't criticize or blame myself more than usual.

1. I am more critical of myself than I used to be.

2. I criticize myself for all of my faults.

3. I blame myself for everything bad that happens.

9. Suicidal Thoughts or Wishes

0. I don't have any thoughts of killing myself.

1. I have thoughts of killing myself, but I would not carry them out.

2. I would like to kill myself.

3. I would kill myself if I had the chance.

10. Crying

0. I don't cry anymore than I used to.

1. I cry more than I used to.

2. I cry over every little thing.

3. I feel like crying, but I can't.

11. Agitation

0. I am no more restless or wound up than usual.

1. I feel more restless or wound up than usual.

2. I am so restless or agitated, it's hard to stay still.

3. I am so restless or agitated that I have to keep moving or doing something.

12. Loss of Interest

0. I have not lost interest in other people or activities.

1. I am less interested in other people or things than before.

2. I have lost most of my interest in other people or things.

3. It's hard to get interested in anything.

13. Indecisiveness

0. I make decisions about as well as ever.

1. I find it more difficult to make decisions than usual.

2. I have much greater difficulty in making decisions than I used to.

3. I have trouble making any decisions.

14. Worthlessness

0. I do not feel I am worthless.

1. I don't consider myself as worthwhile and useful as I used to.

2. I feel more worthless as compared to others.

3. I feel utterly worthless.

15. Loss of Energy

0. I have as much energy as ever.

1. I have less energy than I used to have.

2. I don't have enough energy to do very much.

3. I don't have enough energy to do anything.

16. Changes in Sleeping Pattern

0. I have not experienced any change in my sleeping.

1a I sleep somewhat more than usual.

1b I sleep somewhat less than usual.

2a I sleep a lot more than usual.

2b I sleep a lot less than usual.

3a I sleep most of the day.

3b I wake up 1-2 hours early and can't get back to sleep.

17. Irritability

0. I am not more irritable than usual.

1. I am more irritable than usual.

2. I am much more irritable than usual.

3. I am irritable all the time.

18. Changes in Appetite

0. I have not experienced any change in my appetite.

1a My appetite is somewhat less than usual.

1b My appetite is somewhat greater than usual.

2a My appetite is much less than before.

2b My appetite is much greater than usual.

3a I have no appetite at all.

3b I crave food all the time.

19. Concentration Difficulty

0. I can concentrate as well as ever.

1. I can't concentrate as well as usual.

2. It's hard to keep my mind on anything for very long.

3. I find I can't concentrate on anything.

20. Tiredness or Fatigue

0. I am no more tired or fatigued than usual.

1. I get more tired or fatigued more easily than usual.

2. I am too tired or fatigued to do a lot of the things I used to do.

3. I am too tired or fatigued to do most of the things I used to do.

21. Loss of Interest in Sex

0. I have not noticed any recent change in my interest in sex.

1. I am less interested in sex than I used to be.

2. I am much less interested in sex now.

3. I have lost interest in sex completely.

Appendix B-The State-Trait Anxiety Inventory

A number of statements which people have used to describe themselves are given below. Please read each statement and then chose the appropriate number to the right of the each statement to indicate how you generally feel. There are no right or wrong answers. Please do not spend too much time on any of the statement but give the answer which seems to describe how you generally feel. 1= Almost Never, 2= Sometimes, 3= Often, 4= Almost Always

Items		Almost Never	Sometimes	Often	Almost Always
1	I feel pleasant	1	2	3	4
2	I feel nervous and restless	1	2	3	4
3	I feel satisfied with myself	1	2	3	4
4	I wish I could be as happy as others seem to be	1	2	3	4
5	I feel like a failure	1	2	3	4
6	I feel rested	1	2	3	4
7	I am "calm, cool and collected"	1	2	3	4
8	I feel that difficulties are piling up so that I cannot overcome them	1	2	3	4
9	I worry too much over something that really doesn't matter	1	2	3	4
10	I am happy.	1	2	3	4
11	I have disturbing thoughts	1	2	3	4
12	I lack self-confidence	1	2	3	4
13	I feel secure.	1	2	3	4
14	I make decisions easily	1	2	3	4
15	I feel inadequate	1	2	3	4
16	I am content	1	2	3	4
17	Some unimportant thought runs through my mind and bothers me.	1	2	3	4
18	I take disappointments so keenly that I cannot put them out of my mind	1	2	3	4
19	I am a steady person	1	2	3	4
20	I get in a state of tension or turmoil as I think over my recent concerns and interests	1	2	3	4

Appendix C-Death Anxiety Scale

Please answer the following 15 questions. If a statement is true or mostly true as applied to you choose "T". If a statement is false or mostly false as applied to you choose "F".

Items			
1	I am very much afraid to die	T	F
2	The thought of death seldom enters my mind	T	F
3	It doesn't make me nervous when people talk about death	T	F
4	I dread to think about having to have an operation	T	F
5	I am not at all afraid to die	T	F
6	I am not particularly afraid of getting cancer	T	F
7	The thought of death never bothers me	T	F
8	I am often distressed by the way time flies so very rapidly	T	F
9	I fear dying a painful death	T	F
10	The subject of life after death troubles me greatly	T	F
11	I am really scared of having a heart attack	T	F
12	I often think about how short life really is	T	F
13	I shudder when I hear people talking about a World War III	T	F
14	The sight of a death body is horrifying to me	T	F
15	I feel that the future holds nothing for me to fear	T	F

Appendix D-Death Attitudes Profile-Revised

This questionnaire contains a number of statements related to different attitudes toward death. Read each statement carefully, and then decide the extent to which you agree or disagree. For example, an item might read: "Death is a friend." Indicate how well you agree or disagree by circling one of the following: SA = strongly agree; A= agree; MA= moderately agree; U= undecided; MD= moderately disagree; D=disagree; SD= strongly disagree. Note that the scales run both from *strongly agree* to *strongly disagree* and from *strongly disagree* to *strongly agree*.

If you strongly agreed with the statement, you would circle SA. If you strongly disagreed you would circle SD. If you are undecided, circle U. However, try to use the undecided category sparingly.

It is important that you work through the statements and answer each one. Many of the statements will seem alike, but all are necessary to show slight differences in attitudes.

1. Death is no doubt a grim experience. **SD D MD U MA A SA**

2. The prospects of my own death arouses anxiety in me. **SA A MA U MD D SD**

3. I avoid death thoughts at all costs. **SA A MA U MD D SD**

4. I believe that I will be in heaven after I die. **SD D MD U MA A SA**

5. Death will bring an end to all my troubles. **SD D MD U MA A SA**

6. Death should be viewed as a natural, undeniable, and unavoidable event. **SA A MA U MD D SD**

7. I am disturbed by the finality of death. **SA A MA U MD D SD**

8. Death is an entrance to a place of ultimate satisfaction. **SD D MD U MA A SA**

9. Death provides an escape from this

terrible world.	**SA**	**A**	**MA**	**U**	**MD**	**D**	**SD**
10. Whenever the thought of death enters my mind, I try to push it away.	**SD**	**D**	**MD**	**U**	**MA**	**A**	**SA**
11. Death is deliverance from pain and suffering.	**SD**	**D**	**MD**	**U**	**MA**	**A**	**SA**
12. I always try not to think about death.	**SA**	**A**	**MA**	**U**	**MD**	**D**	**SD**
13. I believe that heaven will be a much better place than this world.	**SA**	**A**	**MA**	**U**	**MD**	**D**	**SD**
14. Death is a natural aspect of life.	**SA**	**A**	**MA**	**U**	**MD**	**D**	**SD**
15. Death is a union with God and eternal bliss.	**SD**	**D**	**MD**	**U**	**MA**	**A**	**SA**
16. Death brings a promise of a new and glorious life.	**SA**	**A**	**MA**	**U**	**MD**	**D**	**SD**
17. I would neither fear death nor welcome it.	**SA**	**A**	**MA**	**U**	**MD**	**D**	**SD**
18. I have an intense fear of death.	**SD**	**D**	**MD**	**U**	**MA**	**A**	**SA**
19. I avoid thinking about death altogether.	**SD**	**D**	**MD**	**U**	**MA**	**A**	**SA**
20. The subject of life after death troubles me greatly.	**SA**	**A**	**MA**	**U**	**MD**	**D**	**SD**
21. The fact that death will mean the end of everything as I know it frightens me.	**SA**	**A**	**MA**	**U**	**MD**	**D**	**SD**
22. I look forward to a reunion with my							

loved ones after I die.	**SD**	**D**	**MD**	**U**	**MA**	**A**	**SA**
23. I view death as a relief from earthly suffering.	**SA**	**A**	**MA**	**U**	**MD**	**D**	**SD**
24. Death is simply a part of the process of life.	**SA**	**A**	**MA**	**U**	**MD**	**D**	**SD**
25. I see death as a passage to an eternal and blessed place.	**SA**	**A**	**MA**	**U**	**MD**	**D**	**SD**
26. I try to have nothing to do with the subject of death.	**SD**	**D**	**MD**	**U**	**MA**	**A**	**SA**
27. Death offers a wonderful release of the soul.	**SD**	**D**	**MD**	**U**	**MA**	**A**	**SA**
28. One thing that gives me comfort in facing death is my belief in the afterlife.	**SD**	**D**	**MD**	**U**	**MA**	**A**	**SA**
29. I see death as a relief from the burden of this life.	**SD**	**D**	**MD**	**U**	**MA**	**A**	**SA**
30. Death is neither good nor bad.	**SA**	**A**	**MA**	**U**	**MD**	**D**	**SD**
31. I look forward to life after death.	**SA**	**A**	**MA**	**U**	**MD**	**D**	**SD**
32. The uncertainty of not knowing what happens after death worries me.	**SD**	**D**	**MD**	**U**	**MA**	**A**	**SA**

Appendix E-IMPACT OF EVENTS SCALE-Revised (IES-R)

To make it suitable to the current situation the instructions were modified as;

INSTRUCTIONS: Below is a list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate how distressing each difficulty has been for you DURING THE PAST SEVEN DAYS with respect to COVID-19 event. How much have you been distressed or bothered by these difficulties?'

Items		Not at all	A little bit	Moderately	Quite a bit	Extremely
1	Any reminder brought back feelings about it	0	1	2	3	4
2	I had trouble staying asleep	0	1	2	3	4
3	Other things kept making me think about it.	0	1	2	3	4
4	I felt irritable and angry	0	1	2	3	4
5	I avoided letting myself get upset when I thought about it or was reminded of it	0	1	2	3	4
6	I thought about it when I didn't mean to	0	1	2	3	4
7	I felt as if it hadn't happened or wasn't real.	0	1	2	3	4
8	I stayed away from reminders of it.	0	1	2	3	4
9	Pictures about it popped into my mind.	0	1	2	3	4
10	I was jumpy and easily startled.	0	1	2	3	4
11	I tried not to think about it.	0	1	2	3	4
12	I was aware that I still had a lot of feelings about it, but I didn't deal with them.	0	1	2	3	4
13	My feelings about it were kind of numb.	0	1	2	3	4
14	I found myself acting or feeling like I was back at that time.	0	1	2	3	4
15	I had trouble falling asleep.	0	1	2	3	4
16	I had waves of strong feelings about it.	0	1	2	3	4
17	I tried to remove it from my memory.	0	1	2	3	4
18	I had trouble concentrating.	0	1	2	3	4
19	Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart.	0	1	2	3	4
20	I had dreams about it.	0	1	2	3	4
21	I felt watchful and on-guard.	0	1	2	3	4
22	I tried not to talk about it.	0	1	2	3	4

Appendix F-DASS21

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you **over the past week**. There are no right or wrong answers. Please try not to spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree or a good part of time
3 Applied to me very much or most of the time

Items						
1	I found it hard to wind down	0	1	2	3	4
2	I was aware of dryness of my mouth	0	1	2	3	4
3	I couldn't seem to experience any positive feeling at all	0	1	2	3	4
4	I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3	4
5	I found it difficult to work up the initiative to do things	0	1	2	3	4
6	I tended to over-react to situations	0	1	2	3	4
7	I experienced trembling (e.g. in the hands)	0	1	2	3	4
8	I felt that I was using a lot of nervous energy	0	1	2	3	4
9	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3	4
10	I felt that I had nothing to look forward to	0	1	2	3	4
11	I found myself getting agitated	0	1	2	3	4
12	I found it difficult to relax	0	1	2	3	4
13	I felt down-hearted and blue	0	1	2	3	4
14	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3	4
15	I felt I was close to panic	0	1	2	3	4
16	I was unable to become enthusiastic about anything	0	1	2	3	4
17	I felt I wasn't worth much as a person	0	1	2	3	4
18	I felt that I was rather touchy	0	1	2	3	4
19	I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)	0	1	2	3	4
20	I felt scared without any good reason	0	1	2	3	4
21	I felt that life was meaningless	0	1	2	3	4

Appendix G-Brief COPE Inventory

To make it suitable to the current situation the instructions were modified as;

'The following questions ask how you have sought to cope with a hardship in your life. Please read the statements and indicate how much you have been using each coping style to cope with COVID-19 related stress symptoms'

Items:	I haven't been doing this at all	A little bit	A medium amount	I've been doing this a lot
1. I've been turning to work or other activities to take my mind off things.				
2. I've been concentrating my efforts on doing something about the situation I'm in.				
3. I've been saying to myself "this isn't real".				
4. I've been using alcohol or other drugs to make myself feel better				
5. I've been getting emotional support from others.				
6. I've been giving up trying to deal with it.				
7. I've been taking action to try to make the situation better.				
8. I've been refusing to believe that it has happened.				
9. I've been saying things to let my unpleasant feelings escape.				
10. I've been getting help and advice from other people.				
11. I've been using alcohol or other drugs to help me get through it.				
12. I've been trying to see it in a different light, to make it seem more positive.				
13. I've been criticizing myself.				
14. I've been trying to come up with a strategy about what to do.				
15. I've been getting comfort and understanding from someone.				
16. I've been giving up the attempt to cope.				
17. I've been looking for something good in what is happening.				
18. I've been making jokes about it.				
19. I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.				
20. I've been accepting the reality of the fact that it has happened.				
21. I've been expressing my negative feelings.				
22. I've been trying to find comfort in my religion or				

spiritual beliefs.				
23. I’ve been trying to get advice or help from other people about what to do.				
24. I've been learning to live with it.				
25. I've been thinking hard about what steps to take.				
26. I’ve been blaming myself for things that happened				
27. I've been praying or meditating				
28. I've been making fun of the situation.				