

## Dynamic of Death Anxiety in People with Gastroesophageal Reflux Disease

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**Abstract.** Gastroesophageal Reflux Disease (GERD) is a disease that many individuals suffer from. Some GERD patients even develop death anxiety due to their health condition. This qualitative study aimed to explain the dynamic of death anxiety in people with GERD and used a phenomenological approach. The informants were three adult men who had been diagnosed with GERD for more than six months. The stages of data analysis included horizontalization, textural description, structural description, and phenomenon description. Meanwhile, the data validity techniques used were member checking and time triangulation. The three respondents displayed death anxiety aspects proposed by previous studies. Findings revealed that GERD patients who experienced death anxiety also experienced hypochondria symptoms and future doubts. Participants further reported death anxiety was unrelated to age, life stability, and serious illness type.

**Keywords:** death anxiety; hypochondria; people with GERD

Illness is defined as an individual experience of an “unhealthy state” that compromises their ability to do regular activities (Niebroj, 2006). Several schools of thoughts regarding illness exist, such as the differentiation between illness and injury. Illness has two types, an illness with a wound and one without (Seidlein & Salloch, 2019). Gastroesophageal Reflux Disease (GERD) is an illness without wounds. It is a condition when gastric acid goes up to the esophagus, creating a burning sensation in the chest. Several symptoms precede GERD, including sourness or bitterness in the mouth and pain in the chest or heartburn. Other symptoms include difficulty swallowing, breathing problem, nausea and vomiting, throat soreness, and difficulty sleeping (Clarrett & Hachem, 2018; Maret-Ouda et al., 2020).

The mortality rate for people suffering from GERD is relatively low, approximately 0.46/100,000 in 2000 (Permana, 2018). This finding aligns with Islami et al. (2014) who showed that the correlation between GERD and death is low. According to Ari Fahrial Syam (CNN, 2020), an internal medicine doctor, GERD is categorized as a chronic illness. If untreated properly, then it can lead to lung problems.

Although the probability of GERD-related death is low, preliminary data revealed that individuals with GERD experienced death anxiety. Researchers’ preliminary interview with MS (46 years old) showed that he felt anxious about death. MS was worried that his health condition could end his life soon and that he was not ready to die. Another respondent M (40 years old) was also anxious

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about death due to his GERD. DM (42 years old), SM (42 years old), and ST (42 years old) shared similar experiences. Death anxiety arises when someone thinks about death (Neimeyer, 1997; Neimeyer et al., 2004). Six attributes correspond to death anxiety: a) emotion, b) cognition, c) experiential, d) developmental, e) sociocultural shaping, and f) motivation source (Lehto & Stein, 2009).

According to Cai et al. (2017), death anxiety has several aspects. First is *dysphoria* or an emphasis toward the somatic component of death anxiety, including fatigue, self-isolation, and irritability. Second is *death intrusion*, which emphasizes the cognitive aspect of death anxiety. Disturbing nightmares, imageries, and thoughts of death are few examples of intrusion. Third is *fear of death*, which stresses the emotional component of death anxiety. This anxiety is manifested in feeling scared of dying and possibly some emotional and somatic symptoms. Fourth is *avoidance*, which focuses on the behavioral component of death anxiety. It can be avoiding thoughts, events, situations, or experiences linked to death. Meanwhile, according to (Collett & Lester, 1969), death anxiety aspects are one's fear of own death and fear of the dying process. The person may also fear of others' deaths, including their dying processes.

Based on previous findings, researchers were interested in studying death anxiety in GERD patients due to data gap in the field, namely, statistic proofs that most GERD cases do not lead to mortality yet GERD patients report death anxiety. Studies on other contexts have also shown the negative effects of death anxiety in one's psychological health. Death anxiety is found to trigger panic attack, depression, and hypochondria (Iverach et al., 2014); low self-efficacy (J. Choi et al., 2022); stress (Abdollahi et al., 2019); and poor perception toward life (Yukay et al., 2017). Current findings can also become references to understand death anxiety in GERD patients for future studies.

Numerous studies have examined anxiety in GERD patients, including those by Shanmugapriya et al. (2021); J. M. Choi et al. (2018); Wang et al. (2021); Yang et al. (2015); Faruqui (2017); Kessing et al. (2015); On et al. (2017); Javadi and Shafikhani (2017); and Islami et al. (2014). These works have enabled researchers to make comparisons between the present study and previous research.

Several differences exist between the present study and its predecessors. Previous studies focused on the impact of GERD on general anxiety. Meanwhile, the present study pays attention to a specific anxiety type, namely, death anxiety, in GERD patients. Its subject characteristics and location also differ from preceding studies. Samples in previous studies were adolescents, middle adults (J. M. Choi et al., 2018; Shanmugapriya et al., 2021), and elderlies (J. M. Choi et al., 2018; Faruqui, 2017; Shanmugapriya et al., 2021; Wang et al., 2021). Meanwhile, the present study is conducted in Sukoharjo, Central Java, Indonesia and includes individuals with GERD who experienced death anxiety. No previous research had been done in the area.

This study aims to unveil the dynamic of death anxiety among individuals with GERD and identify factors causing death anxiety. The results are expected to explain death anxiety in GERD patients and be used as modalities to design appropriate treatments.

## Method

This qualitative study used a phenomenological approach. Phenomenology is an approach adopted to infer the individual interpretation of a phenomenon or an experience (Qutoshi, 2018). Through this study, researchers aimed to dive into the individual interpretation of death anxiety due to GERD. Past studies about death anxiety also implemented a phenomenological approach (Jahani et al., 2020; Nia et al., 2015; Zhou et al., 2022).

Several inclusion criteria were implemented in the present study: 1) male or female, 2) adult (aged 21–60 years old), as past research revealed that adults are especially vulnerable to GERD (Patala et al., 2021; Radjainin et al., 2019; Tarigan & Pratomo, 2019), and 3) experiencing a gastric acid issue for more than six months because the longer someone suffers from GERD, the more psychological symptoms may arise, including anxiety (Jannah et al., 2021; Radjainin et al., 2019).

**Table 1**  
*Brief Respondent Profiles*

Respondent 1	Respondent 2	Respondent 3
WD (initials)	WY (initials)	GL (initials)
Male	Male	Male
32 years old	38 years old	21 years old
Married	Married	Single
Working as a chef of a hotel in Solo. His wife was an entrepreneur in Wonogiri. WD also ran an online shop, selling mechanical tools	WY was unemployed at the time of study to focus on recovering from his GERD	GL used to study at a university and had a part-time job but was on leave due to GERD
WD's GERD condition started in 2020 until the time of the study. Diagnosed by a physician	WY started showing GERD symptoms in August 2020. Diagnosed by a physician	GL started developing GERD in 2020. Diagnosed by a physician

The recruitment process was initiated by posting an online announcement that received responses from several potential candidates. Then, researchers confirmed whether these candidates had been diagnosed by physicians and compared symptoms experienced by the candidates with common GERD symptoms. All respondents provided their consent upon explanation of the research.

The data collection method used was a semi-structured interview to understand the dynamic of death anxiety and the factors influencing the condition. Researchers conducted five meetings with WD, five meetings with WY, and three meetings with GL. Observations were done non-participatively to understand the behaviors manifested from death anxiety. Researchers took note of these behaviors during interviews. Another data collection method used was document study, by analyzing respondents' notes that reflected their death anxiety (e.g., social media posts).

Researchers implemented several data analysis steps. First, *horizontalization*. Horizontalization

is a way to describe individual experiences, which do not only encompass respondents but also researchers. Respondents' experiences are used to investigate a phenomenon, whereas researchers' experiences provide modalities to understand that phenomenon. Second, *textural description*. At this stage, researchers focused on respondents' experiences regarding their anxiety over death. Third, *structural description*. At this stage, researchers described respondents' interpretations of their anxiety over death. These descriptions were seen according to settings, including when and where these experiences took place. Researchers also analyzed the meanings of these experiences on the basis of the explanations of respondents. Last, *synthetization*. Structural and textural descriptions were synthesized. At this stage, researchers explained respondents' experiences, leading to multicultural meanings according to respondents. These cultural meanings indicated the deepest meanings of respondents/experiences and thus were specific to them (Moustakas, 1994).

Member checking was used as a data validation technique (Birt et al., 2016). Researchers also implemented data triangulation to ensure data consistency using various data collection methods, including interviews, observations, and document studies.

## Results

Several themes arose from interviews with each respondent. The themes were things that were frequently brought up during the interviews.

### *Respondent 1*

WD experienced death anxiety due to GERD and thought that he was suffering from a heart disease. WD thought that GERD disease might cause him to have other diseases, namely heart disease, even though this is not medically proven.

"Well, GERD anxiety (symptom) feels like having a cardiac arrest. (That is) how I feel and then I think about not being able to live for long when my symptoms reappear. When I am healthy, it feels normal." (NSM1-WD-W2-L4-6).

"Sometimes I think that I developed GERD because of smoking. My mind goes wild. It has been a year since I stopped smoking. Since what happened in January 2020, I went to the hospital twice. I mean, to check my condition and checked it again later. I was scolded. I asked if I have a problem with my heart. 'Your heart is fine.' (The doctor replied). I was scanned twice. I was so anxious, until today, I still do not believe that there is nothing wrong with my heart." (NSM1- WD- W1-L11-19).

WD had "scary" death anxiety episodes that occurred at least three times. During these anxiety episodes, WD felt pain in his chest, racing heartbeats, and was feeling nearly fainted.

"The first time was when I got home from work. At 1 a.m., I suddenly could not breathe and almost passed out. My heart beat loudly as if I went into cardiac arrest. I remembered drinking too much coffee at work. The second time was after I ate something slightly hot and paired the meal with

a cold drink. I went out when the weather was cold. The symptoms were similar to the first episode.” (NSM1-WD-W5-L5-9).

“What I think was the most terrible was the third time. From the start (of my diagnosis) to now, (I have experienced) three anxiety episodes. The last time was when I was biking. I did not have breakfast. After waking up, I immediately biked for long miles, Kartasura Airport to Cengklik Reservoir, not eating anything. I wanted to eat something on the way. When I sat down, I felt *thump-thump-thump-thump* (tone increasingly high). Up to this part (pointing at leg), all stiff.” (NSM1-WD- W1-L54-59).

WD was uncertain of future life because he thought that he could not live much longer.

“Well, GERD anxiety (symptom) feels like having a cardiac arrest. (That is) how I feel and then I think about not being able to live for long when my symptoms reappear. When I am healthy, it feels normal.” (NSM1-WD-W2-L4-6).

WD was anxious about his own death. He often thought of the dying process, especially if GERD-related pain arose.

“Sometimes, I was reminded of the scare, pain in the chest, left chest.” (NSM1-WD- W2-L8)

“My perspective is like when my symptoms resurface, I feel like dying.

“Like I am about to die.” (NSM1-WD- W2-L28).

“It is like I am unable to take a breath. Is this how it feels like? My mind went wild.” (NSM1-WD-W2-L30-31).

WD was anxious about others’ deaths and was always reminded of his GERD upon hearing the deaths of others.

“If the person is old, then no. Weird, right? If the (passing) person is old, then I am alright. A few days ago, someone posted the death of someone young. I immediately asked what happened (to the person). They said the person was sick and I became afraid.” (NSM1-WD- W2-L16-18).

“It is scary, it is scary to see. Although I have never experienced it, I imagine it on myself.” (NSM1-WD- W2-L16-18).

WD isolated himself and experienced fatigue. Since experiencing death anxiety, WD is often alone. In fact, previously WD liked hanging out with his friends. WD becomes afraid when hanging out with friends and going through the process of dying.

“(I) frequently (hung out with friends), but after (the diagnose), it becomes rare.” (NSM1- WD-W2-L48).

“I like hanging out in the past, but not now. I used to play around and could stay up late too.” (NSM1- WD- W2-L50-51).

“My mind, my mind becomes tired. Thinking is already exhausting. Like at the beginning, I was so exhausted I spent the day sleeping.” (NSM1- WD- W2-L42-43).

WD had nightmares and sleep problems due to death anxiety, i.e., dreaming of meeting people who have previously deceased. He was worried because it is believed by certain cultures that the dream of meeting a deceased person is often interpreted as a sign that the person will die.

“I have sleep paralysis. I am so stressed. I often have sleep paralysis. When it happens, I cannot breathe. Breathing is difficult.” (NSM1-WD- W2-L53-54).

“Yes, I have (nightmares), but I have sleep paralysis more often.” (NSM1-WD- W2-L56).

WD was suddenly aware of past doings that might affect his future, i.e., consuming alcohol and fast food. He believed that these past doings increases the anxiety of death in the future.

“I am afraid of having a serious illness. I used to drink (alcohol) and eat instant food.” (NSM1-WD-W4-L8-9).

Researchers obtained data for document study in WD from a GERD group on Facebook. WD often wrote posts on the group’s page in 2020. He would talk about the GERD pain he was experiencing and asked fellow group members about their own GERD experiences and treatments. WD also talked about his anxiety when riding a motorbike at night and his GERD symptoms suddenly occurred. He talked about his scary death anxiety episode while he was out biking. WD also shared his photos while waiting for a heart scan at a hospital.

#### *Respondent 2*

WY experienced death anxiety due to GERD as it was indicated by the biological responses, i.e., increasing temperature around the chest, pain around the stomach as if it was being stabbed.

“What causes it typically is when my acid reflux reoccurs. My stomach feels uncomfortable like being stabbed. I think a lot.” (NSM2-WY-W2-L2-3).

“In August 2020, I had an anxiety attack.” (NSM2-WY-W3-L4).

“I used to eat freely, I really liked spicy food.” (NSM2-WY-W4-L2).

“I am afraid of this and that, afraid of that illness, afraid of dying like that, many people with GERD experience that. I have difficulty sleeping, although I really want to sleep normally like I used to. (Now I cannot sleep) without sleeping pills.” (NSM2-WY-W1-L15-18).

WY was sad and disappointed about his illness because he had to suffer at a relatively young age. He also worried that the illness would not end.

“I am sad, if I am angry, I can still control it (but I cannot control my sadness). I am sad thinking when my suffering (from GERD) will end. It is a sin to think like that, but I am a normal human. I am young but sickly.” (NSM2-WY-W2-L70-73).

WY experienced fatigue due to his death anxiety.

“My body is weak. My mind is weak. I am already sleepy, but I cannot sleep. If not, then I feel so tired like a working person. I feel weak, not having the will to move. I tried various treatments but nothing helped.” (NSM2-WY-W2-L35-38).

WY experienced several death anxiety episodes. These symptoms, for example, WY often dreams of meeting his parents and friends who have previously deceased. WY further had difficulty sleeping and took medication from a psychiatrist. WY was also afraid every time he heard the hear siren and saw the death flag.

“I often have nightmares. Meeting passing relatives really often. Seeing deceased neighbors (in dreams) is also frequent. My friend also told me that my anxiety level is high, and he told me to let go. However, I just keep dreaming about deceased people, and I feel afraid. I often dream about passing acquaintances.” (NSM2-WY- W2-L40-44).

“Not too long ago, I had that dream (meeting passing relatives), when I woke up, I broke out into a cold sweat.” (NSM2-WY- W2-L56).

“I cannot sleep for three and half months without sleeping pills from my psychiatrist. I cannot sleep without pills. Even if I take my pills, I only sleep for three to four hours.” (NSM2-WY-W1-L2-4).

WY was anxious about his own death that he was imagining the process of death or dying. According to his perception and knowledge, the agony of death causes pain equivalent to the stab of 1,000 swords.

“*Hadits* (Islamic scripture) explained that *sakaratul maut* (dying) feels like being stabbed by 1,000 swords, I have imagined it.” (NSM2- WY- W2-L26-27).

WY was anxious about others’ deaths. If WY saw the death of another person, he chose to leave because he was afraid and could not bear it. In fact, WY used to have the courage to see the death of other people before having stomach acid.

“When I hear news about someone passing, I feel afraid, but I need to defeat my fears.” (NSM2-WY- W2-L82-8).

“When I see someone passing, I feel it in my heart (the anxiety). I think everyone feels it, too. If I see it, then I choose to leave. I cannot bear myself to witness it.” (NSM2-WY-W2-L29-30).

“I witnessed my parents’ deaths. I could not bear it, but I tried to be brave. I used to be brave before I got sick.” (NSM2- WY- W2-32-33).

WY was suddenly aware of past doings, which might affect his future. The past awareness that WY was worried about was the sins he had committed, such as leaving a prayer and then increasing his anxiety about death.

"I have (thoughts) about the afterlife. Thinking about heaven and hell." (NSM2-WY-W2-L90).

"Well, usually because I remember my past sins, like missing prayers. I feel anxious." (NSM2-WY-W2-92-93).

During interviews and when asked questions related to death, WY's eyes would widen. WY almost cried when researchers asked him about dreams of meeting his deceased parents. This observation indicated that WY might derive certain meanings from death.

### *Respondent 3*

GL experienced death anxiety due to GERD and past mistakes. GL's stomach acid is caused by unhealthy lifestyle behaviours, i.e., often staying up late, drinking alcohol, and drinking coffee. GL has also saw YouTube videos about life after death, thereby increasing his anxiety about death.

"I was not aware (of my condition) at first, I went home and got checked. I had a panic attack and went to the emergency room. I was diagnosed with anxiety and GERD." (NSM3- GL- W2-L26).

"I used to drink alcohol. I would stop drinking for a month, then drink gain. I also drank coffee often and spent the entire night gaming. Now I cannot do my regular activities. Whenever I get tired a bit, I will think of death. Every time I feel anxious, I will check my phone, browsing websites. Whenever I feel tired, I always think of death. Until when will I be like this? Sometimes, I feel scared when looking at the calendar." (NSM3- GL-W2-L76-83).

"At first, my issue was not GERD; I took a shower at 9 p.m. and suddenly had a vertigo. The vertigo episode was sudden. A few weeks later, it happened again. I was traumatized. Two days later, I was watching videos on YouTube. Suddenly, I could not breathe, broke into a cold sweat, and lost my sight." (NSM3- GL- W1-L2-6).

"I am worried about the afterlife." (NSM3-GL-W3-L5).

GL was anxious about his illness. Pain from GERD develops into pain in other parts, for example heart and kidney pain. This is because GERD symptoms are associated with pain in the chest and upper abdomen.

"I believe that I am always sick. (I learned that) it is called hypochondria, which is being worried about a serious illness. When my symptoms become severe, my chest feels hurt. It feels like my chest is being squeezed. I massage it and apply warm compress on it and it feels better. I was taken to the hospital and was scanned. (NSM3-3GL- W1-L51-55).

"I thought that I had kidney problems because I felt it here (pointing at the part of his body). I keep thinking, looking for information why am I still alive when my heart stops beating (laughing)." (NSM3-GL- W1-L64-66).

"Kidney. This part (pointing at a body part), if I feel a light pain, just a pinch, my mind goes wild (thinking about serious illnesses)." (NSM3-GL- W1-L72-74).

GL was “possessed” and anxious about sudden death. GL has experienced possession due to an unstable state of mind and feelings. In addition, GL had heard of the sudden death of his neighbor. Thus, causing him to worry that he would die suddenly due to GERD.

“I feel sleepy all the time. My pale face scares me. About one or two months after taking a leave from school, I was “possessed.” I daydreamed frequently, thinking about my illness, causing my mind to become empty and got “possessed.” The entire house underwent *rukayah* (Islamic exorcism ritual). When my vertigo returned, I was brought to a shaman after someone told my family that it was because I was disliked by a certain person. I followed the shaman’s advice for weeks and I recovered. After that, I went to an *ustaz* (religious teacher). (NSM3-GL-W2-L17-23).

“I just avoid doing regular activities. Whenever I am doing something, I feel shortness of breath. When that happens, I feel scared. Before I want to start something I always think, “What if I have shortness of breath?” It will immediately happen when I do something only for a little while.” (NSM3-GL-W2-L160-164).

“I hear news about people passing. A neighbor living at the house in front of mine died young. He did not have any symptom. He went to do a community work and died. He was brought to the hospital and was diagnosed with a heart attack. When I am too tired, I keep thinking of having a heart attack. When my chest feels pain, my thoughts go wild.” (NSM3-GL-W1-L95-99).

“I cannot, I am afraid of doing strenuous works. I am afraid that after cleaning the floor, I will suddenly die. Like my neighbor. Doing community work and suddenly passing away, I am afraid that it will happen to me. I was told that having a picnic would help and I went to Gunung Kidul (beach) with friends. Everyone was happy, but I swam for a while and panicked. I luckily packed my medicine. I was fine after taking my pills, but my anxiety returned an hour later. Meeting people I know can even trigger my anxiety.” (NSM3-GL-W1-L166-174).

GL had an uncertainty about life in the future, often worried that he could not live and have a vision of him dying.

“No, it felt faint. I was in between life and death. I asked for help but was brought to the hospital. I received no special treatment there and was only given calming pills to take home. The pills that the psychiatrist gave me were unsuitable for me because the pills made my face pale like I had a serious illness when I did not.” (NSM3-GL-W1-L8-13).

“For how long will I live? When checking my phone, I can see what year it is. Can I live through 2022? I had those thoughts, two days ago. I imagine that my body will be placed there (pointing at a spot in his living room) when I die. What if this afternoon I pass away? I thought of it two days ago. I texted my clinic. They said that my gall was inflamed.” (NSM3-GL-W1-L85-91).

“Will I live through tomorrow or not? Will I still be living this afternoon?” (NSM3-GL-W1-L84-85).

“When I am doing my usual thing, I do not have that thought. When I am alone at home, sitting still, the thought returns. I think about tomorrow. Whenever I have a plan for the following day, I panic.” (NSM3- GL-W1-L87-89).

GL often had difficulty sleeping. The sleep disorder is in the form of dreams of meeting people who have died, so it is difficult to sleep. His condition caused him to go to a psychiatrist and take medication.

“I asked, but the person (deceased person GL met in his dream) did not respond. I asked, “What are you doing here? Are you not dead?” I asked, but they did not answer me. When I woke up, I was scared. Has my time come? Why did I meet a deceased person in my sleep? Then, I talked to SJ (a friend) and said that it was because my heart was weak. He linked my experience to my health condition, describing the percentage of my dream’s correlation with bodily organs.” (NSM3-GL-W1-L198-203).

“I lost count (of my dreams). I can have those dreams four times a month. Having dreams for more than four times is normal. I checked on Google how severe it was.” (NSM3-GL-W2-L95-99).

GL was anxious about others’ deaths. Once upon a time, GL paid his respects to a neighbor who died. Suddenly GL felt a shiver in his body which was thought to be caused by worry about seeing other people’s deaths. This condition prompted him to be examined and given a sedative by the doctor.

“My anxiety was more (severe) and aggressive. One of my neighbors died, and I was forced to come to the funeral and I suddenly shivered.” (NSM3-GL- W2-L22-23).

“I cannot (sleep). I only sleep for a little while then wake up again. Maybe (the anxiety) is in my unconsciousness. My physique is deteriorating. Whenever I feel afraid, I become weak. My blood pressure goes down.” (NSM3-GL- W2-L28-31).

“It is so scary (others’ deaths). I already feel scared hearing the news. I may come (to the funeral) or isolate myself.” (NSM3-GL- W2-L40-41).

GL was suddenly aware of past doings, which might affect his future. GL has a bad image of the future, especially the afterlife. GL is afraid of getting the torments of hell after death.

“I believe I will be punished. I used to think about the afterlife before I got sick. I keep thinking about tortures.” (NSM3-GL-W2-L142-145).

“Punished and tortured, truthfully I am a sinner.” (NSM4-GL-W2-L147).

During the interview, GL frequently moved his body. He often changed his sitting positions, moved his legs, waved his hands, and glared at the researcher. GL’s palms were wet. When the researcher asked about his movements, the respondent said that he did it deliberately to prevent his anxiety to resurface.

Documents were obtained from a gastritis survivor group on Facebook followed by GL. Researchers read posts written by GL to fellow group members who were also diagnosed with chronic

gastritis. The posts were questions related to GERD, anecdotes about GL's medications, and stories about how his GERD symptoms made him feel like he was dying.

### *Theme Synthesis*

Researchers initially found several distinguished themes in each respondent. However, upon further analysis, these themes were found to share similar aspects. The themes were then synthesized into three main categories: the episode prior to experiencing death anxiety, the episode during death anxiety, and the episode post experiencing death anxiety.

*Episode prior to experiencing death anxiety.* This category encompasses respondents' conditions before feeling anxious over death. Before that, they were healthy individuals. They could perform activities (e.g., studying, working, going out, and gathering with friends) like normal people. However, at one point of their lives, respondents were diagnosed with GERD, causing them to feel anxious about death.

*Episode of death anxiety.* Respondents reported several things when they felt anxious about death. WY, WD, and GL were anxious about their own deaths and others'. The anxiety was related to the dying process. They said that in their religion (Islam), the dying process was immensely painful. Meanwhile, the anxiety over others' deaths was caused by the inability to see the dying process in others, and observing it led to the development of physical and psychological symptoms.

The three respondents also experienced difficulty sleeping. WY often experienced sleep paralysis and dreamed about seeing people in his life who had passed away. WD and GL also reported similar experiences. The sleeping problems also caused WD and GL to consume medications provided by psychiatrists. GL said that he felt anxious when he was about to sleep because he was afraid of not being able to wake up again. WD and WY reported feeling fatigued because of their sleeping problems. The three respondents also thought that they had comorbid conditions; GL felt that he had heart and kidney problems; WD thought he had a heart disease, and WY said that he had appendicitis.

*Episode following death anxiety.* This episode encapsulated various behaviors after respondents experienced death anxiety. WD isolated himself from the public, whereas GL avoided anything related to death.

Respondents had an epiphany about past wrongdoings after thinking about death, thus increasing their anxiety. Moreover, the three respondents said that they were not closely following their religious teachings. WD admitted having consumed alcohol several times, which is forbidden in his religion, whereas WY rarely did his prayers. WD and GL also said that they were unsure of the future, saying that they were unsure whether they could live long due to GERD. Anxiety about the future also affected respondents, especially WD and GL, who said they were worried about family members they would leave behind.

## Discussion

### *Factors Causing Death Anxiety*

Death anxiety is caused by several factors. According to Schaie and Willis (2001), a factor that causes anxiety over death is old age. The older someone gets, the bigger their anxiety over death. This anxiety is developed due to the high awareness that an old person will not live for long. The high awareness is due to declining bodily functions in old age (Ningrum et al., 2018). Past studies revealed the vulnerability to death anxiety among elder people (Ebrahimi et al., 2018; Ermawati & Sudarji, 2013; Farmawati et al., 2019; Hamid et al., 2019; Ilyas & Effendi, 2019; Kaloeti & Hartati, 2017; Khalvati et al., 2021; Kurniasih & Nurjanah, 2020; Lim et al., 2017; Maramis, 2015; Missler et al., 2012; Nazira et al., 2020; Sharma et al., 2019; Zahirah et al., 2021; Zhang et al., 2019).

Previous studies found that anxiety over death is common among elderlies (Ebrahimi et al., 2018; Ermawati & Sudarji, 2013; Farmawati et al., 2019; Hamid et al., 2019; Ilyas & Effendi, 2019; Kaloeti & Hartati, 2017; Khalvati et al., 2021; Kurniasih & Nurjanah, 2020; Lim et al., 2017; Missler et al., 2012; Schaie & Willis, 2001; Sharma et al., 2019). In the present study, respondents who were in middle adulthood also experienced death anxiety. In this context, death anxiety is triggered by an illness, namely, GERD.

The first factor that can cause death anxiety is illness because when an individual experiences it, he/she potentially develops a cognitive bias. Although statistics showed the low mortality rate among people with GERD, respondents who had witnessed people around them dying due to GERD thought that the illness had a high chance to kill them. Furthermore, the pain associated with GERD symptoms reminded respondents of the pain they would experience when dying. The pain caused respondents to feel anxious about death.

The second factor influencing death anxiety is serenity in life (Schaie & Willis, 2001). A form of serenity in life is economic stability; the more stable one's economy, the less likely they will be anxious about death. The individual will have material inheritance to pass on to family members to fulfill their daily needs. However, the present study showed that economic stability did not contribute to respondents' death anxiety. WY and GL were not considered established in terms of economic standing, whereas the economic situation of WD was relatively stable. The three of them displayed a death anxiety aspect, being unsure about the future, including the futures of their families. They were worried that their inheritance would not be enough to fulfill the needs of family members they would leave behind. This worry caused them to not feel prepared to face death, thus causing anxiety.

The third factor is externally caused deaths, meaning that the death anxiety of an individual is caused by factors outside of the individual (e.g., accidents, disasters, and wars) ("Construction of a death Anxiety Scale-Extended", 2006). All respondents did not exhibit this death anxiety factor. No respondents had been involved in accidents, lived in warzones, and lived close to areas that were vulnerable to disasters. Thus, respondents' death anxiety was mainly caused by an internal factor, suffering from GERD.

An interesting finding was that death anxiety in respondents was caused by GERD, which

statistically had low mortality rate (Islami et al., 2014). GERD was also found unlikely to cause sudden death (Fadli, 2020). Despite the statistics not supporting high GERD fatality, respondents tended to overgeneralize few death cases caused by GERD.

Overgeneralization occurs when an individual draws a general conclusion based on a small set of data or cases (Nelson-Jones, 2014; Rnic et al., 2016). When encountering news about someone's death due to acid reflux, respondents thought that every GERD case had a high probability to result in death. They also associated GERD pain with the pain that, according to their religion, someone would feel when they are dying. Thus, respondents developed death anxiety.

Death anxiety is also related to the awareness of a person's past (Maramis, 2015). After being diagnosed with GERD, the three respondents were reminded of past deaths that led to their anxiety, which was further exacerbated by the self-awareness of poor past behaviors, including missing prayers and consuming alcohol, both considered "unholy" behaviors for Muslims. According to Ardel (2003), if someone is aware that they do not behave religiously or live based on religious teachings, then the person will have difficulty in believing that they will have a happy afterlife despite believing in the afterlife concept.

According to Smet (1994), consuming alcoholic beverage is a risk factor to various diseases in later age. Alcohol consumption also increases the risk of developing GERD (Pan et al., 2018).

The awareness of nonreligious past behaviors also reminded the person of "hell." Krause (2015) explained that the depiction of hell (e.g., punishment, torture, and other forms of suffering) causes people to develop death anxiety. GERD and cognitive distortion, namely, overgeneralization and awareness of past behaviors, simultaneously cause death anxiety in respondents.

Three out of the four death anxiety factors proposed by Thorson and Powell (1988, 1992) were found in the present study. First is *fear of isolation and immobility*, which are expected to happen in the afterlife. The examples are fear of not being able to think, move, or feel anymore after that and being isolated within their final resting place. Second is *fear of pain*, which is fear of the pain that comes along death. The three respondents said that the dying process is painful. This perception was derived from their religious beliefs. Third is *fear of future*, which is related helplessness and not knowing what will happen after death, causing a burden. The three respondents said that they were afraid of being sent to hell because of their past nonreligious behaviors (e.g., consuming alcohol) and not adhering to religious teachings (e.g., missing prayers). Fear of future became a burden to the three participants, as they were also worried of their families' futures if they passed away.

#### *Dynamic of Death Anxiety*

Death anxiety caused WD and WY to experience fatigue. They were fixated by death anxiety that it caused their energy to be depleted. WD and WY also said that they kept thinking that their GERD conditions did not improve. It caused them more stress and led to fatigue. According to Niven (2013), fatigue is the last stage of stress, following alertness and resistance. An illness can also potentially cause declining performances and physical changes in patients. In this case, GERD led to respondents' inability to perform their regular activities, like before they were diagnosed. This condition is a form

of dysphoria, a death anxiety aspect (Cai et al., 2017). The anxiety caused by the pain linked to GERD symptoms also caused stress (Maramis, 2015) and panic attack.

According to Smet (1994), stress related to individual health has several sources, namely, internal stress, stress from family, and stress caused by the community and surrounding environment. Within the context of respondents, stress caused by GERD developed internally. They felt anxious about their GERD. GERD hindered their abilities to perform daily tasks. Moreover, respondents frequently thought about their illness. Meanwhile, Smet (1994) said that stress can aggravate illnesses.

Maramis (2015) explained a death anxiety aspect, attention to intellectual and emotional responses toward death, which concerns their preparedness to face death. The three respondents believed that death would certainly occur. However, at their relatively young ages, they were unprepared to die and thus lead them to a dilemma. Respondents were resigned about death because of their religious beliefs. However, they said that they were not ready to leave their families behind, saying that they still wanted to take care of their partners, children, and parents. Thinking about death caused them to worry about the futures of their families. They were also worried of not being able to gather with family members again (Naftali et al., 2017).

Death intrusion is a death anxiety aspect that was also found in respondents. It can be defined as a death anxiety-related intrusion, which includes nightmares, obtrusive thoughts related to death, and perceiving health symptoms as signs of dying (Cai et al., 2017). Respondents experienced death intrusion in the form of dreams, specifically dreaming about people who had passed away. These dreams might be the manifestations of their death anxiety. Dreams may arise from the dynamic of human unconsciousness. When an individual thinks of something deeply and is unable to express the thought well, this thought will be pushed into unconsciousness. During sleep, the preconscious, a threshold that divides the consciousness and unconsciousness, becomes less divisive and some parts of the unconscious mind may be manifested into dreams (Freud, 2010). The three respondents might think of passing acquaintances due to their own intrusive thoughts of death.

Within the paradigm of Islamic psychology, dreaming about someone who has passed away is considered common. According to this paradigm, when someone is asleep, the person's soul is separated from their body and the soul was within the supernatural realm. Thus, the soul can meet with the souls of the deceased (Nashori, 2000; Yuminah, 2018). However, the three respondents interpreted their dreams as signs of dying. An intricate relationship may exist between these dreams and death anxiety. These dreams are the manifestations of one's anxiousness about death. Frequent thoughts of death cause respondents to dream about death and experience sleeping problems. At the same time, the dreams further intensify the death anxiety experienced by respondents.

Respondents reported that they experienced sleep paralysis, which is a condition where someone is unable to move while sleeping or waking up (Denis et al., 2018; Olunu et al., 2018). During a sleep paralysis episode, someone will suddenly wake up when they are about to enter the dreaming phase, but their body has become "inactive." The person then becomes immobile and goes into sleep paralysis, often accompanied with auditory and visual sensations because at that time, the brain still produces dreams while they are already awake. Stress is one of the causes of sleep paralysis (Arista &

Tjang, 2017).

WD experienced sleep paralysis due to the stress of his ongoing GERD condition and obtrusive thoughts about death. When experiencing sleep paralysis, WD had breathing difficulties and hallucinations, causing him to think that he was dying. Stress can disrupt sleep quality, reducing sleep duration. When the condition is repeated for multiple nights, the individual's alertness will decline. The person is already awake but the brain has yet to be completely alert, causing sleep paralysis.

Fear of death (Cai et al., 2017), which leads to somatic symptoms, was also found in respondents, especially WD and GL. Both respondents were sure that in addition to GERD, they also developed cardiovascular diseases. They reported having felt pain on the left side of their chest. Such pain might be caused by GERD or simply the common biological process. WD and GL went to the doctor to perform a medical checkup, but they had no problems with their hearts. Despite that, they were adamant about experiencing cardiovascular diseases. This condition is a symptom of hypochondria.

Hypochondria is a condition when an individual believes that they have a serious illness, despite no medical proofs to back up the conviction. Anxiety is one of the causes of hypochondria (Scarella et al., 2015). Death anxiety can be accompanied by hypochondria. The conviction of having a serious illness can happen due to intense death anxiety. This psychological condition may lead to physiological and biological symptoms, such as feeling pain in certain body parts.

The three respondents also reported that they had avoided anything related to death. They wanted to move out, avoided going to a neighbor's funeral, and ignored news about a neighbor's passing. They used to hang out with friends frequently but following their diagnosis, outings became rare. The change in behavior was an effort to avoid death. They wanted to assure themselves or avoid thinking about death, which could cause them to be anxious. It also enabled them to avoid encountering anything related to death.

These behaviors were included in the death avoidance aspect, which emphasizes the behavioral part of death anxiety. Individuals who are anxious about death will develop avoidance behaviors, such as avoiding thoughts, situations, events, and experiences related to death (Cai et al., 2017).

Another condition experienced by the three respondents were feeling afraid of their own death (Collett & Lester, 1969). They thought of death as a horrible situation. Moreover, according to their religious beliefs, the dying process (known as "*sakaratul maut*") is painful. The more someone thinks that death is a scary condition and that dying is painful, the more anxious they become. WY believed that the pain of dying was like being stabbed by a thousand of swords. This conviction was developed from his religious teachings, which are internalized within individuals, forming a belief system because they are brought by figures thought to have exceptional capabilities and being sent by God (prophets). The belief system causes individuals to believe in something that they have never experienced or felt, including the pain intensity when someone is dying.

Meanwhile, GL and WD had experienced pain due to their recurring GERD and perceived the pain as dying. The imagery of death as a long, arduous, and scary process is a part of death anxiety (Ermawati & Sudarji, 2013). A survey done by Hamjah et al. (2019) also found that 75.4% of respondents were afraid of the dying process.

Based on the explanation, death anxiety encompassed cognitive, affective, and psychomotor aspects. The cognitive impacts caused by death anxiety were thinking of family's future once the person died, obtrusive thoughts about death that led to difficulty sleeping, and constantly thinking about the afterlife.

The affective aspect of death anxiety encompassed fear of the dying process for oneself and others. Respondents also felt sad because their GERD did not improve. In addition, they experienced panic attacks and felt worried about developing other chronic illnesses despite no scientific proof to back up the belief (termed as "hypochondria").

The psychomotor or behavioral aspect related to death anxiety includes withdrawal, whether from social situations or death symbols (e.g., ambulance and traditional flag people put up when someone passed away), sleep paralysis, and nightmare.

Death anxiety is viewed as something positive and negative. Several people view death as a painful experience, especially during the division between the body and the soul (in Islamic concept). They also believe that there will be consequences to human deeds on earth, which lead to anxiety. People are also anxious about death because they will be parted from family members and other things they love when living. Some people view death as something positive because when they pass away, they will meet God and receive various rewards for good deeds on earth. A positive attitude toward death is usually found in individuals with high religiosity. Thus, these people can restructure the dynamic of death anxiety, which leads to fear, self-isolation, and negative thoughts about death. Doing so can prevent them from displaying maladaptive behaviors (Hidayat, 2013). Therefore, death anxiety can help individuals develop their psyche and personality if managed properly. Moreover, Mardliyah (2017) indicated that remembering death can be a therapy modality for psychospiritual health.

## Conclusion

This qualitative study on three respondents found that age and economic stability level did not contribute to death anxiety. This finding differs from established theories, which cite the opposite. The three respondents were adults and not elderly and their economic conditions were sufficient. Death anxiety in respondents was mainly caused by GERD of which they suffered. Furthermore, they were afraid of the pain when dying and the afterlife.

The death anxiety aspects found in three respondents were concerning readiness to die, showing hypochondria symptoms, experiencing sleeping problems and nightmares, perceiving certain things as signs of dying, being afraid of the dying process, being anxious about others' deaths, feeling afraid of their own and family's futures after death, and practicing self-isolation.

A new finding generated from this study was the hypochondria symptoms found in respondents. Their death anxiety about GERD led them to worry excessively about having other chronic diseases (e.g., heart, gastrointestinal, and kidney diseases), despite no medical proofs supporting their convictions. Another new finding was fearing for one's future and their family after death.

The current findings imply that death anxiety can happen to anybody in any condition. Therefore, preventive and curative measures are required, specifically for GERD patients. Holistic preventive and curative treatments should be developed by considering the biological, psychological, and spiritual aspects of patients.

This study had several limitations, including observations that were only done during interviews, thus limiting observations of respondents' behaviors to their facial expressions and intonations. Future researchers are expected to extend the observational component of the present study to unveil death anxiety behaviors in detail and concrete form.

#### *Recommendation*

Future researchers can also incorporate other methods, such as quantitative methods, to measure the death anxiety level of each participant and thus gain a comprehensive understanding. Future studies on this topic can use experimental methods. They can first use measuring instruments that have been proven to have good psychometric properties to study participants' death anxiety levels and then provide treatments (e.g., psychotherapy) to reduce such levels.

## **Declarations**

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#### *Authors' Contribution*

MZ and AS designed the study; MZ performed the data collection; MZ and AS collaboratively analyzed the data; AS wrote the manuscript. Both authors (MZ and AS) read and agreed on the final version of the manuscript.

#### *Conflict of Interest*

Authors declared no potential conflict of interest.

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