

# Does Death Anxiety Influence Psychological Adjustment Differently in Chronic and Non-Chronic Individuals?

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## ABSTRACT

Chronic patients have maladjustment problem than non-chronic individuals. So, it is important for the family members as well as the patients to keep knowledge about these factors. So that the patients could get proper care and attention from the family members as well as friends and relatives. Sometimes, they need counseling to heal their psychological adjustment problem. This present study explored relations of death anxiety and psychological adjustment between chronic and non-chronic individuals. The main objectives of the study were to find out the relationship between death anxiety and psychological adjustment, to see the difference between death anxiety and psychological adjustment according to gender, to see the death anxiety level of chronic and non-chronic individuals and to see the psychological adjustment level of chronic and non-chronic individuals. A questionnaire package comprising Death Anxiety Scale, Psychological Adjustment Scale along with a Personal Information Form (PIF) was administered on a purposive sample of 165 individuals. Where 52.1% were chronic patients and 47.9% were non-chronic individuals of the total participants. The age ranging between 18 to 65 years old. Results of Pearson product moment correlation showed higher death anxiety is significantly associated with higher psychological maladjustment. It also shows that chronic individuals are more psychologically maladjusted than non-chronic patients. It is valuable to understand factors that may influence psychological adjustment in chronic patients. Overall, the results highlight the need for psychological interventions, counseling, and family involvement in helping chronically ill patients, as well as the for clinicians to address death anxiety and related existential issues during assessment and care.

**Keywords:** Death anxiety, Psychological adjustment & Chronic and non-chronic individuals

## INTRODUCTION

Chronic diseases have evolved as the important cause of death worldwide. Noncommunicable diseases (NCDs)— like, cardiovascular conditions, cancers, chronic respiratory disorders, and diabetes—accord markedly to global mortality every year (WHO, 2021). In the context of Bangladesh, chronic illnesses are overseen for nearly 61% of the overall disease burden and account for approximately 54% of annual deaths (Mahumud et al., 2023). Alarmingly, the portion of deaths linked to NCDs in Bangladesh increased from 59% in 2010 to 70% in 2019, according to the World Health Organization's Global Health Estimates (2021).

A recent study showed that adolescents and young adults in Bangladesh may spend nearly 38.7% of their life expectancy living with diabetes or hypertension, highlighting the high lifelong burden of chronic conditions (Alam & Sheoti, 2024). These findings underscore the growing health crisis posed by chronic diseases and their impact on both mortality and quality of life. The term *chronic disease* broadly refers to health conditions that persist for long durations—often one year or more—and require ongoing medical attention or limit daily activities (Mahumud et al., 2023). Under the U.S. National Center for Health Statistics definitions, a disease lasting three months or longer is considered chronic. For the present study, any condition persisting beyond three months has been operationalized as a chronic disease, since newly diagnosed serious conditions may provoke

heightened levels of death anxiety. Common chronic and potentially fatal conditions include diabetes mellitus, cardiovascular disorders (heart disease, hypertension), kidney disease, cancers, HIV/AIDS, asthma, tuberculosis, hepatitis, and others. These illnesses impose physical suffering, medical expenses, lifestyle changes, and social stigma, all of which may aggravate mental health challenges.

Another contributing factor is population aging. The World Health Organization defines "old age" as beginning at age 65, and demographic shifts in many countries mean a growing proportion of older adults, who tend to have higher prevalence of degenerative and chronic conditions. Aging increases exposure to mortality salience and heightens concerns about death among individuals.

In psychological terms, adjustment refers to how well a person adapts to changes in their physical, occupational, or social environments. It involves balancing one's own needs amid obstacles or stressors. When an individual struggle to adapt meaningfully to stressors—such as those posed by chronic illness—an adjustment disorder may develop. Prior research has found a positive association between severity of chronic disease and maladaptive psychological adjustment. For example, Stanton, Revenson, and Tennen (2007) reported that patients with more severe chronic illness show more adjustment difficulties. Similarly, Ridder, Geenen, Kuijer, and Middendorp (2008) documented that individuals with chronic disease often face problems in healthy psychological adjustment.

Death anxiety is another psychological phenomenon relevant to chronic illness. It refers to conscious or unconscious fears, worries, or anxieties about one's own death or the process of dying. This may intensify with age or with facing serious disease. The North American Nursing Diagnosis Association defines death anxiety in terms of fear or anxiety regarding death or near death. Theoretical work, including that by Freud, Erikson, and Ernest Becker, has explored how death anxiety affects cognition, emotion, identity, and behavior. Empirical studies show that cancer patients, those with terminal disease, or those facing high mortality risk show elevated death anxiety that can impair psychological well-being.

Several recent studies have specifically explored how death anxiety relates to psychological adjustment among people with chronic disease. For example, Togluk and Cuhadur (2021) examined individuals with Chronic Obstructive Pulmonary Disease (COPD) and found that greater death anxiety was associated with poorer psychological adjustment. Shakeri, Abdi, Bagi, and Dalvand (2022) conducted a meta-analysis among Iranian cancer patients, noting that high death anxiety worsened mental health outcomes and could influence treatment response and quality of life. In Bangladesh, chronic conditions such as diabetes, hypertension, and chronic kidney disease have been shown not only to impose physical and economic burdens but also to reduce healthy life expectancy and affect quality of life (Alam & Sheoti, 2024; Mahumud et al., 2023).

Chronic illnesses impose significant physical, psychological, and social challenges, which often interfere with an individual's ability to adapt effectively to daily life (Stanton, Revenson, & Tennen, 2007). Patients with chronic conditions frequently experience maladjustment due to ongoing physical suffering, lifestyle limitations, financial strain, and social stigma (Ridder, Geenen, Kuijer, & Middendorp, 2008). Recognizing the psychological challenges linked to chronic illness is vital not only for patients but also for their families and caregivers, who play a central role in offering both emotional and practical support (Livneh & Antonak, 2005). One significant psychological concern in this context is death anxiety, defined as the conscious or unconscious fear of dying or the process of death. High levels of death anxiety can intensify stress, hinder coping strategies, and contribute to poor psychological adjustment and well-being (Abdel-Khalek, 2005). While previous research has examined death anxiety within specific chronic patient groups (Shakeri et al., 2022) or tested adjustment problems in association to specific illnesses (Togluk & Cuhadur, 2021), finite attention has been given to exploring these two constructs together across varied chronic conditions.

The current study meets relationship between death anxiety and psychological adjustments between chronic and non-chronic patients. Death anxiety is a global phenomena and human are concern about living with health limitations, mortality and psychological problems. Psychological adjustments of chronic patients have serious impact on coping skills, mental well-being, physical illness. This study valuable not only theoretical understanding but also for practical uses, as they may support clinician's treatment plan, improve patients' adjustments with psychological, emotional and social challenges. Finally, this study contributes to enhancing

patient's quality of life, longevity of life, struggle level of chronicity and aligning global health issues like Sustainable Development Goal of ensuring good and well-being.

## Objectives of the Study

The present research was conducted with the following objectives:

1. To examine the relationship between death anxiety and psychological adjustment.
2. To investigate differences in death anxiety and psychological adjustment according to gender.
3. To assess the level of death anxiety among chronic versus non-chronic individuals.
4. To assess the level of psychological adjustment among chronic versus non-chronic individuals.

## METHOD

### Participants

A purposive sampling technique was employed to recruit 180 participants for the study, of which 165 complete responses were retrieved and analyzed. Among the 165 participants, 86 (52.1%) were chronic patients and 79 (47.9%) were non-chronic individuals. Gender distribution included 86 males (52.1%) and 79 females (47.9%). Among male participants, 48 (55.8%) were chronic and 38 (48.1%) were non-chronic, while among female participants, 37 (43.0%) were chronic and 41 (51.9%) were non-chronic. Participants' ages ranged from 18 to 65 years. Regarding residential background, 84 (50.9%) lived in urban areas, 53 (32.1%) in towns, and 28 (17.0%) in villages.

### Measures

#### Demographic Information

A Personal Information Form was used to collect demographic and background data, including age, gender, monthly income, residential area, and presence, intensity, and duration of chronic illnesses.

#### Death Anxiety Scale (DAS)

The Bangla version of the Templer Death Anxiety Scale (DAS) was employed, as adapted by Rahman and Nahar (2021) from Templer's original 1970 scale. The DAS assesses the extent of death-related anxiety through 15 items. Responses can be recorded either as dichotomous True/False or on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) (McMordie, 1979). Total scores range from 15 to 75, with 15–35 indicating low death anxiety, 36–55 moderate, and 56–75 high. Sample items include: "I am very afraid to die," "I fear dying a painful death," and reverse-scored items such as "I am not at all afraid to die." Test-retest reliability over three weeks was  $r = 0.83$ , and internal consistency in a pilot sample was  $\alpha = 0.76$ .

#### Adult Psychological Adjustment Questionnaire (PAQ)

The Bangla version of the Adult PAQ (Rohner & Khaleque, 2005) was used to assess overall psychological adjustment. The scale includes 43 items rated on a 4-point Likert scale (1 = almost never true, 4 = almost always true). Seven subscales are evaluated: hostility/aggression, dependence, impaired self-esteem, impaired self-adequacy, emotional unresponsiveness, emotional instability, and negative worldview. Reverse-scoring was applied where appropriate. Total scores range from 42 to 210, with scores at or above the midpoint (105) indicating psychological maladjustment. The PAQ has demonstrated high reliability and validity across multiple cross-cultural studies (Khaleque & Rohner, 2002; Rohner & Khaleque, 2005). Sample items include: "I think about fighting or being unkind" (hostility), "I like myself" (self-esteem), and "I am cheerful one moment and gloomy the next" (emotional instability).

## Procedure

Data were collected using a combined questionnaire package including the DAS, PAQ, and Personal Information Form. Demographic items like, capturing age, sex, income, residential area, and chronic disease information. The chronic diseases included in this study were Diabetes, Heart Disease, Kidney Disease, Hypertension, Asthma, Cancer, AIDS, Tumor, Hepatitis, Jaundice, and Tuberculosis. Disease intensity was classified as mild, moderate, or severe, and duration was categorized as 3 months, 6 months, 1 year, or more than 2 years.

The total questionnaire contained 70 items; however, to reduce participant fatigue, only relevant items were presented. Non-chronic participants did not answer disease-specific questions, while chronic participants responded only to items relevant to their diagnosed conditions. Most chronic participants reported between one and four chronic illnesses. Data collection was conducted in two phases. First, 65 responses were collected manually through visits to three major hospitals in Dhaka city, targeting chronic patients. Second, 115 responses were collected online via Google Forms. After screening for completeness and accuracy, 100 online responses were retained for analysis, resulting in a final sample of 165 participants.

## RESULT

The present study aimed to examine the relationships between death anxiety and psychological adjustment, as well as to compare these variables across chronic and non-chronic individuals. Data were analyzed using Pearson product-moment correlation to assess associations and independent samples t-tests to examine group differences between chronic and non-chronic participants.

Table 1. Pearson's product moment correlation between Death Anxiety and Psychological Adjustment

Death Anxiety		Death Anxiety	Psychological Adjustment
	Pearson Correlation	1	.600**
	Sig. (2-tailed)		0.000
	N	165	165
Psychological Adjustment	Pearson Correlation	.600**	1
	Sig. (2-tailed)	0.000	
	N	165	165

\*\* Correlation is significant at the 0.01 level (2-tailed)

In order to explore the relationships among variables, Pearson Bivariate correlation was computed and showed in Table 2. Result of correlation shows that there is a correlation between death anxiety and psychological adjustments ( $r = .600$ ) at .01 level. Higher death anxiety is significantly associated with higher psychological maladjustment.

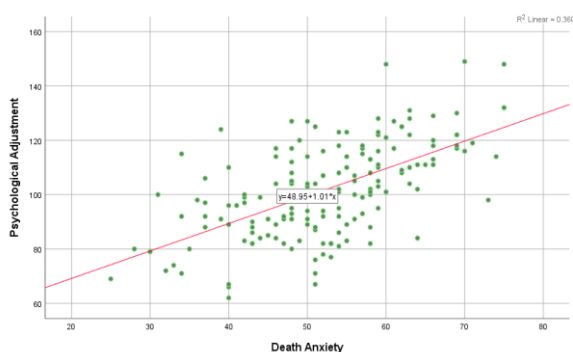


Figure 1: Plot showing strong positive correlation between Death Anxiety and Psychological Adjustment

Pearson correlation analysis revealed a significant positive relationship between death anxiety and psychological adjustment ( $r = .600$ ,  $p < 0.01$ ). This suggests that participants experiencing higher levels of death anxiety are

more likely to exhibit maladaptive psychological adjustment patterns. The scatterplot further confirms this trend, showing a consistent upward trajectory, indicative of the strong positive association between the two variables.

Table 2. Differences of death anxiety and psychological adjustment between chronic and non-chronic individuals

Variable	Chronic			Non-Chronic			<i>df</i>	<i>t</i>
	<i>n</i>	<i>Mean</i>	<i>SD</i>	<i>n</i>	<i>Mean</i>	<i>SD</i>		
Death Anxiety	86	53.74	11.765	79	51.22	8.146	163	1.592
Psychological Adjustment	86	104.88	19.124	79	98.97	14.469	163	2.223*

\* $P < 0.05$

From the table-2 it is shown that psychological maladjustment score of chronic patients ( $M=104.88$ ) is noticed higher than that of non-chronic individuals ( $M= 98.97$ ). The t-test suggests that there is a significant difference between chronic and non-chronic individuals in psychological adjustment. This suggests that chronic illness is associated with greater difficulties in psychological adjustment. The death anxiety score of chronic patients ( $M= 53.74$ ) is higher than non-chronic individuals ( $M= 51.22$ ) but the t-test suggest that there is no significant difference between chronic and non-chronic individuals in death anxiety.

Table 3. Linear regression analysis level of chronicity on death anxiety

Model	<i>R</i>	<i>R</i> <sup>2</sup>	<i>B</i>	<i>SEB</i>	$\beta$	<i>t</i>	<i>p value</i>
D.Anxiety	.324	.105	2.529	1.000	.324	2.592	.012

$F = 6.42, p = .012$

Level of chronicity has a statistically significant effect on death anxiety. The unstandardized coefficient  $B=2.529$  indicates that chronic patients experience, on average, a 2.529-unit increase in death anxiety compared to non-chronic individuals. The standardized coefficient  $\beta=0.324$  shows a moderate positive effect. The  $R^2$  of .105 suggests that 10.5% of the variance in death anxiety is explained by level of chronicity.

Table 4. Linear regression analysis level of chronicity on psychological adjustment

Model	<i>R</i>	<i>R</i> <sup>2</sup>	<i>B</i>	<i>SEB</i>	$\beta$	<i>t</i>	<i>p value</i>
P.Adjustment	.538	.290	5.909	2.685	.538	2.223	.028

$F = 4.924, p = .028$

Chronicity also significantly affects psychological adjustment. The unstandardized coefficient  $B=5.909$  indicates that chronic patients' psychological adjustment scores increase by 5.909 units. The standardized coefficient  $\beta=0.538$  represents a strong positive effect, and the  $R^2$  of 0.290 shows that 29% of the variance in psychological adjustment is accounted for by level of chronicity.

## DISCUSSION

This study aimed to examine the relationship between death anxiety and psychological adjustment and to investigate differences in these variables between chronic and non-chronic individuals. The results revealed a strong positive correlation between death anxiety and psychological maladjustment ( $r = 0.600, p < 0.0$ ), suggesting that individuals experiencing higher levels of death anxiety are more prone to psychological maladjustment. These results match with previous research supporting that fear of death can peaked greater stress, emotional numbness, and coping difficulties, specially among those individuals who have chronic health issues (Abdel-Khalek, 2005; Khawyar, Aslam, & Aamir, 2013; Shakeri et al., 2022; Togluk & Cuhadur, 2021). In contrast, respondents with lower levels of death anxiety tended to administer good psychological adjustment.



A comparative study evolved that patients with chronic conditions announced significantly greater psychological maladjustment ( $M = 104.88$ ) differed to their non-chronic counterparts ( $M = 98.97$ ), with the difference reaching statistical significance ( $t = 2.223$ ,  $p < 0.05$ ). This finding is supported by recent evidence showing that uncertainty in illness—characterized by fluctuating symptoms and unclear prognoses—negatively affects psychological adjustment (Skojec et al, 2024). Similarly, Dekker et al. (2024) proposed a biopsychosocial–allostatic load model in which chronic disease exerts continuous demands on emotional, cognitive, and physiological systems, thereby straining adjustment resources. Recent reviews further emphasize that maladjustment is a widely recognized issue across chronic conditions, with illness-specific instruments consistently documenting psychological difficulties in such populations (Ebrahimgol, 2025). Moreover, regression analysis finds that chronic disease was a greater predictor of psychological adjustment, explaining 29% of the observed variance. These findings are in line with previous studies reporting that chronic illness negatively affects psychological adjustment due to physical limitations, lifestyle disruptions, financial strain, and social challenges (Stanton, Revenson, & Tennen, 2007; Ridder, Geenen, Kuijer, & Middendorp, 2008; Pierobon, Giardini, Callegari, & Majani, 2011). The study also found that women experienced higher psychological maladjustment than men, which may reflect gender differences in emotional expression, coping strategies, and willingness to verbalize fears (Madnawat & Kachhawa, 2013).

Regarding death anxiety, chronic patients had slightly higher scores ( $M = 53.74$ ) compared to non-chronic participants ( $M = 51.22$ ), though this difference was not statistically significant ( $t=1.592$ ,  $p>0.05$ ). Regression analysis indicated that chronicity had a modest predictive effect on death anxiety, explaining 10.5% of the variance. These findings contrast with earlier research suggesting that chronic patients typically exhibit higher death anxiety than healthy individuals (Spinetta & Maloney, 1975; Shakeri et al., 2022). The observed discrepancy may be due to variability in disease severity, type (e.g., cancer or AIDS versus asthma or hypertension), or duration of illness. Patients recently diagnosed may experience heightened death anxiety, whereas those living with chronic conditions for extended periods may have adapted. Additionally, certain items on the Death Anxiety Scale, such as concerns about global conflicts or pandemics, may have elicited elevated scores from both chronic and non-chronic participants. Supporting this, recent studies reported increased death anxiety across populations during the COVID-19 pandemic (Bulut, 2022; Özgüç, Küçük, & Aytaç, 2021). Cultural and religious beliefs, particularly in Bangladesh, may also buffer death anxiety, as faith in an afterlife can reduce fear of death.

In summary, the study confirms that death anxiety is significantly associated with psychological maladjustment and that chronic illness strongly predicts maladjustment, though its impact on death anxiety is modest. Chronic patients are more psychologically poor adjusted than non-chronic individuals, while differences in death anxiety are less spoken. Gender differences in coping styles and emotional manifestation point out that personalized psychological care is necessary. These findings highlight the need for targeted family involvement, counseling, and stress management activities to enrich the well-being of people living with chronic illnesses, influencing the objectives of SDG 3: Good Health and Well-Being.

### **Implications and Limitations of the Study**

The present study addresses valuable knowledge into the psychological challenges faced by individuals with chronic diseases. It is essential to investigate factors that may influence psychological adjustment in chronic patients. Generally, many of them go through worse physical conditions. So, they always need proper care and treatment. Adjustment problem could deprive them from proper care and nurture. Some of them need professional help of Psychologist or Psychiatrist. Other findings of the study were positive correlation between death anxiety and psychological adjustment. So, death anxiety and psychological adjustment are associated with each other. That could help the Psychologist, psychiatrists, physicians to create proper intervention, reduce mortality rate, evaluate the patients more accurately. While the research adds to sustain knowledge, several limitations should be noted. Firstly, the sample size was not represented whole population of chronic disease patients.

Secondly, the cross-sectional study design may not determine casual relationships with death anxiety, psychological adjustments and chronic & non-chronic individuals. Third, Further studies should need to do other

issues such as diverse group of population, longitudinal studies, examine other psychosocial factors to achieve a better knowledge of complex influence on mental health (Abdel-Khalek, 2005; Spinetta & Maloney, 1975).

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