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Cognitive and existential factors of students' loneliness

Eugene Stepura[a]*, Olena Zavgorodnia[b]

[a,b]*H.S. Kostiuk Institute of Psychology, National Academy of Educational Sciences of Ukraine*
2 Pankivska Str., 01033, Kyiv, Ukraine

Abstract

The paper deals with the problem of the connection attributional style, meaning in life and death anxiety with loneliness. The presence of a clear sense of meaning in life emerged as a stable protective factor, associated with an optimistic attributional style and lower levels of loneliness. In contrast, the search for meaning correlated with heightened death anxiety, but not with loneliness, which may indicate a compensatory nature of this process. Death anxiety was associated with pessimistic attributions, reduced hope, and increased indicators of loneliness. An optimistic explanatory style played a buffering role in relation to loneliness.

Keywords: alienation; isolation; pessimistic attributions; meaning in life; death anxiety

1. Introduction

In the context of prolonged social crises, increasing uncertainty, and existential threat, the issues of loneliness and death anxiety gain particular relevance, especially among young people.

Loneliness is not only a social phenomenon but also a profound emotional experience of alienation, isolation, and disconnection from others. It acquires new forms — combined with a sense of a threatening environment, the loss of loved ones, and the disruption of familiar bonds.

Death anxiety, in turn, is a fundamental existential fear that may intensify under conditions of uncertainty of future, diminishing an individual's capacity for adaptation and meaningful living. Death anxiety, provoked by the experience of loss and fear for oneself and others in uncertain circumstances, reaches a high level of psychological intensity.

Under such conditions, internal factors that can either alleviate or exacerbate these experiences become especially significant. This highlights the need to study the interrelations between cognitive interpretation of events (attributional style), the presence or search for meaning, hope, and the levels of loneliness and death anxiety.

Despite growing scientific attention to these topics, the cognitive and existential factors that may underlie individual differences in the perception and experience of loneliness and death anxiety remain insufficiently explored. In particular, the role of life meaning, optimistic or pessimistic attributional style, and such psychological resources as hope requires further clarification. A lack of meaning, or the search for it, may influence a person's psycho-emotional state in different ways, altering their sensitivity to loneliness or existential anxiety.

* Corresponding author. Tel.: +38-068-101-82-98
E-mail address: es18011988@yahoo.com

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In this context, it is important to integrate the approaches of existential psychology (Frankl, 1985; Yalom, 2020) with theories of cognitive appraisal of life events (Seligman, 2018; Snyder et al., 2002) in order to gain a deeper understanding of the mechanisms underlying psychological vulnerability or resilience under conditions of life uncertainty.

Over the past decade, there has been growing scientific interest in studying existential themes in psychology, particularly phenomena such as death anxiety, the experience of loneliness, loss of meaning, and the resources for coping with existential instability. The COVID-19 pandemic, as well as socio-political crises — including war — have heightened the relevance of issues related to ontological security.

Loneliness and death anxiety are two phenomena that, under current conditions, increasingly come to the forefront of psychological analysis. Loneliness is considered not only as objective social isolation but primarily as a subjective emotional experience of alienation and disconnection from the social world — often accompanied by a diminished sense of meaning and a feeling of existential emptiness (Cacioppo & Cacioppo, 2014; Qualter et al., 2015). At the same time, death anxiety is described as a fundamental component of human experience (Becker, 1973; Yalom, 2020), which can be either destructive or motivational depending on the individual's internal resources.

Research on death anxiety emphasizes its association with negative emotional states (depression, anxiety, isolation) and with impaired psychosocial functioning. In particular, studies by Doustinouri et al. (2024) and Sindhu et al. (2022) demonstrated that optimism and positive thinking significantly reduce levels of death anxiety among healthcare professionals. AlBoukhary et al. (2024) found that the effect of gratitude on reducing fear of death is fully mediated by optimism, indicating its key role in transforming negative experience into a psychological resource.

The topic of loneliness in contemporary research is viewed not merely as a lack of social contacts but as a profound existential experience of isolation, disconnection, detachment from other people. Peplau and Perlman (1982) emphasize the role of cognitive interpretations of loneliness, which may lead to chronic psycho-emotional difficulties.

In parallel, research on cognitive factors involved in coping with existential anxiety is also evolving. In the cognitive dimension, the role of attributional style is of particular importance. The theory of optimistic attributional style (Seligman, 2018) conceptualizes optimism as a stable tendency to interpret events in a positive manner. Snyder's hope theory (Snyder et al., 2002) also demonstrates the protective function of hope — conceptualized as a combination of motivational agency and the capacity to plan pathways toward goals — in conditions of uncertainty and loss. An optimistic attributional style is linked to greater stress resilience, higher quality of life, and fewer manifestations of depression and anxiety (Seligman, 2018). In the context of loneliness, cognitive distortions may intensify feelings of rejection or helplessness (Qualter et al., 2015).

Another important psychological resource is the sense of meaning in life. According to V. Frankl's concept (Frankl, 1985), the presence of meaning enables individuals to endure even the most difficult circumstances, while its loss exacerbates existential disorientation. Empirical studies confirm that the presence of meaning correlates with lower levels of death anxiety (Routledge & Juhl, 2010), whereas the search for meaning demonstrates more complex associations: it can function as a protective adaptive process, but also as an indicator of internal frustration (Steger et al., 2006). In traumatic contexts (e.g., war, epidemic), the search for meaning often serves as a way to integrate experience, rather than merely a reaction to its loss.

Thus, current findings point to a complex network of interrelations between existential (meaning, death anxiety) and cognitive (optimism, hope) factors, which collectively influence the intensity of experiencing of loneliness and psychological vulnerability. These factors may function either as protective or risk factors depending on their configuration, the social context, and individual resources. However, there is

a lack of studies that integrate these variables into a unified model, especially in the context of social crises and youth experience.

The general hypothesis of our study is that the level of loneliness is associated with the intensity of cognitive and existential characteristics of the individual, which was specified in the following three assumptions:

1) the tendency to interpret events in a positive manner and the presence of hope are inversely related to experiencing of loneliness;

2) loneliness is associated with higher levels of existential anxiety;

3) painful experiences of loneliness are related to the absence of meaning in life, but may also be linked to the activation of the search for meaning.

The present study aims to examine the relationships between loneliness and the individual's cognitive and existential characteristics, namely: dimensions of attributional style, meaning in life, and death anxiety.

2. Methodology

2.1. Objective

The first research question aims to identify the levels of attributional style, meaning in life, death anxiety, and loneliness. The second research question aims to determine whether correlations exist between these psychological constructs and the indicators of loneliness. The third research question seeks to provide a theoretical analysis and interpretation of the obtained results in order to clarify how cognitive and existential factors contribute to students' experience of loneliness. To examine the influence of cognitive and existential factors on students' feelings of loneliness, the present study employed a survey-based design followed by statistical analysis of the collected data.

2.2. Participants

The sample consisted of 109 individuals aged 18 to 23, primarily students from various faculties of the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" as well as students from the Faculty of Psychology and Social Work of Mykola Gogol Nizhyn State University. The composition included 67% identifying as women and 33% as men. The sample was randomly selected. Data collection took place in 2024. During the study period, participants engaged in blended learning formats, combining online and offline instruction depending on the current security situation in the country.

2.3. Instrument

Attributional Style Questionnaire (Seligman, 2018).

This instrument consists of 48 items describing problematic life situations and possible response options that serve as explanations for the events. The questionnaire includes the following scales:

PmB – belief in the stability of negative (bad) events' impact on a person's life;

PmG – belief in the stability of positive (good) events' impact on a person's life;

PvB – belief in the global (pervasive) impact of negative events across all areas of life;

PvG – belief in the global impact of positive events across all areas of life;

HoB – level of hopelessness (calculated as the sum of PmB and PvB; low scores indicate higher hope, while high scores indicate hopelessness);

PsB – personal responsibility for negative life events;

PsG – personal responsibility for positive events;

B – general orientation toward negative life events;

G – general orientation toward positive life events;

G–B – overall optimism level.

Differential questionnaire of loneliness experience (Osin & Leontiev, 2013), which includes 40 items grouped into 8 subscales and 3 composite scales:

Subscale 1 "Isolation" contains a statement about the absence of people with whom close contact is possible.

Subscale 2: «Experience of Loneliness» – includes generalized statements forming the respondent's self-perception as a lonely person.

Subscale 3: «Alienation» – emphasizes the absence of meaningful connections with others.

Subscale 4: «Loneliness Dysphoria» – captures negative emotions related to being alone.

Subscale 5: «Loneliness as a Problem» – reflects a negative evaluation of loneliness as a phenomenon.

Subscale 6: «Need for Company» – measures the felt need for social interaction.

Subscale 7: «Joy of Solitude» – measures the acceptance and valuing of solitude.

Subscale 8: «Resource of solitude» contains statements that reflect the productive aspects of solitude and its potential for self-discovery and development.

The General Loneliness score is calculated by summing Subscales 1–3, reflecting the degree of current loneliness and lack of close interpersonal connection.

The Dependency on Communication score is derived from Subscales 4–6, indicating rejection of solitude and inability to remain alone.

The Positive Solitude (Loneliness) score is calculated from Subscales 7–8 and reflects the individual's capacity to find psychological resources in solitude and use them for personal growth.

Death Anxiety Scale (Templer, 1970).

This scale consists of 15 dichotomous (Yes/No) items. Each answer matching the scoring key receives 1 point. The total score indicates the individual's level of death anxiety.

Meaning in Life Questionnaire (MLQ) by Steger, Frazier, Oishi, & Kaler (2006).

This instrument measures two dimensions of meaning in life: Presence of Meaning (the extent to which the individual perceives their life as meaningful); Search for Meaning (the degree to which the individual is motivated to find meaning in life).

Participants rate 10 items using a 7-point Likert scale ranging from 1 (Absolutely untrue) to 7 (Absolutely true).

2.4. Procedure

The study protocol and materials were approved by the Research Ethics Committee of the H. S. Kostiuk Institute of Psychology of the National Academy of Educational Sciences of Ukraine (Extract from Minutes No. 2/9, dated December 18, 2023). Participants were provided with written information outlining the study's objectives and procedures. Written informed consent was obtained from each participant prior to data collection.

Upon completion of data processing, participants were offered personalized feedback on their results. If needed, additional clarification or psychological support was provided.

2.5. Data analysis

Empirical data were analyzed using IBM SPSS Statistics 27 for Windows, applying both quantitative and qualitative approaches, including descriptive statistics and Pearson's correlation analysis.

Descriptive statistics were calculated for each variable under investigation, including the mean, standard deviation, skewness, and kurtosis of the distribution.

3. Results

Within the framework of the study, preliminary statistical procedures were conducted to assess the suitability of the empirical data for further statistical analysis.

Table 1 presents the descriptive statistics for the parameters of the attributive style of personality.

Table 1. Descriptive statistics for the parameters of the attributive style of personality

	M	*CI*		*SD*	*SD²*	*A*	*E*
		Low	Hight				
PmB	4.33	4.04	4.62	1.528	2.334	-.052	-.212
PmG	2.50	2.20	2.79	1.555	2.419	.528	-.041
PvB	4.06	3.72	4.41	1.807	3.264	-.011	-.838
PvG	3.74	3.42	4.07	1.718	2.952	.207	-.791
HoB	8.46	7.95	8.96	2.662	7.084	.069	-.179
PsB	5.02	4.65	5.38	1.929	3.722	-.562	.019
PsG	3.19	2.86	3.53	1.777	3.157	.268	-.608
B	13.49	12.85	14.12	3.346	11.197	.009	.008
G	9.40	8.65	10.15	3.944	15.558	.372	-.396
G-B	-4.07	-5.19	-2.96	5.887	34.661	.488	.032

Note. M – mean, CI – 95% confidence interval of the mean, SD – standard deviation, SD² – variance, A – skewness, E – kurtosis, PmB – belief in the duration of the impact of negative events on a person's life; PmG - belief in the duration of the impact of positive events on a person's life; PvB – belief in the impact of negative events on all areas of human life; PvG – belief in the impact of positive events on all areas of human life; HoB – level of hopelessness; PsB - personal responsibility for negative events in one's life; PsG - personal responsibility for positive events in one's life; B – level of general orientation towards negative; G – level of general orientation towards positive; G-B – level of optimism.

Table 2 presents the descriptive statistics for the parameters of loneliness.

Table 2. Descriptive statistics for the parameters of loneliness

	M	*CI*		*SD*	*SD²*	*A*	*E*
		Low	*Hight*				
I	*8.43*	*7.80*	*9.06*	*3.288*	*10.813*	*.909*	*.914*
EL	*9.97*	*9.30*	*10.64*	*3.498*	*12.235*	*.169*	*-.898*
An	*10.39*	*9.73*	*11.06*	*3.482*	*12.127*	*.531*	*-.325*
LD	*10.48*	*9.84*	*11.11*	*3.306*	*10.931*	*.735*	*.306*
LP	*12.52*	*11.91*	*13.14*	*3.193*	*10.195*	*.027*	*-.405*
NC	*12.19*	*11.58*	*12.79*	*3.169*	*10.040*	*.143*	*-.342*
JS	*12.36*	*11.86*	*12.85*	*2.567*	*6.590*	*-.677*	*.412*
RS	*18.50*	*17.82*	*19.19*	*3.572*	*12.762*	*-.454*	*-.208*
GL	*28.54*	*26.85*	*30.23*	*8.829*	*77.949*	*.499*	*-.510*
DC	*35.13*	*33.63*	*36.63*	*7.813*	*61.039*	*.426*	*.083*
PS	*30.94*	*29.93*	*31.95*	*5.264*	*27.714*	*-.474*	*.641*

Note. M – mean, CI – 95% confidence interval of the mean, SD – standard deviation, SD² – variance, A – skewness, E – kurtosis, I – Isolation, EL – Experience of Loneliness, An – Alienation, LD – Loneliness Dysphoria, LP – Loneliness as a Problem, NC – Need for Company, JS – Joy of Solitude,

RS – Resource of solitude, GL– The General Loneliness, DC – The Dependency on Communication, PS – The Positive Solitude (Loneliness).

Table 3 presents the descriptive statistics for the parameters of meaning in life and death anxiety.

Table 3. Descriptive statistics for the parameters of meaning in life and death anxiety

	M	*CI*		*SD*	*SD²*	*A*	*E*
		Low	Hight				
PML	15.76	14.56	16.95	6.259	39.175	.260	-.470
SML	12.57	11.61	13.54	5.053	25.537	.584	-.061
DA	8.39	7.88	8.90	2.687	7.223	.073	-.589

Note. M – mean, CI – 95% confidence interval of the mean, SD – standard deviation, SD² – variance, A – skewness, E – kurtosis, PML – Presence of Meaning in Life, SML – Search for Meaning in Life, DA – Death anxiety.

The values of skewness and kurtosis indicate that all empirical data fall within the range of normal distribution. Therefore, Pearson's correlation analysis was applied for further statistical analysis.

Table 4 presents the correlations between attributional style parameters and various dimensions of loneliness.

Table 4. Correlations between Attributional Style Parameters and Loneliness Dimensions

Parameters Loneliness	Attributional style parameters									
	PmB	PmG	PvB	PvG	HoB	PsB	PsG	B	G	G-B
Insulation	.04	-.05	.01	-.08	.01	**-.23***	.09	-.13	-.02	.06
Experiencing loneliness	.10	**-.26****	.14	-.10	.12	-.14	-.07	.01	-.18	-.13
Alienation	.09	**-.34****	.07	-.18	.08	-.05	-.06	.03	**-.24****	-.18
Loneliness dysphoria	.10	.02	.12	-.05	.13	.03	-.04	.12	-.03	-.09
Loneliness as a problem	-.03	-.03	.11	-.01	.03	.02	-.07	.04	-.04	-.05
The need for a company	.02	.03	.18	.02	.10	-.09	.03	.03	.03	.01
The joy of solitude	.01	-.10	.06	-.02	.05	-.01	-.13	.03	-.11	-.09
Resource of solitude	.03	-.12	.13	-.11	.11	.01	-.07	.08	-.12	-.13
General	.09	**-.23***	.11	-.13	.10	-.18	.01	-.03	-.15	-.09

loneliness										
Dependence on communication	.03	.01	.17	-.02	.11	-.02	-.03	.08	-.01	-.05
Positive loneliness	.05	-.13	.11	-.07	.09	0	-.11	.08	-.13	-.13

Note. * - p < .05, ** - p < .01; PmB – Belief in the permanence of the impact of negative events on a person's life; PmG – Belief in the permanence of the impact of positive events on human life;; PvB – Belief in the global impact (on all spheres of human life) of negative events; PvG – Belief in the global impact of positive events (on all spheres of human life); HoB - the level of loss of hope (hopelessness); PsB - a person's responsibility for negative events in his life; PsG - a person's responsibility for positive events in his life; B - the level of overall orientation toward negativityt; G - the level of overall orientation toward positivity; G-B - the level of optimism.

An inverse correlation was found between the belief in the permanence of the impact of positive events on a person's life (PmG) and the subscales of the Differential Loneliness Questionnaire "Experience of loneliness" ($r = –.26$; $p < .01$) and "Alienation" ($r = –.34$; $p < .01$).

The belief in the permanence of the impact of positive events (PmG) also showed an inverse correlation with the "General loneliness" scale ($r = –.23$; $p < .05$).

The subscale "Alienation" was inversely correlated with the overall orientation toward positive events (G) of the Attributional Style Questionnaire ($r = –.24$; $p < .05$).

The subscale "Isolation" was inversely correlated with personal responsibility for negative events (PsB) ($r = –.23$; $p < .05$).

Table 5 presents the correlations between loneliness parameters with death anxiety and parameters of meaning in life.

Table 5. Correlations between loneliness parameters with death anxiety and parameters of meaning in life

Parameters Loneliness	Death anxiety	Presence of meaning in life	Search for Meaning in Life
Insulation	-.04	**-.23***	-.01
Experiencing loneliness	.16	**-.34****	-.07
Alienation	.17	**-.36****	.05
Loneliness dysphoria	**.30****	-.01	.05
Loneliness as a problem	**.30****	-.01	-.13
The need for a	**.30****	.11	-.11

company			
The joy of solitude	-.07	**-.24***	-.07
Resource of solitude	.12	.13	-.06
General loneliness	.12	**-.33****	.05
Dependence on communication	**.38****	.05	.08
Positive loneliness	.04	-.17	.07

Note. * - p < .05, ** - p < .01.

The "Loneliness Dysphoria" subscale of the Differential Loneliness Questionnaire shows a direct correlation with the level of death anxiety (.30; p < .01). Similarly, the subscales "Loneliness as a Problem" (.30; p < .01) and "Need for Company" (.30; p < .01) also directly correlate with death anxiety. Therefore, it appears consistent that the "Dependence on Communication" scale, composed of the three aforementioned subscales, likewise has a direct correlation with death anxiety (.38; p < .01).

The "Isolation" subscale of the Differential Loneliness Questionnaire has an inverse correlation with the presence of meaning in life (-.23; p < .05), as does the "Experience of Loneliness" subscale, which is inversely related to the presence of meaning in life (-.34; p < .01). The "Alienation" subscale also has an inverse correlation with the presence of meaning in life (-.36; p < .01). Consistently, the "Overall Loneliness" scale of the Differential Loneliness Questionnaire, which is composed of the three above-mentioned subscales, shows an inverse correlation with the level of presence of meaning in life (-.33; p < .01).

Additionally, the "Joy of Solitude" subscale of the Differential Loneliness Questionnaire also inversely correlates with the presence of meaning in life (-.24; p < .05).

Table 6 displays the correlations between the parameters of attributional style with death anxiety and meaning in life.

Table 6. Correlations between the parameters of attributional style with death anxiety and meaning in life

Attributional style parameters	Death anxiety	Presence of meaning in life	Search for Meaning in Life
PmB	.12	-.01	-.01
PmG	**-.26****	**.35****	.08
PvB	**.33****	.07	.17
PvG	**-.21***	**.34****	.07
HoB	**.27****	.04	.07
PsB	-.07	-.13	.15
PsG	-.15	**.33****	.12

B	.18	-.05	.14
G	**-.25****	**43****	.12
G-B	**-.28****	**.32****	.0

Note. * - p < .05, ** - p < .01; PmB – Belief in the permanence of the impact of negative events on a person's life; PmG – Belief in the permanence of the impact of positive events on human life;; PvB – Belief in the global impact (on all spheres of human life) of negative events; PvG – Belief in the global impact of positive events (on all spheres of human life); HoB - the level of loss of hope (hopelessness); PsB - a person's responsibility for negative events in his life; PsG - a person's responsibility for positive events in his life; B - the level of overall orientation toward negativityt; G - the level of overall orientation toward positivity; G-B - the level of optimism

The optimistic attributional style has an inverse correlation with death anxiety (-.28; p < .01). Additionally, some elements of attributional style show significant correlations with death anxiety: the general orientation towards positivity (G) inversely correlates with death anxiety (-.25; p < .01); the conviction in the impact of positive events on all spheres of a person's life (PvG) also has an inverse correlation with death anxiety (-.21; p < .05); the belief in the duration of the influence of positive events on a person's life (PmG) inversely correlates with death anxiety (-.26; p < .01). Conversely, the conviction in the impact of negative events on all spheres of a person's life (PvB) has a direct correlation with death anxiety (.33; p < .01); the level of hopelessness (HoB) also directly correlates with death anxiety (.27; p < .01).

The optimistic attributional style has a direct correlation with the presence of meaning in life (.32; p < .01). The general orientation towards positive events (G) also directly correlates with the presence of meaning in life (.43; p < .01). Cognitive attitudes that comprise the general orientation towards positivity (G) logically have a direct correlation with the experience of presence of meaning in life. The presence of meaning in life directly correlates with the conviction in the impact of positive events on all spheres of a person's life (PvG) (.34; p < .01), the belief in the duration of the influence of positive events on life (PmG) (.35; p < .01), and the attitude of personal responsibility for positive events in one's life (.33; p < .01). Parameters of attributional style do not correlate with the search for meaning in life.

Table 7 presents the correlation links between death anxiety and the scales of the meaning in life questionnaire. Death anxiety does not have a relationship with the presence or absence of meaning in life but shows a direct correlation with the search for meaning in one's life (.22; p < .05).

Table 7. Correlation links between death anxiety and parameters of meaning in life

	Presence of Meaning in Life	Search for Meaning in Life
Death anxiety	.07	**.22***

Note. * - p < .05, ** - p < .01.

4. Discussions

The results obtained are generally consistent with the propositions of existential psychology (Frankl, 1985; Yalom, 2020), the theory of attributional style (Seligman, 2018), and the model of hope (Snyder et al., 2002), allowing for a more precise understanding of the role of cognitive and existential factors in the experience of loneliness and death anxiety.

Within the existential paradigm, particularly in the works of Frankl (1985) and Yalom (2020), loneliness and death anxiety are conceptualized as fundamental existential givens. Frankl emphasized that the loss of meaning in life renders the individual vulnerable to an "existential vacuum," within which death anxiety becomes more salient. However, the present study did not reveal a significant relationship between the presence of meaning in life and death anxiety. Although previous

research (Dursun, Alyagut, & Yilmaz, 2022) has demonstrated that a strong sense of personal meaning is associated with lower levels of death anxiety, the current findings do not support this association.

At the same time, the search for meaning was positively associated with death anxiety, suggesting that it may function as a trigger for meaning-making, particularly in the absence of a stable internal orientation. This finding is consistent with Steger et al. (2006), who argue that the search for meaning is inherently ambivalent and, under certain conditions, may be associated with increased anxiety that activates meaning-making processes.

Loneliness in the present study appears not only as an interpersonal phenomenon but also as an internal state of detachment that intensifies awareness of mortality. This interpretation aligns with Yalom's concept of existential isolation (Yalom, 2020), according to which the human condition is characterized by the impossibility of fully sharing one's existence with others. In this sense, loneliness reflects not only the absence of interpersonal ties but a more fundamental disruption in the individual's relation to existence itself.

The positive association between loneliness and death anxiety observed in the sample suggests that reduced social connectedness undermines the sense of belonging and ontological security, thereby intensifying concerns related to mortality.

From a cognitive perspective, particular attention should be given to the relationship between an optimistic attributional style and death anxiety. According to Seligman (2018), an optimistic style—characterized by stable, global, and internal explanations of events—supports psychological resilience. The present findings suggest that optimism is associated with lower levels of death anxiety and may function as a protective cognitive resource.

This is consistent with the results reported by Sindhu et al. (2022), indicating that individuals with an optimistic explanatory style are less likely to catastrophize death-related concerns.

These findings can also be interpreted in light of Snyder's model of hope (Snyder, 2000). Although hope was operationalized within the parameters of attributional style, its associations with optimism and meaning in life suggest overlapping protective mechanisms. Within this framework, loneliness and death anxiety may reflect disruptions in two key components: pathways thinking (the perceived ability to generate routes toward goals) and agency thinking (the motivational component). Under conditions of existential threat, a reduction in these capacities may weaken the sense of agency, thereby intensifying both loneliness and death anxiety. Conversely, higher levels of hope may support adaptive meaning-making and coping with existential distress.

Similarly, the present results indicate that optimism may serve a comparable function, being associated with lower death anxiety and contributing to the preservation or reconstruction of meaning in life. This observation is in line with Snyder's assumption regarding the complementary roles of hope and optimism as resources of psychological resilience.

The data can also be interpreted within the framework of Terror Management Theory (TMT; Greenberg et al., 1986; Dar-Nimrod, 2022). According to TMT, awareness of mortality elicits anxiety, which individuals attempt to regulate through adherence to cultural worldviews and the maintenance of self-worth. Within this perspective, when such buffering mechanisms are weakened, awareness of mortality may become less symbolically mediated and more directly experienced, intensifying existential distress. Loneliness, in turn, may contribute to this weakening by disrupting the individual's connection to socially shared systems of meaning.

A growing body of research supports the protective role of optimism in the context of existential threat. For example, Sindhu et al. (2022) showed that optimism mitigates the negative impact of death anxiety on life satisfaction. Similar findings were reported by Brown (2011) and Doustinouri et al. (2024), who observed reductions in death anxiety associated with positive expectations about the future. Al-Boukhary et al. (2024) further demonstrated that optimism mediates the relationship between gratitude and fear of death, highlighting its integrative role in coping with

distress. These findings suggest that optimism not only relates directly to lower death anxiety but may also influence its broader psychological consequences. This interpretation is consistent with existential approaches emphasizing the importance of ontological security (Frankl, 1985), understood as a basic trust that supports meaning construction. The present findings are in line with this view, indicating that optimism is associated with reduced existential distress.

At the same time, the search for meaning in life was not associated with optimism, whereas the presence of meaning showed direct associations with components of the optimistic attributional style. Furthermore, loneliness was positively associated with death anxiety and also related to meaning in life, suggesting a complex interplay between these variables. Within the TMT framework, social disconnection may reduce the effectiveness of culturally grounded buffers against death anxiety, while internal resources such as optimism and meaning may partially compensate for this deficit.

Comparable results have been reported in clinical populations. Salehi and Rabiee (2020) found that optimism, along with hope, resilience, and self-efficacy, is associated with lower death anxiety among patients with severe illnesses. These findings further support the role of optimism as a key factor in maintaining both emotional well-being and a sense of meaning in life.

Consistent with Yalom's (2020) existential perspective and empirical evidence (Stillman et al., 2009; Chopik, 2016), the absence of meaningful social connections may deprive individuals of a sense of belonging and continuity of the self, thereby increasing vulnerability to death anxiety. In a study by Estherwood and Saida (2020), loneliness and social isolation during the COVID-19 pandemic were associated with increased anxiety, whereas social support reduced distress independently of other factors. Similar patterns were observed in the present study and are consistent with findings reported by Greenblatt-Kimron et al. (2021).

From an existential-psychotherapeutic perspective, loneliness may activate fundamental concerns related to death, isolation, and meaninglessness. As suggested by Menzies and Menzies (2020) and Menzies et al. (2022), individuals are required to construct meaning as a central organizing principle of experience. These findings may also be interpreted through the concept of ontological security (Laing, 1960), according to which loneliness undermines a stable sense of self and increases awareness of existential vulnerability.

However, under conditions of social isolation, the search for meaning may be either activated or inhibited. Death anxiety may stimulate attempts to construct meaning, but it may also be associated with experiences of meaninglessness. This observation is consistent with the notion of the dual potential of existential anxiety (Frankl, 1985; Routledge & Juhl, 2010), which may either facilitate or hinder meaning-making processes depending on available psychological resources.

The results of the study provide partial support for the proposed hypotheses. The first hypothesis was partially confirmed: an optimistic attributional style was associated with lower levels of dysphoria, isolation, and alienation, whereas hope did not show significant associations with loneliness. At the same time, hopelessness was positively associated with death anxiety. The second hypothesis was supported, as higher levels of loneliness were associated with greater existential anxiety. The third hypothesis was also confirmed: the absence of meaning in life was associated with increased loneliness. At the same time, the search for meaning was not related to loneliness but was positively associated with death anxiety, suggesting its ambivalent nature.

In conclusion, the findings allow loneliness to be interpreted not merely as a socio-psychological state but as a point of intersection between cognitive and existential processes. The results indicate that an optimistic attributional style and the presence of meaning in life are associated with lower levels of existential anxiety, whereas their absence—combined with loneliness—relates to increased vulnerability. The lack of a direct association between the presence of meaning and death anxiety, together with the positive relationship between the search for meaning and death anxiety, suggests that meaning-making may emerge not only from the presence of psychological

resources but also from confrontation with existential limits, where anxiety becomes a condition for the reconstruction of meaning rather than merely its consequence. These findings highlight the importance of integrative approaches that combine cognitive and existential perspectives in addressing loneliness and its psychological consequences.

References

1. Al Boukhary, R., Hallit, R., Postigo, A., Malaeb, D., Dabbous, M., Sakr, F., ... & Obeid, S. (2024). The effect of gratitude on death anxiety is fully mediated by optimism in Lebanese adults following the 2023 earthquake. *BMC psychology,* 12(1), 2. 1-9. Doi: 10.1186/s40359-023-01509-4
2. Becker*,* E. *(*1973*). The denial of death*. United States: Free Press.
3. Brown, A. G. (2011). An examination of the relationshipbetween death anxiety, optimism, depression, and anxiety. URL: https://ttu-ir.tdl.org/server/api/core/bitstreams/91f91483-5376-47a3-ae3f-61142d29b4a8/content
4. Cacioppo, J. T., & Cacioppo, S. (2014). Social relationships and health: The toxic effects of perceived social isolation. *Social and Personality Psychology Compass, 8*(2), 58-72. Doi: 10.1111/spc3.12087
5. Chopik, W. J. (2016). The benefits of social technology use among older adults are mediated by reduced loneliness*. Cyberpsychology, Behavior, and Social Networking,* 19(9), 551-556. Doi: 10.1089/cyber.2016.0151.
6. Dar-Nimrod I. (2022). Death awareness and terror management theory. In Menzies R. G., Menzies R. E., Dingle G. A. (Eds.), *Existential concerns and cognitive-behavioral procedures, an integrative approach to mental health* (pp. 35–55). Springer. Doi: 10.1007/978-3-031-06932-1_3
7. Doustinouri, M., Rahnama, M., Abdollahimohammad, A., Moghadam, M. P., Moghadam, E. S., & Asadi-Bidmeshki, E. (2024). Effect of Positive Thinking Skills on Optimism and Death Anxiety of COVID-19 Nurses: A quasi-experimental study. *Ethiopian Journal of Health Sciences,* 34(2).143-148. Doi: 10.4314/ejhs.v34i2.5
8. Dursun P., Alyagut P., Yılmaz I. (2022). Meaning in life, psychological hardiness and death anxiety: Individuals with or without generalized anxiety disorder (GAD). *Current Psychology*, 41(6), 3299–3317. Doi: 10.1007/s12144-021-02695-3
9. Esterwood, E., & Saeed, S. A. (2020). Past epidemics, natural disasters, COVID19, and mental health: learning from history as we deal with the present and prepare for the future. *Psychiatric Quarterly,* 91(4), 1121-1133. Doi: 10.1007/S11126-020-09808-4
10. Frankl, V. E. (1985). *Man's search for meaning*. Simon and Schuster. 221 p.
11. Greenblatt-Kimron L., Kestler-Peleg M., Even-Zohar A., Lavenda O. (2021). Death anxiety and loneliness among older adults: Role of parental self-efficacy. *International Journal of Environmental Research and Public Health*, 18(18), 9857. Doi: 10.3390/ijerph18189857
12. Laing, R. D. (1960). *The divided self: An existential study in sanity and madness London*. The Sciences.
13. Menzies, R. G., & Menzies, R. E. (2020). Emotional pain and suffering: The search for global solutions. In P. Rhodes (Ed.), *Beyond the psychology industry: How else might we heal?* (pp. 11-22). Springer Nature Switzerland AG. Doi: 10.1007/978-3-030-33762-9_2
14. Menzies R. G., Menzies R. E., & Dingle G. A. (Eds.) (2022). *Existential Concerns and Cognitive-Behavioral Procedures: An Integrative Approach to Mental Health.* New York, NY, United States: Springer. 325 p.
15. Osin, E. N., & Leontev, D. A. (2013). Differencialnyj oprosnik perezhivaniya odinochestva: struktura i svojstva [Differential questionnaire of the experience of loneliness: structure and properties]. Psihologiya. *Zhurnal Vysshej shkoly ekonomiki,* 10(1), 55-81.
16. Peplau, A., & Perlman, D. (1982). *Loneliness: A Sourcebook of Current Theory, Research, and Therapy.* New York: John Wiley & Sons.
17. Qualter, P., Vanhalst, J., Harris, R., Van Roekel, E., Lodder, G., Bangee, M., ... & Verhagen, M. (2015). Loneliness across the life span. *Perspectives on psychological science*, 10(2), 250-264. Doi: 10.1177/1745691615568999
18. Routledge, C., & Juhl, J. (2010). When death thoughts lead to death fears: Mortality salience increases death anxiety for individuals who lack meaning in life. *Cognition and Emotion,* 24(5), 848-854. Doi: 10.1080/02699930902847144

19. Salehi R., & Rabiee M. (2020). Investigating the role of Self-Compassion and Psychological Capital (hope, resilience, Self-efficacy and Optimism) in predicting depression and death anxiety in Patients with Cancer. *Rooyesh-e-Ravanshenasi Journal.* 9(10), P. 103-114. Doi: 10.29252/rooyesh
20. Seligman, M. (2018). *Learned Optimism*. London: John Murray Press.
21. Sindhu, Z. M., Shahbal, S., Khurshid, S., Irshad, N., Khan, A., & Batool, R. (2022). Death Anxiety and Life Satisfaction among Health Workers during Covid-19; with Moderating Role of Optimism. *Journal of Xi'an Shiyou University, Natural Science Edition,* 18(8), 199-220.
22. Snyder, C. R., Rand, K. L., & Sigmon, D. R. (2002). Hope theory. *Handbook of positive psychology*, 257-276.
23. Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: assessing the presence of and search for meaning in life. *Journal of counseling psychology,* 53(1), 80-93. Doi: 10.1037/0022-0167.53.1.80
24. Stillman, T. F., Baumeister, R. F., Lambert, N. M., Crescioni, A. W., DeWall, C. N., & Fincham, F. D. (2009). Alone and without purpose: Life loses meaning following social exclusion. *Journal of Experimental Social Psychology,* 45(4), 686-694. Doi: 10.1016/j.jesp.2009.03.007
25. Templer, D. I. (1970). The construction and validation of a death anxiety scale. *The Journal of general psychology,* 82(2), 165-177. Doi: 10.1080/00221309.1970.9920634
26. Yalom I. D. (2020). *Existential psychotherapy*. Hachette UK, p. 544