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The prevalence of existential anxiety and its association with depression, general anxiety, and stress in Saudi university students

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Abstract

Background Existential anxiety (EA) is an expression of loneliness. Although depression, anxiety, and stress have been extensively studied worldwide, research on EA in the sociocultural context of the Arab–Muslim society is scarce. This study aimed to determine the prevalence of EA among undergraduate students in Jeddah, Saudi Arabia, by examining the association between EA and depression, anxiety, and stress.

Results This cross-sectional study of 811 undergraduate students at three large Saudi universities was conducted between June and July 2018. Data collection involved demographic information, EA testing (using a validated questionnaire modified for the Saudi Arabian context), and the Depression, Anxiety, and Stress Scale to test for depression, anxiety, and stress. The average age of the participants was 21 years, and 77.2% were female. The prevalence of EA was 71.1% in all students and was significantly correlated with depression ($rp = 0.73$, $p < 0.001$), general anxiety ($rp = 0.47$, $p < 0.001$), and stress ($rp = 0.54$, $p < 0.001$).

Conclusions There was a high prevalence of EA among university students in Saudi Arabia, and EA was strongly correlated with depression, anxiety, and stress. This study emphasizes the importance of additional research on the underlying causes of EA among university students.

Keywords Academic performance, Anxiety, College students, Depression, Existential anxiety, Stress

Background

Humans are uniquely capable of abstract thought and must confront the unsettling realities of their existence. Life is not infinite, and we are bound to confront mortality eventually. Hence, as we navigate life's challenges, questions about the purpose and meaning of our lives naturally arise [1]. When we struggle to find satisfactory answers to fundamental questions, our quest for understanding is usually accompanied by anxiety.

Existential concerns have been studied in various fields, including religion, philosophy, sociology, psychology, and psychiatry. Existential therapy first emerged in Europe during the 1940s and 1950s as mental health professionals sought profound approaches to comprehensively address these questions [2].

Frankl introduced the term "existential vacuum," which he defined as a sense of meaninglessness, purposelessness, boredom, and despair. Frankl endured the

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distressing conditions of Nazi concentration camps during World War II and emerged with a new perspective on life. He believed that to live a fulfilling life, one must discover the overarching meaning underlying suffering. In a study conducted on his students, Frank reported that 55% of the participants experienced such an existential vacuum [3]. May and Yalom proposed that the fundamental source of distress among their clients stemmed from unresolved concerns about death, freedom, existential isolation, and meaninglessness in life [2]. Jung, who shared this viewpoint, observed that a substantial number of his patients achieved mental health recovery only after addressing their concerns. Jung suggested that religion and psychiatry should be merged, emphasizing the importance of a shared approach to assist individuals in seeking answers to existential questions [4].

Existential anxiety (EA) is an emotional state characterized by distress related to one's ultimate purpose, death, meaninglessness, life, uncertainty, and overwhelming loneliness [5]. Although EA is, at times, a transient experience, it has been associated with sustained and clinically significant symptoms of anxiety and depression [6]. Fuchs described the connection between depression, anxiety, and proneness to interpret stressful events in catastrophic ways and perceive them as existential threats [7]. Apprehension concerning death is a prevalent source of EA in patients with clinical depression and generalized anxiety disorders [8]. Robah identified religion as a mitigating factor of death anxiety [9]. Furthermore, EA associated with self-perception of one's future has been associated with depression and anxiety in adolescents [10]. However, data on college students, particularly those outside Western countries, are lacking.

Existential concerns have been associated with symptoms of depression, anxiety, and suicide. Routledge argued that the increasing rate of suicide in the US is not due to poor mental healthcare, as many claim. He explained that the surge in suicides represents an existential crisis stemming from recent societal changes in America, prompting questions about the meaning of life, particularly concerns that life may lack fundamental meaning as secularization and materialism have risen [1]. Albert Camus, an existential philosopher, similarly stated that suicide denotes a declaration that life is of no value or meaning. Camus also argued that suicide is not solely due to mental illness, irrationality, or impulsivity. Instead, he reconceptualized it as the end point of the contradiction between a person's desire to live a life of overarching, grand, and ultimate meaning and purpose and the apparent meaninglessness of life [11].

A few studies have explored the prevalence of EA and its correlation with mental health symptoms in Arab and Muslim communities. A study conducted in Gaza revealed that 74.4% of university students experienced some degree of EA, which was significantly associated with a lack of pleasure [12]. Another study found that high levels of EA were positively correlated with academic procrastination [13]. One study involving participants from Egypt, Kuwait, Syria, Turkey, and the UK revealed that EA was strongly correlated with post-traumatic stress disorder, psychopathology, internalizing and externalizing thought disorders, poor health, and cumulative stressors and traumas (CST). Furthermore, EA was negatively correlated with the will to exist, live, and survive, self-esteem, religiosity, and emotion regulation [14].

To address this research gap in the Middle East, we aimed to determine the prevalence of EA among undergraduate students across various universities in Jeddah, Saudi Arabia. Furthermore, this study evaluated the associations between EA and depression, general anxiety, and stress.

Methods

This cross-sectional study involved a convenience sample of Saudi undergraduate students enrolled in three large universities in Jeddah, Saudi Arabia. Most participants were from the primary university, given its status as the largest university in Jeddah, with an enrollment of 180,000 students. Participants were recruited from different majors. A convenience sample of 811 students was included in the study. All the participants signed a written consent form before completing the questionnaire. This study was approved by the Research Ethics Committee of King Abdulaziz University (approval number 428–18).

Sociodemographic, academic, and general health data were collected using the questionnaire. The psychometrically validated 32-item EA scale (EAS) developed by Good and Good was administered to measure EA [15]. The EAS comprises four primary domains: lack of meaning, lack of purpose, boredom, and despair. The questionnaire was translated into Arabic using the forward backward–forward translation method, with a few modifications for clarity. The Arabic questionnaire was pilot-tested with 17 participants. Most participants indicated that item number 23, which states, "I feel that there is little, if anything, in this world that is particularly worth pursuing over a long period," was unclear to them. Hence, it was removed from the scale, resulting in a final 31-item scale. The original scale's options were yes/no, with no cutoff for determining whether the participant had clinically significant levels of EA. Therefore, we modified the scale to allow participants to respond using a 4-point Likert scale (from 0 to 3) instead of the yes/no response option. A broader range of response options was incorporated to enhance the precision of the EAS.

The revised version of the EAS has a maximum score of 93 and a minimum score of 0. The cut-off points were determined by dividing the 93-point scale into four quartiles representing different levels of EA based on severity: absent (0–23), mild (24–46), moderate (47–70), and severe (71–93). Cronbach's alpha for the Arabic version of the revised scale for the entire sample of 811 respondents was 0.96, indicating excellent internal consistency (Table 1).

The Depression, Anxiety, and Stress Scale (DASS-21) was used to assess symptoms of depression, anxiety, and stress. It is a psychometrically reliable and valid measure for assessing these symptoms in Arabs [16]. The DASS-21 comprised 21 items that the participants responded to on a 4-point Likert scale. The DASS-21 provides separate scores for depression, general anxiety, and stress across five levels of severity. Questionnaires were distributed to students through social media platforms, including WhatsApp, Telegram, and Twitter.

Statistical analysis

Frequencies and percentages were calculated for each nominal and ordinal variable, whereas means and SDs were calculated for interval-level variables. The normality of the EAS and the stress, anxiety, and depression subscales of the DASS-21 was tested using the one-sample

Table 1 Reliability of Arabic Existential Anxiety Scale (EAS) in 811 undergraduates

Item-total statistics				
EAS	**Scale mean if item deleted**	**Scale variance if item deleted**	**Corrected item-total correlation**	**Cronbach's alpha if item deleted**
I have the feeling that my life has little or no purpose	32.14	482.474	0.679	0.958
I feel bored and indifferent by what is going on around me	31.80	487.044	0.579	0.959
I don't find life exciting and challenging	32.04	481.778	0.667	0.958
I feel that my accomplishments are worthless	32.11	479.067	0.708	0.958
I feel that I am merely existing, not really living	31.92	474.420	0.731	0.958
I feel that it is useless to discuss things with others because they just never really understand	31.71	487.313	0.535	0.959
I don't feel that I have more to look forward to in life than most others	32.25	482.746	0.647	0.959
My daily activities seem to be pointless	31.71	480.073	0.677	0.958
I feel depressed when I think about the future	31.82	479.155	0.672	0.958
I didn't find any type of work that I really enjoy	32.07	482.754	0.625	0.959
My feelings don't seem to mean anything to anyone else	31.95	480.373	0.631	0.959
I find religion is to be empty	32.83	499.745	0.408	0.960
I feel that it is useless to try to convince anyone else of anything	32.07	489.386	0.539	0.959
I feel that I have little to look forward	32.17	483.908	0.653	0.959
I feel that life is meaningless	32.39	478.770	0.760	0.958
I just don't seem to enjoy things the way others seem to	31.86	475.725	0.743	0.958
I feel that I am getting nowhere, no matter how much effort I put	32.07	478.475	0.712	0.958
I don't feel that I have found more meaning in life than most others have	32.11	478.597	0.738	0.958
I don't take a strong interest in what I am reading or studying	32.30	487.438	0.575	0.959
There is nothing in my past life that is particularly worth remembering	32.24	486.721	0.545	0.959
I feel that my life is of no real importance to anyone	32.15	479.484	0.659	0.958
I cannot find something to do that I really enjoy	31.99	498.463	0.712	0.958
My life seems to be aimless	32.29	474.471	0.804	0.957
I find it difficult to believe strongly in anything	32.20	481.948	0.676	0.958
People who I know seems to live an empty life	32.36	495.413	0.412	0.960
I feel that what I do is useless	32.28	477.325	0.792	0.958
I don't know what to do with myself	31.91	473.430	0.749	0.958
I do not have any important goals in life	32.38	479.764	0.731	0.958
I feel all alone in the world	31.86	476.851	0.690	0.958
I feel a strong sense of responsibility for any other person	31.53	500.128	0.260	0.961
I don't feel that I am a productive person	32.01	479.013	0.691	0.958

Kolmogorov–Smirnov test. The Kruskal–Wallis H-test examined potential significant differences in depression, anxiety, and stress subscale scores of the DASS-21 and EAS scores based on the cumulative grade point average (CGPA). Kendall's ordinal association test was used to assess significant associations between depression, anxiety, stress, and the EAS. The chi-squared test explored the association between the EAS categories and other categorical study variables. Finally, multiple linear regression analysis was conducted to model the relationship between the study variables and continuous EAS scores (as the dependent variable).

Results

Table 2 presents the participants' characteristics. The average age was 21.1 years ($SD = 2.3$, minimum = 15.0, and maximum = 48.0). Females accounted for 77.2% of the sample, and males accounted for 22.8%. Most participants (94.8%) were single, and 93% resided with their families. In addition, 57.2% lived with a monthly income of > 10,000 SR. Most participants (90.1%) denied having any chronic diseases. The mean EAS score was 33.2 ($SD = 22.7$, minimum = 0.0, maximum = 93.0). Furthermore, 71.1% of the participants showed signs of EA (23.7% with mild EA, 35.01% with moderate EA, and 12.3% with severe EA). No significant differences were found between the EAS scores based on sex.

Table 3 demonstrates a significant positive correlation between EAS scores and depressive symptoms

Table 2 Participants' characteristics ($n = 811$)

	***N* (%)**
Sex	
Female	626 (77.2%)
Male	185 (22.8%)
Marital status	
Divorced/widowed	6 (0.7%)
Married	36 (4.4%)
Single	769 (94.8%)
Income	
Less than 5000 SR	109 (13.4%)
5000–10,000 SR	238 (29.3%)
More than 10,000 SR	464 (57.2%)
Living arrangement	
Alone	34 (4.2%)
Students' dormitory	23 (2.8%)
With family	754 (93.0%)
Chronic diseases	
No	731 (90.1%)
Yes	80 (9.9%)
Cumulative GPA	
2–2.74	28 (3.5%)
2.75–3.74	116 (14.3%)
3.75–4.49	296 (36.5%)
4.5–5	371 (45.7%)

GPA, Grade point average

Table 3 Kendall correlations between existential anxiety and depression, anxiety, and stress symptoms

EAS	Normal ($n = 234$)	Mild ($n = 193$)	Moderate ($n = 284$)	Severe ($n = 100$)	Total ($n = 811$)	Kendall's corr	*p*-value
Depression						0.73	< 0.001
Normal	201.0 (85.9%)	82.0 (42.5%)	15.0 (5.3%)	0.0 (0.0%)	298.0 (36.7%)		
Mild	17.0 (7.3%)	42.0 (21.8%)	22.0 (7.7%)	0.0 (0.0%)	81.0 (10.0%)		
Moderate	15.0 (6.4%)	51.0 (26.4%)	71.0 (25.0%)	3.0 (3.0%)	140.0 (17.3%)		
Severe	0.0 (0.0%)	13.0 (6.7%)	75.0 (26.4%)	3.0 (3.0%)	91.0 (11.2%)		
Extremely severe	1.0 (0.4%)	5.0 (2.6%)	101.0 (35.6%)	94.0 (94.0%)	201.0 (24.8%)		
General anxiety						0.47	< 0.001
Normal	143.0 (61.1%)	70.0 (36.3%)	42.0 (14.8%)	7.0 (7.0%)	262.0 (32.3%)		
Mild	25.0 (10.7%)	14.0 (7.3%)	17.0 (6.0%)	1.0 (1.0%)	57.0 (7.0%)		
Moderate	35.0 (15.0%)	41.0 (21.2%)	49.0 (17.3%)	11.0 (11.0%)	136.0 (16.8%)		
Severe	19.0 (8.1%)	24.0 (12.4%)	31.0 (10.9%)	6.0 (6.0%)	80.0 (9.9%)		
Extremely severe	12.0 (5.1%)	44.0 (22.8%)	145.0 (51.1%)	75.0 (75.0%)	276.0 (34.0%)		
Stress						0.54	< 0.001
Normal	171.0 (73.1%)	71.0 (36.8%)	29.0 (10.2%)	4.0 (4.0%)	275.0 (33.9%)		
Mild	44.0 (18.8%)	52.0 (26.9%)	58.0 (20.4%)	10.0 (10.0%)	164.0 (20.2%)		
Moderate	13.0 (5.6%)	39.0 (20.2%)	79.0 (27.8%)	15.0 (15.0%)	146.0 (18.0%)		
Severe	4.0 (1.7%)	23.0 (11.9%)	75.0 (26.4%)	24.0 (24.0%)	126.0 (15.5%)		
Extremely severe	2.0 (0.9%)	8.0 (4.1%)	43.0 (15.1%)	47.0 (47.0%)	100.0 (12.3%)		

EAS, Existential Anxiety Scale

($rp = 0.73$, $p < 0.001$), general anxiety symptoms ($rp = 0.47$, $p < 0.001$), and stress symptoms ($rp = 0.54$, $p < 0.001$). Participants with a higher CGPA had significantly higher EAS scores ($p = 0.005$) (Table 4). The results of the regression model indicated that the predictors explained 75.2% of the variance (model R2 = 0.75, F (11, 799) = 220.17, $p < 0.001$). Examination of the individual predictors revealed that anxiety symptoms ($\beta = -0.11$, $t = -1.98$, $p < 0.05$) and depressive symptoms ($\beta = 1.59$, $t = 29.1$, $p < 0.001$) significantly predicted EAS scores. Interestingly, anxiety symptoms exhibited a negative relationship, whereas depressive symptoms demonstrated a positive association with EAS scores, as indicated by both depression and anxiety in the model (Table 5). In other words, controlling for depression may have caused the positive bivariate

Table 4 Associations between cumulative GPA, existential anxiety, and depression, anxiety, and stress symptoms

	GPA					
	2–2.74 (*n* = 28)	**2.75–3.74 (*n* = 116)**	**3.75–4.49 (*n* = 296)**	**4.5–5 (*n* = 371)**	**Total (*n* = 811)**	***p*-value**
EA score						< 0.001[1]
Mean (SD)	45.8 (21.3)	36.4 (22.9)	33.9 (23.4)	30.6 (21.7)	33.2 (22.7)	
Range	8.0–81.0	0.0–91.0	0.0–93.0	0.0–93.0	0.0–93.0	
Stress score						0.014
Mean (SD)	25.0 (9.5)	19.6 (12.7)	18.3 (12.2)	17.9 (12.1)	18.5 (12.2)	
Range	6.0–42.0	0.0–42.0	0.0–42.0	0.0–42.0	0.0–42.0	
Anxiety score						< 0.001
Mean (SD)	23.2 (11.3)	16.4 (12.0)	14.7 (11.8)	14.1 (11.3)	15.0 (11.7)	
Range	0.0–40.0	0.0–42.0	0.0–42.0	0.0–42.0	0.0–42.0	
Depression score						< 0.001
Mean (SD)	24.6 (11.7)	18.2 (13.0)	16.4 (12.3)	15.4 (12.4)	16.5 (12.5)	
Range	0.0–42.0	0.0–42.0	0.0–42.0	0.0–42.0	0.0–42.0	
DASS-21 score						< 0.001
Mean (SD)	36.4 (15.3)	27.1 (17.5)	24.7 (16.7)	23.7 (16.3)	25.0 (16.7)	
Range	3.0–62.0	0.0–63.0	0.0–63.0	0.0–63.0	0.0–63.0	

[1] Kruskal–Wallis H-test

Table 5 Regression analysis demonstrating independent correlates of existential anxiety

Predictor	**Estimate**	**SE**	***t***	***p*-value**
Intercept	7.3919	5.2871	1.398	0.162
Stress score	0.0675	0.0633	1.067	0.286
Anxiety score	-0.1136	0.0574	-1.978	0.048
Depression score	1.5878	0.0546	29.091	< .001
Sex				
Male–female	1.2748	0.9584	1.330	0.184
Marital status				
Married–divorced/widow	0.5382	5.1352	0.105	0.917
Single–divorced/widow	1.3911	4.6822	0.297	0.766
Income				
5000–10,000 SR–less than 5000 SR	0.2682	1.3255	0.202	0.840
More than 10,000 SR–less than 5000 SR	− 1.0269	1.2227	− 0.840	0.401
Living arrangement				
Students' dormitory–alone	− 1.3841	3.2484	− 0.426	0.670
With family–alone	− 1.2609	2.2185	− 0.568	0.570
Chronic diseases				
Yes–no	1.4498	1.3520	1.072	0.284

Model $R^2 = 0.75$, F (11, 799) = 220.17, $p < 0.001$. *SE*, standard error

relationship between anxiety and EAS scores to become negative.

Discussion

This study determined the prevalence of EA among undergraduate students in Jeddah, Saudi Arabia, and its association with depression, general anxiety, and stress. The findings indicated that 71% of students experienced EA, which was significantly correlated with depression, general anxiety, and stress. The selection of undergraduates aligns with Frankl's statement that this phase of life is crucial for the development of self-identity, sense of meaning, and purpose. Failing to find such a purpose, students may risk losing their self-confidence, experiencing depression, or developing a sense of meaninglessness [17]. Growing into adulthood necessitates continuous experimentation, learning, and change. Consequently, individuals in this phase may easily reach a point where everything seems meaningless. For instance, obstacles to achieving life goals or a lack of certainty regarding various aspects of life may lead to a hopeless state, contributing to the development of EA [18].

The results of this study indicate that the prevalence of EA is relatively high among Saudi undergraduate students in Jeddah. This finding is consistent with that of previous research, suggesting that EA concerns are common during this stage of life [10]. The findings are also consistent with previous reports of a significant correlation between EA and depression [6]. Moreover, the association between EA and depression appeared to be stronger than that between EA and general anxiety. Thus, EA may lead to negative self-perceptions in students, possibly leading to depression.

The results were unexpected for individuals who were members of a community characterized by religion and social relationships. Strong religious beliefs and social relationships do not appear to eliminate concerns regarding meaning, death, and fate. Other studies have shown that modernity, social media, and student lifestyles are the three significant factors involved in the development of EA [10, 15, 16, 19]. Therefore, we discuss these factors as possible explanations for the reported findings.

Modernity

Modernization is defined as the era in which society intensifies its emphasis on industrialization, urbanization, technological advancement, secularization, westernization, and consumerism [19]. One study found that depression was less frequent among those residing in an environment characterized by evolutionary adaptation. In addition, it was established that the degree of a society's modernization was positively correlated with a higher prevalence of depression [20]. Research indicates that the social environment in modern industrialized countries such as the United States has become increasingly threatening, competitive, and socially isolating. In particular, heightened competition is most evident in college admissions settings [21]. This provides a probable explanation for the increased prevalence of EA among students in Saudi Arabia, considering that the country is at its peak of modernization across different domains.

Multiple studies have highlighted the association between modernization and depression. One study investigating the adoption of an American lifestyle by Mexican Americans born in the US compared to Mexican immigrants revealed higher rates of depression among Mexican Americans born in the US. In addition, the rapid cultural transformation in metropolitan China has been associated with a significant increase in the risk of depression. Individuals born after 1966 were 22.4 times more likely to experience a depressive episode in their lifetime compared to those born before 1937 [19].

Schwartz also proposed that depression rates could be affected by high levels of self-determination in Western societies. Freedom appears to be a double-edged sword, as many choices may lead to greater expectations, paralyze decision-making, increase stress, and eventually result in self-blame and dissatisfaction with life [22]. The rise in psychopathology among young adults has been attributed to a cultural shift, redirecting emphasis away from intrinsic goals, such as community, competence, and social relationships, and towards extrinsic goals, such as status, appearance, and money [23]. In the modern world, values have been largely replaced by social standards enforced by peer pressure. We argue that the rapid surge in modernity in Saudi Arabia has contributed to the elevated levels of EA reported in this study.

Social media

Social media is a major force in the modern world and a tool that allows individuals to showcase their personal opinions and express themselves. It helps young individuals communicate across diverse communities and cultures and is a platform where different ideologies meet. If one does not have firm convictions, one's beliefs might be swept away when attempting to apply the values and beliefs in ways that conflict with local norms. Consequently, such individuals may easily question their values and entertain existential questions that challenge their beliefs and identities, ultimately leading to EA [24].

A meta-analysis of the relationship between social networking sites (SNS) and depression revealed a slight positive correlation between SNS usage (time spent and frequency of checking) and depressive symptoms. Regarding SNS, general social comparisons had a small-to-medium correlation with depressive symptoms,

whereas upward social comparisons had a moderate correlation. Notably, when compared with measures of SNS usage, both general and upward social comparison to SNS had stronger associations with depressive symptoms [25]. Another study investigated the association between Facebook addiction and depression and discovered that Facebook addiction worsens the current and future states of depression owing to an increased sense of self-worthlessness [26].

Career decisions

Career selection is a major life decision for many university students who seek a satisfying profession that aligns with their vocations and provides meaning to their lives. The decision is often made independently, with limited advice from others, careful decision-making, or planning. This is a decision for which the individual is ultimately responsible. Consequently, the fear of making regrettable decisions can contribute to the development of EA. Previous research has found that difficulties in career decision-making and failure to find meaning in that decision are likely to contribute to EA [27].

A study examining the impact of meaning in life on career indecision and anxiety discovered that the awareness of meaning in life reduces the connection between career indecision and anxiety. Although the study did not demonstrate that actively pursuing meaning alters the relationship between career indecision and anxiety, it points to the necessity for additional investigation of these findings in future research [28].

Study limitations

This study is the first to explore EA among undergraduate students in Saudi Arabia. However, several limitations affect the generalizability and interpretation of the results. First, the convenience sample of undergraduate students was directed more towards specific institutions in Jeddah, implying that applicability to other settings, such as rural areas, should be done with caution. Second, the cross-sectional nature of the study makes it difficult to determine whether EA leads to greater emotional distress or whether these symptoms lead to greater EA. Third, the measure used to assess EA was adapted from the original version. Therefore, the results of the present study may differ from those of the original version. Nevertheless, the high internal consistency of the measure (alpha = 0.96) suggests that the Arabic version is a psychometrically solid scale. Finally, scores of the EA measure were divided into quartiles and descriptors, including low, moderate, and high, and then added to each category. Without scientifically established cutoffs for this scale, such cutoffs and descriptors may be arbitrary.

The strengths of this study include its large sample size, the use of psychometrically valid measures, and a relatively comprehensive assessment of student characteristics, including academic performance.

Recommendations

Limited information on EA in this highly religious region of the world highlights the necessity for more research on this topic, including developing and validating scales to measure EA, possibly refining the scale used in this study, and establishing cut-off scores for severity levels. Similarly, further research is needed to investigate the use of EA scales among undergraduate populations in other Middle Eastern countries. Further prospective studies are crucial to better understand the causes of and protective factors against EA. Despite the students' strong religious beliefs (not measured here), they struggled with existential concerns, highlighting the importance of further investigation.

Given the strong association between EA and depression and assuming that EA drives emotional symptoms, therapies are essential to help reorient students to find meaning and purpose in their lives. Frankl developed a treatment known as "logotherapy" to address such issues. By focusing on conscious experiences, engaging in higher levels of consciousness, and adopting a holistic approach that activates both the analytical and creative aspects of the brain, logotherapy aims to ignite the will to find meaning [29]. Moreover, Saudi psychiatric residency programs should consider incorporating philosophical and religious approaches in their training programs to address existential issues. A survey of psychiatric residents in the United States revealed that 65% struggled with philosophical, conceptual, and metaphysical challenges related to psychiatry [30]. Addressing such issues early during training may help future psychiatrists assist patients facing similar struggles.

Conclusions

The study's findings revealed that the prevalence of EA was relatively high in the student population and was strongly associated with depression and other distressing emotions that are likely to interfere with academic performance. Faculty and mental healthcare professionals teaching and caring for students should be mindful of these concerns and take appropriate measures to identify and address them. Future research, particularly prospective studies and randomized controlled trials, is needed to help guide these efforts.

Abbreviations

CGPA	Cumulative grade point average
DASS-21	Depression, Anxiety, and Stress Scale
EA	Existential anxiety
EAS	EA scale
SNS	Social networking sites

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Authors' contributions
HA, RA, BH, SA, RA, and HT contributed to the study conception and design. NSB performed the statistical analyses. SAM, AOB, WAA, FAZ, HGK, and HKA wrote the manuscript. All the authors contributed to the revision, reading, and approval of the manuscript.

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Availability of data and materials
The original contributions presented in this study are included in the article/supplementary material, and further inquiries can be directed at the corresponding author.

Declarations

Ethics approval and consent to participate
This study was approved by the Research Ethics Committee of King Abdulaziz University (approval number 428–18). All the participants signed a written consent form before completing the questionnaire.

Consent for publication
Not applicable.

Competing interests
The authors declare that they have no competing interests.

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