Academic Stress and Fear of Covid-19 Among Gaza's Students During the Covid-19 Outbreak: The Mediating Role of Social Support and Self-Esteem

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Abstract

The present cross-sectional study sought to explore the role of social support and self-esteem in alleviating the Covid-19 burdens among university students in a context characterized by political instability and conflict, such as the one of the Gaza Strip. Three hundred and fifteen university students in the Gaza Strip, 230 (73%) boys and 85 (27%) girls, compiled self-reported questionnaires (FCS-19, RSES, BSSS, ASS-14). We tested throughout stratified regression analysis the role of social support and self-esteem in influencing the relationship between fear of Covid-19 and academic stress. We expected social support and self-esteem to influence the association between the predictor (fear of Covid) and the outcome variable (academic stress). The findings showed that self-esteem was crucial in regulating the association between fear of COVID and academic stress. Social support did not. The more students perceived fear of the infection, the more they were at risk of displaying stress in their studies, while self-esteem might have regulated the sense of overload because of academic demands. The need to support students living in chronic warfare and political violence conditions, the necessity to promote social networks and potentiate their self-esteem during and beyond the pandemic outbreak emerged as urgent in the Gaza Strip.

Plain Language Summary

How academic stress and fear of Covid-19 affected Gaza's students during the pandemic: The importance of social support and self-esteem

We conducted a study to see how social support and self-esteem helped university students in Gaza cope with the stress and fear of Covid-19, especially in a place with ongoing political conflict. We surveyed 315 students, including 230 boys and 85 girls, asking them questions about their fear of Covid-19, self-esteem, social support, and academic stress. We analyzed the data to see if social support and self-esteem made a difference in how fear of Covid-19 was linked to academic stress. We found that self-esteem played a big role in reducing the stress caused by fear of the virus, but social support did not have a significant effect. Students who were more afraid of getting infected felt more stressed about their studies, but those with higher self-esteem were better at managing this stress. Our results highlight the importance of building self-esteem and social networks for students in Gaza, especially during and after the pandemic, to help them handle the challenges of living in a conflict zone.

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Data Availability Statement included at the end of the article

Introduction

The COVID-19 pandemic posed unprecedented challenges to the global university system due to government-imposed restrictions aimed at curbing the virus's spread and safeguarding public health (Shen et al., 2020). Consequently, 80% of universities worldwide shut down their campuses, halted in-person teaching, and transitioned to online classes to adhere to social distancing measures and control the contagion (Cao et al., 2020). This led to the cancellation of numerous activities, disrupting the academic year and causing students to miss or delay their terms (Fawaz & Samaha, 2021).

As a result, students' psychological well-being has been significantly impacted, resulting in academic and psychological distress and frequent stress-related symptoms (Lai et al., 2020). Stress, anxiety, and depression have emerged as common issues among university students during the COVID-19 crisis (Essadek & Rabeyron, 2020; Lai et al., 2020; Wang et al., 2020).

The greater the students' fear of infection, the higher their risk of experiencing academic stress, while self-esteem may have played a role in moderating the sense of overload due to academic pressures. Conversely, a loss of connectedness and a diminished sense of efficacy may have exacerbated feelings of stress and powerlessness among students (Moawad, 2020).

Fear of Covid and Mental Health

The uncertainty surrounding COVID-19 and its potential impact has been linked to feelings of unpredictability and fear (Satici et al., 2022). The fear of the unknown related to COVID-19 stems from the insecurity about the virus's spread and the risk of infection across various populations (Satici et al., 2022). Ahorsu et al. (2020) discovered that individuals at risk of infection may experience fears of transmission, anxiety about their health, and concern about infecting others. For instance, the fear of contracting COVID-19 has been shown to significantly contribute to psychological distress (Labrague & De los Santos, 2021).

This fear and uncertainty have had a detrimental effect on students' academic performance, triggering significant anxiety (Mudenda et al., 2020). Guldager et al. (2021) found that the COVID-19 pandemic has heightened academic stress among university students. Approximately one-third of students reported a significant increase in their study workload due to the pandemic and expressed anxiety about their ability to complete the academic year. The closure of universities and the implementation of precautionary measures have left students feeling helpless, isolated, and uncertain about their educational progress (Alkhamees & Aljohani, 2021).

Self-Esteem and Social Support

Research indicates that increased social support from family and friends is linked to fewer depressive symptoms, and such support from friends helps mitigate anxiety, stress, and depression during the COVID-19 pandemic (Woon et al., 2021). However, Mauer et al. (2022) found that peers might not always provide the necessary social support, and fear of COVID-19 within one's social network could exacerbate anxiety rather than alleviate it.

Self-esteem has been identified as an effective strategy to reduce the psychological distress associated with COVID-19 fear. Rossi et al. (2020) found that self-esteem acted as a buffer, protecting against anxiety symptoms triggered by the fear of COVID-19. Self-esteem is rooted in personal values that are shaped by social, relational, and cultural contexts and is reinforced through social validation and the perception of oneself as a valuable member of society (Pyszczynski et al., 2004).

In a study conducted in the U.S. among social work university students, academic stress became evident following the onset of the COVID-19 pandemic, with the lack of program support and limited access to academic resources being significant stressors (Scheffert et al., 2021). Similarly, a study in China involving 1,074 college students found that academic workload, separation from school, and fears of contagion negatively impacted students' health through perceived stress, highlighting the crucial role of perceived stress in influencing students' psychological well-being during the pandemic (Lorenzo-Banco & Unger, 2015).

A cross-sectional study in Denmark revealed that 39% of students experienced academic stress due to COVID-19. About one-third reported a significant increase in their workload and were worried about completing the academic year. Factors contributing to academic stress included being female, younger, at the bachelor level, knowing someone with COVID-19, and worrying about infection, whereas socioeconomic status and ethnicity were not significant factors (Guldager et al., 2021).

Self-Esteem and Academic Stress

Academic stress has been linked to low self-esteem and adverse psychological outcomes (Nikitha et al., 2014). High self-esteem enhances students' self-worth and competence (Matthews et al., 2003). Additionally, self-esteem serves as a motivational factor for academic achievement, fostering aspirations and perseverance toward academic goals. This is supported by a meta-analysis of 128 studies, involving over 200,000 participants, which found that self-esteem accounted for 4% to 7% of the variance in academic achievement (Fang, 2016; Hansford & Hattie,

1987; Wong et al., 2002). Research indicates that self-esteem is inversely related to negative psychological outcomes such as stress and depression (Dumont & Provost, 1999; Leary, 1999). High self-esteem is associated with lower exposure to psychological stressors, greater confidence in managing uncertainty, and problem-solving (Dumont & Provost, 1999). Conversely, students with lower self-esteem tend to experience poorer mental and physical health and higher stress levels (Leary, 1999; Li et al., 2018). During the COVID-19 outbreak, self-esteem was found to be a protective factor against depression and anxiety in a sample of Italian adults (Rossi et al., 2020).

Furthermore, assertiveness and self-esteem enabled a group of 116 Turkish nursing students to effectively utilize their skills and abilities during the pandemic, allowing them to promptly join the front lines and address personnel shortages caused by the virus emergency (Göl & Erkin, 2021).

Social support also plays a crucial role in enhancing self-esteem in both individualistic and collectivistic societies (Goodwin & Hernandez Plaza, 2000). The perception of valuable social support positively impacts students' self-esteem through relational networks. The following section will explore how social support helps protect students from academic stress and promotes their self-esteem.

Social Support and Academic Stress

Intrapersonal factors such as self-esteem, alongside interpersonal and social characteristics, significantly influence academic stress. Social support is crucial in fostering resilience and coping strategies during challenging times (Taylor et al., 2010). During the COVID-19 pandemic, social support was found to be negatively associated with students' anxiety levels (Cao et al., 2020; Chen et al., 2021; Ma & Miller, 2021). Specifically, perceived social support helped students develop better coping strategies to manage anxious reactions during the outbreak (Ma & Miller, 2021). Additionally, a lack of social support and increased anxiety were identified as predictors of decreased motivation among Italian and Portuguese students, as reported by their parents (Camacho et al., 2021).

Social support also plays a significant role in enhancing self-worth and academic performance (Cohen & Wills, 1985). It is considered a key factor in promoting self-esteem and academic success (Li et al., 2018). Self-esteem has been found to mediate the relationship between social support and academic achievement, as well as between social support and emotional exhaustion (Li et al., 2018). Consequently, social support emerges as a predictor of both self-esteem and school achievements, with students who have high self-esteem being more likely to receive substantial social support, experience less academic stress, and achieve better academic outcomes (High & Scharp, 2015; Jiang et al., 2015; Wong et al., 2002).

Conceptualized as an exchange of resources among individuals, social support enhances well-being (Shumaker & Brownell, 1984). It acts as a crucial resource during stressful situations, offering protection and reducing stress (Szkody et al., 2021). Students benefit from social support from parents, friends, and peers, which includes guidance, feedback, and non-directive support. This positive social interaction enhances well-being (Friedlander et al., 2007). Social support is vital for academic achievement and emotional well-being, mediated by self-esteem, showing how social relations can elevate students' sense of being valued and accepted (Li et al., 2018). During the COVID-19 pandemic, social support has been essential in reducing psychological distress, anxiety, and stress among students (Li et al., 2021; Szkody et al., 2021).

Terror Management Theory and Covid-19

The terror management theory (TMT) suggests that individuals cope with stress and anxiety related to mortality by relying on their cultural worldviews, self-esteem, and significant relationships (social support) (Solomon et al., 2015). Consequently, social support and self-esteem play crucial roles in understanding human behavior during the COVID-19 crisis. Cohen (2004) defines social support as the reinforcement individuals receive through their social networks. During the pandemic, these factors were vital in managing the uncertainty and unpredictability of the COVID-19 outbreak. Self-esteem, which reflects a sense of personal value, stems from the belief that one's actions align with cultural values, thereby providing a sense of protection and reducing vulnerability to external threats during the pandemic (Pyszczynski et al., 2021). According to TMT, fostering self-esteem and social support enhances physical and psychological well-being, mitigating anxiety and fear of death in response to threats (Pyszczynski et al., 2021).

The Study

The Research Context

Gaza is one of the most densely populated areas globally and has faced a military blockade that has severely impacted economic, environmental, and political security since 2014. By 2020, the United Nations had declared Gaza unlivable (Al-Hindi et al., 2022). Inadequate infrastructure has made Gaza particularly vulnerable to the spread of COVID-19, and the blockade has led to a

severe shortage of medical supplies and equipment necessary to fight the pandemic (Sen, 2020). According to a report by the Norwegian Council for Refugees, there has been a significant decline in the well-being of Gaza students during the pandemic. The report highlighted that Gaza's socioeconomic and political situation is likely to worsen due to the long-term impacts of COVID-19, the Israeli-Palestinian conflict, and internal Palestinian political divisions (Norwegian Council for Refugees, NCR, 2021). Consequently, the quality of life and mental health of students in Gaza are at significant risk of deterioration during the COVID-19 outbreak.

Students in Gaza face chronic uncertainty, insecurity, and lack of freedom, making them particularly vulnerable to academic stress during the pandemic. The ongoing military violence and oppression exacerbate the burdens related to the virus. For example, Gaza experienced an 11-day assault by the Israeli army, resulting in over 200 deaths and thousands of injuries, predominantly affecting children and youth (Awadallah & Ellessi, 2021; Mahase, 2021).

Based on the principles of Terror Management Theory (TMT), our study aimed to explore the role of social support and self-esteem in alleviating COVID-19-related burdens among university students in the politically unstable and conflict-ridden Gaza Strip. We examined the mediating role of social support and self-esteem between the fear of COVID-19 and academic stress. We hypothesized that the fear of COVID-19 would increase academic stress among university students (H1). We also hypothesized that both self-esteem and social support would be negatively associated with academic stress (H2) and that the fear of COVID-19 would be related to social support and self-esteem (H3). Finally, we posited that social support and self-esteem would mediate the relationship between the fear of COVID-19 (predictor) and academic stress (outcome variable) (H4).

Methods

Participants

The sample comprised (315) university students in the Gaza Strip. Of them, 230 (73%) were female, and 85 (27%) were males. Participants' age was less than 20 years old (27%), from 20 to 25 (61.6%), and (11.4%) were over 25.

Procedures

A non-probability accidental sampling technique was employed for this study. Due to the complexities of accessing students during the COVID-19 pandemic, data were collected using online forms. Questionnaires were distributed via Google Forms through social media

platforms like Facebook and WhatsApp. Before completing the questionnaires, participants were informed about the study's objectives and provided with details about the instruments used. They were assured that participation was voluntary and that their responses would remain anonymous and confidential. Participants who chose to proceed were then directed to the questionnaire section. Contact information for each data collector was provided to address any questions or clarifications. Data collection occurred from January to April 2021, during a severe phase of the pandemic that resulted in new lockdown restrictions imposed by health authorities in Gaza.

Instruments

Demographic variables: participants self-reported their academic performance (pass, good, very good, excellent) and level of study (first year, second, third, fourth, fifth, and sixth).

Fear of Covid-19 scale, FCS-19-Arabic Version (F. Mahamid et al., 2021, F. A. Mahamid et al., 2022).

This scale was developed by Ahorsu and colleagues (2020). The Fear of COVID-19 Scale (FCV-19S) has been validated in a sample of 717 Iranian adults. FCS-19 is a reliable and robust instrument in assessing fear of COVID-19 among the general population. In this study, the internal consistency of the fear of COVID-19 was (0.822).

Rosenberg Self-Esteem Scale (Rosenberg, 1965). The scale was translated from English to Arabic, reviewed by psychology experts, and then back-translated into English by an independent expert. This is a 10-item scale that measures global self-worth by measuring positive and negative feelings about the self. The scale is believed to be uni-dimensional. All items were answered using a 4-point Likert scale ranging from 0 (strongly disagree) to 3 (strongly agree). In this study, the scale's internal consistency was (0.789).

Berlin Social Support Scales (BSSS; Schulz, & Schwarzer, 2003)-Arabic Version (Veronese, et al., 2022). The BSSS is a quantitative self-report measure developed to assess different aspects of social support the respondents perceive. The instrument comprises 17 items. The BSSS is often used in stress and resilience (Testa et al., 2015) to measure social resources and support. The participants responded using a 4-point Likert scale ranging from 1 (rarely) to 4 (always). In this study, the internal consistency of the BSSS was (0.891).

Academic Stress Scale. This scale consists of 14 items in the Inventory of University Students' Perceptions regarding the Sources of Caused Stress (IUSPRS) (Alkaddomy & Khalil, 2011). It shows how the students perceived academic stress as a part of psychological stress. Each item was scored on a scale from 1 (never) to

5 (always). In this study, the internal consistency of the Academic stress scale was (0.818). The scale was translated from English to Arabic and reviewed for content validity and inclusiveness. Ten experts in psychological counselling, Arabic language, and clinical psychology reviewed the scale. The scale was then back-translated into English by an independent expert in the language.

Statistical Analysis

Pearson-correlation coefficient analysis was used to examine the associations between Fear of Covid-19, Self-esteem, Social support, and academic stress. Hierarchical regression was used to investigate the effect of Self-esteem and Social support on the relationship between fear of Covid-19 as a predictor (IV) and academic stress as a dependent variable (DV). First, we entered the overall fear of Covid-19 (IV) in the regression model as a predictor of academic stress (DV). Second, we entered Covid-19 (IV) fear in the regression model as a predictor for each mediator variable (Self-esteem and social support). Finally, we entered fear of Covid-19 (IV) and both mediator variables (Self-esteem, Social support) in the regression model to predict academic stress (DV).

Results

Participants' age was less than 20 years old (27%), from 20 to 25 (61.6%), and (11.4%) were over 25. Of the participants (73%) were female, and (27%) were male (see Table 1).

Table 1. Frequency of Demographic Variables.

Demographic variables	N	%
Age		
Less than 20	85	27
20–25	194	61.6
More than 25	36	11.4
Gender		
Male	85	27
Female	230	73
Level of study		
First year	71	22.5
Second year	78	24.8
Third year	56	17.8
Fourth year	101	32.1
Fifth year	6	1.9
Sixth year	3	1
Academic performance		
Pass	2	.6
Good	89	28.3
Very good	156	49.5
Excellent	68	21.6

Table 2. Pearson Correlation Between Fear of Covid-19, Self-esteem, Social Support, and Academic Stress.

N.	Variables	1	2	3	4
1.	Fear of Covid-19	—			
2.	Self-esteem	−.136*	—		
3.	Social support	.045	.303**	—	
4.	Academic stress	.316**	−.299**	−.154**	—

*Correlation is significant at the .05 level (2-tailed).
**Correlation is significant at the .01 level (2-tailed).

Pearson correlation indicates that fear of COVID-19 has a significant positive correlation with self-esteem ($r = −.136$; $p = .01$) and academic stress ($r = −.299$; $p < .001$). Moreover, self-esteem significantly correlates with social support ($r = .303$; $p < .001$). Similarly, social support significantly correlates negatively with academic stress ($r = −.154$; $p = .006$) (see Table 2).

Predictors of Academic Stress

The following steps were applied to establish the hierarchical association between variables: first, we entered the overall fear of COVID-19 (IV) in the regression model as a predictor for academic stress (DV). Simple linear regression showed that fear of Covid—19 significantly predicted academic stress (Beta = .316, $p < .001$). Second, we entered fear of Covid-19 (IV) in the regression model as a predictor for each mediator variable (self-esteem and social support). Simple linear regression showed that fear of COVID—19 significantly predicted self-esteem (Beta = .355, $p = .01$). However, the fear of COVID did not significantly predict social support (Beta = .045, $p = .42$). Finally, we entered fear of COVID-19 (IV) and the mediator variables (self-esteem and social support) together in the regression model to predict academic stress (DV). The results showed that self-esteem (Beta = −.230, $p < .001$) significantly mediated the effect of fear of COVID—19 (Beta = .289, $p < .001$) on academic stress. However, social support did not significantly predict academic stress ($p = .07$) (see Table 3).

Demographic Variables

Participants self-reported their academic performance (*pass*, *good*, *very good*, *excellent*) and level of study (*first year*, *second*, *third*, *fourth*, *fifth*, and *sixth*).

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Table 3. Hierarchical Regression Analysis for Predicting Academic Stress by Fear of Covid—19 (N = 315).

Variables	Step 1 (fear of Covid—19 predicted academic stress)		Step 2 (fear of Covid—19 predicted mediators)		Step 3 (fear of Covid—19 and mediators predicted academic stress)	
	B [95% CI]	β	B [95% CI]	β	B [95% CI]	β
Academic stress	1.34 [0.893, 1.78]**	.316				
Self-esteem			−0.281 [−0.509, −0.052]*	.355	−0.472 [−0.693, −0.252]**	.076
Social support			0.214 [−0.309, 0.736]	.045	−0.088 [−0.184, 0.008]	.282
Fear of Covid-19					1.22 [0.791, 1.66]**	.289
R^2					.175†	
Adjusted R^2					.167	

*$p < .05$.
**$p < .001$.
†R^2 change: Academic stress: $F(3,311) = 22.03$, $p < .001$.

reliable and robust instrument in assessing fear of COVID-19 among the general population. In this study, the internal consistency of the fear of COVID-19 was ($\alpha = .822$).

Rosenberg Self-Esteem Scale (Rosenberg, 1965). The scale was translated from English to Arabic, reviewed by psychology experts, and then back-translated into English by an independent expert. This is a 10-item scale that measures global self-worth by assessing positive and negative feelings about the self. The scale is believed to be uni-dimensional. All items were answered using a 4-point Likert scale ranging from 0 (*strongly disagree*) to 3 (*strongly agree*). In this study, the scale's internal consistency was ($\alpha = .789$).

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Statistical Analysis

Pearson correlation coefficient analysis was used to examine the associations between Fear of Covid-19, Self-esteem, Social support, and academic stress. Hierarchical regression was employed to investigate the effect of Self-esteem and Social support on the relationship between Fear of Covid-19 as an independent variable (IV) and academic stress as a dependent variable (DV). First, the overall Fear of Covid-19 (IV) was entered into the regression model as a predictor of academic stress (DV). Second, Fear of Covid-19 (IV) was entered into the regression model as a predictor for each mediator variable (Self-esteem and Social support). Finally, Fear of Covid-19 (IV) and both mediator variables (Self-esteem, Social support) were entered into the regression model to predict academic stress (DV).

Results

Participants' age distribution was as follows: less than 20 years old (27%), 20 to 25 years old (61.6%), and over 25 years old (11.4%) (see Table 1).

Pearson correlation analysis indicated that Fear of COVID-19 had a significant positive correlation with Self-esteem ($r = −.136$; $p = .01$) and academic stress ($r = −.299$; $p < .001$). Moreover, Self-esteem showed a significant positive correlation with Social support ($r = .303$; $p < .001$). Similarly, Social support had a significant negative correlation with academic stress ($r = −.154$; $p = .006$) (see Table 2).

Predictors of academic stress: To establish the hierarchical association between variables, several steps were followed: first, the overall Fear of COVID-19 (IV) was entered into the regression model as a predictor of academic stress (DV). Simple linear regression showed that Fear of Covid-19 significantly predicted academic stress (*Beta* = .316, $p < .001$). Second, Fear of Covid-19 (IV)

was entered into the regression model as a predictor for each mediator variable (Self-esteem and Social support). Simple linear regression indicated that Fear of COVID—19 significantly predicted Self-esteem (*Beta* = .355, *p* = .01). However, Fear of COVID—19 did not significantly predict Social support (*Beta* = .045, *p* = .42). Finally, Fear of COVID-19 (IV) and the mediator variables (Self-esteem and Social support) were entered together into the regression model to predict academic stress (DV). The results showed that Self-esteem (*Beta* = −.230, *p* < .001) significantly mediated the effect of Fear of COVID—19 (*Beta* = .289, *p* < .001) on academic stress. However, Social support did not significantly predict academic stress (*p* = .07) (see Table 3).

Discussion

The COVID-19 pandemic has resulted in significant societal changes, particularly in educational institutions, where teaching methods and social interactions have been altered. These changes have adversely impacted the academic stress levels of university students. Our study examined the relationship between Fear of COVID-19 and academic stress, mediated by Self-esteem and Social support. The mediating role of these variables (Self-esteem and Social support) was partially supported (H4). We found a direct positive association between Fear of COVID-19 and academic stress (H1), a negative association between Self-esteem and academic stress (H2), and a negative association between Fear of COVID-19 and Self-esteem. The relationship between Social support and the other variables (Fear of COVID-19 and academic stress) did not reach statistical significance. In other words, while Self-esteem was crucial in moderating the association between Fear of COVID-19 and academic stress, Social support did not play a significant role.

Ozer (2022) highlighted that Social support from significant others, family, and friends (but not peers) is negatively associated with perceived stress and positively linked with life satisfaction through self-efficacy and Self-esteem. Although societal lockdowns did not have a significant psychological impact, the results underscore the importance of Social support among students, both during and after lockdowns. Significant negative correlations between perceived Social support and Fear of COVID-19 among university students were reported (Chen et al., 2021; Yenen & Carkit, 2021), whereas (Alnazly et al., 2021; Muyor-Rodriguez et al., 2021) found the opposite.

In this context, it is crucial to acknowledge the unique challenges faced by students in Gaza. For instance, online classes are severely compromised by unstable internet connectivity and limited hours of electricity each day (ranging from 4 to 8 hrs, subject to weekly changes). Moreover, university students in Gaza endure harsh conditions due to siege and chronic military violence, potentially exacerbating fear and uncertainty related to COVID-19 (Elessi et al., 2019; Veronese et al., 2021). Additionally, continuous military attacks and environmental resource shortages disrupt daily life for students (Veronese et al., 2021). Such ongoing challenges may have affected social relationships as protective factors and hindered the perception of Social support as a coping resource for academic pressures during the pandemic.

Personal resources such as Self-esteem may have protected against the critical function described by the Terror Management Theory, enabling students to manage feelings of powerlessness in their academic lives. In summary, Self-esteem may better mitigate academic stress than Social support, especially in a context where social networks have been undermined by years of military violence and severe human rights violations, including restrictions on freedom of movement exacerbated by the COVID-19 outbreak (Diab et al., 2020; United Nations, 2018).

Self-esteem could empower Gaza students to confront fears of mortality and concerns about contracting COVID-19, enabling them to focus more on academic achievements, reduce stress from academic demands, and navigate environmental constraints, including strained or deteriorated social relationships (Hassona et al., 2019).

More recently, Terror Management Theory (TMT) (Greenberg et al., 1986) has posited that individuals' awareness of mortality—heightened by COVID-19—conflicts with the inherent human desire for life and survival tendencies, resulting in fearful thoughts of death and subsequent anxiety. Within this framework, the Anxiety-Buffer Hypothesis (ABH; Greenberg et al., 1992) suggests that Self-esteem can act as a protective shield (buffer) against the adverse psychological effects of life threats and stressors by reconnecting individuals with a broader universe of meanings and values (Pyszczynski et. al., 2021).

Conclusion

To our knowledge, this study is the first to investigate the impact of Fear of COVID-19 and anxiety on university students' academic stress in Gaza, considering the mediating roles of Self-esteem and Social support. It is crucial to recognize the multiple challenges posed by COVID-19 on a population forced to live under precarious conditions. Moreover, a new COVID-19 wave led authorities to enforce a national lockdown, compounding existing burdens and potentially increasing fear and pressure among Gaza students, making it challenging to establish a direct and unequivocal link between Fear of COVID-19 and academic stress. Several intervening variables, related to the daily individual and social suffering

of Gazans, could have influenced our findings, despite relative "peaceful" conditions in Gaza from 2014, which included the period of data collection. The cross-sectional nature of our exploratory study precludes generalization and causal inferences regarding the relationships between variables. Conducting qualitative and longitudinal studies would provide a clearer understanding of how Self-esteem protects students from Fear of COVID-19 and academic stress, and the role of Social support in a conflict-affected environment.

Our findings underscore the need to support students living amidst chronic warfare and political violence, emphasizing the importance of enhancing Social networks and bolstering Self-esteem during and beyond the pandemic outbreak. Policymakers and human rights advocates are urged to prioritize improving students' quality of life and opportunities in contexts where violations of fundamental human rights pose significant dangers amidst global restrictions on freedoms, movement, and opportunities (Beyrer et al., 2021; Devi, 2021; Zarocostas, 2021).

Given the recent escalation of the ongoing mass killings in Gaza, we are deeply concerned about the living conditions and safety of university students and the entire population in Gaza (Segal, 2023). Specifically, all universities have been destroyed by Israeli ground and air attacks (Asi et al., 2024; Gordon & Turner, 2024). Amidst very high risks to their lives, rampant famine, and collapsing health and sanitation systems during 7 months of continuous bombardment, the mental well-being and health of university students are severely at risk (Buheji & Hassan, 2024). Scholars have described this as scholasticide (Shahvisi, 2024)—the complete obliteration of the higher education system—leaving Gaza students without educational opportunities, destroying social networks, and undermining students' sense of worth, contrary to students' inalienable right to education and peace.

Acknowledgments

Authors' Contributions

All authors conceived of the study and its design. BE-K coordinated and drafted the manuscript. GV and MD contributed to designing the methodology of the study. BE-K, GV and MD contributed to the results and analysis. All authors contributed to manuscript revision, read, and approved the submitted manuscript.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Ethics Approval

The study was approved by the Palestinian Health Research Council / Helsinki Committee for Ethical Approval (approval no: PHRC/HC/826/21).

Consent to Participate

Informed consent was obtained from all participants included in the study.

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Data Availability Statement

The datasets generated for this study are available on request to the corresponding author.

Code availability

(Not applicable).

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