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# Unraveling the Impact of Virtual Social Comparisons on Psychological Burnout among Palestinian University Students: a Mixed-Method Study

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## Abstract

The study examines the nuanced effects of virtual social comparisons on university students using 401 surveys and 18 interviews. Employing a mixed-methods approach, the study rigorously examines variables such as gender, place of residence, type

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of faculty, and academic level. The investigation aligns with the ‘social comparison theory,’ emphasizing how cultural resilience, gender dynamics, communal support structures, living conditions, and developmental stressors shape the effects of virtual social comparisons. Findings reveal an overall minimal impact, yet highlight significant gender-based differences in favor of male students. Despite diverse academic disciplines, the absence of differences based on faculty type underscores shared cultural resilience. Distinct impacts emerge based on the place of residence, with students in camps experiencing heightened effects due to socio-political and economic factors. Variations across academic levels correspond with developmental stressors, elucidating a dynamic relationship between academic advancement and the impact of virtual social comparisons. This research contributes nuanced insights for future studies and interventions, recognizing the multifaceted influence of cultural variables on students’ experiences in the digital age.

### Keywords

burnout – cultural resilience – gender dynamics – Palestine – social media influence – virtual social comparisons

## 1 Background

The dynamics of social comparisons have undergone significant transformation in the modern era, shaped by the pervasive influence of digital connectivity and virtual interactions. University students, who are at the intersection of academic aspirations, social expectations, and personal development, are particularly affected by the rise of virtual social comparisons, which have become a powerful force impacting their mental health (Jang et al. 2016; Verduyn et al. 2020). The ubiquity of social media and online platforms has fundamentally altered how individuals perceive and evaluate their lives in relation to others (Verduyn et al. 2017). This phenomenon is especially pronounced in university settings, where the pursuit of academic success intersects with personal growth and societal pressures (Ramos Salazar et al. 2022).

The digital landscape offers a constant stream of curated content, showcasing the achievements, lifestyles, and experiences of peers and role models (Festinger 1954). Individuals often selectively share aspects of their lives that align with societal ideals, creating a distorted representation of reality. As a result, university students may find themselves constantly comparing their own lives to these idealized standards, leading to heightened pressure and

anxiety about falling short (Kitchel et al. 2012). Moreover, the global nature of virtual interactions, combined with the competitive academic environment, amplifies the comparison process (Gerber et al. 2018). Students are no longer comparing themselves solely to their immediate peers but also to individuals from diverse cultural and socioeconomic backgrounds, further complicating their academic and personal challenges.

Excessive engagement with social media has been linked to various psychosocial issues, including disrupted sleep patterns (Garrett et al. 2018; Woods and Scott 2016), reduced subjective well-being (Sobaih et al. 2016), and poorer academic performance (Junco 2012). Additionally, unrestrained social media use has been associated with increased levels of anxiety and depression (Seabrook et al. 2016). The mental health implications of virtual social comparisons for university students are multifaceted (Gerber et al. 2018). Constant exposure to others' achievements can foster feelings of inadequacy, self-doubt, and diminished self-esteem (Zubair et al. 2023). The pressure to meet societal expectations, both academically and socially, can exacerbate stress and anxiety (Shensa et al. 2018; Vannucci et al. 2017). Consequently, the evolving nature of virtual social comparisons has become a critical area of concern, necessitating a deeper exploration of its nuances and implications for student mental health.

The term “virtual social comparisons” encompasses the various ways individuals assess their experiences, accomplishments, and overall well-being in relation to their peers within the context of online interactions (Festinger 1954). In the digital age, the prevalence of social media platforms and the constant flow of curated content not only provide a window into others' lives, but also create a backdrop against which individuals continually evaluate themselves. Within the complex environment of university life – where academic pressures, career aspirations, and social dynamics intersect – the psychological effects of these comparisons become particularly pronounced (Yang et al. 2018). Comparing one's achievements to the perceived successes of others fosters a competitive atmosphere that can heighten stress, anxiety, and a sense of rivalry among students (Hu and Liu 2020). Therefore, understanding the intricacies of virtual social comparisons is essential to fully grasp their profound impact on the mental health of university students.

Psychological burnout, characterized by emotional exhaustion, cynicism, detachment, and a diminished sense of accomplishment, has emerged as a significant concern in university settings (March-Amengual et al. 2022). The academic environment, often marked by rigorous demands and intense competition, places substantial pressure on students to excel (Galbraith and Merrill 2015). Simultaneously, the social demands of a digitally connected

world add another layer of complexity to the student experience (Vodă et al. 2022). The expectation to meet high academic standards and achieve scholarly excellence creates an environment where students face relentless cycles of coursework, exams, and deadlines. This academic pressure, compounded by the pervasive influence of digital connectivity, contributes to elevated stress levels (Yang et al. 2018). The omnipresence of virtual social comparisons further intensifies the perception of academic achievement as a benchmark for success, exacerbating the competitive nature of university life.

In a digitally connected world, where social interactions often transcend physical boundaries, students must navigate not only traditional academic challenges but also the demands of maintaining an online presence (Vodă et al. 2022). The pressure to curate an idealized image on social media, coupled with the fear of falling short of societal expectations, creates a potentially toxic environment (Yang et al. 2018). Constant comparisons to peers, both academically and socially, can foster feelings of inadequacy and amplify the stress associated with achieving perceived success (Hu and Liu 2020). Prolonged exposure to such stressors can lead to emotional exhaustion, leaving students feeling physically and emotionally drained (Yang et al. 2018). Cynicism and detachment may emerge as coping mechanisms, while a reduced sense of accomplishment can make it difficult for students to derive satisfaction from their academic efforts (Vodă et al. 2022). These dynamics highlight the urgent need to address the psychological and emotional toll of virtual social comparisons and academic pressures on university students.

Social comparisons among university students are common, and social media and digital communication have made them worse. Exposure to idealized experiences might result in heightened stress levels, emotional exhaustion, and a weakened sense of achievement. Social comparison theory emphasizes the link between this and psychological weariness since stress and emotional exhaustion can be worsened by the pressure to live up to social and academic expectations. It is essential to comprehend the mechanisms underlying social comparisons in the academic setting to create measures for reducing burnout.

## 2 Review of the Literature

In the context of studies examining burnout within Palestinian educational settings, researchers have identified only three relevant studies. Sheikh-Khalil (2008) investigated burnout among teachers in Gaza, revealing a generally low prevalence of burnout. Interestingly, the study found no significant variations in burnout levels based on factors such as gender, academic qualifications,

years of experience, or the educational stage of the teachers. However, an exception was noted, with higher burnout rates observed among teachers holding a bachelor's degree. Similarly, Harb (1998) explored burnout among secondary school teachers, reporting a moderate level of burnout, which aligns with the broader findings in this area. These studies provide valuable insights into the nuanced nature of burnout across different professional roles within the Palestinian educational context.

Beyond the educational sector, Ramadan (1999) examined burnout among employees in the ministries of the Palestinian National Authority, finding a moderate prevalence of burnout. This study expanded the understanding of burnout to include non-educational occupational settings, highlighting its relevance across various professional domains in Palestine. Collectively, these studies underscore the multifaceted nature of burnout and its varying prevalence across different contexts, offering a foundation for further research into its causes and implications within Palestinian society.

This research aims to address several key research gaps in the current understanding of psychological burnout among university students, particularly focusing on the influence of virtual social comparisons. While the literature acknowledges the prevalence of burnout in academic settings, there is a distinct lack of in-depth exploration into the unique experiences of university students. Additionally, the role of virtual social comparisons in contributing to burnout remains insufficiently nuanced. This study seeks to fill these gaps by examining the intersectionality of factors such as gender, academic level, and residential location in shaping burnout. Furthermore, this study aims to assess the effectiveness of current support systems and interventions while considering the temporal dynamics of burnout throughout a student's academic journey. By addressing these gaps, this research aims to provide valuable insights for the development of targeted and holistic solutions to alleviate psychological burnout among university students in the digital age.

### 3 Statement of the Problem

The increasing issue of psychological burnout among university students, characterized by emotional exhaustion, cynicism, and a diminished sense of accomplishment, is a pressing concern in the modern educational landscape. Virtual social comparisons facilitated by social media platforms have emerged as a potential contributing factor to burnout. The role of these comparisons in influencing the mental health of university students is a critical area that requires thorough investigation. Understanding the mechanisms through

which these comparisons operate and potential variations based on gender, academic level, and residential location is crucial for developing targeted strategies, interventions, and support systems to mitigate the adverse effects on university students' mental well-being in the digital age. This research aims to unravel the complex dynamics surrounding virtual social comparisons and their impact on psychological burnout among university students, providing valuable insights for the development of holistic and effective solutions.

#### 4 Research Questions

The following questions were crafted with the intention of revealing the intricacies of this relationship and examining potential variations based on factors such as gender, faculty, academic level, and residential location. Through this inquiry, the study seeks to contribute valuable insights that can inform strategies to enhance the mental well-being of university students in the digital age.

What is the role of virtual social comparisons in contributing to the psychological burnout experienced by university students?

Is there significant variation in the impact of virtual social comparisons on psychological burnout among university students, considering factors such as gender, faculty, academic level, and residential location?

After analyzing the quantitative data and extracting the results, the researchers prepared and validated four open-ended research questions to assess the perspectives of (18) students who responded to the interview tool.

1. What are the negative emotions that dominate you when making virtual comparisons with others on social media?
2. Have you made any significant life decisions, such as changing your major, due to specific virtual comparisons you observed on social media?
3. Did virtual social comparisons on social media impact your relationships with family and friends?
4. Have you ever felt that you are in a bad psychological state due to virtual social comparisons on social media?

#### 5 Methods

The researchers used a mixed-methods descriptive research strategy for this study, which included both quantitative and qualitative procedures. After a

rigorous review of relevant information, the quantitative data were gathered using a questionnaire created in accordance with the theoretical framework and body of existing research (see Appendix A). After checks for validity and reliability, the data were analyzed with both descriptive and inferential techniques. The idea was to observe the impact of social media in its real-world context. Simultaneously, the qualitative portion of the research employed qualitative interviews, focusing on observing and analyzing social phenomena in their natural settings.

### 5.1 *Study Population*

The study population encompasses all relevant individuals or elements directly related to the investigated educational issue. Researchers have sought to extend the generalizability of their findings to this defined population. Hence, the study population consisted of all university students enrolled during the inaugural semester of 2022–2023 within the limits of this study. It is imperative to note that the study aimed to encompass the entire student body.

### 5.2 *Study Sample*

Quantitatively, a purposive sampling strategy facilitated by the use of Google Forms for survey administration was employed by the researchers. The sample comprised 401 respondents, with a marked gender disparity: 310 females (77.3%) and 91 males (22.7%). The respondents were nearly evenly split between scientific (199 respondents, 49.6%) and humanities (202 respondents, 50.4%) faculties. In terms of academic level, the majority were in their second (165 respondents, 41.1%), third (98 respondents, 24.4%), and fourth (108 respondents, 26.9%) years, with fewer in the first (7 respondents, 1.7%), fifth (18 respondents, 4.5%), and sixth (5 respondents, 1.2%) years. Regarding their place of residence, the distribution was close between those living in cities (194 respondents, 48.4%) and villages (183 respondents, 45.6%), with a smaller number residing in camps (24 respondents, 6.0%). Qualitatively, the researchers selected a purposive sample of active students who demonstrated notable engagement on social media platforms. The sample consisted of 18 individuals.

### 5.3 *Study Tools*

This study employed two methodological instruments, with the primary tool being a carefully crafted questionnaire designed as a comprehensive data collection instrument for the subject under investigation. The questionnaire was disseminated via Google at the commencement of the 2023–2024 academic year, beginning on September 1, 2023. It remained accessible to respondents for four months, until the conclusion of the first semester on December 28, 2023. It aimed to explore the influence of virtual social comparisons on the

escalation of psychological burnout among university students. Its construction was informed by a comprehensive review of theoretical frameworks and pertinent prior studies. With a total of 30 items, the questionnaire was methodically structured utilizing a five-point Likert scale, wherein responses were stratified into distinct grades: strongly agree (5), agree (4), neutral (3), disagree (2), and strongly disagree (1). The demographic section included questions about gender, college affiliation, academic level, and residential location. The Likert-scale items (1 to 30) explore feelings of jealousy, sadness, frustration, inadequacy, and other emotional responses arising from social comparisons on social media. The survey aims to capture various aspects of emotional well-being in the context of online social comparisons. Further analysis and interpretation of the results are necessary to derive meaningful insights.

In addition, the study used individualized, structured interviews to collect data and back the quantitative data. These interviews were conducted at the respondents' convenience during the first semester, specifically between September 10, 2023 and December 18, 2023. The researchers crafted (4) structured questions with open-ended conclusions. This approach ensures a systematic and consistent method, promoting reliability and meaningful analysis. The one-on-one setting enhances participant engagement and fosters rich qualitative insights.

#### 5.4 *Validity of Research Tools*

After the questionnaire was first developed, with 45 items initially, a thorough assessment of its validity was conducted. The content validity, relevance to study objectives, and alignment with study factors of the questionnaire were evaluated by a group of eight qualified experts and specialists from Palestinian universities. These specialists were entrusted with evaluating each phrase's suitability for assessing the specified constructions. Eighty percent had a significant rate of concurrence. Iterative changes were made in response to their helpful criticism; these included revisions, additions, and deletions of some items. In this arbitration procedure, the majority's (80% of the expert panel) decisions were crucial. As a result, the list of items was reduced to 30 items. To ensure the validity of the interview questions, the researchers presented them to eight expert arbitrators. They suggested the removal and replacement of certain questions.

#### 5.5 *Reliability Assessment*

The Cronbach's alpha coefficient was utilized to determine the reliability of the study instrument. The results showed a remarkable coefficient of 0.96, which was considered extremely appropriate for the study's goals. The

researchers used test-retest and interrater reliability as two reliability assessment techniques for the interview tool. Using the interrater reliability approach, the researchers conducted simultaneous analysis of the qualitative study sample responses using Holsti's equation.

Holsti's Formula =  $(2 \times \text{number of ideas agreed upon in the analysis by the coders}) / \text{total number of ideas in the analysis}$

In the analysis round, the number of ideas agreed upon by the coders for all questions was nine (9). The total number of ideas in the analysis round for all questions was  $14 \pm 13 = 27$ . Thus,  $2 \times 9 = 18$  ( $18/27 = 0.67$ ). Therefore, the reliability coefficient using this formula is 0.67, indicating good reliability for the purposes of this study.

## 5.6 Results

The primary objective of this investigation was to elucidate the influence of virtual social comparisons on the increase in psychological burnout among students enrolled at the university. Furthermore, the study sought to discern potentially statistically significant differences in the mean responses of the study participants regarding the impact of virtual social comparisons on the intensity of psychological burnout. These distinctions were examined across various demographic variables, including gender, college affiliation, academic level, and residential location.

## 6 Quantitative Results

To answer the first study question, "What is the role of virtual social comparisons in increasing psychological burnout among university students?", the mean scores and standard deviations for the items were calculated. The results are presented in the table provided in Appendix A.

It is evident that the role of virtual social comparisons in increasing psychological burnout among university students has an average of 2.28, with a standard deviation of 0.77 for the total score. The results from the previous table affirm that the role of virtual social comparisons in increasing psychological burnout among university students was very low.

While the overall impact of virtual social comparisons on burnout is low, certain mild negative emotions, such as frustration, sadness, and irritation, were reported by a small but notable portion of respondents. For example, items like "I feel sad when I compare myself to others on social media" (Item 2)

saw 24 percent of respondents agreeing or strongly agreeing, and “I feel a bit irritated when I compare myself to others on social media” (Item 22) had 27 percent agreement or strong agreement. This indicates that while severe consequences are rare, some students (approximately 1 in 4) do experience transient negative emotions as a result of social comparisons.

Items related to self-esteem and self-worth, such as “My self-esteem decreases when I compare myself to others on social media” (Item 9) and “I feel inferior when comparing myself to others on social media” (Item 7), received very low levels of agreement, with over 85 percent of respondents disagreeing or strongly disagreeing. Specifically, only four percent strongly agreed and ten percent agreed with Item 9, while Item 7 saw five percent strongly agreeing and 12 percent agreeing. This suggests that virtual social comparisons do not significantly undermine students’ self-perception or confidence in most cases.

Statements addressing physical symptoms (e.g., headaches, sleep disturbances) and behavioral changes (e.g., loss of appetite, aggression) were among the least agreed-upon items. For instance, “Sometimes I find myself suffering from physical problems such as headaches, eye pain, or stomach ache when I compare myself to others on social media” (Item 30) had only six percent agreeing or strongly agreeing, and “Sometimes I feel aggressive when comparing myself to others on social media” (Item 16) saw just five percent agreeing or strongly agreeing. This underscores that virtual social comparisons rarely translate into tangible physical or behavioral issues among university students.

Items related to social withdrawal, such as “I usually try to isolate myself from my surroundings when comparing myself to others on social media” (Item 24), also received very low agreement levels, with over 90 percent disagreeing or strongly disagreeing. Only three percent strongly agreed and six percent agreed with this statement, indicating that virtual comparisons do not typically lead to significant social disengagement or isolation in this population.

The generally low levels of agreement across all items suggest that university students may possess effective coping mechanisms or resilience that mitigate the potential negative effects of virtual social comparisons. For example, only 10–15 percent of respondents reported strong agreement or agreement with items reflecting significant emotional distress, such as “I feel jealous when I compare myself to others on social media” (Item 1) and “I feel dissatisfied with myself when I compare myself to others on social media” (Item 10). This could be attributed to factors such as maturity, social support systems, or a balanced perspective on social media use.

The findings may also reflect cultural or contextual influences, such as the specific social media platforms used, the nature of content consumed,

or societal norms surrounding social comparisons. For example, students in this study may engage with social media in ways that minimize negative impacts, such as curating their feeds or focusing on positive interactions. This is evident in the low agreement rates for items like “I feel socially unfair when I compare myself to others on social media” (Item 8), where only 12 percent strongly agreed and 26 percent agreed.

While the overall impact is low, the small percentage of students who do report negative emotions or thoughts highlights the importance of targeted mental health interventions. For instance, 15 percent of respondents agreed or strongly agreed with “I feel less accomplished than others when I compare myself to others on social media” (Item 20), and 14 percent agreed or strongly agreed with “I get overthinking when I compare myself to others on social media” (Item 18). Universities could provide resources to help these students develop healthier social media habits, build resilience, and foster a positive self-image.

These findings suggest that virtual social comparisons have a limited role in increasing psychological burnout among university students, with most students (approximately 80–90%) experiencing minimal negative effects. However, the presence of mild emotional responses in a subset of respondents (approximately 10–25%) underscores the need for continued awareness and support to address the potential risks associated with social media use.

To answer the second question, “Is there significant variation in the impact of virtual social comparisons on psychological burnout among university students, considering factors such as gender, faculty, academic level, and place of residence?”, the researchers derived subquestions for ease of analysis.

1. Does gender contribute to a noteworthy variance in the influence of virtual social comparisons on psychological burnout among university students?
2. Does the type of faculty (discipline) contribute to a noteworthy variance in the influence of virtual social comparisons on psychological burnout among university students?
3. Does place of residence contribute to a noteworthy variance in the influence of virtual social comparisons on psychological burnout among university students?
4. Does academic level contribute to a noteworthy variance in the influence of virtual social comparisons on psychological burnout among university students?

To answer the first two subquestions, the researchers employed the independent samples t-test, and the results in Table 1 illustrate this.

TABLE 1 Results of the t-test for independent samples based on gender and type of faculty variables

Variable	Category	N	M	SD	T	P
Gender	Male	91	2.4919	0.920	2.872	0.004
	Female	310	2.2292	0.710		
Type of Faculty	Scientific	199	2.2500	0.750	-0.828	0.408
	Humanities	202	2.3200	0.970		

Notes: N = number; M = means; SD = standard deviations; T = t-value; P = significance level; a value less than 0.05 suggests a significant difference among the groups

The study revealed statistically significant differences in the mean responses of the study sample regarding the impact of virtual social comparisons on heightened psychological burnout based on gender. The results were below the threshold of 0.05, indicating male students are more likely to be affected by social media. However, no significant differences were found between the mean responses of the study sample regarding the impact of virtual social comparisons on heightened psychological burnout based on the type of faculty variable. The results suggest that virtual social comparisons have a more significant impact on psychological burnout for male students.

To address the third subquestion (Does place of residence contribute to a noteworthy variance in the influence of virtual social comparisons on psychological burnout among university students?) and fourth question (Does academic level contribute to a noteworthy variance in the influence of virtual social comparisons on psychological burnout among university students?), the researchers utilized the independent samples t-test. The results presented in Table 2 reveal discernible variations in mean scores across different categories. Specifically, the ‘Camp’ category exhibited the highest mean scores, whereas the ‘City’ category demonstrated the lowest mean scores. In terms of academic level, the results presented in Table 2 reveal discernible variations, with the highest means observed in favor of the ‘fifth year’ category and the lowest means associated with the ‘first year’ category. To ascertain whether these mean differences were statistically significant, the researchers employed one-way analysis of variance (ANOVA), as shown in Table 3.

The study revealed no significant differences in participants’ responses on the role of virtual social comparisons in increasing psychological burnout based on academic level. However, the study revealed significant differences in participants’ responses on the role of virtual social comparisons in increasing psychological burnout based on place of residence. The significance level

TABLE 2 Results of the t-test for independent samples based on the place of residence variable

Variable	Category	N	M	SD
Place of Residence	City	194	2.2400	0.76627
	Village	183	2.2550	0.72274
	Camp	24	2.9417	0.94113
	Total	401	2.2889	0.77405
Academic Level	First year	7	1.90	0.92
	Second year	165	2.21	0.73
	Third year	98	2.35	0.78
	Fourth year	108	2.32	0.79
	Fifth year	18	2.50	0.82
	Sixth year	5	2.33	1.08
	Total	401	2.28	0.77

Notes: N = number; M = means; SD = standard deviations

TABLE 3 One-way ANOVA results for the impact of virtual social comparisons on psychological burnout based on place of residence and academic level

Variable	Source of variation	Sum of square	Degrees of freedom	Means of square	F	P
Place of Residence	Between groups	10.900	2	5.450	9.482	0.000
	Within groups	228.764	398	0.575		
	Total	239.664	400			
Academic Level	Between groups	3.278	5	0.656	1.096	0.362
	Within groups	236.386	395	0.598		
	Total	239.664	400			

Notes: F = f-value; P = significance level; a value less than 0.05 suggests a significant difference among the groups

(0.00) is less than 0.05. The researchers used the least significant difference (LSD) test to determine which category exhibited differences, as shown in Table (4).

The study revealed that virtual social comparisons increase psychological burnout more significantly among students residing in camps than among those residing in cities and villages. The results indicate that students in camps

TABLE 4 LSD test for pairwise comparisons between means of place of residence

Comparisons	City	Village	Camp
City		-0.01497	-0.70163
Village			-0.68666
Camp			

are more likely to experience burnout due to increased exposure to virtual social comparisons, indicating a potential link between these factors.

## 7 Qualitative Results

After analyzing the quantitative data and extracting the results, the researchers prepared and validated four open-ended research questions to assess the perspectives of (18) students who responded to the interview tool.

### 7.1 *What Are the Negative Emotions That Dominate You When Making Virtual Comparisons with Others on Social Media?*

The qualitative findings revealed a range of emotional responses among students regarding the impact of virtual social comparisons on their psychological well-being. For instance, Student 2 shared, "I often find myself trying to imitate others on social media because I feel like I don't measure up. It's like I'm constantly chasing an ideal that isn't even real." Similarly, Student 3 noted, "Seeing others' achievements online makes me feel like I'm not good enough, and it's hard to shake that feeling of inferiority." These reflections highlight how consistent exposure to virtual comparisons can lead to imitative behaviors and a diminished sense of self-worth.

Regarding self-confidence, Student 1 explained, "I used to feel confident about myself, but now I constantly doubt my abilities because of what I see online." This sentiment was echoed by Student 7, who stated, "Social media makes me question my choices and achievements, which has really hurt my self-esteem." These quotes illustrate how virtual comparisons can erode self-confidence over time.

Feelings of envy and sadness were also commonly reported. Student 4 expressed, "I often feel envious of others' lives on social media, and it leaves me feeling sad and dissatisfied with my own life." Similarly, Student 12 shared,

"It's hard not to compare yourself to others, and when you do, it's easy to feel like you're falling behind." These responses underscore the emotional toll of virtual comparisons.

In terms of self-hatred and inferiority, Student 5 revealed, "I sometimes hate myself for not being as successful or attractive as the people I see online." Student 13 added, "I feel like I'm constantly failing because I can't live up to the standards I see on social media." These statements highlight the intense negative emotions that can arise from virtual comparisons.

On the other hand, some students reported minimal impact. Student 1 noted, "I don't really feel affected by what I see on social media; I try to focus on my own journey." Student 7 similarly stated, "I've learned to take social media with a grain of salt, so it doesn't really bother me." These perspectives suggest that not all students are equally impacted by virtual comparisons.

## 7.2 *Have You Made Any Significant Life Decisions, Such as Changing Your Major, Due to Specific Virtual Comparisons You Observed on Social Media?*

The qualitative findings revealed that virtual social comparisons played a significant role in shaping life-altering decisions for many students, while others remained unaffected. For example, Participant 2 shared, "Seeing others travel abroad and achieve success on social media motivated me to take a gap year and convince my parents to let me study overseas. It completely changed my life – I now have opportunities I never imagined." Similarly, Participant 6 explained, "I started working part-time because I saw my peers on social media balancing jobs and studies. It pushed me to take initiative and become more independent." These quotes illustrate how virtual comparisons can inspire students to pursue new opportunities and make significant changes in their lives.

On the other hand, some students reported that virtual comparisons had little to no influence on their decisions. Participant 1 stated, "I don't let social media dictate my choices. What others post doesn't reflect reality, so I focus on my own path." Participant 5 echoed this sentiment, saying, "I see social media as a curated highlight reel, not something to base my life decisions on." These perspectives highlight the varying degrees of influence virtual comparisons can have, depending on individual attitudes and perceptions.

The study found that 11 out of 18 participants made significant life decisions influenced by virtual comparisons, such as pursuing side jobs, increasing religious commitment, or showcasing their talents. For instance, Participant 9 noted, "I started sharing my artwork online after seeing others gain recognition for their talents. It gave me the confidence to put myself out there." Meanwhile, Participant 12 shared, "I became more religious after seeing how others on

social media found purpose and peace through their faith.” These examples demonstrate the diverse ways virtual comparisons can impact students’ lives.

However, seven out of 18 participants reported that virtual comparisons did not influence their decisions. Participant 8 explained, “I see social media as artificial and not reflective of real life, so it doesn’t affect my choices.” Participant 14 added, “I prefer to make decisions based on my own values and goals, not what I see online.” These responses underscore the importance of individual resilience and critical thinking in navigating social media influences.

### 7.3 *Did Virtual Social Comparisons on Social Media Impact Your Relationships with Family and Friends?*

The qualitative findings revealed mixed perspectives on how virtual social comparisons influenced students’ relationships with family and friends. For instance, Participant 2 shared, “I started distancing myself from my family because I felt like they didn’t understand my ambitions after seeing how others on social media were living their lives.” Similarly, Participant 12 explained, “I became so focused on comparing myself to others online that I unintentionally isolated myself from my relatives. It felt like they couldn’t relate to my struggles.” These quotes illustrate how virtual comparisons can strain familial relationships and lead to feelings of isolation.

In terms of friendships, Participant 11 noted, “I ended a few friendships because I felt like those people didn’t align with the image I was trying to build for myself online.” Participant 18 added, “Seeing others with what seemed like perfect friendships made me question my own relationships, and I eventually cut ties with some friends.” These reflections highlight how virtual comparisons can sometimes lead to the abandonment of friendships.

On the other hand, some students reported that virtual comparisons had no impact on their relationships. Participant 1 stated, “My relationships with my family and friends are too strong to be affected by what I see on social media.” Participant 5 echoed this sentiment, saying, “I don’t let social media influence how I interact with the people who matter most to me.” These perspectives emphasize the resilience of certain relationships in the face of virtual comparisons.

The study found that ten out of 18 participants felt that virtual comparisons led to isolation from their families, while eight out of 18 reported no such impact. Additionally, three out of 18 participants acknowledged that virtual comparisons prompted them to abandon certain friendships. For example, Participant 3 shared, “I felt like my friends didn’t match the lifestyle I was aspiring to after seeing others on social media, so I drifted away from them.” Meanwhile, Participant 16 explained, “I became so consumed with comparing

myself to others that I neglected my family, which created a lot of tension at home.”

However, eight out of 18 participants maintained that virtual comparisons did not affect their relationships. Participant 9 noted, “I’ve always been close to my family and friends, and social media hasn’t changed that.” Participant 14 added, “I see social media as separate from my real-life relationships, so it doesn’t interfere with how I connect with others.” These responses highlight the varying degrees of influence virtual comparisons can have, depending on individual circumstances and perspectives.

#### 7.4 *Have You Ever Felt That You Are in a Bad Psychological State Due to Virtual Social Comparisons on Social Media?*

The qualitative findings revealed a divide in how virtual social comparisons impacted students’ psychological states. For instance, Student 2 shared, “Seeing others on social media achieve their dreams – like buying luxury cars or traveling the world – made me feel like I was falling behind. It created a lot of pressure and anxiety for me.” Similarly, Student 6 explained, “When I compared my life to the lives of Gulf Arabs or foreigners on social media, I felt like I wasn’t doing enough. It made me question my own ambitions and abilities.” These quotes illustrate how virtual comparisons can significantly affect students’ mental well-being by fostering feelings of inadequacy and self-doubt.

On the other hand, some students reported that virtual comparisons had no negative impact on their psychological state. Student 1 stated, “I don’t let what I see on social media affect me. I know everyone’s journey is different, so I focus on my own goals.” Student 7 echoed this sentiment, saying, “I see social media as entertainment, not something to compare my life to. It doesn’t influence how I feel about myself.” These perspectives highlight the resilience of some students in navigating the pressures of virtual comparisons.

The study found that 11 out of 18 participants felt that virtual comparisons significantly affected their psychological state, particularly when observing others achieving milestones such as buying luxury cars, traveling, or living what appeared to be more affluent lifestyles. For example, Student 3 noted, “Watching people travel and live lavishly made me feel like I was missing out. It made me question my own choices and future.” Student 12 added, “Comparing myself to others on social media made me feel like I wasn’t successful enough, which really impacted my self-esteem.”

However, seven out of 18 participants reported that virtual comparisons had no negative effects on them. Student 10 explained, “I’ve learned to take social media with a grain of salt. It doesn’t define my worth or happiness.” Student 14 shared, “I focus on my own progress and don’t let others’ achievements on

social media affect me.” These responses underscore the importance of individual mindset and coping strategies in mitigating the psychological impact of virtual comparisons.

## 8 Discussion

The findings of this study indicate that virtual social comparisons among university students have a minimal overall impact, which aligns with social comparison theory (Festinger 1954). According to this theory, individuals engage in social comparisons to evaluate their abilities and opinions, often within their immediate social circles. The low average score of 2.28 (standard deviation = 0.77) observed in this study may reflect the cultural resilience and strong community ties inherent in Palestinian society. Palestinian culture places a high value on shared experiences, collective identity, and community solidarity, which are deeply rooted in ideals of cooperation and mutual support (Harb 1998; Sheikh-Khalil 2008). These cultural norms may lead individuals to compare themselves primarily with those in their immediate social circles – such as family, friends, and neighbors – rather than with external or idealized figures on social media. This tendency to focus on local comparisons, rather than global or virtual ones, may mitigate the psychological impact of virtual social comparisons, as suggested by Gerber et al. (2018) who emphasize the role of cultural context in shaping social comparison processes.

Traditional gender roles in Palestinian society also play a significant role in shaping the impact of virtual social comparisons. These roles dictate distinct expectations for men and women, particularly in academic and career domains. Male students, for instance, often face heightened societal pressure to fulfill roles as providers and protectors, which may increase their sensitivity to social comparisons in academic and professional contexts (Sheikh-Khalil 2008). This aligns with Yang et al. (2018) who found that social comparisons of ability, particularly in competitive environments, can lead to lower self-esteem and increased stress. Male students may experience amplified psychological strain as they strive to meet societal expectations of success, which are often tied to cultural notions of masculinity and familial responsibility. In contrast, female students may face different but equally significant pressures, though these were not explicitly explored in this study. The dynamic interplay between gender roles and social comparisons underscores the need for further research into how cultural norms influence the psychological impact of virtual comparisons, as highlighted by Hu and Liu (2020).

The study also found no significant differences in the impact of virtual social comparisons based on faculty type, which reflects the shared cultural resilience among Palestinian students. This finding is consistent with social comparison theory, which posits that individuals tend to compare themselves within their immediate social groups (Festinger 1954). In the Palestinian context, the strong sense of collective identity and shared cultural values may transcend disciplinary boundaries, enabling students to draw on communal coping strategies when faced with external pressures (Harb 1998; Ramadan 1999). The shared academic environment, characterized by common campus experiences and extracurricular activities, further fosters a sense of interconnectedness that may buffer the effects of virtual social comparisons. This aligns with Ramos Salazar et al. (2022) who emphasize the role of social support and collective identity in mitigating the negative effects of social comparisons in academic settings.

Students residing in Palestinian refugee camps were found to face unique challenges that amplify the impact of virtual social comparisons. The socio-political and economic constraints of camp life – such as limited resources, overcrowded living conditions, and restricted opportunities – create an environment where individuals are more susceptible to psychological strain (Ramadan 1999). This finding resonates with social comparison theory, which acknowledges that external factors, such as living conditions, can exacerbate the effects of social comparisons (Gerber et al. 2018). Despite the strong sense of solidarity and shared identity within refugee communities, the daily struggles for basic necessities and aspirations for a better future create a complex backdrop against which social comparisons unfold. This aligns with Zubair et al. (2023) who highlight the role of socioeconomic factors in shaping the psychological impact of social media use. The compounded stressors faced by students in refugee camps may make them more vulnerable to the negative effects of virtual social comparisons, underscoring the need for targeted interventions to support this population.

Finally, the study revealed variations in the impact of virtual social comparisons across academic levels, with higher means observed among fifth-year students and lower means among first-year students. This pattern aligns with the developmental nature of stressors outlined by social comparison theory (Festinger 1954). As students progress through their academic journeys, they encounter evolving challenges and expectations, which may increase their susceptibility to social comparisons. This finding is consistent with March-Amengual et al. (2022) who found that academic burnout and stress tend to intensify as students advance through their studies. The higher impact

observed among fifth-year students may reflect the cumulative pressure of academic demands, career aspirations, and societal expectations, which are often heightened during the final years of university.

The quantitative findings of this study reveal that virtual social comparisons on social media can evoke a range of negative emotions, including insecurity, self-hatred, envy, sadness, and feelings of failure. These emotional responses align with social comparison theory (Festinger 1954), which posits that individuals evaluate themselves against others, often leading to feelings of inadequacy when perceived discrepancies arise. Such emotions can have tangible consequences, prompting significant life decisions such as changing academic majors, pursuing side jobs, or delaying studies to pursue travel or other opportunities. For instance, some students reported making expensive purchases or altering their career paths in response to comparisons with peers on social media. This finding resonates with Yang et al. (2018) who found that social comparisons of ability can lead to identity confusion and heightened stress, particularly in competitive environments. However, not all students are equally affected; some perceive the online world as artificial and remain largely unaffected by virtual comparisons, a perspective that aligns with Verduyn et al. (2017) who emphasize the role of individual differences in moderating the impact of social media use.

The study also highlights the relational consequences of virtual social comparisons, with some students reporting feelings of isolation and distancing from friends and family. This finding is consistent with Hu and Liu (2020) who found that passive social media use can exacerbate feelings of social disconnection and loneliness. The psychological well-being of students is further compromised when virtual comparisons lead to negative perceptions of others' potential to achieve their goals, fostering a sense of inadequacy and self-doubt. This aligns with Seabrook et al. (2016) who linked excessive social media use to increased levels of anxiety and depression. However, it is important to note that not all students experience these negative effects. Some students demonstrate resilience, viewing social media as a curated and artificial representation of reality, which shields them from its potentially harmful impacts. This variability underscores the importance of individual coping strategies and cultural factors in shaping responses to virtual social comparisons, as highlighted by Gerber et al. (2018).

## 9 Conclusions

In the context of the chosen University, this study revealed that virtual social comparisons, while having a minimal overall impact, are influenced

by Palestinian cultural dynamics. Aligned with social comparison theory, this research highlights the importance of communal ties, gender roles, living conditions, and developmental stressors in shaping students' responses to virtual comparisons.

Traditional gender roles in Palestinian society contribute to the observed variations. Men who adhere to societal expectations of academic and career success may face heightened sensitivity to virtual comparisons. The pressure to fulfill roles as providers and protectors intensifies the impact of comparisons on psychological well-being, reflecting the evolving nature of gender roles within Palestinian culture. The absence of significant differences based on faculty type suggests shared cultural resilience among students, which resonates with social comparison theory. The Palestinian cultural context, which emphasizes collective identity and shared values, allows students to draw from common coping mechanisms despite pursuing diverse academic disciplines.

Unique challenges faced by students in Palestinian refugee camps, rooted in sociopolitical and economic factors, contribute to heightened susceptibility to virtual social comparisons. This study identified compounding stressors within camp environments, emphasizing the influence of living conditions on the impact of virtual comparisons. Variations across academic levels align with the developmental stressors outlined by social comparison theory. As students progress through their academic journeys, evolving challenges and expectations shape their responses to virtual social comparisons. The highest means in the 'fifth year' category and lowest in the 'first year' category reflect this dynamic relationship.

This research on the impact of virtual social comparisons on university students in the Palestinian context offers valuable insights for various stakeholders. It provides administrators and counselors with insights into the unique challenges faced by students, guiding the development of tailored support programs and workshops. Faculty members and educators can benefit from this knowledge to foster a supportive learning environment and implement strategies to mitigate the negative impacts of social comparisons. Students can benefit from understanding the psychological effects of virtual comparisons, leading to more informed decision-making. Parents and families can gain insights into the challenges their children face in the digital realm, facilitating open conversations and emotional support. Researchers in social psychology, cultural studies, and technology can benefit from this research, while community organizations can benefit from understanding social dynamics influencing students.

This study has several limitations. The sample size of participants may limit the generalizability of the findings. The demographic representation of the student population may not fully capture the diversity, and the cross-sectional

nature of the research may limit the ability to draw conclusions about causality or changes in perceptions over time. The reliance on self-reported data introduces social desirability bias, which could impact the accuracy of responses on sensitive topics.

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## Appendix

TABLE A1 Means and standard deviations of questionnaire items

No.	When I compare myself to others on social media ...	Means	SD	LoA
20	I feel less accomplished than others	2.73	1.224	Low
18	I get to overthinking	2.67	1.285	Low
6	I feel like I have made bad choices in my life	2.65	1.156	Low
8	I feel socially unfair	2.57	1.231	Low
28	I feel a bit bored with my life	2.52	1.167	Low
23	I enjoy life less	2.51	1.200	Low
15	I experience some stress	2.48	1.190	Very low
5	I feel less fortunate than others	2.45	1.218	Very low
14	I lose my passion for some things (e.g., my studies)	2.44	1.171	Very low
22	I feel a bit irritated	2.43	1.164	Very low
13	I get tired of comparing myself to others	2.38	1.211	Very low
2	I feel sad	2.37	1.170	Very low
3	I get frustrated	2.36	1.198	Very low
19	I have negative thoughts about my specialty	2.33	1.227	Very low
21	I feel empty inside	2.32	1.104	Very low
1	I feel jealous	2.30	1.081	Very low
10	I feel dissatisfied with myself	2.28	1.148	Very low
11	I experience feelings of failure	2.20	1.088	Very low
27	I feel like I have become a hostage of some details	2.19	1.128	Very low
7	I feel inferior	2.18	1.103	Very low
12	I feel less attractive than others	2.17	1.144	Very low
24	I usually try' to isolate myself from my surroundings	2.16	1.097	Very low
26	I get angry	2.14	1.106	Very low
4	I feel helpless	2.10	1.045	Very low
30	Sometimes I suffer from physical problems*	2.01	1.104	Very low
25	I often have trouble sleeping	1.98	1.038	Very low
9	My self-esteem decreases	1.92	1.094	Very low
17	I have feelings of hatred toward some people	1.91	1.001	Very low
29	Sometimes I lose my appetite for food and drink	1.90	1.013	Very low
16	Sometimes I feel aggressive	1.88	0.977	Very low
Total Degree		2.28	0.770	Very low

Notes: SD = standard deviations; LoA = level of agreement: \* such as headaches, eye pain, stomach ache

**AQ 1: Please provide your ORCID if you have one.**