

## Research Article

# Consequences of Social Media on the Onset of Depression and Anxiety among Teachers from Junior Schools and Students from Teachers' Families and Relatives: A Comprehensive Cross-Section Survey

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## Abstract

**Background:** Social media offering opportunities for connectivity, information sharing, and entertainment. However, alongside the benefits, there is a negative impact of social media use on mental health, particularly concerning depression and anxiety. This study determined the consequences of social media on the onset of depression and anxiety among teachers from junior schools and students from their families and relatives.

**Methods:** This is a cross-sectional survey applied on the teachers (n=263) from junior schools and students (n=99) from their families and relatives from Qassim population of Saudi Arabia. A standardized instrument was applied to quantify the social media usage. Depression and anxiety levels were quantified using the Patient Health Questionnaire-9 (PHQ-9), the Generalized Anxiety Disorder Questionnaire-7 (GAD-7), respectively.

**Results:** Among teachers, a majority displayed minimal depression (55.1%), with some showing mild (26.6%), moderate (10.3%), and severe depression (8.0%). Students also exhibited 56.6% minimal depression, followed by mild (16.2%), moderate (17.2%), and severe depression (10.1%). Regarding anxiety, teachers reported minimal (39.9%), mild (40.3%), moderate (12.5%), and severe (7.2%) anxiety. Similarly, students displayed anxiety levels as minimal (48.5%), mild (29.3%), moderate (10.1%), and severe (12.1%). The levels of depression and anxiety among studied teachers and students were not statistically comparable (p 0.05).

**Conclusion:** This is the first study evaluating the effects of social media usage on the onset of depression and anxiety among teachers in junior schools and students from their families and relatives. A majority of both teachers and students experienced minimal levels of depression and anxiety due to their social media usage. Overall, these findings suggest that teachers from junior schools and students from their families in Qassim did not exhibit significant impacts of severe depression and anxiety from their social media use.

## INTRODUCTION

Social media is a range of online platforms, services, and customs geared towards fostering collaboration, community development, participation, and content sharing. These technologies are increasingly captivating teachers and students across schools, colleges, and universities, encouraging them to explore avenues for learning and communication, thus maintaining motiva-

tion for engaging in constructive activities (Marín et al., 2022). Teachers are showing a growing interest in integrating various social media tools, such as blogs, wikis, microblogs, video-sharing platforms, and social networks, into educational practices (Xu et al., 2023; Alonzo et al., 2023; Marín et al., 2022). Twitter, for instance, serves as a microblogging platform, while Facebook remains a popular social networking site among students and teachers for leisure activities. Social me-

dia, essentially reliant on computers, facilitates users in creating accounts and exchanging information, ideas, and multimedia content within online communities and networks. It is broadly defined as a group of internet-based applications that leverage the principles and technologies of the web to enable the creation and exchange of user-generated content (Alalwan, 2022; Ashraf et al., 2021). The interconnectedness of media has driven the widespread adoption of the internet, giving rise to social media platforms. A social networking service serves as a platform for people to establish connections and build relationships by sharing interests, activities, life backgrounds, or experiences with others they are connected to. Such platforms mirror real-life communities rather than purely online ones, fostering connections among teachers and students with high school peers, campus acquaintances, fellow organization members, and individuals met at various events (Alalwan, 2022). Since their inception in the 1990s, social networking sites have amassed millions of users who integrate these platforms into their daily routines for educational and professional purposes. They manifest in diverse forms, including blogs, forums, social networks, wikis, virtual environments, bookmarking sites, and multimedia sharing platforms, among others (Xu et al., 2023; Alonzo et al., 2023; Marin et al., 2022; Alalwan, 2022). However, despite their benefits, social media platforms also have a darker side, increasingly affecting individuals' mental well-being. Students, in particular, often find themselves distracted from their studies by excessive social media use, leading to time wastage and difficulty meeting deadlines (Sharma & Behl, 2022). Moreover, reliance on social media for information consumption diminishes traditional reading habits and research skills. Misuse of these platforms can have adverse effects on mental and physical health, such as disrupted eating and sleeping patterns, eye strain, and increased stress levels (Khalaf et al., 2023). Excessive social media usage can lead to detrimental effects on students' mental health and physical well-being, including depression, anxiety, poor posture, and fatigue (Chen & Xiao, 2022). This study aims to investigate the social media usage affects the development of depression and anxiety in teachers from primary, elementary, or secondary schools, as well as in students who are family members or relatives of these teachers and are over 18 years old.

## METHODS

### Study type, sampling, population and sample size

The study conducted was a cross-sectional survey design to investigate the impact of social media on the development of depression and anxiety among teachers from primary, elementary, or secondary schools, as well as students from the teachers' families or relatives who were above 18 years old. The study was carried out in the Buraidah Qassim region of Saudi Arabia.

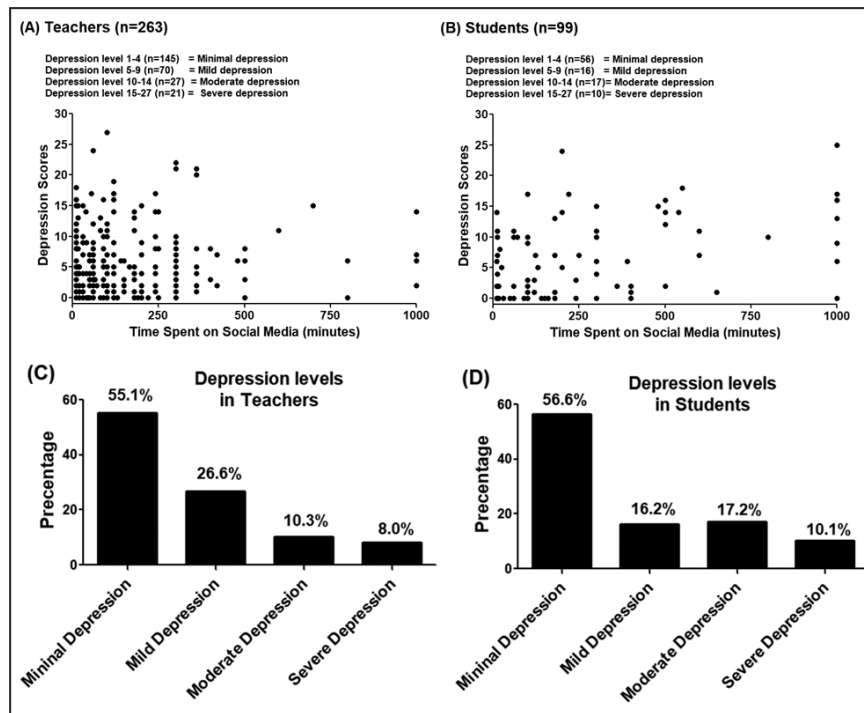
To recruit participants, a random selection process was applied to choose teachers from primary, elementary, and secondary schools over a span of three months, specifically from January 2023 to March 2023. These selected teachers were then requested to encourage their family members and relatives, who were students above 18 years old, to participate in the study. In order to ensure a representative sample, twelve high schools were selected. From each locality, four schools were randomly chosen from a list of schools, with two being exclusively for males and two for females. Each of the selected schools acted as a cluster for enrolling both teachers and students from their families. The sample size was determined by the population proportion calculation using the Select Statistical Services (<https://select-statistics.co.uk/calculators/sample-size-calculator-population-proportion/>). A margin of error of 5%, a confidence level of 95%, a population size of 100,000, and a sample size proportion of 50% were chosen, resulting in a required sample size of 383 participants. Ultimately, we were able to recruit 362 participants, which was slightly below the desired sample size.

### Data collection, PHQ-9 and GAD-7

The data collection process involved the use of a structured digital questionnaire. The questionnaire consisted of sections that gathered demographic information as well as details about participants' social media usage. Teachers and students were asked to provide information on the specific social media platforms they utilized, including WhatsApp, Twitter, Instagram, TikTok, Facebook, and others. In order to measure levels of depression and anxiety, well-validated scales were used. The severity of depression was assessed using the Patient Health Questionnaire-9 (PHQ-9), which has been thoroughly validated across different populations (Sawaya et al., 2016). Similarly, the levels of anxiety were evaluated using the Generalized Anxiety Disorder Questionnaire-7 (GAD-7), which has also been pre-tested and validated across diverse populations (Sawaya et al., 2016; Spitzer et al., 2006).

### Participants' inclusion and exclusion criteria

The study included subjects who met specific inclusion criteria. Eligible participants were required to be teachers from primary, elementary, or secondary schools or students under the age of 18 who belonged to the families of these teachers. Both male and female individuals from the Qassim region in Saudi Arabia were considered to ensure a comprehensive analysis. Participants agreed to participate in the study and provided informed consent. On the other hand, certain exclusion criteria were applied. Participants who did not reside in the Qassim region of Saudi Arabia were excluded from the study. Participants who were unable or unwilling to provide informed consent were excluded. Participants who were minors and did not have consent from a par-



**Figure 1:** Social media usage induced depression in teachers from junior schools and students from their families/relatives. (A) Depression scores versus time spent on social media quantified in studied teachers. (B) Depression scores versus time spent on social media quantified in studied students. (C) Percentage levels of depression scores in teachers. (D) Percentage levels of depression scores in students.

ent or guardian were not eligible for inclusion. Finally, teachers from tertiary or higher institutions were not included in the study.

### Ethical approval and participants consents

The study received ethical approval from the institutional review board (IRB) at Deanship of Scientific Research, Qassim University, with approval number 22-15-07. All participants were provided with an informed consent document. This document clearly outlined the study's objectives, the types of questions that would be asked, and the expected time commitment for participation. Participants were assured that their identities and responses would remain strictly confidential and would only be used for research purposes.

### Statistical analysis

The collected data were statistically analyzed using GraphPad Prism version 8 software (San Diego, CA, USA). Statistical comparisons were conducted using GraphPad Prism-8, which involved performing one paired two-tailed t-test with one-way ANOVA analysis, followed by Tukey's post hoc analysis. Moreover, two-way ANOVA was also applied, followed by Bonferroni's post hoc tests. Some data sorting was carried out using MS Excel, and further analysis was conducted using an online GIGA P-value calculator (<https://www.gigacalculator.com/calculators/p-value-significance-calculator.php>).

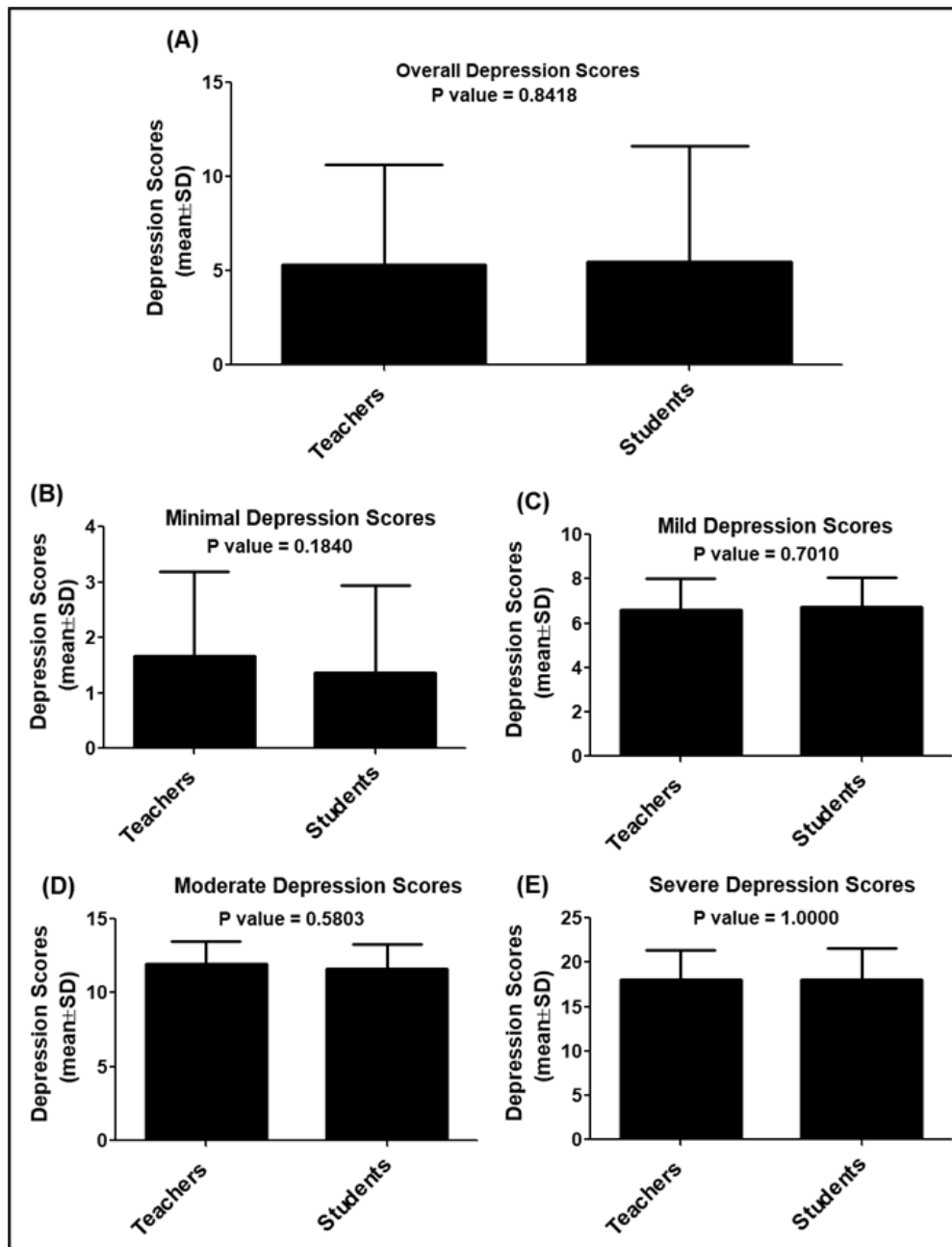
## RESULTS

### Demographic details of studied teachers from junior schools and students from their families or relatives

This study was conducted in Qassim, Saudi Arabia and gathered demographic details from studied teachers from primary, elementary and secondary schools and studied students from the teachers' families or relatives regarding the impact of social media usage on depression and anxiety. A total of 362 teachers and students were participated and completed the survey. Among them, 263 were teachers and 99 were students from their families and relatives. The ages of participated teachers and students in mean( $\pm$ SD) were  $39.0\pm 8.14$  and  $18.79\pm 1.59$  years, respectively. The mean( $\pm$ SD) of age of participated teachers and students were statistically significant ( $p < 0.001$ ). The participants' teachers and students were Saudi nationals and were from Qassim region of Saudi Arabia.

### Social media-induced depression in teachers from junior school and students from their families/relatives

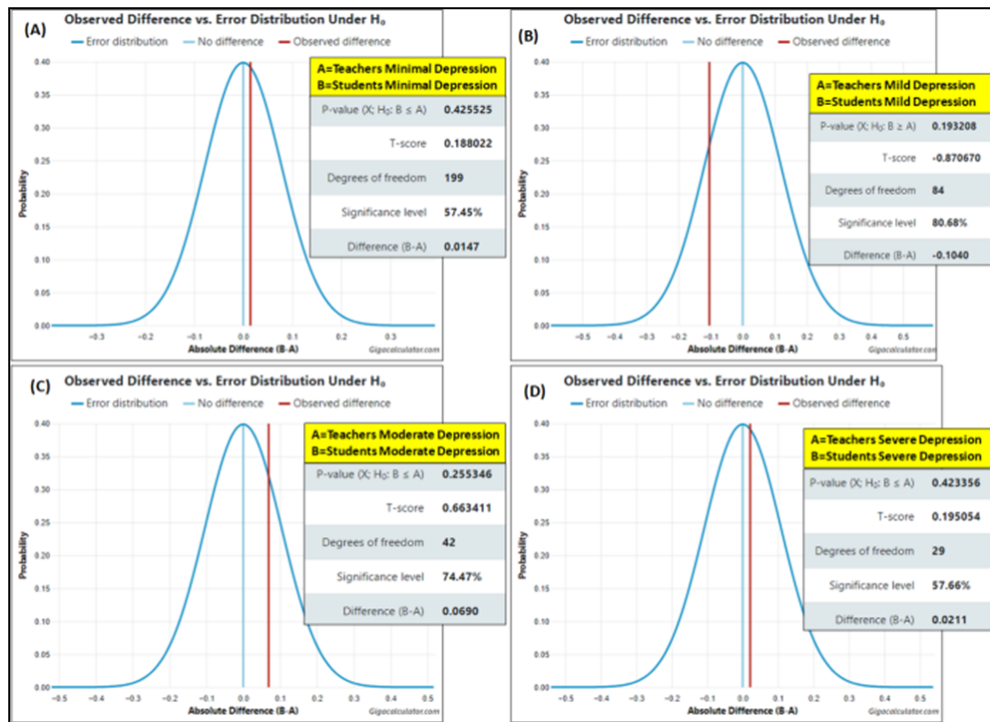
The usage of social media induced depression levels among the teachers from junior school ( $n=263$ ) and students from their families/relatives ( $n=99$ ) due to the use of social media quantified by the administration of the PHQ-9, which was well tested and validated on different populations (Sawaya et al., 2016). Using the PHQ-9, the effect of daily usage of social media on



**Figure 2:** Comparison of social media induced depression levels in teachers from junior schools and students from their families/relatives. (A) Overall social media induced depression scores in teachers and students. (B) Social media induced minimal depression scores in teachers and students. (C) Social media induced mild depression scores in teachers and students. (D) Social media induced moderate depression scores in teachers and students. (E) Social media induced moderate depression scores in teachers and students.

depression levels among all studied participants was calculated and the depression data against the daily usage of social media have been given in Figure 1. The data showed that among 263 teachers, 145 teachers (55.1%) showed minimal depression level, whereas 70 teachers (26.6%) showed mild depression. Importantly, 27 teachers (10.3%) showed moderate depression, whereas severe depression was found in 21 studied teachers (8.0%). Among studied students (n=99), 56 students (56.6%) showed minimal depression level, whereas 16 (16.2%) showed mild depression. Importantly, 17 students (17.2%) showed moderate depression,

whereas severe depression was found in 10 studied students (10.1%) (Fig. 1B). Moreover, the social media induced depression levels for teachers and students were also compared and were presented in Figure 2. The overall depression levels in both teachers and students were almost found to be similar ( $p=0.8418$ ; Fig. 2A). This pattern was same also in those participants which were showed mild depression, moderate depression and severe depression ( $p < 0.05$ ; Fig. 2B-E). In order to validate these results, the data were further analyzed using giga online statistical software. The results were almost similar as we observed using prism statis-



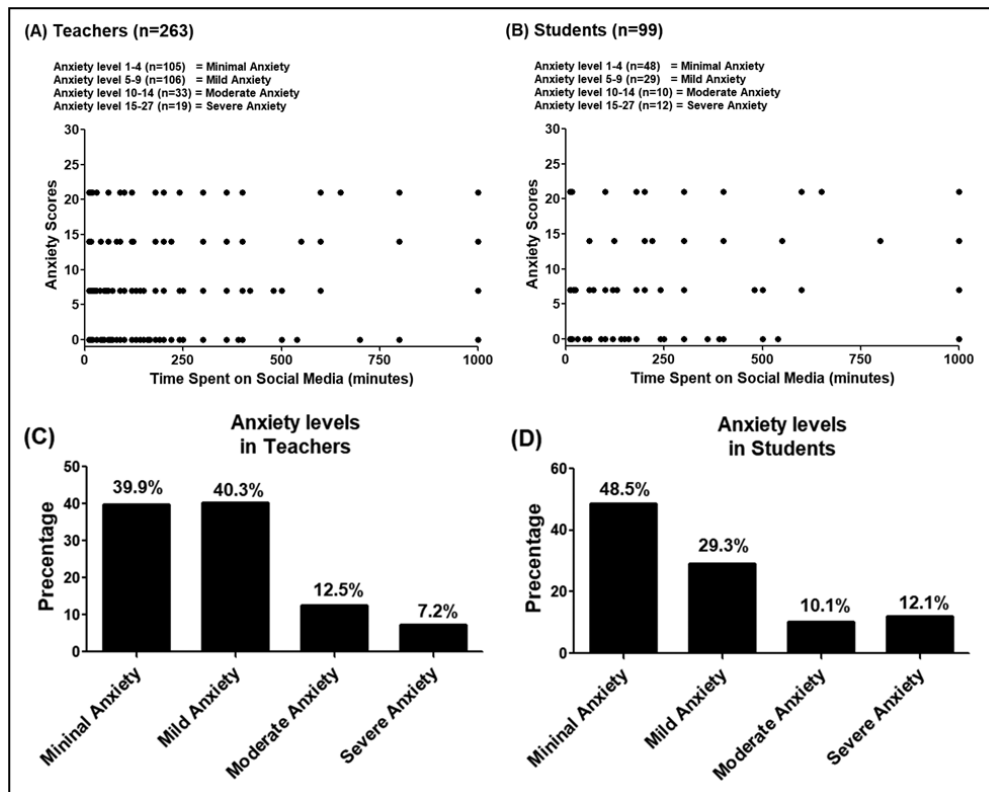
**Figure 3:** Probability of social media induced depression versus absolute difference among teachers and students groups. (A) Probability of social media induced minimal depression levels versus absolute difference among teachers and students groups. (B) Probability of social media induced mild depression versus absolute difference among teachers and students groups. (C) Probability of social media induced moderate depression versus absolute difference among teachers and students groups. (D) Probability of social media induced severe depression versus absolute difference among teachers and students groups.

**Table 1:** Depression scores in teachers from junior school and students from their families and relatives

Subjects	Participants' ages, years(mean±SD)	Total participants in a group	Depression wise participants distribution	Depression levels	Depression scale
Teachers	39.0±8.14	263	145	Minimal	0-4
			70	Mild	5-9
			27	Moderate	10-14
			21	Severe	>14
Students	18.8±1.59	99	56	Minimal	0-4
			16	Mild	5-9
			17	Moderate	10-14
			10	Severe	>14
Both groups	33.5±11.41	362	201	Minimal	0-4
			86	Mild	5-9
			44	Moderate	10-14
			31	Severe	>14

tical software. In minimal depression group of participants, no statistical significance was found ( $p=0.425$ ,  $T\text{-score}=0.188$ , degree of freedom=199). These data with absolute difference between the studied teachers and students have been given in Figure 3A. In mild depression group of participants, again no statistical significance was found ( $p=0.193$ ,  $T\text{-score}=-0.871$ , degree of freedom=84). These data with absolute difference between the studied teachers and students with mild depression levels have been summarized in Figure 3B. Similarly, in moderate depression groups of teachers

and students, no statistical significance was found with  $p=0.255$ ,  $T\text{-score}=0.663$ , degree of freedom=42 (Fig. 3C). The similar results were also obtained in participants showing severe depression levels with  $p=0.423$ ,  $T\text{-score}=0.195$ , degree of freedom=29. These data with absolute difference between the studied teachers and students with severe depression levels have been summarized in Figure 3D. The complete details social media induced depression among teachers and students are summarized in Table 1.

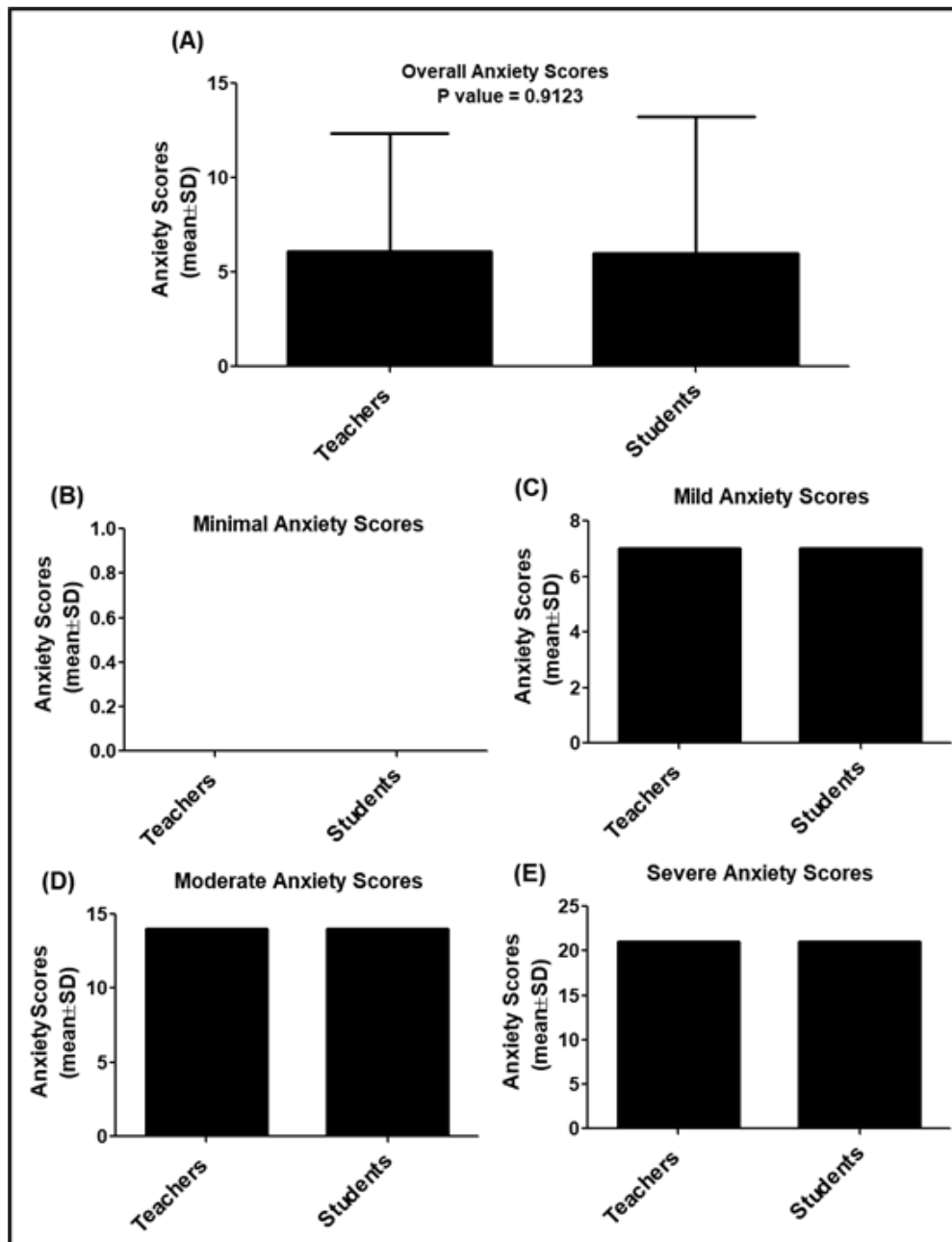


**Figure 4:** Social media usage induced anxiety in teachers from junior schools and students from their families/relatives. (A) Anxiety scores versus time spent on social media quantified in studied teachers. (B) Anxiety scores versus time spent on social media quantified in studied students. (C) Percentage levels of anxiety scores in teachers. (D) Percentage levels of anxiety scores in students

### Anxiety among teachers from junior school and students from their families/relatives due to the use of social media

The usage of social media induced anxiety levels among the teachers from junior school (n=263) and students from their families/relatives (n=99) due to the use of social media quantified by the administration of the Generalized Anxiety Disorder Questionnaire-7 (GAD-7), which was well tested and previously validated on different populations (Spitzer et al., 2006; Sawaya et al., 2016). Using the GAD-7, the effect of daily usage of social media on anxiety levels among all studied teachers and students was calculated and the anxiety data against the daily usage of social media have been given in Figure 4. The data showed that among 263 teachers, 105 teachers (39.9%) showed minimal anxiety level, whereas 106 teachers (40.3%) showed mild anxiety. Importantly, 33 teachers (12.5%) showed moderate anxiety, whereas severe anxiety was found in 19 studied teachers (7.2%) (Fig. 4A&C). Among studied students (n=99), 48 students (48.5%) showed minimal anxiety level, whereas 29 (29.3%) showed mild anxiety. Importantly, 10 students (10.1%) showed moderate anxiety, whereas severe anxiety was found in 12 studied students (12.1%) (Fig. 4B&D). Moreover, the social media induced anxiety levels for teachers and students were also compared and were presented in Figure 5. The overall anxiety levels in both teachers and students were almost same between them

( $p=0.9123$ ; Fig. 5A). This pattern was same also in those participants which were showed mild anxiety, moderate anxiety and severe anxiety ( $p < 0.05$ ; Fig. 4B-E). In order to validate these results, the data were further analyzed using giga online statistical software. The results were almost similar as we observed using prism statistical software. In minimal anxiety group of participants, no statistical significance was found between studied teachers and students ( $p=159$ , T-score=0.998, degree of freedom=151). These data with absolute difference between the studied teachers and students have been given in Figure 6A. In mild anxiety group of participants, again no statistical significance was found ( $p=0.141$ , T-score=-1.082, degree of freedom=133). These data with absolute difference between the studied teachers and students with mild anxiety levels have been summarized in Figure 6B. Similarly, in moderate anxiety groups of teachers and students, no statistical significance was found with  $p=0.419$ , T-score=-0.205, degree of freedom=41 (Fig. 6C). The similar results were also obtained in participants showing severe anxiety levels with  $p=0.323$ , T-score=0.462, degree of freedom=29. These data with absolute difference between the studied teachers and students with severe anxiety levels have been summarized in Figure 6D. The complete details social media induced anxiety among teachers and students are summarized in Table 2.

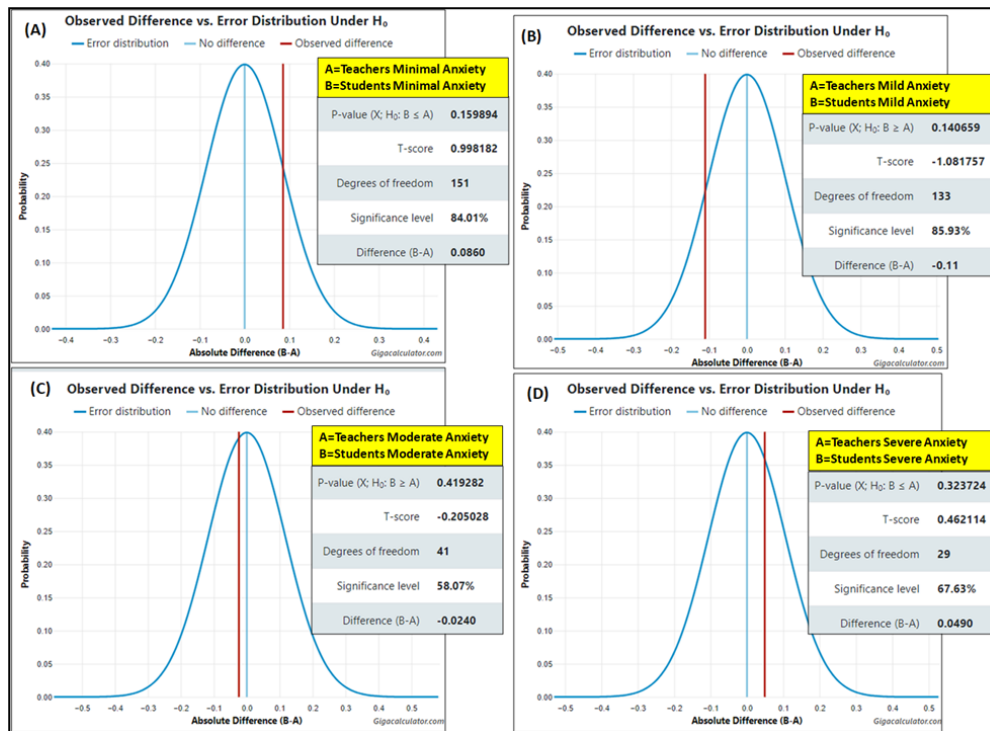


**Figure 5:** Comparison of social media induced anxiety levels in teachers from junior schools and students from their families/relatives. (A) Overall social media induced anxiety scores in teachers and students. (B) Social media induced minimal anxiety scores in teachers and students. (C) Social media induced mild anxiety scores in teachers and students. (D) Social media induced moderate anxiety scores in teachers and students. (E) Social media induced moderate anxiety scores in teachers and students.

## DISCUSSION

This cross-sectional survey determined the consequences of social media use on the onset of depression and anxiety among teachers from junior schools and students from teachers' families and relatives. The proliferation of social media has dramatically transformed how people communicate, interact, and access information. While social media platforms offer numerous benefits, there is growing concern about their impact on mental health, particularly among vulnerable populations such as teachers and students (Fouasson-

Chailloux et al., 2022; Ashraf et al., 2021). Social media platforms have become integral parts of daily life for many individuals, offering opportunities for social connection, information sharing, and entertainment. However, studies indicate a complex relationship between social media use and mental health. While some studies suggest positive outcomes, such as increased social support and self-esteem, others highlight negative effects, including heightened feelings of loneliness, envy, and depression (Twenge & Campbell, 2018; Primack et al., 2017). Among educators, excessive social media use may contribute to stress and



**Figure 6:** Probability of social media induced anxiety versus absolute difference among teachers and students groups. (A) Probability of social media induced minimal anxiety levels versus absolute difference among teachers and students groups. (B) Probability of social media induced mild anxiety versus absolute difference among teachers and students groups. (C) Probability of social media induced moderate anxiety versus absolute difference among teachers and students groups. (D) Probability of social media induced severe anxiety versus absolute difference among teachers and students groups.

**Table 2:** Anxiety scores in teachers from junior schools and students from their families and relatives

Subjects	Participants' ages, years(mean±SD)	Total participants in a group	Anxiety-wise participants distribution	Anxiety levels	Anxiety scale
Teachers	39.0±8.14	263	105	Minimal	0-4
			106	Mild	5-9
			33	Moderate	10-14
			19	Severe	>14
Students	18.8±1.59	99	48	Minimal	0-4
			29	Mild	5-9
			10	Moderate	10-14
			12	Severe	>14
Both groups	33.5±11.41	362	153	Minimal	0-4
			135	Mild	5-9
			43	Moderate	10-14
			31	Severe	>14

burnout, affecting job performance and overall well-being (Jiang, 2021). Similarly, students, especially those with familial ties to teachers, may experience unique challenges related to social media use. Adolescents are particularly susceptible to the influence of social media on mental health, with research linking excessive screen time to increased depressive symptoms and anxiety (Orben & Przybylski, 2019). Moreover, students from families with educators may face additional pressure to excel academically, leading to heightened stress levels and psychological distress (Cho et al., 2023; Orben & Przybylski, 2019). This study was con-

ducted in Qassim, Saudi Arabia and collected demographic information from teachers in primary, elementary, and secondary schools, as well as students who were related to these teachers. The focus was on how social media usage affects levels of depression and anxiety. A total of 362 participants, including 263 teachers and 99 students, completed the survey. The average age of the teachers and students differed significantly. All participants were Saudi nationals from the Qassim region of Saudi Arabia. Social media-induced depression among teachers and students is a complex and multifaceted phenomenon that warrants careful examination



in today's digital age. The pervasive nature of social media platforms offers individuals unprecedented opportunities for connectivity, information sharing, and social interaction. However, alongside these benefits, there is growing concern about the adverse effects of social media use on mental health, particularly concerning depression. One of the primary factors contributing to social media-induced depression is the pervasive culture of comparison that permeates these platforms (Fardouly et al., 2015). Teachers and students alike are constantly exposed to carefully curated images and narratives that highlight others' achievements, experiences, and lifestyles, leading to feelings of inadequacy, envy, and low self-esteem. Moreover, the phenomenon of fear of missing out (FOMO) exacerbates these feelings, as individuals fear being left out or excluded from social events or activities showcased on social media (Steinberger & Kim, 2023). This perpetual sense of inadequacy and social isolation can contribute to the onset and exacerbation of depressive symptoms among teachers and students. Furthermore, the relentless nature of social media, with its constant stream of notifications and updates, can disrupt sleep patterns and exacerbate feelings of stress and overwhelm (Wang & Deng, 2022). The pressure to maintain a curated online persona and project an image of success can create a profound sense of performance anxiety, as individuals strive to meet unrealistic standards of perfection set by social media influencers and peers (Satici et al., 2020). Moreover, the prevalence of cyberbullying and online harassment on social media platforms can exacerbate feelings of depression and self-doubt, particularly among vulnerable populations such as teachers and students (Wright et al., 2018). The impact of social media-induced depression extends beyond individual well-being to encompass broader societal and institutional implications. In educational settings, depressed teachers may experience decreased job satisfaction, impaired concentration, and diminished productivity, ultimately compromising their ability to fulfill their professional duties effectively (Moutinho et al., 2017). Moreover, the emotional toll of depression may strain interpersonal relationships with colleagues and students, further exacerbating feelings of isolation and distress. For students, social media-induced depression can impede academic performance and hinder socio-emotional development. Research has shown a negative correlation between depressive symptoms and academic achievement, with depressed students exhibiting lower grades and higher rates of absenteeism (Hysenbegasi et al., 2005). Additionally, depression can compromise students' ability to form meaningful connections with peers and engage in extracurricular activities, depriving them of essential opportunities for socialization and personal growth. Moreover, the cumulative effect of social media-induced depression can perpetuate a cycle of negative reinforcement, exacerbating psychological distress and impairing overall well-being. Individuals experiencing depressive symp-

toms may be at increased risk of developing comorbid mental health conditions, such as anxiety disorders and substance abuse (Dyson et al., 2016). Left unaddressed, social media-induced depression can have profound and far-reaching consequences for individuals, families, and communities. In light of these challenges, it is essential to explore effective strategies for mitigating the impact of social media-induced depression among teachers and students. Interventions aimed at promoting digital literacy, mindfulness, and resilience can empower individuals to navigate the digital landscape responsibly and cultivate a healthy relationship with social media (Mougharbel et al., 2023). Educating teachers and students about the selective nature of online content and the potential pitfalls of excessive social media use can foster critical thinking skills and enhance resilience against negative influences. Moreover, interventions focused on enhancing coping mechanisms and stress management skills can help individuals navigate the emotional challenges associated with social media use effectively (Querstret et al., 2018). At the interpersonal level, fostering supportive relationships and promoting social connectedness can serve as protective factors against social media-induced depression. Schools can implement peer support programs and mentorship initiatives to provide students with opportunities for meaningful social interaction and emotional support (Calandri et al., 2021). Similarly, creating a supportive work environment for teachers, characterized by open communication and collaborative problem-solving, can mitigate the negative impact of social media-induced stressors on mental health outcomes. Furthermore, systemic interventions aimed at regulating social media usage and promoting digital well-being are essential for addressing social media-induced depression at a broader level. Policy initiatives to limit screen time and promote offline activities can help mitigate the adverse effects of excessive social media use on mental health (Twenge & Campbell, 2018). Moreover, collaboration between policymakers, educators, and technology companies is needed to develop guidelines and best practices for responsible social media usage that prioritize user well-being over engagement metrics. This study in Qassim, Saudi Arabia explored the connection between social media use and depression levels among 263 teachers and 99 students associated with these teachers. The study utilized the PHQ-9 test, which has been proven effective on various populations. Analysis of the data, indicated patterns in depression levels based on daily social media usage. Among teachers, a majority displayed minimal depression (55.1%), with some showing mild (26.6%), moderate (10.3%), and severe depression (8.0%). Students also exhibited varying levels of depression, with 56.6% reporting minimal depression, followed by mild (16.2%), moderate (17.2%), and severe depression (10.1%). Comparisons between teachers and students showed similar overall levels of depression, including those with mild, moderate,

and severe depression. Statistical software confirmed these findings, with no significant differences observed among the groups.

Social media-induced anxiety among teachers and students is a pressing concern in today's digital age, with far-reaching implications for mental health and well-being. One of the primary causes of social media-induced anxiety is the pervasive culture of comparison fostered by these platforms. Teachers and students alike are bombarded with carefully curated images and narratives that highlight others' achievements, experiences, and lifestyles, leading to feelings of inadequacy and self-doubt (Keum et al., 2022). The constant exposure to idealized representations of success can exacerbate pre-existing insecurities and fuel a sense of imposter syndrome, where individuals feel as though they do not measure up to their peers' standards (Lim et al., 2022). Moreover, the FOMO on social media, characterized by the anxiety of being excluded from social events or activities, can further amplify feelings of anxiety and isolation among teachers and students (Gupta & Sharma, 2021). Moreover, the relentless nature of social media, with its constant stream of notifications and updates, can contribute to a sense of overwhelm and information overload, leading to heightened stress levels and anxiety (Bányai et al., 2017). The pressure to maintain a curated online persona and project an image of success can create a profound sense of performance anxiety, as individuals strive to meet unrealistic standards of perfection set by social media influencers and peers (Satici et al., 2023). Furthermore, the prevalence of cyberbullying and online harassment on social media platforms can exacerbate feelings of anxiety and insecurity, particularly among vulnerable populations such as teachers and students (Wright et al., 2018). The study in Qassim, Saudi Arabia examined the impact of social media usage on anxiety levels among 263 teachers and 99 students associated with them. The evaluation utilized the GAD-7, a validated tool previously tested on various populations. Results revealed different levels of anxiety based on daily social media engagement. Among teachers, varying degrees of anxiety were observed: minimal (39.9%), mild (40.3%), moderate (12.5%), and severe (7.2%). Similarly, students displayed a range of anxiety levels: minimal (48.5%), mild (29.3%), moderate (10.1%), and severe (12.1%). A comparison between teachers and students indicated similar levels of anxiety, including those with mild, moderate, and severe anxiety. Statistical analysis using online tools confirmed the results, with no significant differences observed between teachers and students in terms of anxiety levels. In short, the findings of this study clearly showed that only 8.0% of studied teachers from junior schools and 10.1% students from their families/relatives showed severe depression due to social media use. Whereas social media induced severe anxiety was found in only 7.2% teachers and 12.1% students. These findings suggest that individuals in Qassim, particularly teachers from junior schools and stu-

dents from their families, have not been significantly impacted by social media usage in terms of severe depression and anxiety.

## CONCLUSION

This is the first cross-sectional survey evaluating the effects of social media usage on the onset of depression and anxiety among teachers in junior schools and students from their families and relatives. The findings indicated that the majority of both teachers (55.1%) and students (56.6%) experienced minimal levels of depression due to their social media usage. Similarly, the prevalence of minimal anxiety among teachers (39.9%) and students (48.5%) was also notable. Specifically, a small percentage of teachers (8.0%) and students (10.1%) exhibited severe depression attributed to social media use, while only 7.2% of teachers and 12.1% of students had severe anxiety. Overall, these findings suggest that individuals in Qassim, particularly teachers from junior schools and students from their families, did not show significant impacts of severe depression and anxiety from their social media use.

## DECLARATIONS

**Conflict of interest:** The authors have no relevant financial or non-financial interests to disclose. The authors declare no conflict of interest.

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