



The relationship between social media social comparison and self-esteem among youth aged 18–25 years: A correlational study

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Abstract

This research examines the relation between social media social comparison and self-esteem among the youth aged 18-25 years in PNG especially Port Moresby. Now days youths are using digital platforms a lot and comparing themselves with others of same age group as well as influencers. This study used quantitative correlational design to analyze data collected through survey questionnaire. Findings show that there is significant negative relationship between social media social comparison, and their self-esteem confirms frequent comparison may lead to reduced self-confidence and also affecting the psychological wellbeing leading to psychological disorders. The study highlights the need of digital literacy awareness, counselling support, focus group awareness programs which promote mindful healthy social media usage and engagement.

Keywords: Social media use, social comparison, self-esteem, youth mental health, digital behavior, online comparison, psychological well-being, university students, social networking sites, correlational study.

1. Introduction

In recent years especially after the pandemic social media has become integral part of youth's daily life. Social media platform such as Instagram, Facebook, TikTok and snapchat encourages users to share their personal things such as their achievements, images, opinions, even their daily activities like where they are going, events they are participating etc. Social media platform promotes connectivity and belongingness which youths actually in need of but at the same time it's also leading to comparing themselves with others continuously.

Social comparison theory by Festinger (1954) proposes that humans have natural drive to compare and assess their abilities, opinions and self-worth with others. On social media, users are often exposed to carefully curated and idealized images, which may lead to unrealistic expectations and negative self-evaluations. Youth, who are in a crucial stage of identity formation, are particularly vulnerable to such influences. Several studies indicate that

excessive comparison on social media is associated with low self-esteem, anxiety, and depression. However, empirical evidence in the local and regional context remains limited. Therefore, this study aims to examine the relationship between social media comparison and self-esteem among youth.

Self-discrepancy theory states that the gap between who we are, who we want to be and who we should be affects our emotional status. The more the gap the bigger the emotional discomfort.

This study inspects multidimensional impact of social media on youth development, while also stressing both its benefits and challenges. Drawing on case studies and secondary sources, it finds that while social media supports self-expression, community building, and connectivity, belongingness it also contributes to distractions, cyberbullying, and mental health concerns. The study underscores the challenges young people faces in using digital platform responsibly and need of digital literacy, parental guidance, and supportive policy measures to reduce risks and promote mindful use of social media. Roughly 1 in 5 social media users say that it hurts their mental health. The findings show that exposure to luxury content on social media particularly from influencers, peers, and other users—stimulates desire and purchase intentions. Post-purchase engagement on platforms such as Instagram enhances social approval and expands social networks, reinforcing consumption behaviors.

2. Statement of the problem

Regardless of extensive use of social media among young people, its impact on mental health is not fully understood. Numerous youths compare their physical appearance, lifestyle, personal and academic achievements, and social status with others online. The comparisons may lead to dissatisfaction, reduced self-confidence, and poor self-esteem. There is a lack of systematic research in this area, particularly in the context of higher education institutions in developing countries. Without adequate empirical data, educators and policymakers may find it difficult to design effective interventions. So, this study attempts to investigate how social media comparison influences self-esteem among youth.

3. Objectives of the study

The main objectives of this study are:

- To examine the level of social media comparison among youth.
- To assess the level of self-esteem among youth.
- To analyze the relationship between social media comparison and self-esteem.
- To identify differences in self-esteem based on social media usage patterns (if any).
- To suggest measures for promoting healthy social media use.

4. Research questions

- What is the level of social media comparison among youth?
- What is the level of self-esteem among youth?
- Is there a significant relationship between social media comparison and self-esteem?
- Does social media usage influence self-esteem?

5. Research hypotheses

H1: There is a significant negative relationship between social media comparison and self-esteem among youth.

H2: Youth with higher levels of social media usage have lower self-esteem than those with lower usage.

H3: Youth who use coping strategies experience less negative impact of social media on self-esteem.

6. Review of literature

Social media has become an essential part of everyday life among young people, particularly those aged 18–25 years. Platforms such as Instagram, Facebook, TikTok, Snapchat, and X (formerly Twitter) provide opportunities for communication, entertainment, self-expression, and social interaction. While these digital platforms offer several benefits, researchers increasingly highlight their psychological and emotional effects on youth, especially regarding social comparison and self-esteem.

The concept of social comparison was first explained by Festinger (1954) through the Social Comparison Theory, which states that individuals evaluate their abilities, appearance, and self-worth by comparing themselves with others. In the context of social media, users are constantly exposed to carefully curated images and achievements of peers, celebrities, and influencers. Such exposure often encourages upward social comparison, where individuals compare themselves to people they perceive as more successful, attractive, or happier. These comparisons may negatively influence self-esteem and psychological well-being.

Several studies have examined the relationship between social media use and self-esteem. Chou and Edge (2012) found that frequent Facebook users often believed that others were happier and living better lives than themselves. This perception contributed to feelings of dissatisfaction and reduced self-confidence. Similarly, Vogel et al., (2014) reported that increased use of social networking sites was associated with greater upward social comparison and lower self-esteem among young adults.

Research by Fardouly and Vartanian (2016) highlighted that Instagram exposure significantly influenced body image concerns and appearance-related comparisons among youth. Their findings suggested that viewing idealized photos on social media can lead to body dissatisfaction and reduced self-worth. Likewise, Verduyn et al., (2017) observed that passive browsing of social media content negatively affects emotional well-being because users engage in frequent comparison with others online.

The relationship between social media use and mental health has also been widely discussed in recent years. Twenge et al., (2018) reported that increased screen time and social media use were associated with depressive symptoms, loneliness, and emotional distress among adolescents. Similarly, Odgers and Jensen (2020) emphasized that while social media may provide social support and connectivity, excessive use can negatively influence adolescent mental health.

More recent studies continue to strengthen this area of research. Li and Knobloch-Westerwick (2024) found that individuals with low self-esteem engaged more frequently in upward social comparison, especially under conditions of high public self-awareness. In contrast, individuals with higher self-esteem showed healthier comparison behaviors. Jaruga-Sękowska et al., (2025) reported significant gender differences in social media comparison, revealing that female students were more likely to engage in appearance-related comparisons, whereas male students reported higher levels of body dissatisfaction.

Additional research has explored the broader psychological effects of digital engagement. Rideout and Robb (2018) argued that the relationship between social media use and depression is complex and influenced by individual emotional experiences and patterns of online interaction. Canlas and Perez (2024) observed that social media promotes self-expression, community participation, and connectivity but also contributes to cyberbullying, emotional stress, distraction, and anxiety among youth. Similarly, Faverio et al., (2025) reported that although many adolescents feel socially connected through digital platforms, a considerable number also believe that social media negatively affects their mental health and confidence.

Furthermore, Mansfield et al., (2025) emphasized the importance of interdisciplinary approaches in understanding the long-term influence of digital environments on youth development. The author suggested that modern research should integrate psychological, educational, and technological perspectives to better address the challenges associated with digital media use among adolescents and young adults.

Many international studies have explored the effects of social media on self-esteem; most research has been conducted in developed Western countries. Limited empirical studies are available within developing countries and Pacific regions, particularly in Papua New Guinea. Cultural diversity, patterns of internet use, and social environments may influence how young people experience social comparison online. Therefore, there is a significant need for localized research to understand the relationship between social media comparison and self-esteem among youth in Port Moresby.

The present study attempts to address this research gap by examining the relationship between social media comparison and self-esteem among youth aged 18–25 years in higher education institutions in Port Moresby. The study contributes to the growing body of knowledge on youth mental well-being and digital behavior within the local context.

7. Research methodology

7.1 Research design

This study adopted a quantitative, descriptive, and correlational research design to examine the relationship between social media comparison and self-esteem among youth aged 18–25

years. A quantitative approach was considered appropriate because it allows the collection of measurable data and statistical analysis of relationships between variables. The correlational design was used to determine whether social media comparison is significantly associated with self-esteem among young people. The study employed a cross-sectional survey method, where data were collected from participants at a single point in time. This design enabled the researcher to assess current patterns of social media usage, comparison behaviors, and self-esteem levels among youth in Port Moresby.

7.2 Population of the study

The target population for the study consisted of youth aged 18–25 years studying in higher education institutions in Port Moresby, Papua New Guinea. The population included both male and female students who actively use social media platforms such as Instagram, Facebook, TikTok, Snapchat, and X (formerly Twitter). The study focused on university and college students because young adults in higher education are among the most active users of social networking platforms and are more likely to engage in online social comparison behaviors.

7.3 Sample size and sampling technique

A sample of 85 participants was selected for the study. The sample included students from selected higher education institutions in Port Moresby. Out of 85 respondents, 55% were male and 45% were female. The majority (72%) were undergraduate students. About 60% reported using social media for more than three hours per day.

The study used a simple random sampling technique to provide equal opportunity for eligible participants to be selected. Random sampling helped reduce researcher bias and improved the representativeness of the sample.

Participants were selected based on the following inclusion criteria:

- Youth aged between 18 and 25 years
- Active users of at least one social media platform
- Students enrolled in higher education institutions
- Willingness to participate voluntarily in the study

7.4 Research instruments

Data were collected using a *structured questionnaire* consisting of four sections. The questionnaire was developed based on existing literature and standardized measurement scales related to social media comparison and self-esteem.

Section A: Demographic information

This section collected general information such as age, gender, educational level, daily time spent on social media and most frequently used social media platform.

Section B: Social media comparison scale

Social comparison behavior was measured using an adapted version of the *Iowa-Netherlands Comparison Orientation Measure* (INCOM) developed by Gibbons and Buunk (1999). The scale assessed the extent to which participants compared themselves with others on social media platforms.

Sample items included:

- “I often compare my appearance with people on social media.”
- “I compare my achievements with others online.”

Responses were measured using a *5-point Likert scale* ranging from: 1 = Strongly Disagree to 5 = Strongly Agree.

Section C: Self-esteem scale

Self-esteem was measured using the *Rosenberg Self-Esteem Scale* (RSES) developed by Rosenberg (1965). The scale contains statements related to self-worth, confidence, and personal satisfaction.

Sample items included:

- “I feel that I have a number of good qualities.”
- “I take a positive attitude toward myself.”

The same 5-point Likert scale was used for consistency.

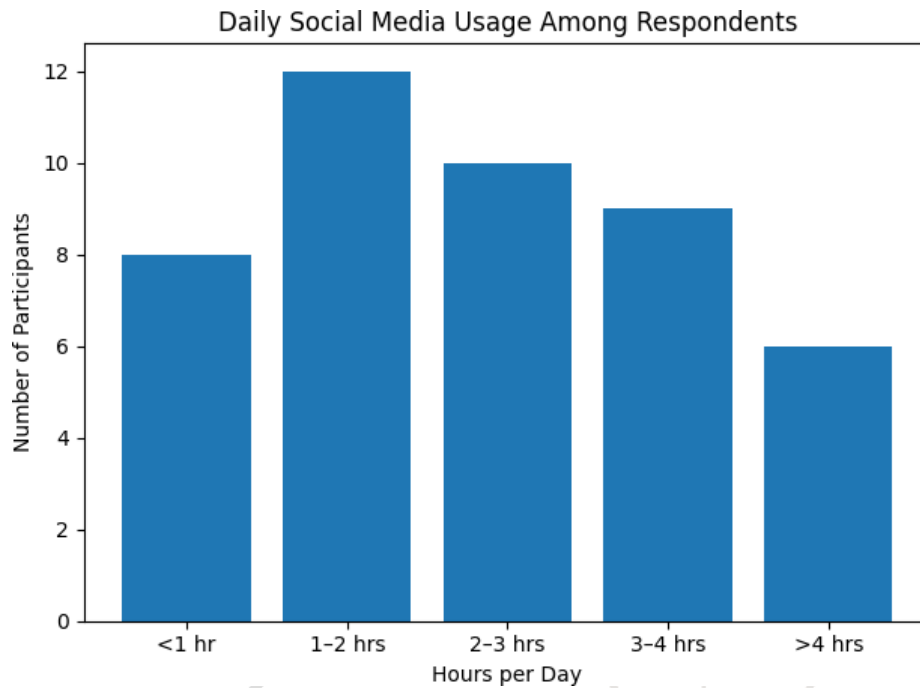


Figure 1: Scatter plot showing relationship between social media comparison and self-esteem

Section D: Coping strategies and emotional impact

This section examined participants' emotional reactions to social media comparison and the coping mechanisms they used to manage negative experiences online.

7.5 Validity and reliability of the instrument

To ensure content validity, the questionnaire was reviewed by academic experts in psychology, education, and research methodology. Suggestions provided by the experts were incorporated to improve clarity, relevance, and appropriateness of the items.

A pilot study was conducted with 10 students who were not included in the final sample. The pilot test helped identify ambiguous questions and improve the overall structure of the questionnaire.

The reliability of the instrument was tested using Cronbach's Alpha coefficient through SPSS software. The reliability values were as follows:

Variable	Cronbach's Alpha
Social Media Comparison Scale	0.82
Self-Esteem Scale	0.79
Overall Questionnaire	0.84

The reliability coefficients exceeded the acceptable threshold of 0.70, indicating good internal consistency of the instrument.

7.6 Data collection procedure

Data collection was conducted over a period of one month using an online survey questionnaire created through Google Forms. The online method was selected because it allowed easy access to participants and ensured efficient data collection. Before data collection, participants were informed about the purpose of the study, voluntary participation, confidentiality of responses, anonymity of personal information and the right to withdraw at any stage. Informed consent was obtained electronically before participants completed the questionnaire. The survey link was distributed through student networks, institutional communication channels, and social media platforms. Completed responses were automatically recorded and later exported into SPSS software for analysis.

7.7 Ethical considerations

Ethical principles were strictly followed throughout the research process. Participation in the study was entirely voluntary, and no participant was forced to take part. The study ensured confidentiality of participant information, anonymity of responses, no collection of personally identifiable information, secure handling of collected data and use of data strictly for academic purposes. Participants were informed that the findings would only be used for research and educational purposes.

7.8 Data analysis techniques

The collected data were coded and analyzed using *Statistical Package for Social Sciences (SPSS) Version 26*. The following statistical techniques were used:

Descriptive statistics

Used to summarize demographic information and study variables through frequency, percentage, mean and standard deviation.

Pearson correlation analysis

Used to determine the relationship between social media comparison and self-esteem among youth.

The correlation analysis revealed a significant negative relationship between social media comparison and self-esteem ($r = -0.48$, $p < 0.01$). This indicates that higher comparison levels were associated with lower self-esteem.

Regression analysis

Used to examine whether social media comparison significantly predicts self-esteem.

Independent sample t-test and ANOVA

Used to identify differences in self-esteem based on:

- Gender
- Social media usage duration
- Educational level

Regression analysis showed that social media comparison significantly predicted self-esteem ($\beta = -0.45$, $p < 0.01$). Approximately 22% of the variance in self-esteem was explained by social comparison.

7.9 Conceptual framework of the study

The study was based on the assumption that increased social media comparison negatively influences self-esteem among youth.

Independent variable

- Social Media Comparison

Dependent variable

- Self-Esteem

Moderating factors

- Gender
- Duration of social media use
- Coping strategies
- Emotional resilience
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8. Significance of the study

This study will be beneficial to Students, Teachers, Institutions, Policy Makers and Researchers.

8.1 Students

This study benefits students by providing empirical evidence on healthy and unhealthy social media practices based on data collected directly from youth aged 18–25 years in Port Moresby through a quantitative online survey. The structured questionnaire captured students'

social media usage patterns, comparison behaviors, self-confidence, emotional responses, and coping strategies. By reflecting the real experiences of students within this age group, the findings can help youth better understand the impact of social media comparison on their self-esteem and encourage more informed and mindful digital engagement.

8.2 Teachers

The study supports teachers by offering quantitative insights derived from systematically collected survey data. The use of Likert-scale items and statistical analysis through SPSS allows teachers to identify trends related to students' confidence levels, emotional well-being, and comparison behaviors associated with social media use. These findings can guide teachers in providing evidence-based guidance, monitoring student well-being, and integrating digital literacy and emotional health discussions into academic and pastoral support activities.

8.3 Institutions

For educational institutions, this research provides data-driven findings obtained through a randomly selected sample of youth and an ethically approved questionnaire. The standardized data collection procedure ensures reliability and consistency, making the results suitable for informing the design of counseling services, awareness programs, and institutional interventions. Institutions can use the findings to develop targeted initiatives that address social media-related emotional challenges identified through the survey responses.

8.4 Policymakers

The study contributes to policymaking by generating locally relevant quantitative data on youth mental well-being in relation to social media use. The systematic data collection process, including voluntary participation, ethical approval, and confidentiality safeguards, enhances the credibility of the findings. Policymakers can use this evidence to frame youth mental health policies, digital well-being strategies, and preventive programs grounded in measurable trends observed among young people in Port Moresby.

8.5 Researchers

This research adds to the existing body of knowledge by providing baseline quantitative data collected using a structured, self-developed questionnaire informed by established literature. The clearly defined data collection procedure and statistical analysis using SPSS enable future researchers to replicate or extend the study, compare findings across contexts, or build on the instrument for larger-scale or longitudinal research.

9. Scope of the study

The study is limited to selected higher education students. It focuses only on social media comparison and self-esteem. Other psychological variables such as anxiety and depression are beyond the scope.

10. Limitations of the study

- **Self-reported data**

The study relied on *self-reported responses* from participants, which may be subject to *social desirability bias or inaccurate recall*. Participants might have over- or under-reported their social media usage, comparison behaviors, or emotional responses, affecting the precision of the data.

- **Limited sample size**

The study included a small sample of 85 participants, which may restrict the generalizability of the findings to the broader youth population in Port Moresby or beyond. While the random sampling technique ensured fairness in selection, a larger sample could provide more robust and representative results.

- **Restricted geographical area**

The study focused only on youth aged 18–25 in *Port Moresby*, which limits the ability to generalize the findings to other cities, rural areas, or cultural contexts. Social media habits and self-esteem patterns may differ significantly across regions.

- **Instrument limitations**

Although the questionnaire was *self-developed* and *conceptually informed by existing literature*, it contained a relatively small number of items (16) and one open-ended question. This may have limited the depth and variability of responses, particularly for capturing nuanced emotional experiences.

- **Online data collection bias**

Since data were collected *online*, participants without reliable internet access or those less familiar with digital tools may have been excluded, introducing a potential *selection bias*.

11. Conclusion

This study examined the relationship between social media comparison and self-esteem among youth. The findings revealed that frequent comparison on social media negatively affects self-esteem. Promoting healthy digital habits and psychological awareness is essential for improving youth well-being. Educational institutions play a crucial role in guiding students towards balanced and responsible social media use.

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