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THE INFLUENCE OF INSTAGRAM USE ON BODY IMAGE AMONG GEN Z: THE
MEDIATING ROLE OF SOCIAL COMPARISON

CHUA XIAO QING

ELAZE NG YONG XUAN

WONG YONG SING

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The Influence of Instagram Use on Body Image among Gen Z: The Mediating Role of Social
Comparison

Chua Xiao Qing, Elaze Ng Yong Xuan, Wong Yong Sing

Universiti Tunku Abdul Rahman

This research project is submitted in partial fulfillment of the requirements for the Bachelor of
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CHUA XIAO QING

ELAZE NG YONG XUAN

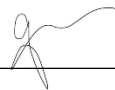
WONG YONG SING

DECLARATION

We declare that the material contained in this paper is the end result of our own work and that due acknowledgement has been given in the bibliography and references to ALL sources be they printed, electronic or personal.

Name : Chua Xiao Qing

Student ID : 22AAB03141

Signed : 

Date : 16 April 2026

Name : Elaze Ng Yong Xuan

Student ID : 23AAB01799

Signed : 

Date : 16 April 2026

Name : Wong Yong Sing

Student ID : 23AAB01216

Signed : 

Date : 16 April 2026

APPROVAL FORM

This research paper attached hereto, entitled “THE INFLUENCE OF INSTAGRAM USE ON BODY IMAGE AMONG GEN Z: THE MEDIATING ROLE OF SOCIAL COMPARISON” prepared and submitted by Chua Xiao Qing, Elaze Ng Yong Xuan, Wong Yong Sing in partial fulfilment of the requirements for the Bachelor of Social Science (Hons) Psychology are hereby accepted.

ooh

Supervisor: Dr. Ooh Seow Ling

Date: *16 April 2026*

ABSTRACT

This study aims to examine the relationship between Instagram usage and body image among Generation Z (Gen Z) and how social comparison plays a role in mediating this relationship. Instagram use was hypothesized that it would have a negative association with body image, positive association with social comparison, and that social comparison would mediate the association between Instagram use and body image. This study employed a quantitative cross-sectional correlational design and convenience sampling was used to recruit 164 Malaysian participants aged 18 to 24. Data was collected through an online survey which was distributed via social media platforms. Instagram use, social comparison, and body image were measured using the adapted Multidimensional Facebook Intensity Scale (MFIS), Physical Appearance Comparison Scale-Revised (PACS-R), and Body Esteem Scale for Adolescents and Adults (BESAA), respectively. Participants were predominantly female (64%) and Chinese (72%), with an average of 21.47 years of age. The findings revealed that Instagram use was positively associated with social comparison. Contrary to the hypotheses, both Instagram use and social comparison were positively associated to body image. Mediation analysis indicated that social comparison partially mediates this relationship. These findings show that social comparison's impact on body image is complex, and Instagram use doesn't always result in a negative self-perception. The study provides important implications for promoting healthier social media engagement and developing interventions targeting body image among Gen Z.

Keywords: Instagram use, body image, social comparison, Gen Z, Malaysia

Subject area: H1-99, Social sciences (General)

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List of Abbreviations

APA	American Psychological Association
BESAA	Body Esteem Scale for Adolescents and Adults
Gen Z	Generation Z
PACS-R	Physical Appearance Comparison Scale–Revised
UTAR	Universiti Tunku Abdul Rahman
SCT	Social Comparison Theory

Chapter I

Introduction

Background of Study

In this era, social media has become deeply integrated into our daily lives, especially among Generation Z. Generation Z, also known as Gen Z (born 1997–2012), and Millennials (born 1981–1996) heavily rely on social media as a source of information (Blandi et al., 2022). As stated by Elkatmış (2024), the research further reports that nearly three-quarters (73.24%) of Gen Z participants use social media daily, with platforms such as WhatsApp, YouTube, TikTok and Instagram being the most preferred. These platforms are not only used for communication and entertainment but also serve as platforms for self-expression and social interaction. Specifically, Instagram is the most famous platform among Gen Z, largely because its visually oriented content aligns with the preferences and consumption habits of younger users. Features such as curated aesthetics, filters, reels, and influencer-driven posts make Instagram especially appealing and encourage prolonged engagement (Djafarova & Rushworth, 2017; Manikonda et al., 2014). However, this constant exposure to idealized images may heighten self-comparison, affect body image, and contribute to potential psychological risks (Faelens et al., 2021). Given this high level of engagement, it becomes critical to examine how Instagram use may impact body image, particularly through mechanisms like social comparison.

Instagram use generally refers to individuals' frequency and duration of engagement with the platform, including browsing, viewing, posting, and interacting with visual content such as photos, reels, and filtered images (Faelens et al., 2021). Gen Z is the largest user group on Instagram, with approximately 76% of them regularly using the platform (Cary et al., 2024). Short videos and entertainment content on Instagram are highly engaging and interactive,

particularly among Gen Z users who demonstrate exceptionally high levels of participation (Alfonso-Fuertes et al., 2022). Compared to other platforms such as TikTok or Snapchat, Instagram places a stronger emphasis on static, highly curated images and polished personal branding. While TikTok prioritizes short-form performance and Snapchat focuses on spontaneous, temporary content, Instagram encourages users to present carefully edited photos and aesthetically consistent profiles (Ravindra & Sahare, 2021). This emphasis on idealized self-presentation makes Instagram unique for making social comparisons, as users are repeatedly exposed to images that appear meticulously constructed, filtered, or perfected. In such an open-sharing environment, users can continuously upload and browse meticulously curated photos and short videos. This highly visual content drives persistent attention to and comparison of appearances. These features not only increase users' opportunities for social comparison but also make Instagram a key platform for understanding Gen Z's body image anxiety (Pedalino & Camerini, 2022). According to Faelens et al. (2021), Instagram provides frequent opportunities for visual evaluation, positioning it as a key context in which social comparison processes shape how Gen Z perceive their bodies.

Body image defines how a person feels, thinks, and perceives their body, shaped by societal beauty standards, cultural norms, media influences, and personal experiences (Peng et al., 2024; Zarrar & Gupta, 2025). Negative body image is often expressed as body dissatisfaction that can lead to various mental health issues. According to Dorčić et al. (2023), Gen Z is especially vulnerable to body image concerns because they are in a critical stage of identity formation and are heavily exposed to sociocultural beauty ideals on digital platforms. As they frequently compare themselves with peers and influencers, this generation is more likely to experience negative body image outcomes, including body dissatisfaction, lower body

appreciation, appearance anxiety, distorted self-perceptions, and reduced self-esteem (Kadavathe Peedikayil, 2025). There are many studies that show idealized social media exposure is consistently linked to reduced body image (Merino et al., 2024). Given that Instagram is a highly visual and appearance-focused platform, it increases the opportunities for users to compare their bodies to curated and perfected images online. In sum, understanding body image is crucial for this study because it shows a main psychological outcome potentially shaped by Gen Z's Instagram use and their tendency to compare themselves with idealized online portrayals. Social comparison occurs in nearly every interaction, especially when individuals lack objective evaluation criteria and are unsure of their own status (Piccoli et al., 2021).

Social comparison can be categorized as both upward and downward comparisons. Social comparison involves judging oneself against others, and upward comparison happens when an individual evaluates themselves against people who are perceived as superior or more successful in a specific area. Conversely, downward comparison involves a person comparing themselves to someone who is considered to have lower abilities or circumstances (Moreno-Padilla et al., 2025). The prevalence of highly idealized images, filters, and photo editing on Instagram, coupled with influencer-driven aesthetic standards and users' widespread perception that peer content feels more “authentic” than celebrity posts, collectively intensifies social comparison, particularly upward comparison (Pedalino & Camerini, 2022). These upward appearance-based comparisons are particularly harmful, as they heighten self-evaluative concerns, strengthen internalization of unrealistic beauty ideals, and consequently reduce body satisfaction. The association between Instagram engagement and lower body satisfaction is mediated by upward appearance-based social comparison, which is substantially supported by recent research

(Bonfanti et al., 2024). In brief, social comparison becomes an essential psychological mechanism explaining why and how Instagram use influences Gen Z's body image.

Finally, Instagram's visual and curated nature exacerbates appearance-focused social comparison among Gen Z, making them more exposed to negative body image repercussions like low self-esteem, appearance anxiety, and body dissatisfaction. The frequent engagement with filtered images and influencer content amplifies these issues. Hence, learning the relationship between Instagram use and body image, particularly the mediating role of social comparison, is crucial for addressing the psychological risks faced by Gen Z in the digital landscape.

Problem Statement

Over the years, researchers have studied about body image issues and realised its impact on individuals of different ages, genders and cultures. Body image dissatisfaction has always been the main cause of eating disorders, such as anorexia nervosa, bulimia nervosa, and binge eating disorder (Gruszka et al., 2022; McLean & Paxton, 2019). Body image dissatisfaction is also associated with anxiety, depression, and social anxiety disorder (Barnes et al., 2020; Haddad et al., 2019). This was because self-confidence and self-esteem caused by negative body image can have detrimental impact on mental health and cause mental health issues to develop (Bajpai, 2024). This is aligned with a study by Zainal et al. (2021), where students who felt less satisfied with their body image tended to have lower self-esteem and didn't perform well academically.

For many years, researchers examined how exposure to traditional media relates to body discontent and body image issues (Derenne & Beresin, 2006; Myers & Biocca, 1992). However, with fast-paced social media is growing, it is proven to be the main cause of negative body image perception by researchers, especially for women. (Brown & Tiggemann, 2016; Pedalino &

Camerini, 2022). Especially Instagram, which is a highly visual and widely used social media platform among Gen Z, has become a significant arena for the construction and evaluation of self-image. The platform's emphasis on curated, idealized photos and influencer-driven content exposes young users to constant visual comparisons, often promoting narrow beauty standards and unattainable body ideals (Fardouly et al., 2018).

Several studies show that Instagram is frequently connected with greater body negativity and lower body appreciation, especially among young women and adolescents (Hendrickse et al., 2017; Pedalino & Camerini, 2022). This is due to Instagram's culture of comparison and validation-seeking which leads to self-objectification, body dissatisfaction, and a cycle of striving for unattainable appearance standards (Alfonso-Fuertes et al., 2022). Research consistently demonstrates that greater time spent on Instagram and engagement with appearance-focused content are associated with higher levels of body dissatisfaction and a stronger desire to contrast physical appearance, particularly among adolescent and young adult females (Pedalino & Camerini, 2022).

Statistics show that people aged 25 to 34 were the biggest user group of Instagram in Malaysia, followed by people aged 18 to 29 (NapoleonCat, 2025). In a survey of 1,500 young people (aged 14-24), it was discovered that Instagram had the most detrimental impact on wellbeing, including body image, among other social media platforms (YouTube, Facebook, Twitter, Snapchat, etc.) (Royal Society for Public Health, 2017). Furthermore, adolescence and young adulthood are key periods of self-esteem and body image development. Gen Z's formative years coincide with the rise of highly visual, comparison-driven platforms, making them more susceptible to body dissatisfaction and mental health issues linked to social comparison (Ameen et al., 2022; Ariana et al., 2024; Oosten et al., 2023). This trend indicates that Gen Z, as the most

active demographic on Instagram, is especially vulnerable to the platform's potential negative influence on body image.

According to Ameen et al. (2022), Gen Z reports lower confidence than previous generations, with increased anxiety and pressure linked to the pervasive impact of social media, which intensifies challenges like bullying and body image issues. The study draws on how social comparison theory influences self-esteem and body image. Social comparison, especially upward comparison with idealized images on Instagram, is widely recognized as a key factor in body dissatisfaction among Gen Z. However, empirical studies specifically testing its mediating role in this group are still relatively scarce.

Despite extensive evidence linking Instagram use to negative body image outcomes, there remains limited understanding of the psychological mechanisms underlying this association, particularly within the Malaysian context. Most studies focus on the Western context, and Malaysia's culturally diverse comprising Malays, Chinese, Indians, and indigenous groups, each with different cultural norms, beauty ideals, and attitudes toward body image (Khodabakhsh & Chan, 2020; Sai et al., 2020). Besides, according to Sai et al., (2020), "individual differences" is shaped by sociocultural forces, reflecting the interconnected influence of family, peers, and media. Hence, it is why findings from Western or even other Asian countries may not generalize well to Malaysia. Even so, Malaysians have undergone the great influence of Western and Chinese social media (Deng, 2021). All these factors put together explains why Malaysians may experience cultural pressures as well as aspirations for body ideals, which may cause them to have a greater risk of body image dissatisfaction.

Hence, this study intends to fill existing knowledge gaps by examining how Instagram use affects the body image of Gen Z, with a focus on social comparison as a mediating role. By

exploring these mechanisms, the study aims to offer a more thorough understanding of how engaging with social media leads to body dissatisfaction and related self-evaluative processes in Gen Z users.

Research Objectives

1. To examine the relationship between Instagram use, social comparison on body image among Gen Z population.
2. To investigate the mediating role of social comparison in the relationship between Instagram use and body image among Gen Z population.

Research Questions

1. Is there a relationship between Instagram use and social comparison among Gen Z?
2. Is there a relationship between social comparison and body image among Gen Z?
3. Is there a relationship between Instagram use and body image among Gen Z?
4. Does social comparison mediate the relationship between Instagram use and body image among Gen Z?

Hypotheses

H1: Instagram use is negatively associated with body image among Gen Z.

H2: Instagram use is positively associated with social comparison among Gen Z.

H3: Social comparison is negatively associated with body image among Gen Z.

H4: Social comparison mediates the relationship between Instagram use and body image among Gen Z.

Significance of Study

This study is significant as it helps to develop a thorough understanding of how Instagram use influences body image among Gen Z, as well as the extent to which social comparison mediates this relationship. Gen Z being the most active consumer of visual material on Instagram, it is important to know how Instagram use shapes their body image, as negative body perceptions are linked to mental health challenges.

Besides, the present study aims to provide a deeper explanation for how Instagram use influences body image. Social Comparison Theory proposes that people commonly assess themselves by measuring their own abilities or circumstances against those of others, a tendency that is especially pronounced when they are exposed to idealized or unrealistic portrayals (Festinger, 1954). Investigating its mediating role allows the study to go beyond simple correlations and uncover underlying psychological processes (Pedalino & Camerini, 2022). This contributes to theoretical development and enhances understanding of mechanisms linking digital behaviour to body-related outcomes.

Furthermore, this study provides valuable insights for mental health professionals, educators, and youth practitioners. Mental health professionals can understand how Instagram uses drives social comparison so that they can design targeted interventions. Educators and counsellors can leverage research findings to enhance online habits among Gen Z students by implementing media literacy programs that foster critical evaluation of online content and mitigate harmful comparisons. Likewise, youth organizations and content creators can develop campaigns that promote diverse, authentic body representations, reducing the pressure to conform to idealized standards often seen online. Thus, this study can guide practical efforts by

informing strategies to reduce harmful comparison tendencies and promote Gen Z in healthier online behaviours.

Overall, the study advances the growing field of digital well-being research by offering both theoretical insights and practical implications for supporting the mental health of Gen Z social media users.

Conceptual Definitions

Instagram Use

Instagram use refers to interacting with the Instagram platform. This includes activities like browsing profiles, posting photos or stories, and engaging with content. It is a very visual and interactive social media space that exposes users to images of idealized body images from peers and influencers (Pedalino & Camerini, 2022).

Social Comparison

Social comparison, originally defined by Festinger (1954), posits that individuals determine their own personal worth based on how they compare against others. Within the context of this research, this process involves users assessing their own physical appearance or talents against the content posted by peers and influencers on Instagram (Pedalino & Camerini, 2022). Comparisons can be 'downward' (targeting those perceived as inferior) or 'upward' (targeting those perceived as superior), with upward comparisons are commonly associated with negative self-appraisal (Fardouly et al., 2018).

Body Image

Body image refers to one's subjective evaluations of their own body or appearance, including feelings of satisfaction, acceptance, and attitudes toward one's own body appreciation (Chang et al., 2019). It is influenced by internalization of beauty standards and social comparison

processes (Fioravanti et al., 2022). Having negative body image or body image dissatisfaction indicates holding negative thoughts, feelings, or attitudes about their own body, often due to a perceived gap between one's actual appearance and an internalized ideal (Troisi, 2020).

Operational Definitions

Instagram Use

In this study, Instagram use is measured using the Multidimensional Facebook Intensity Scale (Orosz et al., 2016). The scale was modified for this study to include Instagram-related usage. The scale evaluates the frequency of use, emotional connection, and integration into daily activities. Respondents assess 13 questions (for example, "I feel out of touch when I haven't logged onto Instagram for a while") on a 5-point Likert scale (1 = strongly disagree; 2 = disagree; 3 = neither agree nor disagree; 4 = agree; 5 = highly agree). Higher ratings imply more intense Instagram use, with possible scores ranging from 13 to 65.

Social Comparison

The Physical Appearance Comparison Scale-Revised (PACS-R) is used to measure social comparison. It is an 11-item self-report questionnaire that assesses how frequently people compare their physical appearance to others in a variety of social circumstances, including social media. Items are scored on a 5-point Likert scale, which ranges from 0 (*never*) to 4 (*always*). The total PACS-R score is derived by adding all item responses, with higher scores indicating more frequent appearance-based comparisons (Anne et al., 2024). The scale is one-dimensional and does not include reverse-scored items.

Body Image

Body image is assessed using the Body Esteem Scale for Adolescents and Adults (BESAA), a 23-item scale with three dimensions: appearance, weight, and attribution.

Respondents score statements (for example, "I like what I see when I look in the mirror") on a 5-point Likert scale, from 0 (*never*) to 4 (*always*). Some items are written negatively and graded in reverse. Total and subscale scores are computed by summing or averaging item responses.

Higher scores indicate higher body esteem. This scale is effective for assessing body image in adolescents and young adults, ensuring reliability and validity. The subscales measure fundamental aspects of body satisfaction that are important to the impact of social comparison on social media platforms like Instagram, making it a suitable tool for analysing body image among Gen Z.

Gen Z (Generation Z)

Gen Z is defined as individuals who were born in between 1995 and 2010 (Harari et al., 2022). According to Bernama (2025), Gen Z makes up of 26% of Malaysia's population in 2025. This makes them the largest and most digitally engaged age group (Chang & Chang, 2023; Grigoreva et al., 2021). Extensive research confirms that frequent Instagram use among Gen Z is associated with greater body dissatisfaction (Alfonso-Fuertes et al., 2022; Pedalino & Camerini, 2022; Verrastro et al., 2020).

Chapter II

Literature Review

Instagram Use and Body Image

Instagram use is strongly associated with negative body image, particularly when users are exposed to idealized body representations on Instagram (Alfonso-Fuertes et al., 2022; Fardouly et al., 2018). According to a cross-sectional, observational study by Alfonso-Fuertes et al. (2022), Gen Z and particularly females indicate that more time spent on Instagram is associated with greater body dissatisfaction, lower self-esteem, and increased tendency to compare physical appearance. At the same time, increased Instagram use is linked to poorer body image satisfaction and self-esteem, while being driven by a tendency to compare physical appearance (Alfonso-Fuertes et al., 2022).

Vuong et al. (2021) found that increased social media use was connected with body dissatisfaction, with guys having high muscular-ideal internalisation and girls having thin-ideal internalisation. The study found that social media platforms such as Instagram and Snapchat expose people to unrealistic body ideals, prompting them to become preoccupied on their own body image when posting on their social media account in order to get approval. This is consistent with research showing that regular browsing and interaction with influencer content can lead to idealised beauty standards and body dissatisfaction (Dao et al., 2025; Glaser et al., 2024; Pedalino & Camerini, 2022).

A controlled experimental study by McElhern (2025) examined whether engaging in a full-body photo-editing task leads to significant changes in weight dissatisfaction, appearance dissatisfaction, and body confidence. The results indicated that full-body photo editing increased weight and appearance dissatisfaction. As Instagram enables users to share photos that highlight

their physical appearance, often enhanced through built-in filters or editing tools before posting, many users experience pressure to showcase a perfect image of themselves. This results in frequent use of photo editing and filters to enhance their appearance before sharing content online (Chua & Chang, 2016). As a result, the platform reinforces stereotypes and unrealistic beauty ideals, influencing users' body image, particularly among younger audiences who are more vulnerable to such effects (Senín-Calderón et al., 2020).

Social Comparison and Body Image

Social comparison is considered a key psychological mechanism influencing negative body image, particularly among Gen Z. Young people are prone to making appearance-related comparisons in environments where social media is widely used (Barbierik et al., 2023). According to Taylor and Armes (2024), individuals assess their self-worth by comparing themselves with others, and upward comparison tends to produce negative body image. This effect is markedly greater than downward comparison, particularly when individuals internalize unrealistic media beauty standards. Liang (2024) indicates that upward identification, or aligning with those perceived as better off, has detrimental effects on self-esteem and well-being, whereas downward identification offers minimal psychological advantages. Therefore, this study hypothesise that higher levels of social comparison are associated with more negative body image among Gen Z.

Findings consistently demonstrate that social comparison is a key mechanism for shaping body image outcomes among young people (Fioravanti et al., 2022; Jung et al., 2022). Numerous studies have shown that exposure to idealized bodies on social media increases upward appearance comparison, which in turn leads to heightened body dissatisfaction (Jiménez-García et al., 2025; Pedalino & Camerini, 2022). This mechanism aligns with Festinger's Social

Comparison Theory, which posits that individuals, especially those concerned about their appearance, often compare themselves to societal beauty standards, resulting in upward comparisons and negative self-evaluations (Festinger, 1954). Research suggests that social networking sites intensified this effect due to the constant access to appearance-centered content and the visibility of peers as comparison targets, making these comparisons more prevalent and significant than in traditional media (Tiggemann et al., 2018). Moreover, experimental and correlational studies also report that upward comparison mediates the relationship between social media exposure and body dissatisfaction, consistently showing reduced body appreciation and increased negative body image following exposure to idealized images (Fardouly & Vartanian, 2016; Fioravanti et al., 2022). In sum, these studies demonstrate that upward social comparison is the primary mechanism by which Instagram usage leads to negative body image.

On the other hand, some studies present mixed or dissimilar findings. For example, some researchers argue that the negative effects of social comparison may be moderated by individual factors such as self-esteem or body appreciation (Ma'rof & Abdullah, 2024; Primo-Simões et al., 2025; Rüther et al., 2023). These findings indicate that social comparison does not always lead to negative body image. Besides, some studies also note that downward comparison may enhance body satisfaction in the short term (Portingale et al., 2024; Van Den Berg & Thompson, 2007). Nevertheless, individuals with higher momentary body satisfaction are less likely to participate in social comparisons, highlighting a complex bidirectional relationship between comparison behaviour and body satisfaction. These differences imply that the relationship between body image and social comparison is not always deterministic and may rely on contextual and individual factors.

Overall, while most of the research highlights a strong negative association between social comparison and body image, the presence of moderating factors and varying results across populations indicates the complexity of this relationship. This highlights the need for further research, especially within specific groups such as Gen Z, to better understand how social comparison influences their body image experiences.

Instagram Use and Social Comparison

Instagram's highly visual and curated environment makes it a prime platform for social comparison, especially among young adults and women. Research has consistently shown that Instagram use is closely linked to both upward and downward social comparisons. Past research suggested that Instagram may contribute to feelings of inadequacy as a result of upward social comparison processes (Pedalino & Camerini, 2022).

Users are often exposed to idealized images and social feedback such as likes and comments on Instagram, which serve as models for social comparison. Repeated exposure to such content encourages users to compare themselves to these models, internalize beauty standards, and adjust their self-perceptions accordingly (Fardouly et al., 2018; Pedalino & Camerini, 2022). Individuals often perceive other users as living happier and more successful lives than their own, which can lead to upward social comparisons (Stapleton et al., 2017).

A study by Afana et al. (2021) found that the intensity of Instagram use was associated with increased body image concerns. Importantly, this relationship was mediated by appearance-based social comparison, indicating that users who more frequently compared themselves to influencers experienced greater dissatisfaction with their own bodies. The findings support the hypothesis that social comparison mediates the relationship of Instagram use and body image.

Instagram Use, Social Comparison & Body Image

Instagram prioritizes photo and video sharing, allowing users to enhance images with filters and share stories, making it highly engaging and visually appealing (Al-Haddad et al., 2024). However, Instagram's focus on curated, idealized images makes users more likely to compare themselves to others, reinforces unrealistic beauty expectations (Dao et al., 2025).

Research consistently shows that social comparison mediates the relationship between Instagram use and body image, explaining how exposure to idealized images translates into negative self-evaluation (Afana et al., 2021; Pedalino & Camerini, 2022). Upward comparisons with influencers are particularly harmful, fully mediating the link between browsing behaviour and body appreciation decline (Pedalino & Camerini, 2022). Similarly, research among young women and university students found that Instagram activity predicts body dissatisfaction through appearance-related comparisons and the internalization of beauty norms (Hendrickse et al., 2017).

A study involving adolescent girls found that the negative association between Instagram photo browsing/editing and body esteem was mediated by peer appearance comparisons, but the direction (upward, downward, lateral) did not significantly alter the mediation effect (Chang et al., 2019). This indicates that frequent comparison, regardless of direction, is linked to lower body esteem. These findings collectively highlight that for Gen Z users, Instagram functions as a powerful environment where visual comparisons shape self-perception and reinforce societal beauty ideals. Despite the previous studies have consistently shown that social comparison mediates the relationship between Instagram use and body image (Afana et al., 2021; Jung et al., 2022; Pedalino & Camerini, 2022), the findings may not fully generalize to Malaysian Gen Z

users, whose cultural norms, beauty standards, and social media behaviours differ in meaningful ways.

Theoretical Framework

Social Comparison Theory

Social Comparison Theory (SCT), first published by Festinger (1954) claims that individuals tend to evaluate their own self-worth, beliefs, abilities, and status by comparing themselves to others. According to SCT, individuals will turn to social comparison when the objective measures are absent or ambiguous (Festinger, 1954). Without this point of references, they will instinctively compare themselves to others to confirm their own status (Lim et al., 2021; Senín-Calderón et al., 2020). The comparison could happen towards physical appearance of others, or others' performance and social status (Barbierik et al., 2023; Senín-Calderón et al., 2020). These comparisons help individuals to understand their own status and gather information about social norms, behaviours, and social standards such as success, lifestyle, beauty (Liu et al., 2024).

Festinger (1954) claims that there are two kinds of social comparison which are upward Comparison and downward Comparison. Upward comparison will occur when people compare themselves to individuals that they believe are better or superior to them. These comparisons puts emphasis on the desire to enhance themselves, their current situation, or their level of competence. Thus, they will compare themselves to someone in a better situation and seek tactics to get similar achievements. On the other hand, downward comparison occurs when individuals compare themselves to those who are inferior to them. This downward comparison used to boost their confidence in capacities or status thus they can enhance their well-being and feel better about themselves. Therefore, people compare themselves to others who are better when they

want motivation to improve, and to those who are worse when they want to feel better about themselves.

SCT plays a significant role in forming individuals' self-perception, motivation and emotional psychological well-being. Upward comparisons can encourage self-improvement, but they can also lead to emotions of inferiority, jealousy, anxiety, and even depression if growth does not meet expectations (McCarthy & Morina, 2020). On the contrary, downward comparison may offer short-term reassurance, emotions regulation and self-esteem boosts, but it may also lead to unhealthy coping, avoidance behaviours or even fragility of self-worth (Nie et al., 2024).

Furthermore, Instagram, a visual-based social networking site may expose Gen Z users to idealised photos of peers, influencers, and celebrities. These pictures are often filtered, staged, and focused on how they seem, which makes the world full of idealised ideas of beauty and prosperity. When idly perusing Instagram feeds, stories, and reels, users are repeatedly provided with the material that encourages upward social comparison, with users comparing themselves to people viewed as more appealing or prosperous, which may contribute to body dissatisfaction and reduced self-esteem (Engeln et al., 2020; McComb & Mills, 2021). Therefore, the upward social comparisons are common on visual social media platforms and have a severe negative impact on mental health, including body image outcomes (Tian et al., 2024).

Multiple studies shown that Instagram use increases the tendency for appearance-based comparisons, and these comparisons mediate the relationship between Instagram activity and negative body image outcomes (Alfonso-Fuertes, 2022; Hendrickse et al., 2017; Pedalino & Camerini, 2022). For example, research found that browsing Instagram is associated to lower body appreciation, which is fully mediated by social comparison with influencers (Pedalino &

Camerini, 2022). According to Pedalino and Camerini (2022), browsing behaviour promotes upward comparison while decreasing body appreciation.

Similarly, frequent exposure to curated images intensifies peer-to-peer appearance comparisons, which in turn adversely affects self-esteem and body satisfaction (Tanveer et al., 2025). Experimental studies further support this, viewing Instagram photographs also encourage upward comparisons lowers self-esteem and body-esteem (Springer Nature, 2023). According to Taylor and Armes (2024), experimental and cross-sectional studies show immediate decreases in body-esteem after exposure to upward images. A meta-analysis study by Bonfanti et al. (2024) shown that even short-term exposure (single viewing) can temporarily diminish body esteem, whereas frequent or prolonged exposure forecasts more enduring unhappiness; meta-analytic data corroborates a strong correlation.

Conceptual Framework

As illustrated in Figure 2.1, Instagram use categorised as independent variable for this study. Gen Z that frequents passively browsing Instagram, especially for those watching fitspiration or thin-ideal images significantly leads to more internalisation of conventional beauty standards which increasing body dissatisfaction and self-objectification (Fardouly et al., 2018; Feltman & Szymanski, 2018).

Social comparison acts as the mediator that translates Instagram exposure into body-related self-evaluations. It demonstrates congruence with contemporary studies, Gen Z users likely to participate in upward appearance-based comparisons while viewing contents from influencers, peers, or celebrities (Hendrickse et al., 2017; Pedalino & Camerini, 2022).

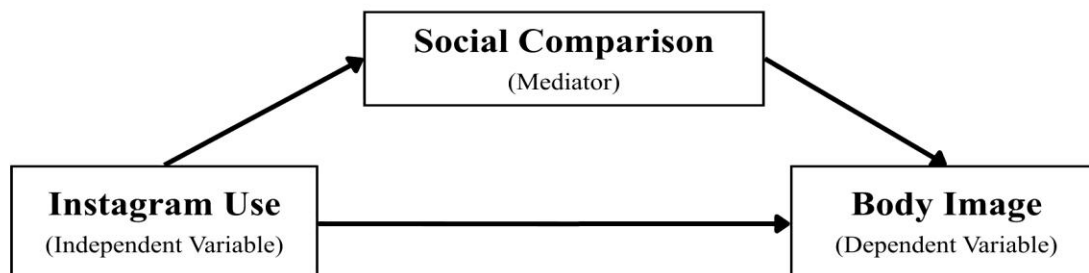
Finally, body image is an outcome variable affected by these comparison processes. The framework assumes that ongoing exposure to idealised photographs on Instagram increases the

risk of absorbing excessive beauty standards and resulting in more negative appraisals of one's looks. According to Bonfanti et al. (2024), the meta-analysis report that social media-driven comparison led to higher body dissatisfaction, higher self-objectification and greater appearance pressure among the population.

In short, the conceptual framework suggests that Instagram use encourages social comparison, which shows a negative effect on Gen Z's body image. In other words, both classical theory and recent empirical data suggest that the best way to understand Instagram's effect on body image is through the comparison processes it initiates.

Figure 2.1

The conceptual framework of “The Influence of Instagram Use on Body Image among Gen Z: The Mediating Role of Social Comparison”



Chapter III

Methodology

Research Design

A quantitative research approach using a cross-sectional correlational research design was used to examine the influence of Instagram use on body image among Gen Z, as well as the mediating role of social comparison. Quantitative methods are appropriate because the study aims to test hypotheses and analyse the relationships among variables using numerical data and statistical techniques (Ghanad, 2023). A correlational design is suitable as it examines the relationship among Instagram use, body image and the mediation effect of social comparison without manipulating any variables. Meanwhile, the cross-sectional approach collects data from participants at a single point in time (Allen, 2017), a cost-effective method for measuring relationships among multiple variables within a population. Besides, this study employed the survey method as it enables efficient collection of standardized data from many Gen Z participants through a structured questionnaire (Hasan, 2024).

Sampling Method

This study employed convenience sampling technique to collect data from individuals aged 18 to 24 across Malaysia. Gen Z includes people born between 1997 and 2012. In 2026, Gen Z are young adults between 14 and 29 years old. However, this sample was chosen due to practical and ethical considerations, such as avoiding the need for parental consent for minors, also support the selection of participants aged 18 and above, research involving individuals under 18 typically requires additional ethical safeguards and consent procedures (Pickles, 2019). Additionally, the sample was set to exclude young adults aged 25 and above to ensure greater homogeneity in life stage and social experiences, thereby improving the internal validity of the

findings, as age differences are known to introduce variability in biological and behavioural characteristics (Makhlouf, 2022; Zampieri et al., 2010). Hence, this study shall only employ young adults aged 18-24.

Convenience sampling is appropriate for this research because it allows for easy access to a large pool of participants who are active social media users, particularly on Instagram, which is a key criterion for this study. Students in university and secondary school represent a suitable target group as they belong to Gen Z, the demographic most engaged with Instagram and most susceptible to social comparison and body image influences. Additionally, this method is time- and cost-efficient, making it practical for academic research conducted within a limited timeframe and budget.

Proposed Location of Study

The study will be conducted in Malaysia, and participants must be within age 18-24 by year 2026. Data will be collected through an online survey which was distributed through digital platforms such as WhatsApp and social media groups (e.g., Xiao Hong Shu, Instagram and Telegram student networks). This nationwide online approach enables access to a diverse student population across different states and institutions, enhancing the generalizability of the findings within the Malaysian context.

Ethical Clearance Approval

Ethical clearance was given by UTAR Scientific and Ethical Review Committee (SERC) (refer to Appendix C, p.83) before data collection. The research proposal, consent form, and survey questionnaire was submitted for ethical review to ensure participant rights, confidentiality, and voluntary participation are protected (Re: U/SERC/78-685/2026). Participants received an online consent form which outlined the objectives of the study,

procedures, potential risks and assurance of anonymity before completing the survey. Only individuals who provide informed consent will be allowed to participate.

Sample Size

Since Monte Carlo Power analysis is a useful method for figuring out power and sample size for basic mediation models (Schoemann et al., 2017), it was used in the present study.

This approach can be used to calculate sample size so that the mediator's indirect influence can be investigated (Thoemmes et al., 2010). Before determining the sample size, the calculator was used to enter the standard deviations and correlations of each variable (Schoemann et al., 2017). The pilot study provided the variable standard deviations, and previous research provided the sample correlations (Nimiya et al., 2024; Bonfanti et al., 2024; Khan, 2025; Piccoli et al., 2021; Saiphoo & Vahedi, 2019) (Refer to Table 3.1).

Table 3.1

Descriptive statistics from previous studies and correlations among variables

Variance	<i>SD</i>	1	2	3
1. Instagram Use	1.25	-		
2. Social Comparison	0.80	0.36*	-	
3. Body Image	14.5	0.38*	0.51*	-

The Monte Carlo power analysis was configured with a “One Mediator” model with the settings “Set Power, Vary N.” The target power was specified at 0.95, with sample sizes ranging from 50 to 1000, increasing in increments of 1. The analysis included 10,000 replications and 20,000 Monte Carlo draws per replication. A random seed of 1234 was applied, and the confidence level was set at 95% for estimating the required sample size. The “10000” for the number of replications are recommended by Mundform et al. (2011) with adding an extra 20% to adjust for missing data outliers (see Appendix A1, p.79).

As the result, the sample size calculated was 105 (see Appendix A1, p.79). Therefore, the minimum sample size required was found to be 105 participants. Considering potential data exclusion, the final recommended sample size is adjusted to 130 participants.

Research Instruments

The survey was self-administered and included nine demographic questions, including age, gender, ethnicity, Instagram usage time and nationality. This survey form consists of instruments that examine Instagram use intensity, body esteem, and appearance comparison behaviours, with careful changes to ensure applicability to Instagram while keeping the original scales' psychometric characteristics and validity. The instruments used are 7-items Multidimensional Facebook Intensity Scale, 11-items Physical Appearance Comparison Scale-Revised (PACS-R), and 23-items Body Esteem Scale for Adolescents and Adults (BESAA) (see Appendix B, p.80).

Multidimensional Facebook Intensity Scale (MFIS)

The Multidimensional Facebook Intensity Scale originally assesses emotional attachment, incorporation into everyday routines, and duration of Facebook usage through items such as “Facebook is part of my everyday activity” and “I feel out of touch when I haven’t logged onto Facebook for a while.” In order to adapt this scale for Instagram, all references to “Facebook” will be replaced with “Instagram” (e.g., “Instagram is part of my everyday activity”), ensuring the scale captures Instagram use intensity and emotional engagement relevant to this platform. This adaptation aligns with prior research that successfully modified the Facebook Intensity Scale for Instagram use (Afana et al., 2021). Seven items were assessed using a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The average total score was calculated, with higher scores indicating increased Instagram use intensity paraphrase

this. This scale has demonstrated good internal consistency ($\alpha > 0.85$) and construct validity when adapted for Instagram, capturing both behavioural and emotional engagement with the platform (Afana et al., 2021; Alfonso-Fuertes et al., 2022) (refer to Appendix B1, p.80). The current study demonstrates good reliability which $\alpha=.915$.

Physical Appearance Comparison Scale-Revised (PACS-R)

According to Schaefer and Thompson (2014), the Physical Appearance Comparison Scale-Revised (PACS-R) includes 11 items that are rated on a 5-point Likert scale from 1 (*never*) to 5 (*always*). It assesses the frequency of comparing one's appearance to others, specifically adapted to Instagram contexts such as "I compare my appearance to people I see on Instagram".

Total scores are summed, with higher scores indicating a greater tendency toward appearance comparison. The PACS-R has demonstrated good reliability ($\alpha = 0.90$) and validity in social media research, linking appearance comparison to body dissatisfaction and self-esteem outcomes (Alfonso-Fuertes et al., 2022). As shown in Table 3.2, the Cronbach's alpha obtained for the PACS-R in the current study ($\alpha = .935$) suggests excellent reliability.

Body Esteem Scale for Adolescents and Adults (BESAA)

According to Mendelson et al. (1997), the Body Esteem Scale for Adolescents and Adults (BESAA) consist of 23 items rated on a 5-point Likert scale ranging from 1 (*never*) to 5 (*always*). Also, there are some reverse-coded items (items 2, 5, 8, 10, 11, 14, 16, 18 and 20) to avoid response bias. It assesses body satisfaction, weight concern, and perceived evaluations by others.

For this study, the scores will be summed, and higher scores reflect more positive body esteem. This scale will be used as an unidimensional measure allowed for an overall assessment of body image. Scores can be categorized by percentile or mean splits to indicate low, moderate,

or high body esteem (Engeln et al., 2020). Past study has shown good internal consistency ($\alpha=.81$ to $.94$) for this scale (Luo et al., 2025). The Cronbach's alpha value of the scale in this study was shown to be reliable ($\alpha=.870$) (see Table 3.2).

Data Collection Procedures

Inclusion and Exclusion Criteria

The inclusion criteria for this study include: (i) Malaysian nationality, (ii) young adults aged between 18 to 24 years, (iii) able to understand English, and (iv) Instagram users with personal accounts. Survey responses that are incomplete and do not achieve these criteria will be excluded.

Additionally, an instructional manipulation check question is inserted under the MFIS questionnaire. This question is used to detect inattentive respondents in surveys and protect data quality (Braitman et al., 2025; Muszyński, 2023). Those who did not choose option 4 were excluded from this survey.

Procedures of Obtaining Consent

Prior to participation, all respondents will be required to provide informed consent. An online consent form will be displayed on the start of the survey, outlining the purpose of the research, the procedures involved, the estimated duration, potential risks and benefits, and assurances regarding confidentiality. Besides, participants were also informed of their right to withdraw from the study at any time. Participants who click the "I agree to participate" button will provide their consent. Those who do not provide consent will be automatically directed out of the survey form.

Description of Data Collection Procedures

Data was collected through Google Forms. The instrument will consist of four main sections: demographic information, Instagram usage patterns, social comparison tendencies, and body image measures. The online survey link will be distributed to respondents through digital channels such as email, WhatsApp, and social media groups associated with student communities across Malaysia. A brief invitation message will be sent along with the link, explaining the study purpose and emphasizing voluntary participation. Data collection is expected to take approximately four weeks. Data analysis will be then conducted through SPSS after data collection and data cleaning.

Pilot Study

A pilot study was done before the main research to evaluate the study design's feasibility, to test the clarity and data collection instruments' reliability, and to identify potential procedural issues. This preliminary testing allowed for refinement of the survey/interview tools, estimation of time and resources needed, and early detection of challenges that could affect data quality. (Fain, 2010; Fraser et al., 2018). A total of 107 responses were collected for the pilot study, and 30 responses were randomly selected using an online random number generator for reliability testing. To ensure the reliability of each scale, we calculated the Cronbach's alpha coefficients. Generally, an alpha value of .70 or higher is considered acceptable, with .80 to .90 indicating good reliability (Tavakol & Dennick, 2011). Overall, the results showed strong reliability and indicate strong internal consistency, which is suitable for research use (see table 3.2).

Table 3.2*Reliability Analysis of Scales for Pilot Study*

Scale	<i>α</i>
MFIS	.915
PACS-R	.935
BESAA	.870

Chapter IV

Results

Data Cleaning

Data cleaning is important because it ensures data is accurate, complete, and consistent, which improves analysis and decision-making (Wickham, 2014). It involves correcting errors, handling missing values, standardizing formats, and removing duplicates, ultimately leading to more reliable results and better model performance (Han et al., 2011; Rahm, 2000).

The total number of responses that were collected for this study was 172 after exclusion of the 30 responses used for the pilot study.

Criteria for Post Data-Collection Exclusion of Participants

The inclusion criteria for this study include: (i) Malaysian nationality, (ii) young adults aged between 18 to 24 years, (iii) able to understand English, and (iv) Instagram users with personal accounts. Based on the responses from our survey, one was not aged between 18 to 24, and 5 were not university students. Additionally, 1 disagreed to provide consent to participate in the survey.

Besides, question number 6 in Part B was an instructional manipulation check question (To ensure you are reading the questions carefully, please select option 4 for this item). Those who did not choose option 4 were excluded from this survey. Hence, there were 6 respondents who did not choose option 4 and have been excluded from this study. At this stage, the final number of responses obtained is 164.

Descriptive Statistics

Demographic characteristics

According to the final sample size, the current study consisted of 164 Malaysian Gen Z

participants aged between 18 and 24 years old ($M = 21.47$, $SD = 1.45$). Among the participants, 64% were female ($n = 105$) and 36% were male ($n = 59$). In terms of ethnicity, the participants were predominantly Chinese (72%, $n = 118$), followed by Indian (14.6%, $n = 24$) and Malay (12.8%, $n = 21$). While a small proportion identified as other ethnicities (0.6%, $n = 1$). Regarding time spent on Instagram, majority of participants reported using Instagram for 1–3 hours per day (44.51%, $n = 73$), followed by 4–6 hours (39.63%, $n = 65$) and more than 6 hours (14.63%, $n = 24$). Only a small percentage of participants reported spending less than one hour per day (1.22%, $n = 2$) on Instagram. A summary of the demographic characteristics of the participants is presented in Table 4.1.

Table 4.1

Demographic Characteristics of Participants

	<i>n</i>	<i>%</i>	<i>M</i>	<i>SD</i>	Min	Max
Age			21.47	1.45	18	24
Gender						
Male	59	36				
Female	105	64				
Ethnicity						
Chinese	118	71.95				
Malay	21	12.80				
Indian	24	14.63				
Other (e.g. Punjabi)	1	0.61				
Time Spent on Instagram			3.96	2.18	0.5	9.0
Less than an hour	2	1.22				
1-3 hours	73	44.51				
4-6 hours	65	39.63				
More than 6 hours	24	14.63				

Note. n = number of cases; $%$ = percentage; M = mean; SD = standard deviation; Min = minimum value; Max = maximum value

Normality Assumptions

Normality of the study variables, including Instagram use, social comparison, and body image, was assessed using several methods: histograms, quantile–quantile (Q-Q) plots, skewness and kurtosis, and the Kolmogorov–Smirnov (K-S) test.

Histogram

The histogram indicates that the data are not normally distributed. The distribution demonstrates that it is skewed to the left (see Appendix F, p. 97). The histogram results suggest a violation of the normality assumption.

Quantile–Quantile (Q-Q) Plot

The normal Q-Q plot shows that the data points deviate from the diagonal reference line, particularly at the lower and upper ends of the distribution (see Appendix G, p. 99). This indicates that the data do not follow a normal distribution and suggests the presence of positive skewness. Therefore, the assumption of normality is violated.

Skewness and Kurtosis

George and Mallery (2003) suggest that skewness and kurtosis values between -2 and $+2$ are acceptable. The skewness values for all items in this study ranged approximately between -1.264 and 0.924 , indicating that most variables were moderately negatively skewed, with a few items showing slight positive skewness. All skewness values fell within the acceptable range of ± 1 , suggesting no severe deviation from normality.

Similarly, kurtosis values ranged approximately between -1.396 and 1.156 , indicating that the distributions were generally within acceptable limits (± 2), with no evidence of extreme peak or flatness.

Overall, these results suggest that although minor deviations from normality are present, the data do not exhibit severe non-normality. Therefore, normality assumptions are considered reasonably satisfied.

Table 4.2

Skewness and Kurtosis

Variable	Skewness	Kurtosis
Instagram Use	-0.79	-0.60
Social Comparison	-0.62	-0.90
Body Image	-0.56	-0.82

Kolmogorov-Smirnov (K-S) Test

The K-S test is interpreted based on the significance value (p -value), where values greater than .05 indicate normality (Field, 2018). The K-S test indicated that all variables significantly deviated from normality ($p < .001$) (refer to Table 4.3). However, given the large sample size ($N = 164$), the test is highly sensitive and may detect minor deviations from normality. Therefore, despite the significant results, the assumption of normality was reasonably satisfied.

Table 4.3

Kolmogorov-Smirnov (K-S) test

Variable	p
Instagram Use	$< .001$
Social Comparison	$< .001$
Body Image	$< .001$

Conclusion of Assumptions of Normality

In conclusion, the histograms and Q-Q plots revealed only slight deviation from normality, with most variables demonstrating negative skewness. The K-S test indicated significant results from normality for all variables. However, larger sample sizes may detect

trivial deviations from normality much more easily given that normality tests like K-S test are highly sensitive to sample size (Ghasemi & Zahediasl, 2012).

Furthermore, skewness and kurtosis values were within acceptable ranges, indicating no severe violations of normality. Given the relatively large sample size ($N = 164$), parametric statistical analyses are considered robust to moderate deviations from normality.

Therefore, the assumption of normality was deemed to be reasonably satisfied, and subsequent analyses, including correlation and mediation using multiple linear regression, were conducted.

Assumptions of Multiple Linear Regression

Independence of Errors

To assess the independence of errors, the Durbin-Watson test was conducted. Values within the range of 1 to 3 are considered acceptable, while values surrounding 2 would be the ideal value. The current study yielded a value of 1.728, confirming that the assumption of independent errors was successfully satisfied (see Appendix H2, p.106).

Multicollinearity

The Variance Inflation Factor (VIF) and tolerance values were examined to assess multicollinearity. In accordance with the criteria proposed by Marcoulides and Raykov (2019), the assumption of non-multicollinearity is maintained when tolerance levels exceed .10 and VIF values remain below 10. The analysis revealed that tolerance value was 0.529 and VIF value was 1.89, confirming that the study was non-multicollinear (see Table 4.4).

Table 4.4

Collinearity Statistics

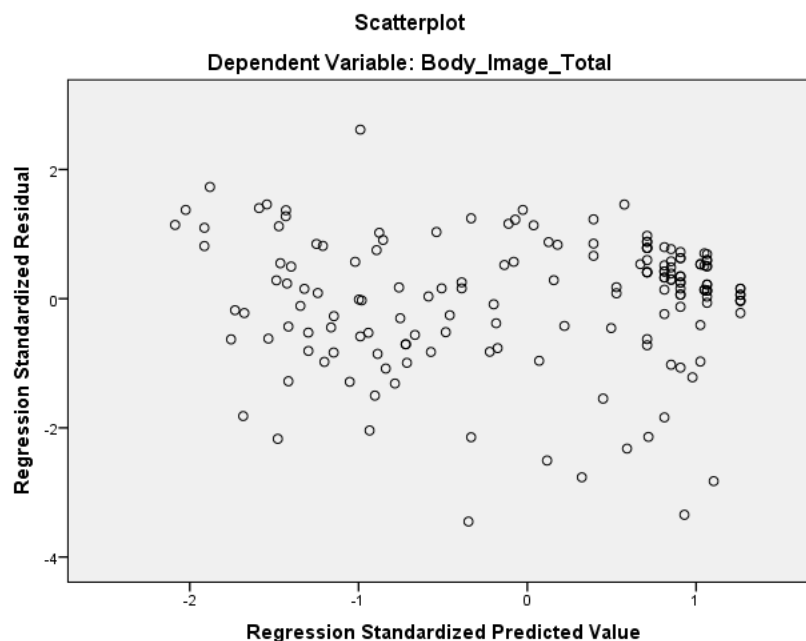
	Tolerance	VIF
Instagram Use	.529	1.89
Social Comparison	.529	1.89

Normality of Residuals, Linearity and Homoscedasticity

A scatterplot of standardized residuals versus predicted values was used to evaluate model assumptions. As shown in Figure 4.1, the residuals were approximately randomly scattered around the zero line, which indicated that the assumptions were not violated. This indicates a linear relationship and relatively constant variance of residuals across predicted values, while the random spread also suggests approximate normality. Thus, the assumptions of normality, linearity, and homoscedasticity were met.

Figure 4.1

Normality of residuals, linearity and homoscedasticity among variables



Multivariate Outliers

Three different measures were employed to identify potential multivariate outliers, namely Mahalanobis distance, Standardized Residuals, and Cook's distance (Figueiredo et al., 2023). The maximum Mahalanobis distance (10.951) did not exceed the critical chi-square (χ^2) value of 13.82 ($df = 2, p < .001$), indicating that no multivariate outliers were detected

(Dashdondov & Kim, 2021). Univariate outliers were examined using standardized residuals, and a small number of cases slightly exceeded the ± 3 threshold (El-Masri et al., 2020). However, no data entry errors were identified, and all cases were retained. Additionally, Cook's Distance values were inspected, and the maximum value (0.091) was well below 1, suggesting that no influential cases were present (see Appendix H1, p.101).

MLR Analysis

A multiple linear regression analysis was performed to determine whether Instagram use and social comparison significantly predict body image among Gen Z participants.

According to Table 4.5, the overall regression model was statistically significant, $F(2, 161) = [68.09]$, $p < .01$, accounting for 47.10% of the variance in body image.

Instagram use was found to be a significant predictor of body image, $\beta = 0.79$, $p < .001$, indicating that higher Instagram use was associated with higher (positive) body image. Furthermore, social comparison was a significant predictor of body image, $\beta = 0.24$, $p < .001$, indicating that higher levels of social comparison correspond to higher body image scores. These findings indicate that both hypotheses 1 (Instagram use is negatively associated with body image among Gen Z) and hypotheses 3 (social comparison is negatively associated with body image among Gen Z) were not supported.

Table 4.5

Predictors of Body Image among Gen Z populations in Malaysia

Dependent Variable	Predictor Variable	β	t	Sig.
Body Image	Instagram Use	.363	4.301	< .001
	Social Comparison	.320	3.793	< .001

Note. N=164.

Inferential Statistics

Mediation Analysis

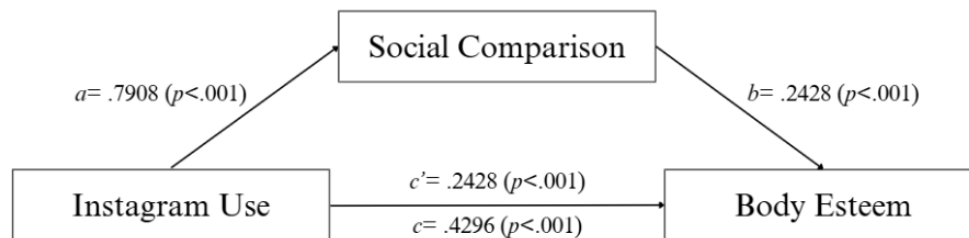
A mediation analysis was conducted using PROCESS Model 4.2 with 5,000 bootstrap samples to examine whether social comparison acts as a mediator in the relationship between Instagram use and body image among Gen Z individuals. A mediation effect is considered significant when the bootstrap confidence interval does not include zero (Jo & Hwang, 2024; Zadawa et al., 2018).

Results indicated that Instagram use was a significant predictor of social comparison (path *a*), $\beta = .79, p < .001$, supporting *H2*. Social comparison also significantly predicted body image (path *b*), $\beta = .24, p < .001$, this relationship was positive rather than negative, and therefore *H3* was not supported. The total effect of Instagram use on body image (path *c*) was also significant, $\beta = .43$, supporting *H4*. After including social comparison in the model, the direct effect of Instagram use on body image (path *c'*) remained significant, $\beta = .24$, 95% CI [.13, .35]. This indicates that greater Instagram use was associated with more positive body image and therefore *H1* was not supported.

The indirect effect was significant, $\beta = .19$, with a 95% bootstrap confidence interval of [.11, .28], which excludes zero. This confirms the presence of a mediation effect. Overall, these findings suggest that social comparison partially mediates the relationship between Instagram use and body image.

Figure 4.2

Mediating Effect of Social Comparison on Instagram Used and Body Image among Undergraduate Students



H1: Instagram use is negatively associated with body image among Gen Z. (Not Supported)

The results revealed a significant positive correlation between Instagram use and body image, $r = .43$, $p < .001$. This suggests that individuals who use Instagram more frequently tend to report more positive body image perceptions. Therefore, H1, which hypothesized a negative association, was not supported.

H2: Instagram use is positively associated with social comparison among Gen Z.

The results showed a significant positive correlation between Instagram use and social comparison, $r = .79$, $p < .001$. This indicates that higher levels of Instagram use are associated with greater social comparison. Therefore, H2 was supported.

H3: Social comparison is negatively associated with body image among Gen Z.

The results revealed a significant positive correlation between social comparison and body image, $r = .63$, $p < .001$. These findings indicate that higher levels of social comparison are associated with better body image. Therefore, H3, which hypothesized a negative association, was not supported.

H4: Social comparison mediates the relationship between Instagram use and body image among Gen Z.

The mediation analysis showed that Instagram use significantly predicted social comparison, $\beta = .79, p < .001$. In addition, social comparison was significantly related to body image, $\beta = .24, p < .001$. Instagram use also retained a significant direct effect on body image, $\beta = .24, p < .001$.

Furthermore, the indirect effect of Instagram use on body image through social comparison was significant, $\beta = .19$, with a 95% bootstrap confidence interval of [.11, .28], which did not include zero. These results indicate a partial mediation effect, supporting H4.

Chapter V

Discussion

H1: Instagram use is negatively associated with body image among Gen Z

H1 proposed that Instagram use would be negatively associated with body image among Gen Z. However, the results of the current study showed a significant positive association between Instagram use and body image indicating that greater Instagram use was linked to a more positive body image. As a result, H1 was not supported.

This contradicts with our past literature which often reports that increased social media use is related to poorer body image (Alfonso-Fuertes et al., 2022; Fardouly et al., 2018; Vuong et al., 2021). One possible explanation for the current finding the survey participants may engage with more positive or body-affirming content on Instagram, such as body positivity movements or fitness-related inspiration, which could enhance self-perception rather than diminish it (Cohen et al., 2019; Cowles et al., 2023; Glaser et al., 2024). Unlike previous studies that focused on thin-ideal body image exposure, the current Instagram environment have a much more diverse and affirming representations of body types.

Over the years, body-positive content has increased to tackle conventional beauty ideals. The body positivity movement encourages a more inclusive and diverse definition of beauty by challenging traditional appearance standards and encouraging acceptance of all body types (Jiménez-García et al., 2025). Social media platforms including Instagram, encourage these body positive contents through hashtags like #bodypositive and #bopo, which have played a key role in spreading this message and supporting more authentic and varied representations of bodies (Ando et al., 2021; Cohen et al., 2021). According to a study focusing on “Instagram vs reality” content by Tiggemann & Anderberg (2020), seeing realistic and unedited images reduces body

dissatisfaction and weakens negative comparison effects. This further explains that Instagram use does not exclusively link to negative body image outcomes and may also contribute to more positive body image, depending on the how users engage with the platform. However, this interpretation should be treated cautiously, as the present study did not directly examine the types of content participants were exposed to or interacted with.

The divergence of results as observed in the current study could also be attributed to the demographic characteristics of the sample, which consisted of fully university students. One possible explanation is that university students may possess higher levels of media literacy and critical awareness. Individuals with greater awareness of image manipulation and unrealistic beauty standards may be less prone to negative comparison effects (Huguenin et al., 2024). This aligns with a study on college females, suggesting that users who critically evaluate social media content are less affected by its negative impact on body image, despite heavy use (Baker, 2018).

In conclusion, the results indicate that the association between Instagram use and body image is likely more complex than earlier assumed. Among these explanations, exposure to body-positive content appears most plausible, as recent research shows increased prevalence of such content on Instagram. However, this interpretation should be treated cautiously, as the present study did not directly measure content type. The relationship between Instagram use and body image is not universally negative but may be context dependent as it highlights the importance of considering demographic characteristics and patterns of social media engagement when examining the psychological impact of Instagram use.

H2: Instagram use is positively associated with social comparison among Gen Z

H2 proposed that Instagram use would be positively associated with social comparison among Gen Z. The findings of the present study supported this hypothesis, as Instagram use was found to be significantly and positively associated to social comparison.

This result is consistent with existing literature suggesting that social media platforms, especially image-based platforms such as Instagram, provide an environment that facilitates social comparison processes. Instagram is highly visual and often features idealized content, which naturally encourages users to evaluate themselves in relation to others (Fardouly et al., 2018; Pedalino & Camerini, 2022). As users are repeatedly shown content portraying desirable lifestyles, appearances, and achievements, they may will conduct comparisons with these standards (Fardouly & Vartanian, 2016).

From a theoretical perspective, this result aligns with social comparison theory (Festinger, 1954), which posits that individuals have an inherent tendency to compare with others to evaluate themselves, particularly in ambiguous contexts where objective standards are lacking. Instagram amplifies this tendency by having a continuous stream of content, making comparison processes more frequent and accessible. Chua and Chang (2016) provide further support by demonstrating that social media platforms foster a “comparison culture,” where users continuously evaluate themselves against their peers and derive self-worth from online feedback such as likes and comments. The study highlights that self-presentation and social comparison are closely intertwined, as individuals curate idealized images of themselves, which in turn become standards for others to compare against, creating a reinforcing cycle of comparison. Moreover, Instagram’s platform features such as visual content and quantifiable feedback mechanisms intensify both the frequency and emotional impact of these comparisons. Therefore,

increased Instagram use is likely to expose individuals to more opportunities for evaluative feedback and idealized peer content, ultimately strengthening their tendency to engage in social comparison, consistent with the findings of the present study.

In the context of the present study, which consists predominantly of Malaysian Chinese university students, this relationship may be further influenced by developmental and cultural factors. As university students, individuals are in a stage of identity exploration and self-evaluation, which may increase their sensitivity to comparison cues. A study by Lundell et al. (2019) found that Malaysian Chinese university students are in an active stage of identity exploration, where self-evaluation is highly influenced by social context. As individuals in this developmental stage are more sensitive to external cues, environments that increase exposure to peers may amplify tendencies toward social comparison. Therefore, greater Instagram use is expected to be positively associated with social comparison among Gen Z.

However, while Instagram use increases the likelihood of engaging in social comparison, the present findings suggest that the outcomes of such comparisons are not necessarily negative. This distinction is important, as it indicates that the presence of social comparison (as supported in H2) does not automatically lead to negative body image outcomes, which is further explored in H3.

H3: Social comparison is negatively associated with body image among Gen Z

H3 predicted that Social Comparison would be negatively associated with body image among Gen Z. However, the findings of this study did not support H3. It revealed a significant positive relationship between social comparison and body image among Gen Z Instagram Users.

This finding contradicts several previous studies which reported that social comparison on social media platforms especially on Instagram tends to negatively impact body image

(Fioravanti et al., 2022; Jiménez-García et al., 2025; Jung et al., 2022; Pedalino & Camerini, 2022). Prior study has suggested that individuals who frequently compare their appearance with others on visual-based social media platforms often experience lower body satisfaction and negative self-evaluation due to high exposure to idealized and portrayed image (Tiggemann et al., 2018). This is due to the fact that visual-based social media platform often display highly curated images that emphasize on socially desirable beauty standards, which may cause users to believe that their own appearance differs from those displayed online as well as exacerbate peer-to-peer appearance comparison (Tanveer et al., 2025). People who make appearance-based comparisons daily may consistently experience feelings of inadequacy or body dissatisfaction.

Prior research based on social comparison theory indicates that people frequently engage in upward social comparison on image-based social media platforms, comparing themselves to those they consider to be more successful or attractive (McComb et al., 2023; Taylor & Armes, 2024; Verduyn et al., 2020). Also, studies conducted specifically on Instagram show that upward appearance comparisons lead to negative psychological outcomes like decreased body-esteem and increased social appearance anxiety, which are linked to body dissatisfaction (Park et al., 2021; Seekis et al., 2020; Taylor & Armes, 2024). Therefore, it was initially expected that higher levels of social comparison would be linked to more negative body image among Gen Z users based on these theoretical perspectives and empirical findings. However, the current study's findings did not align with this expectation because they showed a positive correlation between body image and social comparison among Gen Z Instagram users.

One possible explanation for this unexpected finding is that social comparison does not always produce negative outcomes. It may be explained by the complex nature of social comparison processes and the type of content that users engage with. According to Social

Comparison Theory (SCT), individuals may engage in both upward and downward social comparisons. Downward social comparison might be happened in social media platform such as Instagram where users compare themselves with others perceived as less advantages thus increasing the self-evaluation (Festinger, 1954). In addition to producing more positive self-evaluations, downward social comparison may serve as a psychological defence mechanism to preserve self-esteem (Stapel & Schwinghammer, 2004; Wayment & O'Mara, 2008). Consequently, while upward comparison is typically associated with negative emotions (Lewallen & Behm-Morawitz, 2016), downward comparison may neutralize or even enhance body image (Tiggemann & Anderberg, 2019). These findings highlight the importance of the type of social comparison and the nature of social media content in shaping whether social comparison leads to positive or negative body image outcomes (Bonfanti et al., 2024; Dorčić et al., 2023). Therefore, social comparison may serve protective or motivational functions depending on content and context type which shown that not all social comparisons are detrimental to body image (Rodgers et al., 2022; Tylka et al., 2023). Thus, studies demonstrate that lateral or downward comparisons can enhance body appreciation and self-esteem by making individuals feel better about their bodies (Taylor & Armes, 2024).

Additionally, some research suggests that different kinds of media information, including fitness motivation or body positivity might encourage positive self-perception or improve body appreciation (Glaser et al., 2024; Pedalino & Camerini, 2022). Recent research also identified that exposure towards positive body related social media content that focuses on diversity, inclusivity, self-acceptance, rejection of harmful appearance ideals can reduce the risk of harmful upward social comparison and build a broader conceptualization of beauty and lead to higher self-acceptance level and increased body satisfaction and appreciation (Rodgers et al., 2022;

Rousseau, 2023; Jiménez-García et al., 2025). This positive effect reduced the frequency of people comparing themselves with others and having a greater sense of unconditional self-body acceptance thus decreasing negative self-evaluations (Rousseau, 2023).

Moreover, individual differences may also buffer the impact of social comparison on social media platforms. Psychological factors such as resilience, critical awareness, or selective engagement with empowering content may exacerbate the effect of social comparison (Kraye et al., 2007; Tylka et al., 2023; Ahsan Haider Shehzad et al., 2025). Traits such as trait appearance comparison which a stable tendency to compare oneself to others moderate the effects of high trait comparison linked to greater vulnerability to negative body image due to exposure to idealized or curated image on social media platforms (Fioravanti et al., 2022; Betz et al., 2019).

Not only that, gender differences as well as cultural differences may also provide a possible explanation for these unexpected findings. Previous research has shown men and women having different types of body image pressures (muscularity vs. attractiveness) which affect their body satisfaction (Merino et al., 2024; Speranza et al., 2024). For example, women are more likely to experience pressure to conform to societal ideals of thinness and physical attractiveness, whereas men often face pressure to become muscular (Watson et al., 2019). These differing social expectations may influence how individual engage in social comparison on Instagram. While women may engage in appearance-based comparisons related to beauty standards or make up skills, men may focus more on comparisons related to body size, muscularity or fitness. For instance, male users may view appearance-related comparisons as a form of motivation for self-improvement, such as engaging in fitness activities or adopting healthier lifestyles. These gender-specific comparison patterns may influence how social

comparison affects body image, leading to variation in body satisfaction across Gen Z individuals.

Besides, cultural factors strongly shape body image perceptions by influencing beauty standards and societal norms which affect how individual evaluate their own appearance and body appreciation and engagement in social comparison. In many Asian cultures that including Gen Z populations, there is a pronounced emphasis on slimness and clear skin as a sign of attractiveness, there is a possibility of intensifying pressures to conform to these ideals and increase body dissatisfaction (Abdoli et al., 2024; Stojcic et al., 2020). Also, regular exercise, balanced eating habits, and grooming are seen as key attributes of an attractive and healthy appearance also reflecting self-care practices that align with societal ideals among younger populations (Platta et al., 2023; Deshmukh & Oka, 2024). Intrinsic motivation and satisfaction with one's own body influence behaviours related to body image, such as exercise adherence where intrinsic motivation also can link to positive body image and contributed to healthier outcomes among Gen Z populations (Lee et al., 2022). On the other hand, cultural identification with modern or traditional values also may mediate the relationship between media exposure and body dissatisfaction, such as stronger identification with contemporary cultural values often lead to higher body dissatisfaction with media influence among Japanese adolescents (Brockhoff et al., 2016). This cultural perspective may reduce the negative emotional impact typically associated with social comparison and may partly explain the positive association observed in the present study.

Also, the virtual environments on visual-based social media platforms that involve immersive experiences like creating own ideal avatars also help Gen Z users cope with real-world body dissatisfaction by boosting their own self-esteem through this virtual identification

with their avatars (Park & Kim, 2025). Overall, these findings suggest that the relationship between social comparison and body image may be more complex than previously thought. Factors such as individual psychological characteristics, gender differences, cultural background, and coping strategies may shape how social comparison affects body image among Gen Z Instagram users.

H4: Social comparison mediates the relationship between Instagram use and body image among Gen Z

The findings supported the mediating role of social comparison in the relationship between Instagram use and body image among Gen Z. The presence of both significant direct and indirect effects suggests that social comparison partially mediates this relationship. This indicates that Instagram use influences body image not only directly, but also indirectly through increased engagement in social comparison. This research emphasizes the complexity of social comparison, implying that its effects might not always be detrimental but rather rely on how people perceive and react to the material they come across on social media. This may help explain why the relationships observed in this study differed from the initial hypotheses.

Past studies have consistently shown that social media use is associated with increased social comparison (Bonfanti et al., 2024; Pedalino & Camerini, 2022). Recent research further supports that frequent use of social networking sites is linked to greater engagement in upward social comparisons, where individuals compare themselves to others perceived as superior (McComb et al., 2023). Especially the highly visual nature of Instagram, where users are frequently exposed to curated and idealized images, encourages individuals to evaluate themselves in relation to others (Le Blanc-Brillon et al., 2025). Furthermore, such comparison processes have been widely linked to body image outcomes (Bonfanti et al., 2024).

However, contrary to predictions, the indirect effect observed in this study was positive, suggesting that negative body image does not necessarily result from social comparison. Alternatively, social comparison could have adaptive purposes. For example, individuals may engage in upward social comparison that promotes self-improvement, motivation and increased body awareness (Li et al., 2025). In addition, exposure to body-positive content on Instagram may contribute to more positive self-evaluations, as such content has been shown to enhance body satisfaction and emotional well-being (Jiménez-García et al., 2025; Nelson et al., 2022). Hence, social comparison in the context of positive social media content may play a role in enhancing individuals' body image.

Last but not least, as one of the most frequently used social media platforms among Gen Z, Instagram provides a highly interactive environment where users can actively engage with others and maintain social connections (Kalita & Goswami, 2025). Besides, social comparison may improve a sense of belonging and social connectedness, particularly among Gen Z users who actively engage with others on social media platforms (Desjarlais, 2024; Sharma, 2024). This sense of connectedness may contribute to more positive perceptions of body image. Therefore, the findings suggest that the effect of Instagram use on body image cannot be fully understood without considering the mediating role of social comparison, which may function as both a risk factor and a source of positive self-evaluation depending on the context.

Theoretical Implications for Future Research

The present study adopted the Festinger's (1954) Social Comparison Theory (SCT) to understand that social comparison plays a significant mediating role in the relationship between Instagram use and body image among Gen Z. Firstly, the findings provide support for SCT by demonstrating that Instagram use is positively associated with social comparison among Gen Z.

This shows that social media platforms such as Instagram provide important contexts that trigger the social comparison processes, reinforcing the relevance of SCT in explaining individuals' behaviors in digital environments, particularly in how these comparisons can influence self-esteem and body image among users (Chen et al., 2024; Jiang & Ngien, 2020; Tian et al., 2024).

However, the absence of direct predictive effects between Instagram use and body image, as well as social comparison and body image, point out that social media's influence on body image may be more complex than previously thought. This is because Instagram use is not the sole determinant of negative body image, as other factors such as interpersonal evaluations and social feedback from peers may also play a significant role (Pedalino & Camerini, 2022). In addition, body image is shaped by both internal and external factors (Yao et al., 2024), which may explain why the impact of Instagram use varies across individuals. Although social media often promotes unrealistic appearance of ideals, protective factors such as higher self-esteem, stronger media literacy, and positive social support may buffer or weaken the direct negative effects of social comparison.

Next, the significant mediating effect of social comparison highlights its critical role as an underlying mechanism linking Instagram use and body image. This indicates that Instagram use does not directly influence body image but instead operates through social comparison processes. Specifically, exposure to Instagram content may increase individuals' tendency to engage in social comparison, which subsequently shapes their perceptions of their own body image. This finding emphasizes the importance of indirect pathways in understanding how social media influences psychological outcomes. Therefore, the findings enhance the explanatory power of SCT by demonstrating that the effects of social media are not direct but are mediated through cognitive comparison processes. Furthermore, this study extends SCT by suggesting that

additional psychological and contextual factors may interact with social comparison processes, thereby influencing how individuals perceive their body image. This provides a more nuanced understanding of how Instagram uses influences body image among Gen Z.

Finally, the findings of this study contribute to a more comprehensive understanding of the relationship between Instagram use and body image by emphasizing the importance of indirect mechanisms. Hence, it offers an extended perspective on SCT within the context of digital environments. Moreover, future research is encouraged to incorporate additional psychological and contextual variables, such as self-esteem, media literacy, and social support, as potential mediators or moderators to further capture the complexity of social media influences on body image. This would enable a deeper and more holistic understanding of how digital interactions shape individuals' self-perceptions in contemporary society.

Practical Implications for Program and Policies

The present study reveals that social comparison mediates the relationships between Instagram use and body image, established the need to address social comparison as a central psychological mechanism rather than focusing exclusively on reducing Instagram use. The findings provide several practical implications for practitioners, counsellors, educators and policymakers in addressing body image concerns among Gen Z.

Firstly, for mental health practitioners, the findings suggest that therapeutic and counselling interventions should incorporate strategies that address maladaptive social comparison. Traditional interventions often emphasize reducing time spent on social media, which may not adequately address the underlying psychological processes linking Instagram use to body image. Instead, interventions should focus on helping individuals recognize unhealthy comparison patterns, develop healthier self-evaluation strategies, and build coping mechanisms

to manage comparison-related thoughts. This may include cognitive restructuring techniques, self-esteem enhancement, and promoting body acceptance to reduce the negative impact of social comparison on body image.

Secondly, the findings are highly relevant to educational institutions and youth development programs, as young adults are particularly vulnerable to social comparison in social media environments. Within educational settings, Instagram use may encourage comparison tendencies that influence students' perceptions of their body image. Therefore, universities and institutions can implement media literacy and digital well-being programs that not only raise awareness about the risks of unrealistic appearance ideals but also address the psychological mechanisms underlying social comparison. Educators can foster healthier digital engagement by encouraging students to critically evaluate online content, reduce reliance on appearance-based comparisons, and promote self-acceptance. Such initiatives may help students develop resilience against negative body image and engage with social media in a more balanced and constructive manner.

Lastly, policymakers should consider incorporating mental health awareness related to social media use into educational systems. Campaigns that promote realistic body standards and responsible social media use could also help mitigate the negative influence of appearance-based comparisons. Additionally, encouraging balanced social media usage and promoting offline activities may help reduce the psychological impact associated with excessive Instagram use.

In conclusion, while Instagram use is an integral part of Gen Z's daily life, its indirect effects through social comparison highlight the need for awareness, education, and platform responsibility to foster healthier body image perceptions. The findings also suggest that

addressing the underlying psychological processes, rather than focusing solely on social media usage, is more effective in promoting positive body image among Gen Z.

Limitation of the Study

The current study holds several limitations that should be acknowledged. First, the study has low generalizability of the findings due to employment of convenience sampling method which recruiting participants mainly from nearby universities and through social media. According to Wisniowski et al. (2020), sample that recruited from non-probability sampling methods are less accurate and not fully representative of the broader populations. Specifically, the sample only recruited university students aged 18-24, which excludes Gen Z adolescents and 24 and above young adults as to ensure the homogeneity for the study. Also, the small number of sample size ($n=164$) may reduce the statistical power of the analysis as well as reduce the ability of detecting the subtle effects. As a result, the generalizability of the present findings was limited.

Next, the current study has shown limited diversity in terms of gender and ethnicity. Majority of the participants from Chinese race (72%, $n=118$) and females (64%, $n=105$). The limited diversity may influence the overall results such as social media use patterns or societal norms that influence body image perceptions can be differs from gender and cultural backgrounds. Consequently, the imbalance findings may disproportionately reflect the experiences of female and Chinese participants which limiting the generalizability to other groups within the Gen Z populations. These factors suggest caution when generalizing findings beyond this specific demographic and highlight the need for more diverse which balanced samples in future research.

Third, the study did not differentiate between types of social comparison (Upward vs Downward social comparison) which could differently impact body image perception. This lack of focus may have distinct psychological effects on self-evaluation and affect (Gerber et al., 2018). Ignoring these nuances may overlook how participants selectively engage in comparisons that influence their attitudes and behaviours differently.

Lastly, the present study used online self-report questionnaire to collect data from respondents. The self-report method that introduces respondent bias which including social desirability and reference bias. It occurs when individuals' responses being influenced by their implicit standards or desire to present themselves more favourably thus tend to distort the accuracy of actual behaviours and attitudes (Lira et al., 2022; Podsakoff & Organ, 1986). Self-report bias can contribute to systematic errors that limit the validity and generalizability of the findings.

Recommendations for Future Research

Based on the limitations identified in the present study, several recommendations can be made for future research. First, future research should prioritize using objective or device-based measures of social media use rather than relying solely on self-reports. It is because self-reported data often suffer from substantial overestimation and self-reporting biases, especially among heavy users and females (Boyle et al., 2022; Burnell et al., 2021; Scharkow, 2016). Future researchers are recommended to investigate longitudinal or experimental designs to ensure the generalizability of the findings and clarify the causality relationship or temporal patterns between all variables. Thus, the designs able to reflect how these variables change over time by recording and observation to provide compelling evidence of causal relationships.

Also, future research should include more diverse and general samples that beyond university students and different cultural contexts thus enhance the generalizability of the findings and address demographic biases common in social media research (Hargittai, 2018; Fardouly & Vartanian, 2016).

Besides, one important direction for future studies is to explore the distinct effects of upward vs downward social comparisons on psychological outcomes. It is because these two types of social comparisons have different psychological and motivational consequences. For example, as upward comparisons on social media have been shown to have a negative impact on self-evaluation and emotions (McComb et al., 2023). In contrast, downward comparisons generally result in more positive emotions but reduce motivation by promoting a “coasting effect” (Diel et al., 2024; Diel et al., 2021). Understanding these differences helps researchers to clarify why people might choose upward comparisons even though it might be self-deprecation themselves but also temporarily boost motivation for self-improvement before it leads to passive resistance (Diel et al., 2024).

Moreover, future researchers are suggested to explore additional contextual or psychological factors such as exposure to body positivity content, social support, or self-esteem among users to provide a more comprehensive and nuanced understanding of how Instagram influences body image.

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Appendices

Appendix A

Sample Size Calculation

Appendix A1: Suggested sample size for the study using Monte Carlo Power Analysis

Monte Carlo Power Analysis for Indirect Effects

Written by Alexander M. Schoemann ([Contact](#)), Aaron J. Boulton, & Stephen D. Short

Model One Mediator

Objective Set Power, Vary N

Target Power 0.95

Minimum N 50

Maximum N 1000

Sample Size Steps 1

of Replications 10000

Monte Carlo Draws per Rep 20000

Random Seed 1234

Confidence Level (%) 95

```

graph LR
    X[X] -- a --> M[M]
    M -- b --> Y[Y]
    X -- c' --> Y
    
```

Input Method Correlations

	X	M	Y
X	1.00		
M	0.36	1.00	
Y	0.38	0.51	1.00
Std. Deviation	1.25	0.8	14.5

Instructions

To use this app, follow these steps:

- Select Model.** The user should first select the mediator model containing the indirect effect(s) of interest. Models may be selected in the drop-down menu in the left-most column of the app. Note that when a different mediation model is selected, the model graphic and input-value sections in the middle column will be altered.
- Select Objective.** Once the desired model is chosen, the user should select the objective of the power analysis. Two

Calculate Power

ab	103.00	0.94	0.96	0.97
ab	104.00	0.94	0.96	0.97
ab	105.00	0.95	0.96	0.97
ab	106.00	0.95	0.96	0.97
ab	107.00	0.95	0.96	0.97

Appendix B

Appendix B1: Multidimensional Facebook Intensity Scale

1. <i>If I could visit only one site on the internet, it would be Instagram.</i>
2. <i>I often search for an Internet connection in order to visit Instagram.</i>
3. <i>Before going to sleep, I check Instagram once more.</i>
4. <i>I spent time on Instagram at the expense of my obligations.</i>
5. <i>It happens that I use Instagram instead of sleeping.</i>
6. <i>My Instagram profile is rather detailed.</i>
7. <i>I like refining my Instagram profile.</i>

Retrieved from: <https://doi.org/10.1016/j.paid.2015.11.038>

Appendix B2: Physical Appearance Comparison Scale-Revised (PACS-R)

1. <i>At parties or other social events, I compare my physical appearance to the appearance of others.</i>
2. <i>The best way for me to know if I am attractive is to compare myself with other people.</i>
3. <i>At the beach, I compare my physique to the physiques of others.</i>
4. <i>I often compare my appearance with that of Instagram users.</i>
5. <i>I often compare my body to that of others.</i>
6. <i>When I see good-looking people, I wonder how my own appearance compares with theirs.</i>
7. <i>I often compare my appearance to the appearance of others in public.</i>
8. <i>I often compare my body to that of people on Instagram.</i>
9. <i>Comparing my appearance with that of others helps me know how attractive I am.</i>

<i>10. I often compare my appearance with that of people on Instagram.</i>
<i>11. I often compare my appearance with the people around me.</i>

Retrieved from: <https://doi.org/10.1016/j.eatbeh.2014.01.001>

Appendix B3: Body Esteem Scale for Adolescents and Adults (BESAA)

Appearance	<i>1. I like what I look like in pictures.</i>
	<i>2. There are lots of things I'd change about my body if I could. (reverse scored)</i>
	<i>3. My looks help me to get dates.</i>
	<i>4. I'm proud of my body.</i>
	<i>5. I'm preoccupied with trying to change my body. (reverse scored)</i>
	<i>6. I think my appearance will help me get a job.</i>
	<i>7. I like what I see when I look in the mirror.</i>
	<i>8. There are lots of things I'd change about my appearance if I could. (reverse scored)</i>
	<i>9. I'm satisfied with my appearance.</i>
	<i>10. I wish I looked better. (reverse scored)</i>
	<i>11. I feel ashamed of how I look. (reverse scored)</i>
	<i>12. My appearance makes me feel good about myself.</i>
Body Weight	<i>13. I'm proud of my body.</i>
	<i>14. I'm preoccupied with trying to change my weight. (reverse scored)</i>
	<i>15. I feel that I weigh the right amount for my height.</i>
	<i>16. I wish I had weighed less. (reverse scored)</i>

	<i>17. I really like what I weigh.</i>
	<i>18. I feel ashamed of my weight. (reverse scored)</i>
	<i>19. I'm satisfied with my weight.</i>
	<i>20. I wish I had weighed more. (reverse scored)</i>
<i>Attribute</i>	<i>21. Other people consider me good looking.</i>
	<i>22. Other people like my looks.</i>
	<i>23. Other people consider me attractive.</i>

Retrieved from: https://doi.org/10.1207/s15327752jpa7601_6

Appendix C

Ethical Clearance Approval



UNIVERSITI TUNKU ABDUL RAHMAN DU012(A)
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Re: U/SERC/78-685/2026

15 January 2026

Dr Lee Wan Ying
Head, Department of Psychology and Counselling
Faculty of Arts and Social Science
Universiti Tunku Abdul Rahman
Jalan Universiti, Bandar Baru Barat
31900 Kampar, Perak.

Dear Dr Lee,

Ethical Approval For Research Project/Protocol

We refer to the application for ethical approval for your students' research project from Bachelor of Social Science (Honours) Psychology programme enrolled in course UAPZ3013. We are pleased to inform you that the application has been approved under Expedited Review.

The details of the research projects are as follows:

No	Research Title	Student's Name	Supervisor's Name	Approval Validity
1.	Academic stress, loneliness, and social anxiety as predictors of social media addiction among university students in Malaysia	1. Lim Le Yee 2. Cheah Yi Thong	Dr T'ng Soo Ting	15 January 2026 – 14 January 2027
2.	The Relationship Between Self-oriented Perfectionism, Self-determination, and Academic Procrastination Among Undergraduate Students in Malaysia	1. Chan Yan Leng 2. Liong Yi Qing 3. Ng Ting Shuen	Dr Siah Poh Chua	
3.	The Relationship Between Coping Strategies, Self-Control and Sleep Quality Among University Students in Malaysia	1. Lee Kell Win 2. Lim Say Khai		
4.	Resilience, Self-efficacy, and Perceived Social Support as Predictors of Coping Strategies Among Young Adults in Malaysia	1. Chong Chee Hui 2. Lian Jin Yee 3. Teo Yi Jing	Ms Teoh Xi Yao	
5.	Sleep Quality, Resilience, and Social Support as Predictors of Mental Well-being Among Undergraduate Students in Malaysia	1. Lai Li Yen 2. Teh Wen Yi	Ms Choo Hui Juin	
6.	Self-efficacy, Intolerance of Uncertainty, and Procrastination as Predictors of Future Anxiety Among University Students in Malaysia	1. Chen Hui En 2. Liew Jun Wei 3. Then Siang Ying		
7.	A Study on Peer Pressure and Parenting Style as Predictors of Self-Esteem Among University Students in Malaysia	1. Chen Jing Yi 2. Foo Yu Xian 3. Sebastian Lin Xu Ze	Ms Sanggari a/p Krishnan	
8.	Relationship Between Self-esteem, Academic Stress and Depression Among Undergraduate Students in Malaysia	1. Lee Seen Yi 2. Tang Jing Deeng 3. Timmy Looi Tian Ming	Dr Ooh Seow Ling	
9.	The Influence of Mindfulness and Sleep Quality in Stress Among University Students in Malaysia	1. Chang Rui Qi 2. Olivia Ho Yui Ying		

Kampar Campus : Jalan Universiti, Bandar Barat, 31900 Kampar, Perak Darul Ridzuan, Malaysia
Tel: (605) 468 8888 Fax: (605) 466 1313
Sungai Long Campus : Jalan Sungai Long, Bandar Sungai Long, Cheras, 43000 Kajang, Selangor Darul Ehsan, Malaysia
Tel: (603) 9086 0288 Fax: (603) 9019 8868
Website: www.utar.edu.my



No	Research Title	Student's Name	Supervisor's Name	Approval Validity
10.	Predictive Roles of Rejection Sensitivity, Maladaptive Perfectionism and Rumination on Depression Among University Students in Malaysia	1. Hii Xiu Jing 2. Joan Chai Wan Ying 3. Sophia Kong Ke Ying	Dr T'ng Soo Ting	15 January 2026 – 14 January 2027
11.	The Predictors of Impulsive Buying of Youth in Malaysia	1. Khaw Jing Chun 2. Ong Chee Seng 3. Phang Wen Jun 4. Li Zihao 5. Tan Wooi Yu	Mr Lim Ooi Sheng	
12.	Online Shopping Addiction, Perceived Social Support, Social Media Usage as Predictors of Life Satisfaction Among Young Adults in Malaysia	1. Chin Yi Ying 2. Katherine Lim Mean 3. Mak Wen Xuan	Dr Nurul Iman Binti Abdul Jalil	
13.	Relationship Between Self-Control, Perceived Social Support, and Internet Addiction with Cyberbullying	1. Mandy Ooi Wen Min 2. Tay Xu Chi 3. Yip Jun Kit	Dr Ooh Seow Ling	
14.	The Relationship Between Attachment Styles, Conflict Resolution Strategies, and Romantic Relationship Satisfaction Among Young Adult	1. Shirley Chew Mei Yee 2. Yeoh Jim Min		
15.	Red Pill Ideology as a Mechanism Linking Gender Norms to Relationship Cynicism: The Buffering Effect of Egalitarian Orientation	1. Ally Tan Sze Man 2. Tun Xin Jie 3. Zoe Ong Jia Jing	Dr Au Zher Wen	
16.	The Relationship Between Violent Game Exposure, Trait Aggression, and Conflict-resolution Styles Among University Students in Malaysia	1. Geh Zhi Yan 2. Soo Jing Xiang 3. Tee Yu Yang		
17.	The Influence of Instagram Use on Body Image Among Gen Z: The Mediating Role of Social Comparison	1. Chua Xiao Qing 2. Elaze Ng Yong Xuan 3. Wong Yong Sing	Dr Ooh Seow Ling	
18.	Shyness, Social Media Use, and Neuroticism as Predictors of Cyberbullying Victimization Among Young Adults in Malaysia	1. Cheng Xin Rou 2. Priyadarsini a/p Gunalan 3. Soh Jing Wen	Dr Lee Wan Ying	
19.	Examine the Associations Between Self-efficacy, Peer Influence, and Impulsivity on Internet Gaming Disorder Among Emerging Adult Multiplayer Online Battle Arena (MOBA) Players in Malaysia	1. Chan Zi Yuan 2. Lim Wen Yan 3. Tan Yun Lin	Dr T'ng Soo Ting	
20.	Examining the Role of Gaming Addiction and Perceived Stress on Aggressive Behaviour Among Young Adults in Malaysia	1. Jeston Lee Tze Xiang 2. Khor Ming 3. Ooi Phey Joo	Ms Tee Geok Hong	
21.	The Relationship Between Mental Health Literacy, Mental Health Stigma and Barriers to Seeking Mental Health Support Among Young Adults in Malaysia	1. Kam Yee Ching 2. Tang Kar Zhan 3. Yong Si Xian		
22.	Association Between Parental Marital Conflict-resolution, Romantic Relationship Self-efficacy, and Attitudes Toward Singlehood Among Malaysian Emerging Adults	1. Kristin Ong Kai Tzu 2. Wonard Primus Kayau	Dr Tan Soon Aun	
23.	Visualizing the Future Self and Its Effect on Future Self-Continuity and Intention to Be Single: An Experimental Study	1. Hoon Xin Yi 2. Joanne Ooi Rou Yan		
24.	Future Self Continuity and Lying-flat Tendency Among Undergraduate Students in Malaysia: The Mediating Role of Grit	1. Chan Lee Yi 2. Ho Si Qing 3. Tan Qian Yine		
25.	Loneliness and Depression as Predictors of Barriers to Help-seeking for Mental Health Among Malaysian University Students	1. Keong Pei Wen 2. Sip Chern Huan 3. Tey Sen Sui	Mr Tay Kok Wai	
26.	Mental Health Literacy and Attitudes Toward Seeking Professional Psychology Help Among Malaysian University Students	1. Lim Sheng Xun 2. Gan Boon Quan 3. Veyron Chua Rui Yuan		
27.	The Mediating Role of Fear of Intimacy Between Parental Psychological Control and Romantic Relationship Among Malaysian Emerging Adults	1. See E Yann 2. Tan Jia Li 3. Tan Yee En	Dr Gan Su Wan	

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Tel: (605) 468 8888 Fax: (605) 466 1313

Sungai Long Campus : Jalan Sungai Long, Bandar Sungai Long, Cheras, 43000 Kajang, Selangor Darul Ehsan, Malaysia

Tel: (603) 9086 0288 Fax: (603) 9019 8868

Website: www.utar.edu.my



Appendix D

Online Survey Form

The Influence of Instagram Use on Body Image among Gen Z: The Mediating Role of Social Comparison

Introduction

We would like to conduct a research study to examine The Influence of Instagram Use on Body Image among Gen Z, with The Mediating Role of Social Comparison.

Procedures and Confidentiality

The following questionnaire will require approximately 15 minutes to complete. All information provided will remain as private and confidential. The information given will only be reported as group data with no identifying information and only use for academic purpose.

Screening

This study is intended for participants who meet the criteria listed below. Please ensure that you qualify before continuing with the survey.

Inclusion criteria:

1. Malaysian citizens or permanent residents
2. Aged 18–30 years
3. Able to read and understand English
4. Willing to participate voluntarily

Exclusion criteria:

1. Non-Malaysian residents
2. Below 18 or above 30 years old
3. Unable to understand English
4. Incomplete responses or refusal to provide consent

Participation

All the information gathered will remain anonymous and confidential. Your information will not be disclosed to any unauthorized person and would be accessible only by group members. Participant in this study is voluntary, you are free to withdraw with consent and discontinue participation in anytime without prejudice. Your responses will be coded numerically in the research assignment for the research interpretation. Your cooperation would be greatly appreciated.

If you choose to participate in this project, please answer all the questions as honestly as possible and return the completed questionnaire promptly.

PERSONAL DATA PROTECTION NOTICE Personal Data Protection Statement

Personal Data Protection Statement

Please be informed that in accordance with Personal Data Protection Act 2010 (PDPA) which came into force on 15 November 2013, Universiti Tunku Abdul Rahman (UTAR) is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

Notice:

1. The purposes for which your personal data may be used are inclusive but not limited to:-

- For assessment of any application to UTAR
- For processing any benefits and services
- For communication purposes
- For advertorial and news
- For general administration and record purposes
- For enhancing the value of education
- For educational and related purposes consequential to UTAR
- For the purpose of our corporate governance
- For consideration as a guarantor for UTAR staff/ student applying for his/her scholarship/ study loan

2. Your personal data may be transferred and/or disclosed to third party and/or UTAR collaborative partners including but not limited to the respective and appointed outsourcing agents for purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is necessary to comply with applicable laws.

3. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.

4. UTAR is committed in ensuring the confidentiality, protection, security and accuracy of your personal information made available to us and it has been our ongoing strict policy to ensure that your personal information is accurate, complete, not misleading and updated. UTAR would also ensure that your personal data shall not be used for political and commercial purposes.

Consent:

1. By submitting this form you hereby authorise and consent to us processing (including disclosing) your personal data and any updates of your information, for the purposes and/or for any other purposes related to the purpose.

2. If you do not consent or subsequently withdraw your consent to the processing and disclosure of your personal data, UTAR will not be able to fulfill our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.

3. You may access and update your personal data by writing to us at:

- elmychuaxq@1utar.my (Chua Xiao Qing)
- elaze.ng0730@1utar.my (Elaze Ng Yong Xuan)
- rongxinn.92@1utar.my (Wong Yong Sing)

Acknowledgment of Notice *

- ☐ I have been notified and that I hereby understood, consented and agreed per UTAR above notice.
- ☐ I disagree, my personal data will not be processed.

[Back](#)

[Next](#)

[Clear form](#)

PART A: Demographic

Instructions: Please fill in your personal details or circle ONE option.

Age *

Your answer

Are you currently enrolled as a student in a University or College? *

- ☐ Yes
- ☐ No

Do you have an Instagram account? *

- ☐ Yes
- ☐ No

Gender *

- ☐ Male
- ☐ Female

Nationality *

☐ Malaysian

☐ Other: _____

Race *

☐ Chinese

☐ Malay

☐ Indian

☐ Other: _____

Roughly how many hours do you spend on IG in a day? *
e.g.: 2.5 hours

Your answer _____

[Back](#) [Next](#) [Clear form](#)

PART B - Multidimensional Facebook Intensity Scale (Revised)

Instructions: For each of the following, please rate the extent of which you agree with each statement, using the scale from 1 to 5 as shown below. Please respond as you really feel, rather than how you think "most people" feel.

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Neither agree or disagree
- 4 - Agree
- 5 - Strongly agree

	1 (Strongly Disagree)	2	3	4	5 (Strongly Agree)
If I could visit only one site on the internet, it would be Instagram.	☐	☐	☐	☐	☐
I often search for internet connection in order to visit Instagram.	☐	☐	☐	☐	☐
Before going to sleep, I check Instagram once more.	☐	☐	☐	☐	☐
I spent time on Instagram at the expense of my obligations.	☐	☐	☐	☐	☐

It happens that I use Instagram instead of sleeping.	☐	☐	☐	☐	☐
To ensure you are reading the questions carefully, please select the option 4 for this item.	☐	☐	☐	☐	☐
My Instagram profile is rather detailed.	☐	☐	☐	☐	☐
I like refining my Instagram profile.	☐	☐	☐	☐	☐
It is important for me to update my Instagram profile regularly.	☐	☐	☐	☐	☐

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PART C - Physical Appearance Comparison Scale-Revised (PACS-R)

Instructions: For each of the following, please rate the extent of which you agree with each statement, using the scale from 1 to 5 as shown below. Please respond as you really feel, rather than how you think "most people" feel.

- 1 - Never
- 2 - Seldom
- 3 - Sometimes
- 4 - Often
- 5 - Always

★

	1 (Never)	2 (Seldom)	3 (Sometimes)	4 (Often)	5 (Always)
At parties or other social events, I compare my physical appearance to the appearance of others.	☐	☐	☐	☐	☐
The best way for me to know if I am attractive is to compare myself with other people.	☐	☐	☐	☐	☐
At the beach, I compare my physique to the physiques of others.	☐	☐	☐	☐	☐

I often compare my appearance with that of TV and movie stars.	☐	☐	☐	☐	☐
I often compare my body to that of others.	☐	☐	☐	☐	☐
When I see good-looking people, I wonder how my own appearance compares with theirs.	☐	☐	☐	☐	☐
I often compare my appearance to the appearance of others in public.	☐	☐	☐	☐	☐
I often compare my body to that of people in magazines or on TV.	☐	☐	☐	☐	☐
Comparing my appearance with that of others helps me know how attractive I am.	☐	☐	☐	☐	☐
I often compare my appearance with that of people in magazines or on TV.	☐	☐	☐	☐	☐
I often compare my appearance with that of people around me.	☐	☐	☐	☐	☐

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PART D - Body Esteem Scale for Adolescents and Adults (BESAA)

Instructions: For each of the following, please rate the extent of which you agree with each statement, using the scale from 1 to 5 as shown below. Please respond as you really feel, rather than how you think "most people" feel.

- 1 - Never
- 2 - Seldom
- 3 - Sometimes
- 4 - Often
- 5 - Always

Appearance*

	1 (Never)	2 (Seldom)	3 (Sometimes)	4 (Often)	5 (Always)
I like what I look like in pictures.	☐	☐	☐	☐	☐
There are lots of things I'd change about my body if I could.	☐	☐	☐	☐	☐
My looks help me to get dates.	☐	☐	☐	☐	☐
I'm proud of my body.	☐	☐	☐	☐	☐
I'm preoccupied with trying to change my body.	☐	☐	☐	☐	☐

I think my appearance would help me get a job.	☐	☐	☐	☐	☐
I like what I see when I look in the mirror.	☐	☐	☐	☐	☐
There are lots of things I'd change about my appearance if I could.	☐	☐	☐	☐	☐
I'm satisfied with my appearance.	☐	☐	☐	☐	☐
I wish I looked better.	☐	☐	☐	☐	☐
I feel ashamed of how I look.	☐	☐	☐	☐	☐
My appearance makes me feel good about myself.	☐	☐	☐	☐	☐

Body Weight *

	1 (Never)	2 (Seldom)	3 (Sometimes)	4 (Often)	5 (Always)
I'm proud of my body.	☐	☐	☐	☐	☐
I'm preoccupied with trying to change my weight.	☐	☐	☐	☐	☐
I feel that I weigh the right amount for my height.	☐	☐	☐	☐	☐
I wish I weighed less.	☐	☐	☐	☐	☐
I really like what I weigh.	☐	☐	☐	☐	☐
I feel ashamed of my weight.	☐	☐	☐	☐	☐
I'm satisfied with my weight.	☐	☐	☐	☐	☐
I wish I weighed more.	☐	☐	☐	☐	☐

Attribute *

	1 (Never)	2 (Seldom)	3 (Sometimes)	4 (Often)	5 (Always)
Other people consider me good looking.	☐	☐	☐	☐	☐
Other people like my looks.	☐	☐	☐	☐	☐
Other people consider me attractive.	☐	☐	☐	☐	☐

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The Influence of Instagram Use on Body Image among Gen Z: The Mediating Role of Social Comparison

End of Survey

We thank you for your time spent taking this survey.
Your response has been recorded.

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Appendix E

SPSS Output: Descriptive Statistics

Descriptive Statistics of Demographic Variables

Table E1

Descriptive Statistics of Age

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Age	164	18.00	24.00	21.4695	1.44606
Valid N (listwise)	164				

Table E2

Descriptive Statistics of Hours

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Hours_R	164	.50	9.00	3.9558	2.17768
Valid N (listwise)	164				

Table E3

Descriptive Statistics of Gender

Gender_R				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1.00	59	36.0	36.0	36.0
2.00	105	64.0	64.0	100.0
Total	164	100.0	100.0	

Table E4
Descriptive Statistics of Race

		Race_R			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	118	72.0	72.0	72.0
	2.00	21	12.8	12.8	84.8
	3.00	24	14.6	14.6	99.4
	4.00	1	.6	.6	100.0
Total		164	100.0	100.0	

Appendix F

SPSS Output: Normality Assumptions

Histogram for Each Distribution

Figure F1

Histogram of Instagram Use

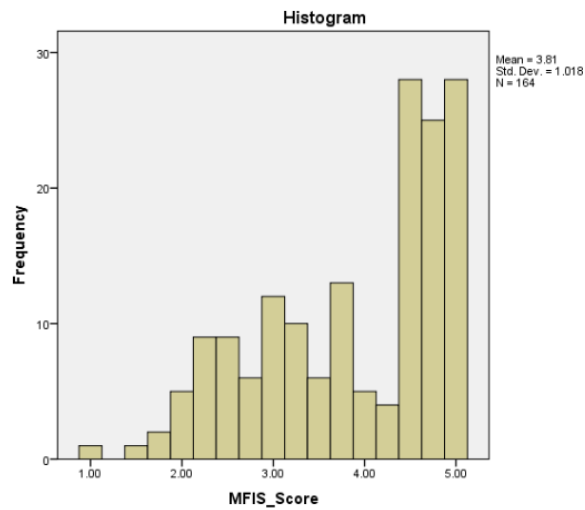


Figure F2

Histogram of Instagram Use

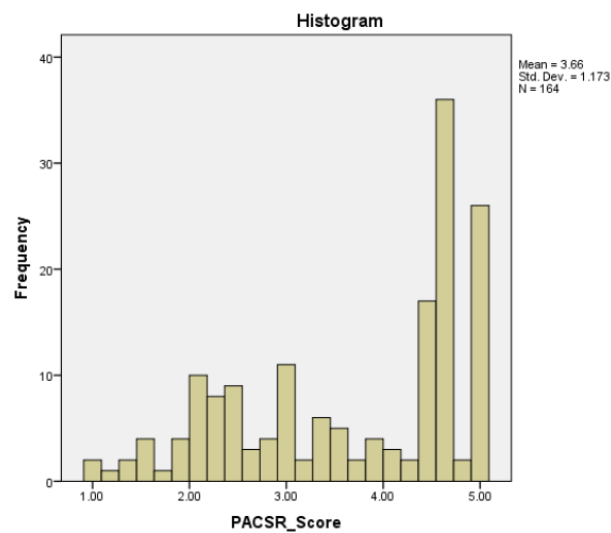
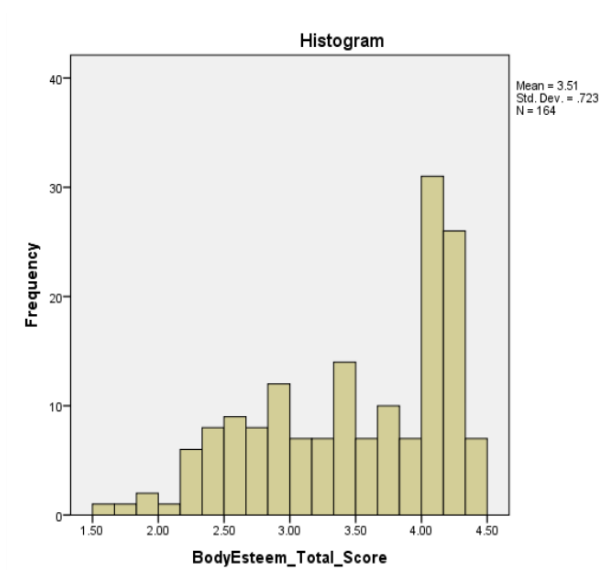


Figure F3*Histogram of Body Image*

Appendix G

SPSS Output: Normality Assumptions

Q-Q Plot for Each Distribution

Figure G1

Q-Q Plot of Instagram Use

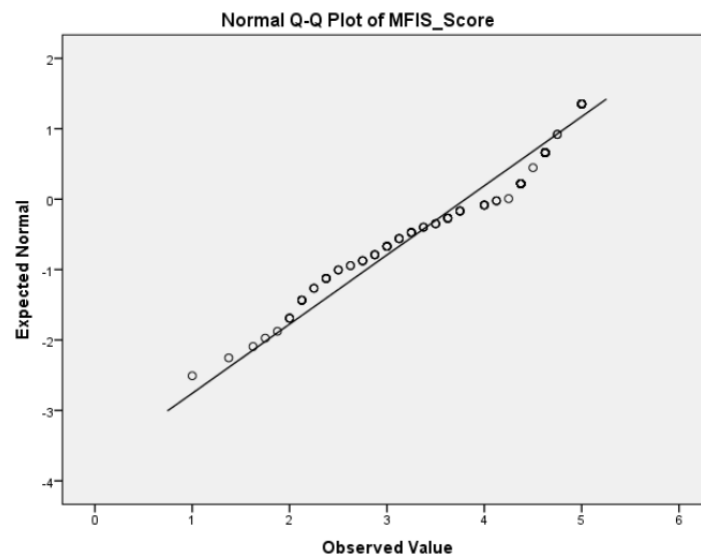


Figure G2

Q-Q Plot of Social Comparison

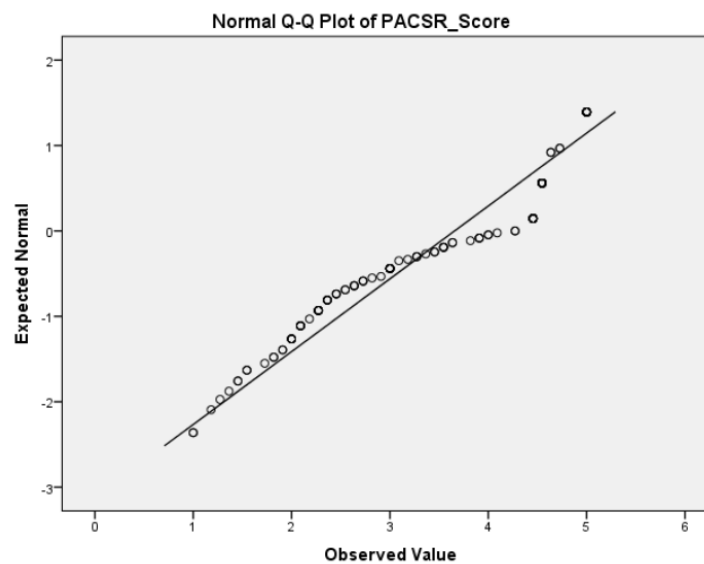
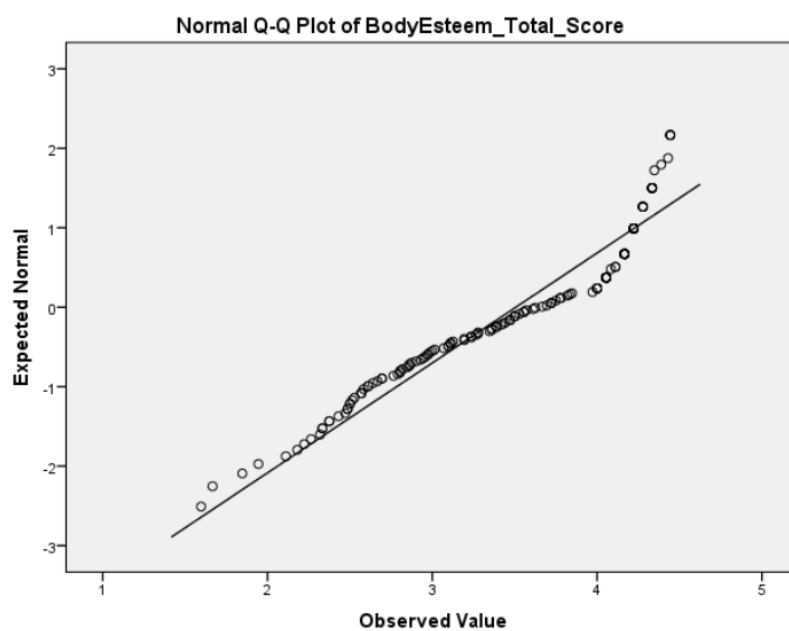


Figure G3*Q-Q Plot of Body Image*

Appendix H

SPSS Output: Multiple Linear Regression (MLR) Assumptions

Table H1

Case Summaries

Case Number	Mahalanobis Distance	Cook's Distance	Centered Leverage Value
1	1.37649	.03986	.00844
2	1.71438	.06823	.01052
3	.8922	.0442	.00547
4	1.7633	.04461	.01082
5	.90078	.01816	.00553
6	.34975	.01504	.00215
7	.20584	.01146	.00126
8	3.20864	.03771	.01968
9	2.75007	.03777	.01687
10	.67754	.01179	.00416
11	.2795	.00634	.00171
12	.20912	.01568	.00128
13	5.27225	.04579	.03235
14	3.98489	.02441	.02445
15	2.45935	.00513	.01509
16	1.3313	.00726	.00817
17	1.49199	.00502	.00915
18	1.7616	.00682	.01081
19	4.10079	.00756	.02516
20	2.06517	.01063	.01267
21	0.30293	0.00073	0.00186
22	1.40826	0.00577	0.00864
23	1.4043	0.00084	0.00862
24	1.43185	.00175	.00878
25	.11392	.00155	.0007
26	1.94897	.00456	.01196
27	.72637	.00376	.00446
28	1.1363	.00741	.00697
29	.88258	.0001	.00541
30	2.72266	.00737	.0167
31	.93912	.00237	.00576
32	1.97769	.00413	.01213
33	2.27571	.00347	.01396
34	2.81563	.01409	.01727

Case Number	Mahalanobis Distance	Cook's Distance	Centered Leverage Value
35	.7787	.00077	.00478
36	2.35714	.00274	.01446
37	1.36601	.00099	.00838
38	1.40826	.00008	.00864
39	2.06517	.00121	.01267
40	3.18701	.00889	.01955
41	.67754	.0002	.00416
42	.04953	.00039	.0003
43	3.08555	.00349	.01893
44	1.85086	.0019	.01135
45	.62914	.00169	.00386
46	1.4043	.00479	.00862
47	2.92428	.00233	.01794
48	1.37903	.00008	.00846
49	8.79956	.0033	.05399
50	1.94343	.00041	.01192
51	.57629	.00129	.00354
52	4.77595	.00063	.0293
53	3.57874	.00091	.02196
54	3.29817	.00029	.02023
55	.72637	.00031	.00446
56	.57629	.0017	.00354
57	6.35186	.00121	.03897
58	.93692	.00113	.00575
59	1.59353	.00027	.00978
60	1.59353	.00001	.00978
61	1.59353	.00001	.00978
62	.39494	.00007	.00242
63	3.77711	.00687	.02317
64	1.37903	.00002	.00846
65	1.81711	.00007	.01115
66	.50659	.00002	.00311
67	1.31135	.00009	.00805
68	2.04352	0	.01254
69	1.40826	.00002	.00864
70	3.34863	.00007	.02054
71	1.59353	.00002	.00978
72	1.59353	.00002	.00978
73	1.37903	.00008	.00846
74	.50659	.0001	.00311
75	1.40826	.00032	.00864
76	1.40826	.00032	.00864

Case Number	Mahalanobis Distance	Cook's Distance	Centered Leverage Value
77	.31724	.00022	.00195
78	2.00625	.00015	.01231
79	1.59353	.00001	.00978
80	1.37903	0	.00846
81	.67754	.00007	.00416
82	.67754	.00037	.00416
83	.16208	.00002	.00099
84	.72637	.00031	.00446
85	1.40826	.00012	.00864
86	1.59353	.00013	.00978
87	1.59353	.00013	.00978
88	1.37903	.00024	.00846
89	1.37903	.00024	.00846
90	.67754	.00037	.00416
91	2.37024	.00058	.01454
92	1.31135	.00128	.00805
93	1.31135	.00009	.00805
94	1.40826	.0006	.00864
95	1.40826	.0006	.00864
96	1.40826	.00002	.00864
97	.57629	.00055	.00354
98	.57629	.00055	.00354
99	2.18317	.00203	.01339
100	1.37903	.00126	.00846
101	1.37903	.00008	.00846
102	1.37903	.00126	.00846
103	1.06686	0	.00655
104	6.40021	.01109	.03927
105	.76303	.00011	.00468
106	.39494	.00018	.00242
107	.78993	0	.00485
108	1.4043	.00144	.00862
109	1.4043	.00144	.00862
110	4.34817	.00659	.02668
111	.72637	.00055	.00446
112	.72637	.00084	.00446
113	1.40826	.00199	.00864
114	.67754	.00062	.00416
115	.67754	.00093	.00416
116	.67754	.00062	.00416
117	.57629	.00117	.00354
118	2.03843	.00035	.01251

Case Number	Mahalanobis Distance	Cook's Distance	Centered Leverage Value
119	1.37903	.00177	.00846
120	1.37903	.00177	.00846
121	.47806	.00088	.00293
122	.74792	.00099	.00459
123	2.56878	.00247	.01576
124	.72637	.0012	.00446
125	1.40826	.00263	.00864
126	.57629	.00202	.00354
127	.57629	.00055	.00354
128	.57629	.00202	.00354
129	.57629	.00202	.00354
130	.83733	.00316	.00514
131	3.48968	.01578	.02141
132	1.31135	.00239	.00805
133	.72637	.00211	.00446
134	1.40826	.00199	.00864
135	4.89851	.0057	.03005
136	2.85871	.00204	.01754
137	1.37903	.00238	.00846
138	.67754	.00222	.00416
139	.20584	.00385	.00126
140	.57629	.00253	.00354
141	.57629	.00253	.00354
142	7.05832	.02287	.0433
143	.00931	.00068	.00006
144	2.9862	.00594	.01832
145	4.89851	.0094	.03005
146	3.77711	.01246	.02317
147	2.54796	.00544	.01563
148	1.2094	.04952	.06263
149	7.45872	.02003	.04576
150	1.54044	.00569	.00945
151	6.0171	.01202	.03691
152	.57629	.00311	.00354
153	4.40563	.0154	.02703
154	3.45676	.01296	.02121
155	3.17362	.01765	.01947
156	.86167	.00826	.00529
157	6.57859	.03221	.04036
158	3.82668	.01566	.02348
159	1.99636	.00819	.01225
160	4.89851	.01956	.03005

Case Number	Mahalanobis Distance	Cook's Distance	Centered Leverage Value
161	6.61858	.0365	.0406
162	4.17889	.0213	.02564
163	1.95086	.0851	.06718
164	1.43185	.03501	.00878

Table H2

Durbin-Watson Test

Model Summary^b



Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.677 ^a	.458	.452	.53527	1.728

a. Predictors: (Constant), PACSR_Score, MFIS_Score

b. Dependent Variable: BodyEsteem_Total_Score

Table H3

The Values of Variance Inflation Factor and Tolerance

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	1.694	.165		10.243	.000	1.367	2.020		
	MFIS_Score	.241	.057	.340	4.259	.000	.129	.353	.529	1.890
	PACSR_Score	.245	.049	.397	4.979	.000	.148	.342	.529	1.890

a. Dependent Variable: BodyEsteem_Total_Score

Appendix I

SPSS Output: Mediation Analysis

Table I1

The Mediating Effect of Social Comparison on Instagram Used and Body Image among Undergraduate Students

```
*****
Model : 4
  Y : B_Image
  X : IG_Use
  M : Soc_Com

Sample
Size: 164

*****
OUTCOME VARIABLE:
  Soc_Com

Model Summary
      R      R-sq      MSE      F      df1      df2      p
      .6863      .4710      .7320    144.2387      1.0000    162.0000      .0000

Model
      coeff      se      t      p      LLCI      ULCI
constant      .6481      .2593      2.4992      .0134      .1360      1.1602
IG_Use         .7906      .0658     12.0099      .0000      .6606      .9206

*****
OUTCOME VARIABLE:
  B_Image

Model Summary
      R      R-sq      MSE      F      df1      df2      p
      .6769      .4582      .2865     68.0917      2.0000    161.0000      .0000

Model
      coeff      se      t      p      LLCI      ULCI
constant      1.6935      .1653     10.2426      .0000      1.3670      2.0200
IG_Use         .2412      .0566      4.2589      .0000      .1293      .3530
Soc_Com         .2448      .0492      4.9794      .0000      .1477      .3418

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****

Direct effect of X on Y
      Effect      se      t      p      LLCI      ULCI
      .2412      .0566      4.2589      .0000      .1293      .3530

Indirect effect(s) of X on Y:
      Effect      BootSE      BootLLCI      BootULCI
Soc_Com      .1935      .0435      .1095      .2808

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

----- END MATRIX -----
```

**UNIVERSITI TUNKU ABDUL RAHMAN
FACULTY OF ARTS AND SOCIAL SCIENCE
DEPARTMENT OF PSYCHOLOGY AND COUNSELLING**

UAPZ 2023 Final Year Project I

Quantitative Research Project Evaluation Form

TURNITIN: *'In assessing this work you are agreeing that it has been submitted to the University-recognised originality checking service which is Turnitin. The report generated by Turnitin is used as evidence to show that the students' final report contains the similarity level below 20%.'*

Project Title: The Influence of Instagram Use on Body Image among Gen Z: The Mediating Role of Social Comparison	
Supervisor: Dr Ooh Seow Ling	
Student's Name: 1. Chua Xiao Qing 2. Elaze Ng Yong Xuan 3. Wong Yong Sing	Student's ID 1. 2203141 2. 2301799 3. 2301216

INSTRUCTIONS: Please score each descriptor based on the scale provided below: 1. Please award 0 mark for no attempt. 2. For criteria 7: Please retrieve the marks from “Oral Presentation Evaluation Form”.
--

1. INTRODUCTION (30%)	Max Score	Score
a. Background of the study - Fitting introduction of the subject - Appropriate introduction of the key variables	5%	
b. Hypotheses and/or research objectives are well constructed.	5%	
c. Research questions are well constructed.	5%	
d. Significance of the study is well explained.	5%	
e. Problem statements are well formulated.	5%	
f. Conceptual and/or operational definitions are well explained.	5%	
Subtotal	30%	/30%
Remark:		
2. LITERATURE REVIEW (30%)	Max Score	Score
a. Adequate evidences supported hypotheses and research questions.	10%	
b. Constructive discussion on publications in relation to the topic of study. Support of similar and/or dissimilar results.	10%	
c. Appropriate explication of theories: - Theoretical framework - Conceptual framework	10%	
Subtotal	30%	/30%
Remark:		
3. PROPOSED METHODOLOGY (10%)	Max Score	Score
a. Proposed research design/framework: - For experiment, proposed anticipated experimental manipulation, participant flow, treatment fidelity, baseline data, adverse events and side effects, assignment method and implementation, masking(*if applicable with the study design) - For non-experiment, propose the design of the study and possible data.	5%	
b. Proposed sampling procedures: - Justification of sampling method/technique. - Proposed location of study. - Plan to obtain ethical clearance approval.	5%	
c. Proposed sample size, power, and precision: - Justification of sample size. - Power analysis or other methods (if applicable).	5%	
d. Proposal of data collection procedures: - Inclusion and exclusion criteria - Procedures of obtaining consent - Description of data collection procedures - Agreement and payment (if any)	5%	
e. Proposed instruments/questionnaire: Description of instruments	5%	

• Scoring system • Meaning of scores • Reliability and validity			
<i>Sum</i>	25%	/25%	
Subtotal (Sum/5*10)	10%	/10%	
Remark:			
4. LANGUAGE AND ORGANIZATION (5%)	Max Score	Score	
a. Language proficiency	3%		
b. Content organization	1%		
c. Complete documentation (e.g., action plan, originality report)	1%		
Subtotal	5%	/5%	
Remark:			
5. APA STYLE AND REFERENCING (5%)	Max Score	Score	
a. 7 th Edition APA Style	5%	/5%	
Remark:			
*ORAL PRESENTATION (20%)	Score		
	Student 1	Student 2	Student 3
Subtotal	/20%	/20%	/20%
Remark:			
PENALTY	Max Score	Score	
Maximum of 10 marks for LATE SUBMISSION (within 24hours), or POOR CONSULTATION ATTENDANCE with supervisor.	10%		
*Late submission after 24 hours will not be graded			
	Student 1	Student 2	Student 3
**FINAL MARK/TOTAL	/100%	/100%	/100%

***Overall Comments:

Signature: _____

Date: _____

Notes:

1. **Subtotal:** The sum of scores for each assessment criterion
2. **FINAL MARK/TOTAL:** The summation of all subtotal score
3. Plagiarism is **NOT ACCEPTABLE**. Parameters of originality required and limits approved by UTAR are as follows:
 - (i) **Overall similarity index is 20% or below**, and
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 - (iii) Matching texts in continuous block must **not exceed 8 words**

Note: Parameters (i) – (ii) shall exclude quotes, references and text matches which are less than 8 words. Any works violate the above originality requirements will NOT be accepted. Students have to redo the report and meet the requirements in **SEVEN (7)** days.

*The marks of “Oral Presentation” are to be retrieved from “**Oral Presentation Evaluation Form**”.

**It is compulsory for the supervisor/examiner to give the overall comments for the research projects with A- and above or F grading.