

**Exploring the impact of Social Comparison on the relationship between LinkedIn
Engagement and Future Anxiety while controlling for Self-efficacy**

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Abstract

This study examines the impact of LinkedIn engagement on future anxiety among university students, with a focus on the roles of social comparison and self-efficacy. As LinkedIn becomes a primary platform for job searches, understanding its psychological effects is crucial to mitigating potential adverse outcomes. The research distinguishes between three LinkedIn user styles: passive, active-social, and active non-social. It was hypothesized that passive LinkedIn use positively influences future anxiety, while active usage styles negatively influence it. Furthermore, the study analysed the mediating effects of social comparison on the relationship between LinkedIn usage styles and future anxiety, controlling for self-efficacy.

A cross-sectional survey involving 62 participants aged 18 to 34 was conducted, revealing moderate to high scores on scales measuring future anxiety, social comparison, and self-efficacy. Significant positive relationships were found between social comparison and future anxiety ($r = .40, p < .001$), and between active social and active non-social LinkedIn usage and future anxiety ($r = .29, p < 0.01$ and $r = .36, p < 0.01$). Mediation analysis indicated that social comparison mediated the relationship between active social LinkedIn usage and future anxiety and that self-efficacy influences this relationship. This can be seen in the following output. The indirect effect ($b = 0.5064, p = .04, 95\% \text{ CI } [0.0195, 1.27]$), the direct effect $b = 1.8545, p < 0.001, 95\% \text{ CI } [0.4715, 3.27]$, the total effect ($b = 2.3609, p < 0.001, 95\% \text{ CI } [1.0093, 3.71]$) and the proportion effect ($b = 0.1989, p = .04, 95\% \text{ CI } [0.0116, 0.62]$). These findings highlight the importance of considering social comparison and self-efficacy when assessing LinkedIn's impact on student anxiety, suggesting the need for further research to better support students in their career development.

Keywords: *LinkedIn, Active Social, Active Non-Social, Passive, Social comparison, Future anxiety, Self-efficacy*

Exploring the impact of Social Comparison on the relationship between LinkedIn Engagement and Future Anxiety while controlling for Self-efficacy

The number of social media platforms and active users has increased dramatically in recent years, positioning social media (SM) as one of the most important segments of the Internet today (Aichner et al., 2021). The term was initially used in Tokyo in 1994, and it is currently widely used in daily speech (Aichner et al., 2021). The usage trends confirm its extensive recognition. According to Statista (2024b), the rate of social media usage worldwide in 2024 is 62.3%, with Northern Europe having the highest percentage at 81.7%.

Social Networking Sites

Social media encompasses various platforms, including blogs, forums, microblogs, and social networking sites (SNS) (Aichner et al., 2021). Thus, social media entails all types of online communication and information, with social networking sites (SNS) playing a significant role in facilitating social interactions through profile-based networking (Lian et al., 2018). The demand of SNS and their consequent popularity has grown significantly, with platforms such as Facebook with 2.5 billion monthly users, Instagram with one billion, and Twitter with 33 million active users monthly (Verduyn et al., 2020). Worldwide, individuals spend an average of two hours daily on SNS (Verduyn et al., 2020). SNS share three core features: users can create personal profiles, build networks, and engage with updated content from connections (Verduyn et al., 2020). They fulfil basic social needs, facilitate information sharing and enable individuals to express their values online (Park et al., 2017; Verduyn et al., 2020). SNS are praised for enhancing social relationships and supporting mental health by connecting people, allowing self-expression, reflecting on aspects of their identity and expressing emotions that may be relevant to their lived experience. However, concerns exist about miscommunication leading to isolation, and negative psychological impacts such as increased anxiety and depression (Seabrook et al., 2016). Longitudinal and meta-analytic studies suggest that SNS have small negative rather than positive effects on overall well-being (Seabrook et al., 2016). Thus, a better understanding and improvement of SNS are essential for promoting positive well-being.

Professional Social Networking Sites

SNS starting as platforms for socializing and meeting new people online, also evolved into professional networking sites. These platforms allow professionals to connect with other professionals in and outside of their domain, as well as to share information (personal and professional interests), aspirations, achievements, qualifications and skills (Ruparel et al., 2023). Due to the shift to professional networking sites, new career opportunities were

established, given the number of new networks. The process of networking has become easier and more global, making the process accessible for everyone with a digital device and a Wi-Fi connection (Ruparel et al., 2023). The significant demand of professional networking sites and its importance for nowadays recruitment can be seen in the development over the years with usage rising from 6% in 2002 to 96% today (Ruparel et al., 2023). In the U.S. a decade ago, nearly 110 million jobs and 20 million resumes were created and posted on job sites like LinkedIn, increasing exponentially (Ruparel et al., 2023). For instance, in 2017 Nakkri.com, India's largest e-recruitment site had 52 million active users (Ruparel et al., 2023). Since 2017, 90% of organisations and companies have used online recruitment platforms as well as 95% of employers who used LinkedIn for hiring (Ruparel et al., 2023). This website is the most popular professional networking site and is considered one of the best sources for finding quality candidates (Ruparel et al., 2023). It simplifies the creation of digital resumes, connects users with companies, and facilitates the hiring process (Carmack & Heiss, 2018; Topic: LinkedIn, 2023). Especially the user-friendly interface, the minimal risk of identity theft and the accessibility across devices contribute to its steady growth (Desautels, 2008; Topic: LinkedIn, 2023). LinkedIn is the 25th most visited platform globally and caters to both job seekers and employers for sharing job-related information (Carmack & Heiss, 2018). Individuals with higher education and income are more likely to engage with LinkedIn (Topic: LinkedIn, 2023). Therefore, given its benefits, growing user base, and influence, understanding LinkedIn is essential for job seekers and employers.

LinkedIn Engagement

To fully understand LinkedIn as a professional networking site, comprehending the usage patterns is crucial. Usage patterns on networking sites can be divided into passive and active use. Passive use can be defined as the process of consuming content without actively creating and engaging with it (Burke & Kraut, 2011), whereas active use can be defined as engaging with the site, creating content, or communicating with other users (Gerson et al., 2017). Moreover, a further distinction of active engagement into active social and active non-social use is made. Active social use includes behaviours such as commenting or chatting, whereas active non-social use only involves liking or tagging content (Gerson et al., 2017).

Research investigated that the different engagement styles on social media platforms or SNS lead to adverse psychological effects. A study by Taylor et al. (2023) showed that increased passive social media usage was connected to higher levels of anxiety as well as depression and stress. In a similar vein, a study by Lai et al. (2023) investigated that passive social media use was positively correlated with social anxiety.

Social Comparison

One potential pitfall of social networking sites is social comparison. This concept can be explained by the social comparison theory, stating that individuals compare themselves to others, to assess themselves, driven by motivations for self-evaluation, self-improvement and self-enhancement (Morse & Gergen, 1970; Verduyn et al., 2020). Although social comparison now seems to be a normal process for an individual to engage in, frequent comparison is linked to adverse outcomes - especially when one compares oneself to superiors which can easily happen on professional networking sites such as LinkedIn (Li, 2019). While using SNS, a substantial number of information is available to the users for comparison purposes such as career achievements and the social status of other profiles - easily leading to comparison (Aubry et al., 2024; Li, 2019). There are two main comparison types: the comparison to other individuals based on criteria where they appear to be better than oneself which is called “upward comparison”, or comparison to people worse than oneself which he coins “downward social comparison” (Aubry et al., 2024). SNS usage is generally associated with higher upward social comparisons (Wang et al., 2017). This might be explained by the fact that individuals tend to present themselves more positively on SNS, leading to a positive publication bias, ultimately related to an idealized impression of the self that favours the availability of a large number of posts in which individuals paint their life in the best light. This might lead to users primarily encountering upward social comparison (Aubry et al., 2024). This aligns with the literature review from Z. Chen et al. (2023) which stated that individuals tend to behave in upward social comparison when they use social media, eventually leading to anxiety. Thus, indicating that upward social comparison mediates the relationship between social networking sites and the anxiety level of an individual (z. Chen et al., 20203). Especially young adults, who compare themselves on social network sites to others who appear to be more successful than themselves, might perceive a gap between the self and the success of others, producing a threat through a contrasting effect, which might have negative effects on mental health. Therefore, upward social comparisons on social media might explain several negative impacts on the self, such as emotions of anger, depression, or envy (Aubry et al., 2024; Park et al., 2021).

Additionally, some research states that passive use is related to increased social comparison and that active use conversely leads to decreased social comparison (Nisar et al., 2019). However, other studies have found that both active and passive Facebook use is related to greater social comparison (Faelens et al., 2019).

In a wider perspective, social media use could be beneficial for some individuals while having adverse effects for others. On the one hand, the “rich get richer” hypothesis states that individuals who exhibit some psychological advantages from the beginning might be positively affected. On the other hand, the effect can go both ways for those who already face difficulties. According to the “poor get poorer” hypothesis, these individuals might experience negative effects that would worsen their state (e.g. Kraut et al., 2002), while according to the “poor get richer” hypothesis, they might benefit from social media use (Aubry et al., 2024). Therefore, one can expect that people experiencing high levels of self-efficacy experience lower levels of social comparison.

Future Anxiety

Consequently, by raising fears about one's professional prospects and future achievement, social comparison on LinkedIn may exacerbate anxiety about the future. According to Rabei et al. (2020), future anxiety is a condition marked by apprehension, uncertainty, fear, worry, and concern about possible negative changes in one's distant personal future. Individuals who experience future anxiety can suffer on the cognitive level (such as impairment of expectancy of positive outcomes, ultimately lessening the probability of success) as well as on the behavioural level (for instance, passive waiting, withdrawal from risky activities or repression) (Rabei et al., 2020). Repeated exposure to the professional accomplishments and successes of others may lead to a feeling of urgency and inadequacy over one's career path (Li, 2019). The phenomenon of future-oriented concern is especially prevalent among university students and early-career professionals who are currently at the crucial stage of establishing their professions (Chomani et al., 2021). Investigating the profiles of others who seem to be further advanced in their professional paths can result in uncertainties about one's own future, intensifying tension and anxiety around forthcoming career choices and prospects (Li, 2019). According to a survey conducted by the American College Health Association (Antshel, 2020), university students particularly face anxiety throughout the final years of their college education. They identified that more than half of all college students surveyed report having experienced overwhelming anxiety regarding their future during the final year, making anxiety the most commonly reported mental health issue among college students. In a similar vein, another study by Pisarik et al. (2017) found that SNS, including LinkedIn, served as platforms for students to compare their career progress against others, leading to heightened future anxiety. As stated above, individuals with higher levels of self-efficacy might experience lower levels of social comparison (Marsh et al., 2020). However, individuals with higher levels of experienced self-efficacy might experience

lower levels of future anxiety hypothesised and successfully tested by Rabei et al. (2020). Furthermore, Sedik (2012) investigated on a sample of 249 university students that there is a negative relationship between self-efficacy and future anxiety which aligns with the findings of Wylds (2017) and Al-Ruwaili et al. (2018). To understand these effects of self-efficacy, the variable is going to be included as a control variable in the present study.

Self-Efficacy

Self-efficacy, as described in the literature, acts as a possible counteraction for both social comparison and future worry (Heslin & Klehe, 2006; Wylds 2017; Al-Ruwaili et al., 2018; Sedik, 2012). The term is used to describe an individual's belief in their own competence to successfully perform a certain task or secure employment in their desired field (Heslin & Klehe, 2006). Alongside the goals individuals set for themselves, self-efficacy stands out as a significant predictor of motivation across various endeavours (Heslin & Klehe, 2006). One's level of self-efficacy strongly correlates with the effort one invests, the training one undergoes, and one's eventual performance in tasks or jobs (Heslin & Klehe, 2006).

Engaging in social comparison with individuals who have achieved success does not always result in negative consequences; rather, it can enhance one's self-efficacy. Bandura et al. (1999) suggest that successful individuals might serve as role models for others, perhaps enhancing their self-efficacy views. Thereby, self-efficacy serves as a protective barrier against the adverse consequences of social comparison, as demonstrated by Bandura et al. (1999). This conviction can assist individuals in sustaining concentration on their specific objectives and endeavours, instead of being disheartened by the accomplishments of others. As a result, individuals who have higher self-efficacy are more likely to have reduced levels of anxiety in the future because they have confidence in their ability to achieve their desired results (Tahmassian & Moghadam, 2011).

Target group

LinkedIn primarily appeals to individuals who have attained greater levels of education and income, with a substantial share of its user base consisting of university students and graduates (LinkedIn, 2023). Notably, 81.7% of LinkedIn users belong to the age bracket of 18 to 34 (Statista, 2023). This group is particularly relevant because university students, who are already dealing with concerns about their future plans after graduation, constitute a significant portion of LinkedIn's user base.

Research regularly demonstrates that university students frequently encounter higher-than-average levels of concern about their future, which can impede their academic advancement (Chomani et al., 2021). Moreover, studies suggest that fourth-year students

encounter increased levels of worry in comparison to their first-year peers (Chomani et al., 2021; Downing et al., 2020). One possible reason for this trend may be ascribed to the upcoming transfer into the workforce, which brings about new life situations and uncertainties. Furthermore, there is a correlation between reduced levels of self-efficacy in students and heightened levels of anxiety, as indicated by Morales-Rodríguez et al. (2019). This correlation emphasises the significance of pupils having confidence in their own talents/capabilities. In the absence of such conviction, anxiety is expected to arise, considering the perceived difficulties and uncertainties that lay ahead.

There is a lack of research on the relationship between how university students use LinkedIn, their tendency to compare themselves to others, and their concern about the future. The relationship between social comparison and academic performance is strongly connected, and fear about the future has an opposite effect on levels of social comparison. However, the strength of this link fluctuates depending on the academic year (Rabei et al., 2020). Addressing anxiety in college students may decrease social comparison and increase intentions for job searches, thereby enhancing career preparedness. According to Fukubayashi and Fuji (2021), college students in the USA experience more worry about career planning than prior generations. Consequently, there is an increasing need for universities to provide enhanced employment advancement opportunities. The majority of LinkedIn's user base consists of individuals with higher levels of education and wealth, particularly university students and graduates. This highlights the platform's crucial role in assisting individuals in navigating the difficulties and uncertainties of transitioning into their professional lives after completing their education.

Current Study

In today's world, online recruitment platforms such as LinkedIn play a crucial role in facilitating job searches and career advancements. LinkedIn, with its expansive network and professional focus, has been found to provide its users with opportunities to showcase their skills, qualifications, and career aspirations (Ruparel et al., 2023). As the most widely used professional networking site globally, LinkedIn connects job seekers with employers, simplifies the application process, and supports career growth (Carmack & Heiss, 2018; Topic: LinkedIn, 2023).

SNS in general, have been investigated and their influence on mental health regarding different factors. Research found significant adverse effects of social comparison on social networking sites on mental health (Verduyn et al., 2020; (Soohinda et al., 2021). Furthermore, studies investigated that social networks have an influence on the anxiety level of individuals

(Blasco et al., 2020; Soohinda et al., 2021). However, there is currently a lack of research on the concept of future anxiety specifically in relation to SNS. Additionally, self-efficacy was found to diminish the effects of both social comparison as well as the level of future anxiety (Lewis et al., 2020; Yukai, 2023). Nevertheless, there is a significant gap in research about different engagement styles on social networks and their influences. Especially, the division between passive, active social, and active non-social remains vaguely investigated. Therefore, despite the huge influence of the company in terms of job seeking, it appears that as of now there is no extensive literature on LinkedIn engagement, social comparison, future anxiety, as well as the influences of the control variable self-efficacy.

Therefore, the emphasis of this research was on the relationship between LinkedIn engagement, social comparison, future anxiety and self-efficacy as a control variable. To find out to what extent LinkedIn engagement contributes to future anxiety, what the role of social comparison is on this relationship, and what controlling effects self-efficacy has, a survey study was conducted. The following research question was central: “How does social comparison affect the relationship between LinkedIn engagement and future anxiety, taking into account self-efficacy as a control variable?/How does LinkedIn Engagement influence university students' future anxiety levels, mediated by social comparison while controlling for individual differences in self-efficacy?”

Main effects

H₁: Passive LinkedIn use positively influences future anxiety.

H₂: Active Social LinkedIn use negatively influences future anxiety.

H₃: Active Non-Social LinkedIn use negatively influences future anxiety.

Mediating Effects

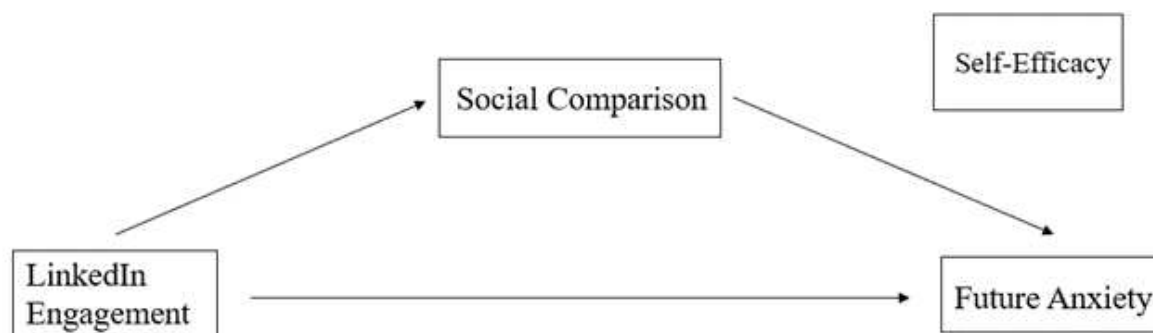
H₄: Social comparison mediates the relationship between passive LinkedIn use and future anxiety while controlling for self-efficacy.

H₅: Social comparison mediates the relationship between active social LinkedIn use and future anxiety while controlling for self-efficacy.

H₆: Social comparison mediates the relationship between active non-social LinkedIn use and future anxiety while controlling for self-efficacy.

Mediation Model 1

Figure 1: *The relationship between LinkedIn engagement (passive, active social, active non-social) (IV) and future anxiety (DV) with social comparison as the mediating variable and controlling for self-efficacy*



Methods

Study design

In this study, an online survey study was conducted among students to examine the relationship between LinkedIn engagement as the independent variable (passive, active social, active non-social LinkedIn use), future anxiety and social comparison as the mediator while controlling for self-efficacy.

Participants

The participants were gathered via non-probability sampling, by using convenience sampling. The convenience sampling was conducted via social media, personal contacts, and the SONA system of the University of Twente on which the study was published. In addition to convenience sampling, snowball sampling was used for gathering participants. A minimum age of 18 and the ability to understand the English language were requirements for participation. Another requirement was to have a LinkedIn account which was checked with a control question.

In Table 1, the frequencies for the age, gender, nationality, and study level of the participants are shown. In total, 137 participants conducted the survey. However, 45 participants needed to be excluded due to the lack of a LinkedIn account, two participants needed to be excluded due to not giving accepting the consent questions and a total of 26 participants needed to be excluded due to not finishing the survey. Thus, the analysis was conducted on a final sample of 62 participants (Table 1).

Table 1:

Frequency Table for Age, Gender, Nationality and Study Level

Characteristics		N	%
Gender	Female	40	64.5
	Male	20	32.3
	Diverse	0	0
	Prefers not to say	2	3.2
Age	18-20	7	11.2
	21-23	35	56.5
	24-26	15	24.1
	27-28	2	3.2
	34	2	3.2
	62	1	1.6
Education Level	High School	34	54.8
	Apprenticeship	2	3.2
	Bachelor	18	29.0
	Master	8	12.9

N = 62

Characteristics	N	%	
Nationality	German	41	66.1
	Dutch	12	19.3
	Spanish	2	3.2
	Japanese	1	1.6
	Korean	1	1.6
	Ukrainian	1	1.6
	Kazakhstan	1	1.6
	Prefers not to say	3	4.8

$N = 62$

Materials

The materials mentioned in the following are part of the cross-sectional online survey for the study, which were created in Qualtrics. Besides demographical questions, the consent form and a control question regarding having LinkedIn, the survey consisted of four existing measurement scales that measured LinkedIn engagement (passive, active social and active non-social use), social comparison, future anxiety and self-efficacy. Besides the Link or QR code of the questionnaire a laptop, phone or tablet was needed to fill out the survey.

Furthermore, a working internet connection, sufficient skills in English as well as having a LinkedIn account have been a requirement.

LinkedIn Engagement

The LinkedIn engagement of the participants was measured using the *Passive and Active Use Measure (PAUM)*. This measure consists of three subscales: active social use, active non-social use, and passive use. The first one is called active social use (Q1: “Posting status updates”, Q2, Q3, Q6, Q12). In this subgroup, the highest possible number to acquire is

25. The second subscale is called active non-social use (Q5, Q7, Q9, Q10: “Tagging videos”). For this subscale, the highest number to be obtained is 20. The last subscale is called passive use (Q4: “Checking to see what someone is up to”, Q8, Q11, Q13) with a highest possible number of 20 (Gerson et al., 2017). The scores for each subscale were computed using a Likert-Scale ranging from “never” to “frequently”. Higher scores in the subscales indicate a stronger identification with the respective subgroup (Gerson et al., 2017). Gerson et al. (2017) revealed that “The factors of the PAUM demonstrated acceptable internal reliability and good discriminant validity with a Cronbach’s alpha over .85.

Social comparison

To understand the level of social comparison the participants are experiencing, the *Iowa-Netherlands Comparison Orientation Scale (INCOM)* was integrated into the survey. Respondents were asked to respond to 11 questions about how they perceive their social comparison (e.g. Q7: “I like to frequently exchange opinions and experiences with others.”). The response options were obtained using a scale with Likert-Scale response options ranging from “I disagree strongly” to “I agree strongly”. The total scores for the subscales were derived by summarizing the responses from all the items. The maximum score achievable was 55 (Schneider & Schupp, 2011). The Cronbach’s alpha’s were .91 overall and .71 to .85 for the subscales, identifying a good reliability and validity (Schneider & Schupp, 2011).

Future anxiety

To assess future anxiety, the “*Future Anxiety and Usage Scale (FAS)*” was integrated into the survey. Respondents were asked to respond to 29 questions about how they perceive future anxiety (e.g. Q1: “My future is uncertain.”). The responses were obtained using a scale with Likert-Scale response options ranging from 0 (“does not apply at all”) to 6 (“completely true”). The total score on the scale was determined by summing the responses to all 25 items. A higher score indicated a greater degree of future concern. The FAS had a minimum score of 0 and a maximum score of 140, according to S & Hock (2023). The questionnaire demonstrated strong reliability and validity, as evidenced by a Cronbach's alpha value of .85 (S & Hock, 2023).

Self-efficacy: Career Decision Self-Efficacy Scale-Short Form (CDSE-SF)

To assess self-efficacy, the *Career Decision Self-Efficacy Scale-Short Form (CDSE-SF)* was integrated into the survey. Respondents were asked to respond to 29 questions about how they perceive their self-efficacy (e.g. Q23: “Find information about graduate or professional schools.”). The responses range from one (“no confidence at all”) to (“complete confidence”) (Miguel et al., 2013). The total score on the scale was calculated by adding the

responses with the highest possible number of 145 (Miguel et al., 2013). High scores on the *CDSE-SF* indicated high levels of self-efficacy, whereas low scores indicated low levels of self-efficacy. The *Career Decision Self-Efficacy Scale-Short Form (CDSES-SF)* is a reliable and valid tool for assessing career decision-making self-efficacy university students (Makransky et al., 2017). The overall Cronbach alpha displays good reliability and validity with a value of .85 (Miguel et al., 2013).

Procedure

The online survey was developed and distributed using the platform Qualtrics. Before survey deployment, the research underwent review and approval by the BMS ethics committee (request number 240540). Once permission was obtained, participants were recruited and provided with a link to access the Qualtrics survey. The survey was available from April 14th to May 21st. Furthermore, the survey was spread via WhatsApp and Instagram.

At the beginning of the survey, participants were briefed about the study, the researchers' expectations, and their rights as participants. They were then asked to provide consent to participate. Subsequently, demographic questions were posed, covering age, gender, nationality, and study level. Following informed consent and demographic inquiries, participants were presented with measurement scales about LinkedIn engagement, social comparison, self-efficacy, and future anxiety. Participants responded to multiple statements and questions within these scales. To avoid missing responses and incomplete scales, the participants had to provide all responses to finish the tests. However, it was ensured that the participants could also withdraw whenever they wanted. Upon completion of all survey components, participants were thanked for their participation.

Data Analysis

The output of the questionnaire was imported into RStudio (2023.03. 0-daily+82. pro2 for Windows 10+ (installer-less)) for the analyses. Firstly, descriptive statistics were examined to gain insights into the participants and their responses. This included analysing gender distribution, as well as assessing the overall age range, mean, and standard deviation.

Next, the scales in the questionnaire are scored and summarized. The participants' total scores on the future anxiety scale were estimated by calculating the mean score of all items. LinkedIn use was divided into three subscales: active social, passive and active non-social. Based on the scoring of the questionnaire, the mean scores for the subscales have also been investigated. Furthermore, all the mean and total scores were estimated for the remaining questionnaires.

The analysis involved conducting a multiple regression analysis, wherein LinkedIn use (passive, active social and active non-social) serves as the independent variable, social comparison as the mediator, and future anxiety as the dependent variable. The controlling variable was the level of self-efficacy. This approach aims to evaluate both the direct impact of LinkedIn use on future anxiety and the indirect effect mediated through social comparison while being controlled by self-efficacy.

Before starting with the analysis of the inferential statistics, the parametric assumptions were tested on the obtained data (Appendix B). The initial assumption pertains to the requirement of proper independence (Van Den Berg, 2022). Residuals must exhibit independence from one another to facilitate a linear regression analysis (Van Den Berg, 2022). Another key assumption is homogeneity of variance, indicating that residual variance remains constant across all levels of extraversion (Van Den Berg, 2022). Additionally, the assumption of linearity posits a significant relationship between variables (Van Den Berg, 2022). The third assumption, normality, mandates that data residuals follow a normal distribution. Before proceeding with data analysis, the fulfilment of these four assumptions was assessed (Van Den Berg, 2022). Based on Appendix B one can say that all assumptions are met. After verifying the parametric assumptions, a linear regression was performed for hypotheses 1-3. The hypothesized effects are confirmed and results are considered significant when the regression coefficients for the predictor variables (LinkedIn use), as well as their interaction terms, are statistically significant ($p < 0.05$), indicating a meaningful relationship between the variables.

In order to evaluate hypotheses 4-6 a bootstrapping analysis was conducted. For every hypothesis (4-6), two analyses were conducted: with the controlling variable self-efficacy and without the controlling variable to assess the differences. Therefore, to explore whether social comparison mediates the relationship between LinkedIn engagement and future anxiety, a mediation analysis was conducted. The indirect effect (mediated effect) was calculated by multiplying the coefficient of the LinkedIn engagement from the mediator model by the coefficient of social comparison from the outcome model. The direct effect was taken as the coefficient of passive behaviour from the outcome model. The total effect was the sum of the indirect and direct effects. The indirect, direct, and total effects were computed and printed, providing insights into the mediation process and the role of self-efficacy. The results indicated whether social comparison mediated the relationship between LinkedIn engagement and future anxiety and how self-efficacy influenced these dynamics.

Results

To describe the results of the analyses of the gathered data in this study, the mean scores, standard deviations and the minimum as well as the maximum scores for the variables passive, active social, active non-social, social comparison, future anxiety and self-efficacy are displayed in Table 1. The descriptives indicate that most of the participants engage in passive usage behaviours ($M = 13.67$, $SD = 3.84$), followed by active social ($M = 9.43$, $SD = 3.84$) and active non-social behaviours ($M = 5.63$, $SD = 3.13$). Furthermore, the sample displayed high levels of future anxiety ($M = 107$, $SD = 23.31$), social comparison ($M = 92.20$, $SD = 14.50$) and self-efficacy ($M = 40.97$, $SD = 6.87$).

Table 1

Descriptive Statistics

Variables	Mean	SD	Min	Max	Max Scale Value
Passive	13.67	3.84	4	20	20
Active Social	9.43	3.84	5	21	25
Active Non-Social	5.63	3.13	4	18	20
Social comparison	40.97	6.87	23	52	55
Future anxiety	107	23.31	68	167	196
Self-efficacy comparison	92.20	14.50	46	118	125

Correlations

To understand the correlations of the variables multiple analyses were conducted. Diagram 1 presents the Correlation Matrix of all variables, providing an overview of their relationships. Table 2 displays the Pearson Correlation Matrix for all variables, while table 3 presents the Partial Correlation Matrix, controlling for self-efficacy. Table four highlights the disparities between the Pearson and Partial Correlation Matrices.

Starting with Table 2, passive LinkedIn use has a weak positive relationship ($r = .18$, $p = .08$) with future anxiety, although this correlation lacks statistical significance. In contrast,

both active social LinkedIn use and active non-social LinkedIn use display moderate positive relationships with future anxiety, with correlation coefficients of $r = .29, p < 0.01$ and $r = .36, p < 0.01$. Moreover, social comparison demonstrates a moderate positive relationship ($r = .40, p < 0.01$) with future anxiety. Conversely, self-efficacy exhibits a weak negative relationship ($r = -.22, p < 0.05$) with future anxiety.

Diagram 1

Circle Diagram of the Correlations

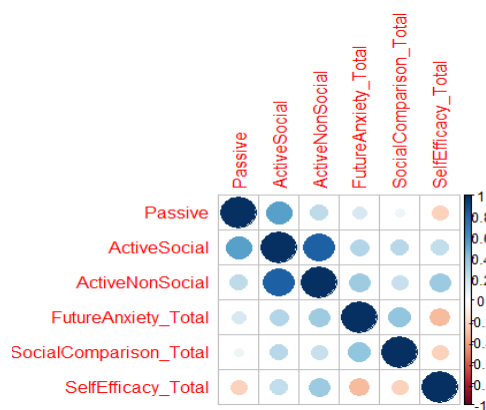


Table 2

Pearson Correlation Matrix

Variable	Passive	Active Social	Active Non-Social	Social Comparison	Future Anxiety	Self-efficacy
Passive	-					
Active Social	.54**	-				
Active Non-Social	.26*	.81**	-			
Social Comparison	.08	.27*	.23	-		
Future Anxiety	.18	.29*	.36**	.40**	-	
Self-efficacy	-.22*	.25**	.36**	-.22	-.32*	-

Note. * $p < 0.05$. ** $p < 0.01$.

Table 3 presents the Partial Correlation Matrix controlling for self-efficacy, illustrating the relationships with the five variables and the significant effects are stated in the following.

A significant positive relationship was observed between passive and active social LinkedIn use ($r = .63, p = .04$). Moreover, a highly significant positive correlation was evident between active social and active non-social ($r = .72, p < 0.01$). Lastly, a significant positive correlation was identified between active non-social and future anxiety ($r = .35, p = .00$).

Table 3

Partial Correlation Matrix Controlling for Self-efficacy

Variables	Passive	Active Social	Active Non-Social	Future Anxiety	Social Comparison
Passive	-				
Active Social	.63*	-			
Active Non-Social	-.25	.72**	-		
Future Anxiety	-.04	-.03	.35**	-	
Social Comparison	-.23	.26	-.04	.21	-

Note. * $p < 0.05$. ** $p < 0.01$.

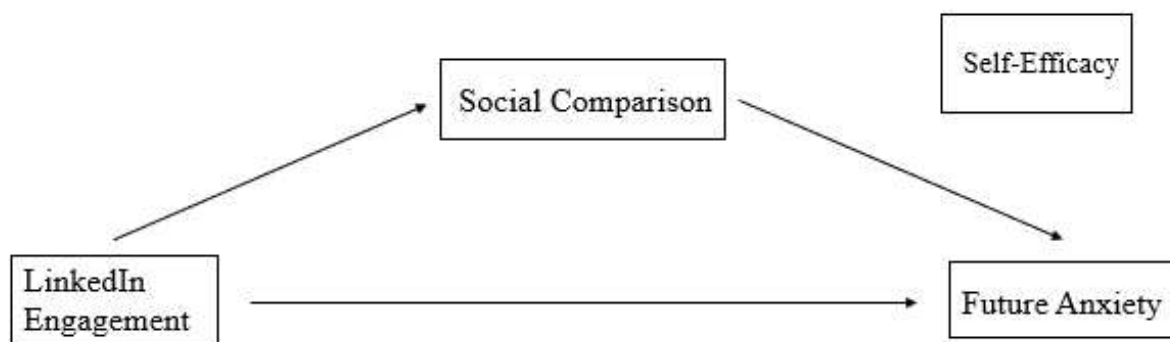
Table 4 highlights the differences between the Pearson correlation matrix and the partial correlation matrix, the latter of which controls for self-efficacy. These differences reveal the impact of self-efficacy on the relationships between the variables: passive, active social, active non-social, future anxiety, and social comparison. In the following, the output will be discussed. The observed difference in the correlation between passive and active non-social behaviour is significant. It suggests that self-efficacy plays a role in moderating the relationship. Furthermore, the observed difference in the correlation between active social use and future anxiety is significant with a moderately positive correlation when controlling for self-efficacy.

Table 4*Difference between Pearson and Partial Correlation Matrices*

Variables	Passive	Active Social	Active Non-Social	Future Anxiety	Social Comparison
Passive	0.00				
Active Social	- 0.09	0.00			
Active Non-Social	0.51	0.09	0.00		
Future Anxiety	0.22	0.33	0.01	0.00	
Social Comparison	0.31	0.02	0.27	0.19	0.00

*N = 62***Regression Analysis****Mediation Analysis**

The following Figure 2 shows the model which was analysed. LinkedIn Engagement stands for passive, active social and active non-social LinkedIn use.

Figure 2:*Mediation Model***Regression Analysis***Main Effects*

Starting with the main effects, the first hypothesis stated that passive LinkedIn use increased future anxiety. The model was not statistically significant, $F(1, 60) = 1.94$, $p = .17$, and explained only a small proportion of the variance in Future anxiety, $R^2 = .03$, adjusted $R^2 = .02$. The regression coefficient for passive LinkedIn use was positive ($b = 1.08$, $SE = 0.77$),

but not statistically significant, $t(60) = 1.39, p = .17$. This suggests that there is no significant evidence to support the hypothesis that passive LinkedIn use leads to an increase in future anxiety which is why the first hypothesis can be rejected.

To test hypothesis 2, a linear regression was conducted to evaluate the relationship between active social LinkedIn use and future anxiety. Contrary to the second hypothesis, which proposed that active social LinkedIn use negatively influences future anxiety, the results indicated a positive and significant relationship. The model was statistically significant, $F(1, 60) = 5.51, p = .02$, and explained a modest proportion of the variance in future anxiety, $R^2 = .08$, adjusted $R^2 = .07$. The regression coefficient for active social LinkedIn use was positive ($b = 1.76, SE = 0.75$), and statistically significant, $t(60) = 2.35, p = .02$, suggesting that higher active social LinkedIn use is associated with increased levels of future anxiety. These results suggest that greater engagement in active social LinkedIn use is associated with higher levels of Future anxiety which is why the hypothesis can be rejected.

Moreover, a linear regression was performed to assess the impact of active non-social LinkedIn use on future anxiety. Contrary to the hypothesis, which proposed that active non-social LinkedIn use negatively impacts future anxiety, the results indicated a positive and significant relationship. The model was statistically significant, $F(1, 60) = 8.67, p = .01$, and explained a moderate proportion of the variance in future anxiety, $R^2 = .13$, adjusted $R^2 = .11$. The regression coefficient for active non-social LinkedIn use was positive ($b = 2.64, SE = 0.90$), and statistically significant, $t(60) = 2.94, p = .001$, suggesting that higher active non-social LinkedIn use is associated with increased levels of future anxiety. Therefore, the hypothesis can be rejected.

Mediating Effects

To analyse hypotheses 4 to 6, a mediation analysis using bootstrapping was conducted. Hypothesis 4 stated that social comparison mediates the relationship between passive LinkedIn use and future anxiety while controlling for self-efficacy. For the indirect effect of passive LinkedIn use on future anxiety mediated through social comparison (Average Mediation Effect) no evidence of a significant mediation effect was found ($b = 0.18, p = .57, 95\% \text{ CI } [-0.46, 0.92]$). For the direct effect of passive LinkedIn use on future anxiety (Average Direct Effect) no evidence for a statistically significant effect is found as well ($b = 0.86, p = 0.22, 95\% \text{ CI } [-0.54, 2.24]$). Also, for the total effect no significant effect could be found ($b = 1.04, p = .19, 95\% \text{ CI } [-0.48, 2.61]$). Lastly, for the proportion of the total effect that is mediated by enthusiasm is also not statistically significant ($b = 0.16, p = .53, 95\% \text{ CI } [-1.77, 2.42]$). Since the hypothesis stated that self-efficacy has an influence as the control

variable on the mediation model, the same analysis was conducted with the control variable to investigate the difference. The indirect effect while controlling for self-efficacy appeared to be ($b = 0.06, p = .79, 95\% \text{ CI } [-0.53, 0.67]$). The direct effect ($b = 0.63, p = .37, 95\% \text{ CI } [-0.77, 1.96]$), the total effect ($b = 0.69, p = .36, 95\% \text{ CI } [-0.81, 2.15]$) and the proportion of the total effect ($b = 0.08, p = .74, 95\% \text{ CI } [-3.31, 3.90]$). Therefore, all effects have been non-significant which is why the hypothesis 4 can be rejected.

The fifth hypothesis stated that social comparison mediates the relationship between active social LinkedIn use and future anxiety while controlling for self-efficacy. Without controlling for self-efficacy, the indirect effect of active social LinkedIn use and future anxiety mediated through social comparison appeared to be significant ($b = 0.56, p = .03, 95\% \text{ CI } [0.03, 1.31]$). Additionally, the direct effect of active social LinkedIn use on future anxiety (Average Direct Effect) no evidence for a statistically significant effect is found ($b = 1.22, p = .102, 95\% \text{ CI } [-0.28, 2.60]$). The total effect of the model showed significant effects ($b = 1.78, p = .02, 95\% \text{ CI } [0.25, 3.25]$). Lastly, for the proportion of the total effect that is mediated by social comparison showed statistically significant effects ($b = 0.30, p = .048, 95\% \text{ CI } [0.01, 1.42]$). To analyse the effects of the controlling variable on the model the same analysis was conducted with the controlling variable. The results showed that all effects appeared to be significant. The indirect effect ($b = 0.51, p = .04, 95\% \text{ CI } [0.02, 1.27]$), the direct effect $b = 1.85, p < 0.001, 95\% \text{ CI } [0.47, 3.27]$, the total effect ($b = 2.36, p < 0.001, 95\% \text{ CI } [1.01, 3.71]$) and the proportion effect ($b = 0.19, p = .04, 95\% \text{ CI } [0.01, 0.62]$). Therefore, hypothesis 5 can be retained.

The sixth hypothesis stated that social comparison mediates the relationship between active non-social LinkedIn use and future anxiety while controlling for self-efficacy. The indirect effect without controlling for self-efficacy between active non-social LinkedIn use and future anxiety mediated through social comparison did not find a significant effect ($b = 0.57, p = .07, 95\% \text{ CI } [-0.04, 1.44]$). Furthermore, the direct effect between active non-social LinkedIn use and future anxiety found statistically effects ($b = 2.07, p = .01, 95\% \text{ CI } [0.418, 3.86]$). The total effect showed statistically significant effects between active non-social LinkedIn use and future anxiety ($b = 2.64, p < 0.001, 95\% \text{ CI } [0.99, 4.48]$). Finally, the proportion of the total effect that is mediated by social comparison is found to be not statistically significant ($b = 0.21, p = .07, 95\% \text{ CI } [-0.02, 0.62]$). Moreover, the control variable was included into the model. The indirect effect of active non-social LinkedIn use mediated through social comparison was found to be ($b = .52, p = 0.08, 95\% \text{ CI } [-0.06, 1.45]$). The direct effect of active non-social LinkedIn use ($b = 3.47, p < 0.001, 95\% \text{ CI } [1.86, 5.13]$)

remained statistically significant, whereby the total effect also remains statistically significant ($b = 3.99, p < 0.001, 95\% \text{ CI } [2.42, 5.67]$). Lastly, the proportion of the total effect mediated by social comparison remains statistically non-significant after controlling for self-efficacy ($b = 0.12, p = .09, 95\% \text{ CI } [-0.02, 0.35]$). Based on the output the hypothesis that social comparison mediates the relationship between active non-social LinkedIn use and future anxiety while controlling for self-efficacy can be rejected.

Discussion

Theoretical Reflection & Implications

This study investigated LinkedIn usage among young individuals, specifically targeting students due to their heightened risk of experiencing the general negative consequences associated with social networking sites (Noori et al., 2023). The research focused on the relationship between three types of LinkedIn use (active social, active non-social, and passive) and their effect on future anxiety. Additionally, it explored whether social comparison mediates this relationship while controlling for individual differences in self-efficacy. Previous studies have suggested that different usage styles may influence the degree of future anxiety and indicated a potential mediation effect. However, most research has concentrated on general social networking sites rather than LinkedIn specifically. Therefore, this work holds significant importance in gaining a deeper understanding of this particular platform, to counteract potential harmful effects for the individuals.

Implications

Interesting results have been found by conducting descriptive analyses regarding the three measurement scales of LinkedIn use. It can be concluded that the passive LinkedIn use on LinkedIn is moderate in the sample. For active social LinkedIn use, the mean is lower than for the passive type, and active non-social use is the lowest. This aligns with the general tendencies in the population stating that most people engage in passive behaviours on social media (Statista, 2024a). Moreover, the respondents display a high level of future anxiety and an overall high level of social comparison. However, the self-efficacy scale shows a notable variability, indicating that some users feel more self-efficacy than others.

The hypothesis 1 to 3, which stated that passive LinkedIn use increases future anxiety whereby active social and active non-social LinkedIn use decrease future anxiety, can all be rejected which contradicts current study findings. The study of Kim et al. (2020) for instances found that passive screen time use and its association with anxiety disorders as well as mood disorders, while active screen time use shows no significant effects. Additionally, the study

from Weng et al. (2022) showed that high levels of passive consumption are strongly connected to anxiety symptoms. However, a study by Scarpulla et al. (2023) found contradicting effects. The study showed that active social media use is associated with more severe anxiety and stress, while passive use is unrelated to these outcomes. Important to add is that LinkedIn as a SNS is very specific, leading to original effects. Moreover, anxiety in literature is often used as a broad concept while this study tried to investigate future anxiety as a more specific variable. Therefore, this study led to new insights which can be attributed to the fact that LinkedIn is a social networking site that has not undergone extensive research and is not easily comparable to other platforms.

Based on the mediation analysis, only hypothesis 5 stating that social comparison mediates the relationship between active social LinkedIn use and future anxiety while controlling for self-efficacy can be retained. Therefore, this study gives interesting insights into analysing social networks, particularly LinkedIn. This is in accordance with Chen et al. (2023), who found individuals tend to behave in upward social comparison when they use social media which eventually leads to anxiety. The literature review showed that upward social comparison mediates the relationship between social networking sites and the anxiety level of an individual (Chen et al., 2023). Now, after conducting the analysis it can be stated that social comparison only mediated the relationship between active social LinkedIn use and future anxiety which is a new insight in trying to understand the platform LinkedIn.

Additionally, it can be noted that self-efficacy influences and improved all three mediation models. Moreover, the overall effect that higher levels of self-efficacy was associated with lower future anxiety (hypothesis 4 to 6), was found. An explanation for these findings of the study could be the concept of self-efficacy. When individuals have higher levels of self-efficacy, they tend to approach challenges with confidence and trust in themselves, which might reduce the level of anxiety (Bartimote-Aufflick et al., 2015). Therefore, the inverse relationship between self-efficacy and future anxiety suggests that building self-belief and confidence could be beneficial in reducing anxiety levels.

Strengths and Limitations

This study shows several strengths that ensure its importance. First, analysing LinkedIn behaviour is still an unreported field of research. Therefore, all information to understand the platform, significant or not, are important to understand the website better especially because LinkedIn is the most used platform for requiring new employees (Topic: LinkedIn, 2023).

Secondly, the measurement scales that were used during the study are valid, reliable, and widely used. This proves that these scales are suitable for measuring LinkedIn use behaviour, social comparison, future anxiety and social comparison. Additionally, meaningful and significant results were found using these scales.

Thirdly, the investigation that self-efficacy has an effect on the mediation models is an interesting insight combined with the fact that social comparison only mediates the relationship between active social LinkedIn behaviour and future anxiety while controlled by self-efficacy. Lastly, that self-efficacy diminishes the effect of future anxiety is also an interesting finding which is align with other studies. For instances, Lewis et al. (2020) stated that self-efficacy can be seen as an important treatment target for anxious individuals to counteract their anxiety symptoms to reduce fear with the help of cognitive behavioural therapy. Therefore, it can be concluded that self-efficacy can help to reduce the effects of anxiety.

One significant limitation of this study is the dataset, which consisted of only 62 participants and was obtained using convenience sampling. As result, the observed effects may not have reached statistical significance, even if they could have been significant with a more representative sampling method. Consequently, it is evident that this dataset cannot be representative of a larger population.

In addition to the previous limitation, another important limitation to consider is the potential impact of social desirability bias. While the cross-sectional design may reduce the likelihood of participants responding dishonestly compared to face-to-face interviews, there is still a possibility that individuals may have felt pressured to provide socially desirable responses. This could lead to participants answering in a way that aligns with societal expectations rather than their true beliefs or behaviours (King & Bruner, 2000). This is particularly relevant given that the questionnaire asks personal questions about their usage behaviour, social comparison, future anxiety their experiences self-efficacy.

Another limitation might be, that participants might have lied in regards of having a LinkedIn account in order to receive Sona System points. This can have an influence on the responses of the LinkedIn Style questionnaire and highly influence the output of the study.

Implications for Further Research

To counteract against the effects of the dataset, a cross-sectional study could be conducted in order to make the study more reliable. More precisely, future research could integrate more diverse samples to enhance the generalizability as well as non-convenience sampling such as random sampling would give better insights into population-wide trends.

Since the study gave new insights into the mediation models and distinction between usage styles further research could investigate this in a greater scenario. Also, replicating the study with another sample might reassure the findings. The surprising findings regarding the increase and decrease of usage styles and future anxiety need to be investigated further, especially because they appear to be contradicting to everything already found. The effect of self-efficacy on future anxiety which was already established in literature can be confirmed again by the study.

Conclusion

The research study investigated the impact of LinkedIn use (passive, active social and active non-social) on future anxiety with the mediation effect social comparison and controlled by self-efficacy levels. The results showed that both active social and active non-social LinkedIn use were associated with increased future anxiety. Moreover, the study revealed that higher levels of self-efficacy were linked to lower levels of future anxiety, emphasizing the protective role of self-belief. Notably, social comparison was found to mediate the relationship between active social LinkedIn use and future anxiety, with self-efficacy influencing this relationship. These findings highlight the complex dynamics of LinkedIn usage and its psychological effects on students, underscoring the need for further research to better understand these interactions and develop strategies to support users' mental well-being.

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Appendices

Appendix A

Questionnaire

This research study investigates the relationship between social comparison, anxiety levels, social comparison, and LinkedIn engagement among university students. Participation in this study is voluntary and requires approximately 10 to 15 minutes. The data collected will contribute to a research project for a third-year student at the University of Twente as part of their Bachelor's Thesis. No identifiable information will be collected during this survey.

The questionnaire probes personal experiences and emotions, and if you anticipate distress or discomfort, you are advised not to proceed. Furthermore, you are also assured that you can terminate your participation at any point by closing the browser window.

During this research, you will be asked questions related to your anxiety levels, social comparison, and social comparison. If you encounter difficulties with these aspects, you are welcome to contact the following services for assistance or information:

Anxiety Help Website: <https://www.blackdoginstitute.org.au/resources-support/anxiety/help-support/>

Mental Health Website: <https://www.healthdirect.gov.au/feeling-worthless>

For more information on this study, please feel free to contact:

Charlotte Antonia Westermann: c.a.westermann@student.utwente.nl

Or contact my supervisor:

Martha Kreuzberg: m.s.kreuzberg@utwente.nl

Demographics:

- How old are you?
 - o Write in blank space
- What gender do you identify as?
 - o Female
 - o Male
 - o Diverse
 - o Other
- What is your nationality?
 - o German
 - o Dutch
 - o Other
- What is your highest level of education?
 - o High School Diploma
 - o Apprenticeship
 - o Bachelor

- Master
- PhD

LinkedIn Usage: Passive and Active: The Passive Active Use Measure (PAUM)

1. Posting status updates
2. Commenting (on statuses, wall posts, pictures, etc)
3. Chatting on LinkedIn chat
4. Checking to see what someone is up to
5. Creating or RSVPing to events
6. Posting photos
7. Tagging photos
8. Viewing photos
9. Posting videos
10. Tagging videos
11. Browsing the newsfeed passively (without liking or commenting on anything)
12. Browsing the newsfeed actively (liking and commenting on posts, pictures and updates)
13. Looking through my friends' profiles.

Tendency of person experiencing social comparison: The Iowa-Netherlands Comparison Orientation Scale (INCOM)

1. I often compare the well-being of my relatives (partners, family members, etc.) with that of others.
2. I always pay close attention to how I do things compared to others.
3. When I want to find out how well I have done something, I compare my results with those of others.
4. I often compare my social skills and popularity with those of others.
5. I'm not the type of person who often compares myself to others.
6. I often compare myself to others in terms of what I have achieved in life (so far).
7. I like to frequently exchange opinions and experiences with others.
8. I often try to find out what others think who are facing similar problems as me.
9. I always want to know how others would behave in a similar situation.
10. When I want to learn more about something, I try to find out what others think or know about it.
11. I never evaluate my life situation in comparison to that of others.

Future anxiety and Usage: FAS

1. My future is uncertain.
2. I am worried that a catastrophe will soon occur.
3. I shudder with fear at the thought of what the next day, the next month, the next year will bring.
4. I am sure that I will not be alone or rejected in the future.
5. I am afraid to plan for the future.

6. I am concerned about possible mishaps.
7. I fear that I will fail in the face of growing difficulties.
8. I worry about the failures that lie ahead for me.
9. I am frightened by the thought that I may sometimes face life crises or difficulties.
10. I am tense and uncomfortable when I think about my future affairs.
11. I am confident that I will achieve the most important goals and values in my life in the future.
12. I worry that I cannot provide good material conditions for my family.
13. I feel that the world is heading towards a collapse, an apocalyptic end.
14. I am afraid of the moment when I have to take responsibility for the decisions and actions in my life.
15. The closer I get to death, the more I fear it.
16. I believe that I am capable of solving my problems in the future.
17. I am concerned that economic and political changes will jeopardize my future.
18. I am frightened by the thought that life passes quickly.
19. I am worried that I will not be able to achieve my goals in the future.
20. I am worried that the problems currently bothering me will persist for a long time.
21. Even if things are going well, fate will turn against me.
22. I am disturbed by the possibility of a sudden accident or a serious illness (e.g., AIDS, cancer).
23. Life is worth living in this beautiful, ever-evolving world.
24. I am not worried that people will be "predators" to each other in the future.
25. I am worried that others will have a bad opinion of me in the future.
26. I am worried that I will consider my life meaningless in a few years.
27. I am worried that my life will take a turn for the worse in the future.
28. I am worried that I will not be recognized in my profession in the future.
29. I worry that I will be a burden to someone in old age.

Career Decision Social comparison Scale-Short Form (CDSE-SF).

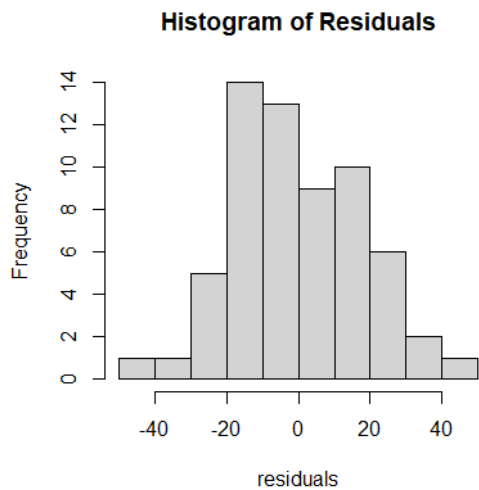
1. Find information in the library about occupations you are interested in.
2. Select one major from a list of potential majors you are considering.
3. Make a plan of your goals for the next five years.
4. Determine the steps to take if you are having academic trouble with an aspect of your chosen major.
5. Accurately assess your abilities.
6. Select one occupation from a list of potential occupations you are considering.
7. Determine the steps you need to take to successfully complete your chosen major.
8. Persistently work at your major or career goal even when you get frustrated.
9. Determine what your ideal job would be.
10. Find out the employment trends for an occupation over the next ten years.
11. Choose a career that will fit your preferred lifestyle.
12. Prepare a good resume.
13. Change majors if you did not like your first choice.
14. Decide what you value most in an occupation.
15. Find out about the average yearly earnings of people in an occupation.
16. Make a career decision and then not worry whether it was right or wrong.

17. Change occupations if you are not satisfied with the one you enter.
18. Figure out what you are and are not ready to sacrifice to achieve your career goals.
19. Talk with a person already employed in a field you are interested in.
20. Choose a major or career that will fit your interests.
21. Identify employers, firms, and institutions relevant to your career possibilities.
22. Define the type of lifestyle you would like to live.
23. Find information about graduate or professional schools.
24. Successfully manage the job interview process.
25. Identify some reasonable major or career alternatives if you are unable to get your first choice.

Appendix B

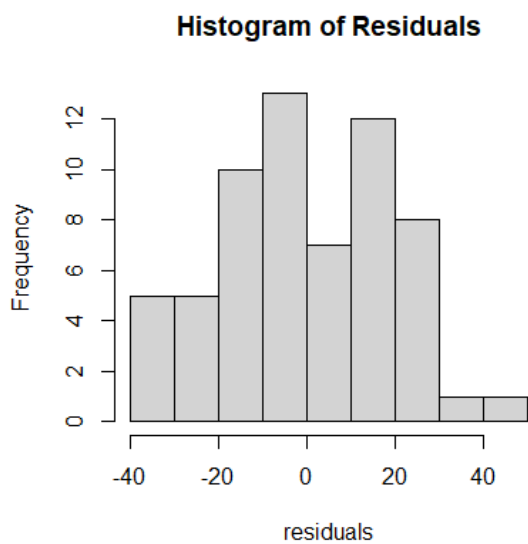
Assumption of Normality

Figure 1



Note. Normality Histogram with control variable Social comparison

Figure 2

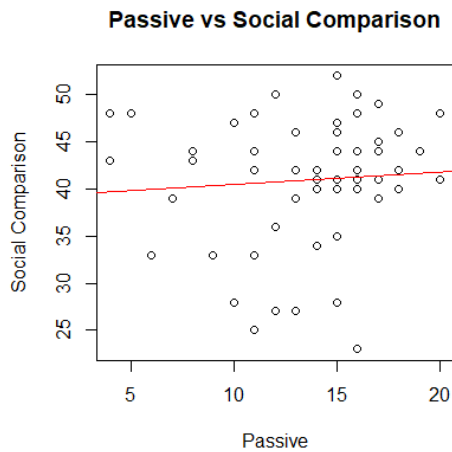


Note. Normality Histogram without control variable Social comparison

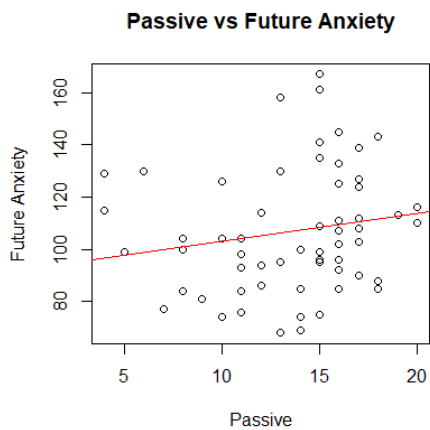
Assumption of Linearity

Model 1: Independent Variable: Passive, Dependent Variable: Future anxiety, Mediator: Social comparison

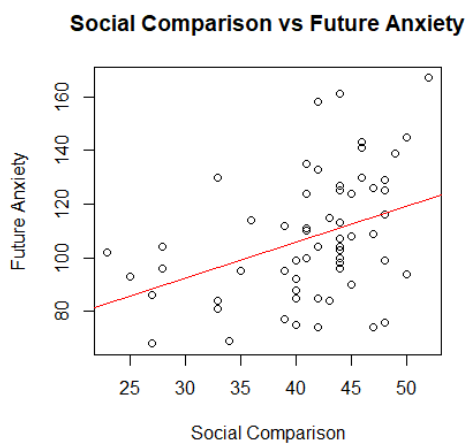
Scatterplot 1: Passive and Social comparison



Scatterplot 2: Passive and Future anxiety



Scatterplot 3: Social comparison and Future anxiety

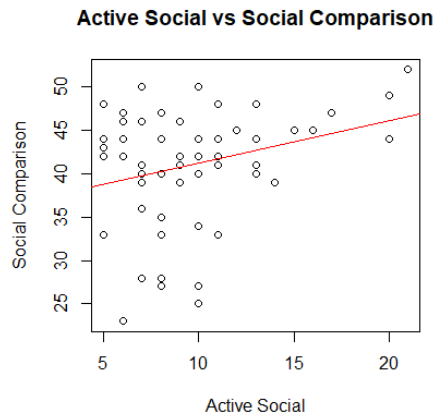


Assumption of Linearity

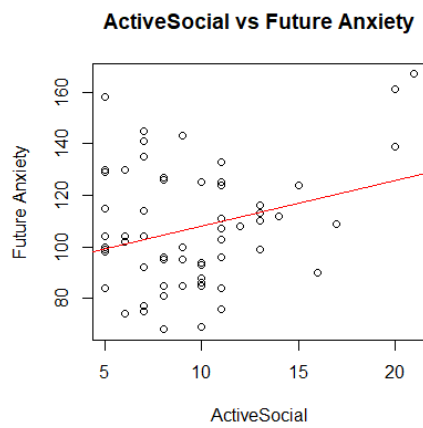
Model 2: Independent Variable: Active Social, Dependent Variable: Future anxiety, Mediator: Social comparison

(Note. Future anxiety and Social comparison see Scatterplot 3)

Scatterplot 4: Active Social and Social comparison



Scatterplot 5: Active Social and Future anxiety

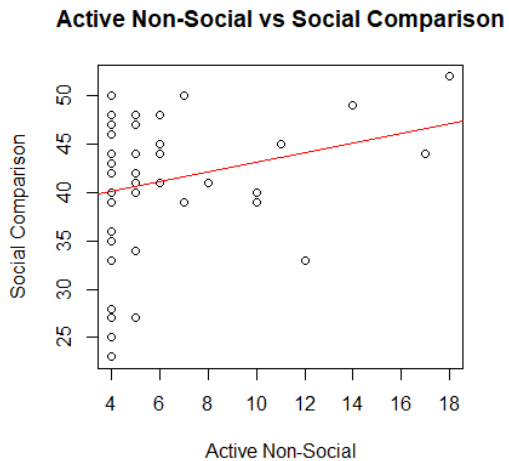


Assumption of Linearity

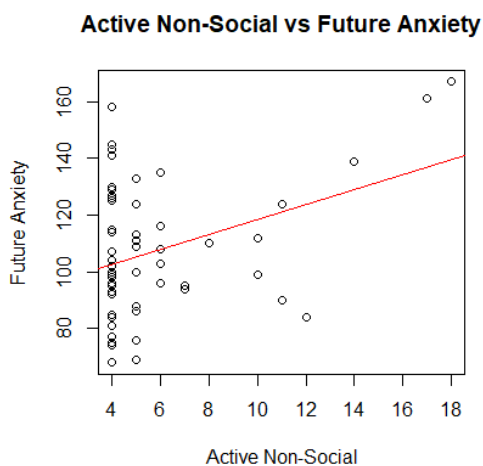
Model 3: Independent Variable: Active Non-Social, Dependent Variable: Future anxiety, Mediator: Social comparison

(Note. Future anxiety and Social comparison see Scatterplot 3)

Scatterplot 6: Active Non-Social and Social comparison



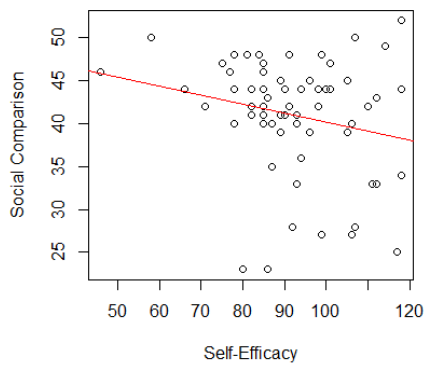
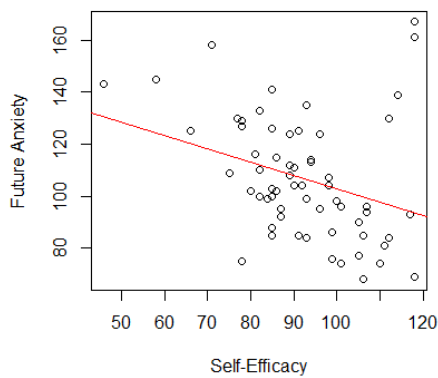
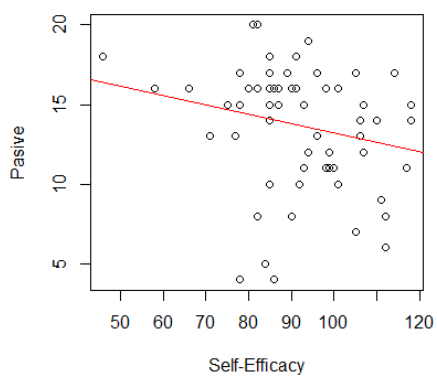
Scatterplot 7: Active Non-Social and Future anxiety

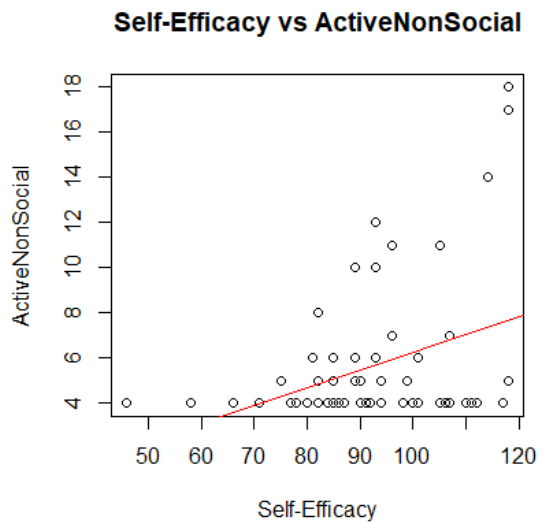


Assumption of Linearity

Social comparison as control variable

Scatterplot 8: Social comparison and Social comparison

Self-Efficacy vs Social Comparison**Scatterplot 8: Social comparison and Future anxiety****Self-Efficacy vs Future Anxiety****Scatterplot 9: Social comparison and Passive****Self-Efficacy vs Passive****Scatterplot 10: Social comparison and Active Non-Social**

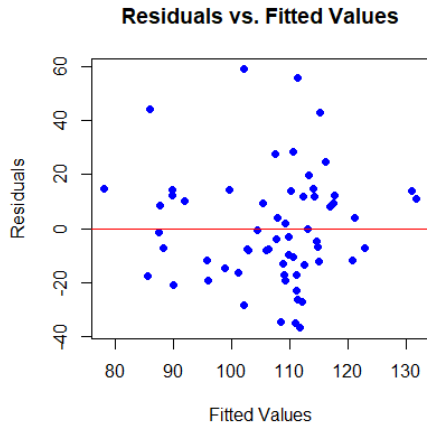


Scatterplot 11: Social comparison and Active Social

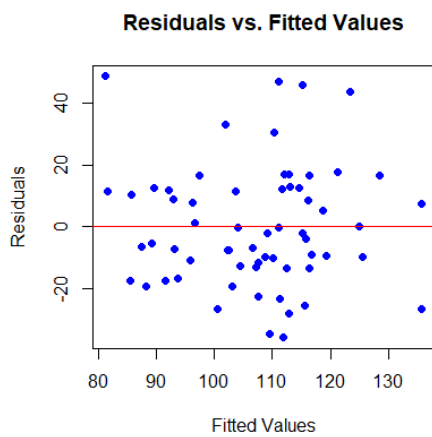


Assumption of Independence

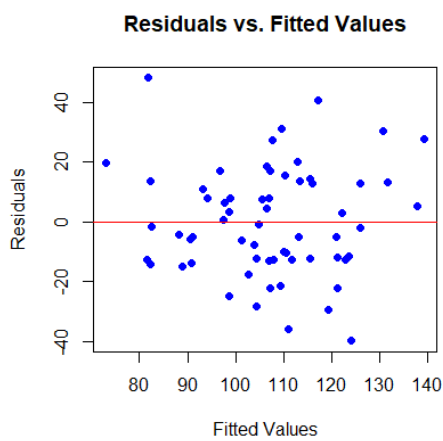
Scatterplot 12: Future anxiety, Passive, Social comparison and Social comparison



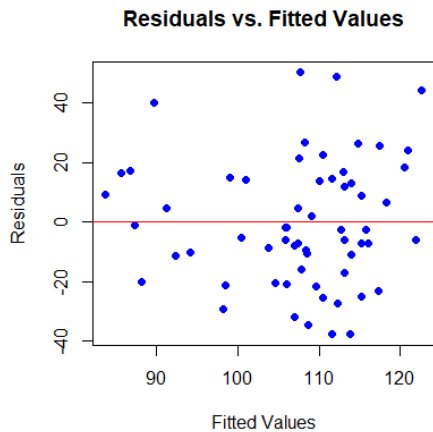
Scatterplot 13: Future anxiety, Active Social, Social comparison and Social comparison



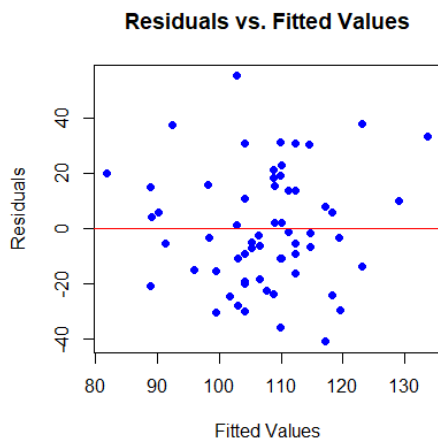
Scatterplot 14: Future anxiety, Active Non-Social, Social comparison and Social comparison



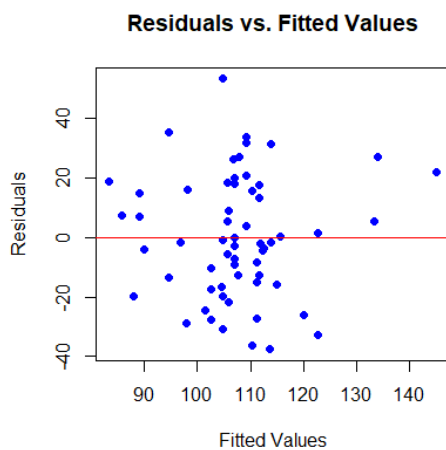
Scatterplot 15: Future anxiety, Passive and Social comparison



Scatterplot 16: Future anxiety, Active Social and Social comparison

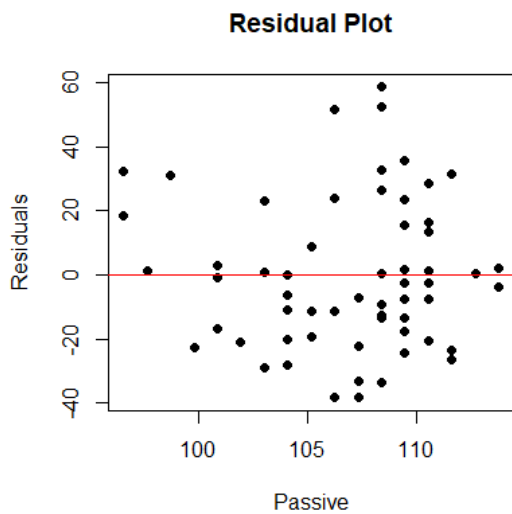


Scatterplot 17: Future anxiety, Active Non-Social and Social comparison

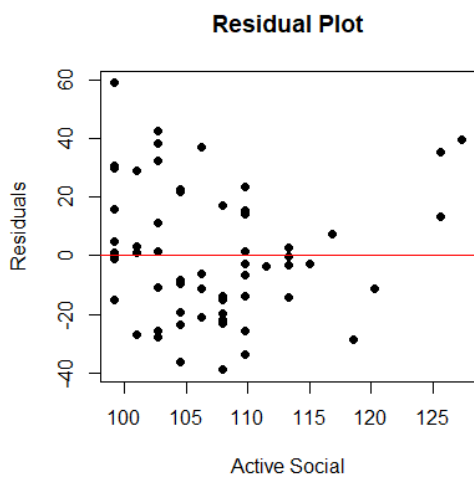


Assumption of Equal Variance

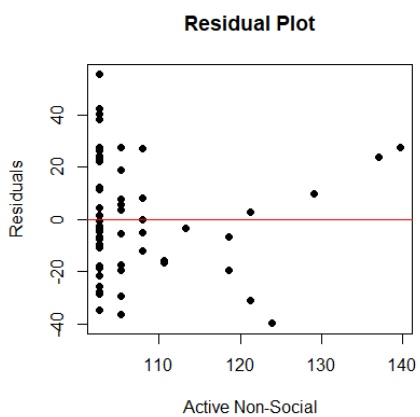
Scatterplot 18: Passive and Future anxiety



Scatterplot 19: Active Social and Future anxiety



Scatterplot 20: Active Non-Social and Future anxiety



Scatterplot 21: Social comparison and Future anxiety

