IJBS
10.30491/IJBS.2022.313534.1711
International Journal of Behavioral Sciences
Original Paper

Demographic Factors, Self-representation, and Social Comparison as Determinants of Depressive Symptoms in Social Media Users: A University-based Survey

Rotimi Oguntayo[1] (MSc), Abiola Oluwagbemiga-Popoola[1] (MSc), Abayomi Oladele-Olaseni[2] (PhD)

1. Department of Psychology, Faculty of Social Sciences, PMB 1515, University of Ilorin, Ilorin, Nigeria
2. Department of Psychology, College of Human Sciences, University of South Africa, South Africa

Submitted: 17 March 2022
Accepted: 12 April 2022

Int J Behav Sci. 2022; 16(1): 29-35

Corresponding Author:
Rotimi Oguntayo,
Department of Psychology,
Faculty of Social Sciences,
University of Ilorin,
Ilorin,
Nigeria
E-mail: oguntayo.r@unilorin.edu.ng

Abstract

Introduction: Recent evidence show that depressive symptoms is becoming a concern among university students. However, possible determining factors of this psychopathology is under investigated, especially among university students. This study aimed to examine demographics, self-representation, and social comparison as determinants of depressive symptoms among university undergraduates.

Method: This correlational study sampled 299-undergraduate students of the University of Ilorin purposively (male 66.6% and 44.4% female) in 2021. A questionnaire-pack comprising of Iowa-Netherlands Comparison Orientation, Embodied Sense of Self, and Self-Rating Depression Scales were utilized to collect data while Pearson's correlation coefficient and stepwise multiple regression were used to analyze the results.

Results: Findings revealed a significant positive correlation between depressive symptoms, age, and social comparison; however, depression was negatively associated with self-representation. Additionally, results indicated three prediction steps; age, relationship status, and social comparison; social comparison and relationship status, and social comparison alone as predictors of depressive symptoms at 0.20%, 19%, and 17% variance respectively among participants.

Conclusion: Age, relationship status, social comparison, and self-representation can be used to explain depressive symptoms among undergraduate students. University counseling services should build these factors into intervention when treating depression among students.

Keywords: Age, Depressive Symptoms, Self-representation, Social Comparison, Social Media Users, University Students

Introduction

University education is one of the most desirable phases of life for the youths in Nigeria. However, this environment can be distressing because of the challenges involved. For instance, academic stress, the uncertainty of low performance, delay in graduation as a result of workers' strikes, low welfare services from the government, and social unrest [1]. A global study reported that over 300 million people develop depressive symptoms daily, and has been ranked as the single largest contributor to global ill health [2-5]. A recent study has found that depressive symptoms are prevalent among university students in Nigeria [1], meanwhile, some research has observed that one of the factors predicting depression is social comparison. For instance, a study discovered that people who
experience depressive episodes are more likely to practice social comparison and

experience a decrease in positive effect as a result of upward social comparison [4].

Social comparison is used as self-concept to form an absolute interpretation of phenomenon by using its conclusions on people's attitudes, abilities, and opinions [6]. When individuals can favorably compare themselves with others, they may feel positive about selves, but when the perceived results of comparison reveal that other people are better than them, then an individual's self-worth is likely going to be affected negatively which could culminate in depression [7]. This could be the reason that makes individuals who tend to compare themselves with other people's appearance, pictures or post on social media, task performance, and so on could suddenly find themselves being depressed especially when they perceive others better than themself [8]. In this case, people may feel much better about themselves or even much worse about themselves, depending on the way they view themselves compared to others.

When individuals compare their lives and achievements with the "perceived better" ones on social media, they may feel moody about themselves and may metamorphose to depressive symptoms [9]. So, it may not necessarily be that the social media websites are the cause of these negative feelings, but the comparisons the users made in their minds as a result of the content they see and interpret negatively. One of the proponents of this concept asserted, "comparison is the thief of joy; our high school friend's relationship looks better than our relationship. Our roommate's vacation seems more epic than the one we took last month. Our sister's life is infinitely more organized and "together" than our own" [10]. This view is a typical example of how social comparison augments in people. The upward social comparison erupts when one compares his/herself with other individuals who are perceived better off than the way they are [11].

A past study has empirically revealed the simultaneous episode of depressive symptoms and social comparison [12]. Most times the use of social media such as; Facebook, Instagram, WhatsApp, Snapchat, etc., could initiate social comparison, where an individual starts to compare self-post with others' posts and the number of friends likes [13-16]. Meanwhile, online social media networking is a channel to meet friends, family, advertise a business, posts pictures, and compare self with others [14-17]. When the social comparison is excessive it triggers envy, jealousy, and wrong self-evaluation which are related to eventual depression. China's research has it that, not only social comparison but self-representation is a predictor of depressive symptoms [18], whereas as far as the researchers of this study are concerned, no similar research has established this in Nigeria yet.

Self-representation is referred to as the specific behavior used to process information about oneself to a real or imagined audience and eventual view or perception of self in a particular way [19]. Apart from the real self, a person can also decide to present their ideal self or false self on social media to deceive people, exploit, or seek impressions from others [15]. However, when the poster does not receive expected feedback it may lead to a low mood. Normally, society usually promotes the presentation of their best side for centuries, but recently social media has particularly begun to lend itself to self-presentation otherwise known as a self-image because of the enabling customize profiles and features; the varying degrees of anonymity, disinhibition, and the asynchronous kind of editable communication that is attached with those sites [20]. These social networks give room for more strategic and generalized self-image than face-to-face interaction [21]. This suggests that those persons who already have social benefits of self-image will have a tendency to indulge in socially desirable representations and may achieve social acceptance. Incidentally, studies are revealing an increase in social media or cyber use addiction during the ongoing COVID-19 pandemic [22, 23].

Reports have shown that there is a surge in the number of active internet users within the year 2020 to 2021 compared to other years earlier. This may have been influenced by the COVID-19 pandemic as people were in lockdown conditions and off schooling or other daily activities [22, 23]. Furthermore, these studies revealed that there is a relationship between social media use and depression. In this study, it was found that young females used WhatsApp more than males, people used Twitter averagely, while more people utilized Instagram and Facebook. A study has found that scrolling through social media news feeds is related to depressive symptoms [24]. In the same direction, a study opined that the risk of internet addiction or penetration by university students across the nation during an academic interruption in Nigeria is associated with psychological distress [22]. Meanwhile, a recent study has found a prevalence of depressive symptoms among undergraduate students in a certain university in Nigeria between the years 2020 to 2021 with socio-demographics as major influencing factors [1].

Studies from the western world have found demographics as great determinants of depression, for instance; age, gender, relationship status, education level, and income [25], although some other studies contradicted these findings [26, 27]. However, age was found to be the most associating factor [22, 23, 24, 28]. Notably, previous studies have found that relationship status (being a single adolescent or long-term relationship in adulthood) has a positive association with depression [29-32]. Considering how the literature has been growing on the events being investigated in the current study, no existing study has focused on these variables especially in university-based settings during pandemics like the COVID-19 outbreak and at the same time among students who use social media in Nigeria. This kind of study would serve as an eye-opener to authorities of the educational sector and it could inform intervention for treating depression among undergraduate students. Considering these gaps, this study aimed at investigating whether psychosocial factors such as; age, marital status, comparison, and self-representation could predict depressive symptoms among university undergraduate students, particularly

those who frequently used social media during the second waves of the COVID-19 pandemic in Nigeria.

Method

This study adopted a descriptive correlational design to investigate the relationship between age, relationship status, social comparison, self-representation, and depressive symptoms. The statistical population consisted of selected students of the University of Ilorin who were purposively sampled. This is because the present study is interested in the undergraduate students who use social media/internet frequently. The study was conducted among university students in 2021 when physical/traditional class resumed during the second wave of COVID-19 though social distancing was seriously imposed and observed. The researchers overcame these hurdles of restrictions using personal protection equipment such as; nose mask, hand glove, and other preventive measures as stipulated by university authorities. The number of samples was considered 299 based on Morris's formula for a limited population (N=5000). The inclusion criteria included being a student at the University of Ilorin, maintaining COVID-19 preventive measures, and signing of the informed consent to participate in the study. All participants agreed to participate and they were informed that they have the right to decline and exit the participation at any time during the study. Confidentiality of the participants' responses was assured. They were asked to fill out a questionnaire for one month. After removing the incomplete questionnaire pack, the 299-participants' responses were evaluated. Data were analyzed using SPSS 21.0. Descriptive statistics such as frequency, mean, standard deviation, and variance were used to describe the demographic information of the participants while Pearson product-moment correlation and stepwise multiple regression were used to test the formulated hypotheses in this study. A total of 299 respondents participated in this study. It was observed that there were 191 (63.9%) male respondents and 108 (36.1%) female respondents. This shows there was a higher response rate from males than females. Also, 200 (66.9%) were single, 65 (21.7%) were in a dyadic relationship and 34(11.4%) were in a romantic relationship. In terms of religion, 167 (55.9%) were Christians and 132 (44.1%) were Muslims. The occupational identity showed 244 (81.6%) students and 55 (18.4%) both schooling and working (table 1).

Table 1. Summary of Descriptive Analysis of the Demographic Factors

Variables	Frequency	Percentage
Age		
20-25	190	63.5
26-31	84	28.1
32-37	25	8.4
Total	299	100.0
Gender		
Male	191	63.9
Female	108	36.1
Total	299	100.0
Relationship Status		
Romantic	34	11.4
Single	200	66.9
Dyadic	65	21.7
Total	299	100.0
Religion		
Christianity	167	55.9
Islam	132	44.1
Total	299	100.0
Participants Occupational Identity		
Students	244	81.6
Schooling/Working	55	18.4
Total	299	100.0

The tools used in the study were as follows:

The Iowa-Netherlands Comparison Orientation Measure (INCOM): Gibbons and Buunk, (1999) designed the INCOM to assess the trait tendency of an individual to practice social comparison. This scale comprises of central aspects of the self, the other, and the psychological interplay between these two factors. It is an 11-item measure with a 5-point Likert scale ranging from 1=I disagree strongly, 2=disagree, 3=undecided, 4=agree, and 5=strongly agree. It is reliable, with a Cronbach's α of .83, and validated by several empirical studies and correlations with other theoretically related measures [33]. For the current study, the exploratory analysis revealed high validity (KMO=.76; p<.001) with a Cronbach Alpha of .75. Items 5 and 11 are reversely scored while others are directly scored. The highest scores are 55; the higher the score the higher the level of comparing oneself with others and vice versa.

Embodied Sense of Self Scale (ESSS): Asai et al. (2016) developed this scale. It is a 23-item scale measuring subjective reports for the sense of self (self-representation), reflect three factors thus: ownership, agency, continuity, and uniformity. The questionnaire showed a strong validity and reliability for practical use

according to the authors [34]. A tense and an expression for items were unified so that a higher score on a five-point Likert scale means a more anomalous ESS thus; 1= Strongly disagree, 2=Disagree somewhat, 3=Undecided, 4=Agree somewhat, and 5=Strongly agree". The internal consistency of the 23-item ESSS, α coefficients were calculated for the total score and each factor score among the 718 university students' sample. The results indicate sufficient values for practical usage of the ESSS: α= 0.84 for total, 0.74 for ownership, 0.75 for narrative, and 0.71 for agency [33]. . For the present study, the exploratory analysis revealed high validity (KMO=.69; p<.001) while the overall Cronbach Alpha was .70. The composite highest score was 65, the average was 33 while below-average scores indicate low self-representation.

The Zung Self-Rating Depression Scale (ZSDS): The Zung Self-Rating Depression Scale (ZSDS) was developed by Zung (1965). This scale is a 20-item scale assessing the level of depressive symptoms. The scale has a rate of four common characteristics of depression: the pervasive effect, the physiological equivalents, other disturbances, and psychomotor activities. There are ten positively worded and ten negatively worded questions. Each question is scored on a 5-point Likert scale from 1=I disagree strongly, 2=disagree, 3=Undecided, 4=agree, 5=strongly agree. Zung recorded .67 to .80 of Cronbach Alpha coefficient [35]. . For this present study, the exploratory analysis revealed high validity (KMO=.68; p<.001) with .73 Cronbach Alpha reliability coefficient. The scores range from 25-100 low, 25-49 normal, 50-59 mild, 60-69 moderate, while 70 and above indicate severe depressive symptoms.

Results

The results of the inferential statistics that test for the significance of the hypotheses are presented in Tables 2, 3a and 3b. The results showed that variables had a normal distribution. The significance levels for age, social comparison, self-representation, and depressive symptoms were 0.001, 0.08, and 0.011 respectively, in which a significant level above 0.05 and 0.01 indicates a normal distribution of data. The mean and standard deviation of the studied variables and their correlation is presented in Table 2. The results show that there is a significant positive correlation between age, social comparison, and depressive symptoms among undergraduate students. Whereas there was a negative correlation between self-representation and depressive symptoms. This indicates that, as self-representation decreases, the depressive symptoms also decrease. However, when social comparison, and age increase, the depressive symptoms decrease.

To examine the stepwise regression analysis, the proposed predictor variables (age, relationship status, social comparison, and self-representation) were regressed sequentially on depressive symptoms. The results indicated that the prediction takes place in three steps and the variables of age, relationship status, and social comparison together explain 0.20% of the relevant changes of depressive symptoms with negative impacts. The results of the regression coefficients showed that the social comparison and relationship status can predict depressive symptoms with a positive impact having a beta coefficients of 0.39 and with a variance of 19% that depict the magnitude of the effect on depressive symptoms. Moreover, social comparison alone was a predictive factor for depressive symptoms (with a beta coefficients 0.42) having a positive impact and the variance accounted for was 17% depicting the magnitude of the effect on depressive symptoms (Table 3). Considering the results in this study, it can be stated that the predictor variables (age, relationship status, and social comparison) have the strength to predict depressive symptoms. However, the combination of these variables can predict depression with a negative impact.

Despite the results obtained in Table 3a, the tolerance results present values related to assessing multicollinearity among the predictor variables. The results of Table 3b showed that none of the tolerance values are below .75, which indicates that deleting one of the predictor variables (age, gender, class level in school, relationship status, and self-representation) is of no use in explaining the outcome predictors of depressive symptoms in this study. This indicates that even though the majority of the variables regressed in the stepwise analysis are insignificant in predicting depressive symptoms at the moment in the current study, it could still be useful for explaining depressive symptoms in some instances. Therefore, there is no need to consider creating a new variable or deleting one of these predictor variables in Table 3b. In other words, the assumption of multicollinearity means that there is a strong correlation between age, social comparison, and relationship status as predictor variables. In this situation, still, the high value of the determination coefficient of the regression model may not portray high validity according to the tolerance variance and values obtained in Table 3b.

Table 2. Mean and SD and their Correlations

	Variables	1	2	3	4	M	SD
1	Age	-				1.57	.62
2	Social Comparison	-.02	-			44.73	33.39
3	Self-Representation	-.17**	.16	-		6.62	2.92
4	Depression	.12*	.41**	.14**	-	58.5	10.95

**. Correlation is significant at the 0.01 level (1-tailed)

*. Correlation is significant at the 0.05 level (2-tailed).

Dependent variable: Depressive symptoms

Table 3a. Results Showing Stepwise Multiple Regression Analysis of Independent Variables on Depressive Symptoms

Dependent	Predictors	Step	R	R^2	B	β	F	t	p
DS	SOC*RS[a]	1	.41[a]	.17	39.27	.41	74.23	17.04	p<0.01
	SOC*RS[b]	2	.43[b]	.18	42.97	.39	7.03	16.05	p<0.01
	SOC*RS*Age[c]	3	.45[c]	.20	-1.31	-.12	6.49	-2.652	p<0.01

Note: Depressive Symptoms=DS., Social Comparison =SOC., Relationship Status=RS.

Table 3b. Tolerance Values of Multicollinearity among Independent Variables

	Model	B	T	P	Partial Correlation	Collinearity Statistics
						Tolerance
1	Age range	-.10[b]	-2.12	.035	-.11	.99
	Marital status	-.12[b]	-2.65	.008	-.14	.96
	Gender	.04[b]	.87	.380	.04	.98
	Class year	.00[b]	.17	.865	.009	.94
	Self Rep	.07[b]	1.57	.117	.08	.98
2	Age range	-.12[c]	-2.54	.011	-.13	.97
	Gender	.01[c]	.37	.705	.02	.94
	Class year	.05[c]	1.009	.314	.05	.85
	Self Rep	.06[c]	1.37	.171	.07	.97
3	Gender	.006[d]	.12	.905	.006	.93
	Class_year	.09[d]	1.82	.068	.09	.78
	SelfRep	.09[d]	1.86	.063	.09	.94

a. Dependent Variable: DS
b. Predictors in the Model: (Constant), SOC
c. Predictors in the Model: (Constant), SOC, RS
d. Predictors in the Model: (Constant), SOC, RS, Age

Discussion

The current study aimed at investigating whether psychosocial factors such as; age, marital status, comparison, and self-representation could predict depressive symptoms among university undergraduate students, particularly those who frequently use social media during second waves of the COVID-19 pandemic in Nigeria. The results show that there is a significant positive correlation between age, social comparison, and depressive symptoms among undergraduate students. However, there was a negative correlation between self-representation and depressive symptoms. This finding is consistent with some past studies which found that as the age of participants increases, depression symptoms surge [25-27], social comparison [4, 7-9] have positive relationships with depressive symptoms, but self-representation [18, 34] found to be negatively related with mood swing challenge. Despite that negative relationship between self-representation and depressive symptoms which has been widely validated in previous studies, there is still research showing positive relationships between self-representation and depression, and some have shown a medium correlation. This ambivalence in the literature could be a result of different settings and cultural differences which suggest further investigations. The results imply that age, social comparison, and self-representation are associated with depression, and these factors could be used to explain depression among the sampled participants. Therefore, there is a need for counselling services to focus more on older ones, tending social comparison traits and low self-image as the vulnerable to suffer from depression.

The results also showed that age, relationship status, and social comparison together predicted depressive symptoms with a negative impact. However, findings show that the social comparison and relationship status predicted depressive symptoms positively. Furthermore, social comparison was alone related to depressive symptoms with a positive impact. This is consistent with previous research such as Hal and Hu's studies; the findings concluded that psychosocial factors (age, and social comparison) did have an influence on depression [36, 37]. Also, a finding revealed that social comparison explained dimensions of psychological distress especially the depression domain than other social factors [37]. Depression in young people often occurs as the age increases [36]. This necessitates screening for depression among undergraduates age groups as extremely vital. Also, social comparison and self-image can be used to explain the tendency for one to be depressed especially among those who use social media frequently. Results also revealed that relationship status combined with social comparison is a predictor of depressive symptoms. This is supported by some previous studies conducted in the western world which revealed that marital status did significantly influence depression [34, 36, 37]. In addition, previous studies had found that being a separated partner, single adolescent and in a long-term relationship has a positive association with depression [22, 29, 30, 31, 32, 36].

The reasons could be that these individuals may have less social support as the majority of them can be left with their ordeal, or sometimes lack social affiliation romantically which affects their feelings. Also, these respondents are generally less prepared emotionally and practically to cope with their situations. Therefore, when they incessantly surf through the internet, they may probably compare themselves with others and perceive their situations as worse compared to those individuals celebrating their partners or being celebrated by their partners which may trigger feelings of self-worthlessness and hopelessness in the viewers who lack a strong self-

image.

Regarding self-representation as a predictive factor, this variable was partial out in the stepwise multiple regression analysis in this study. However, the negative relationship between self-representation and depressive symptoms has been widely validated in past studies [18, 34] whereas the nature of the relationship between the presence of self-representation and depressive symptoms remains unclear. Although some studies found positive relationships as revealed in this study, most have shown a medium correlation coefficient, suggesting that the association between these variables may not be linear [39, 40]. Despite this finding did not confirm our postulation, it was not fully a surprising result that self-representation was most predictive of depressive symptoms. However, the presence of personality predisposition, unidentified social comparison (either downward or upward sloping), and frequency of social media surfing which was not considered in this study could uniquely have contributed to the present results. Thus, we may contemplate a number of variables playing some mediating role concerning depressive symptoms among university students during the second waves of the COVID-19 pandemic among the selected students.

Conclusion

The current study indicated that there is a significant positive correlation between age, social comparison, and depressive symptoms; however, self-representation is negatively related to depressive symptoms. Also, social comparison predicts depressive symptoms. Social comparison and relationship status altogether predict depressive symptoms with a positive impact. While age, relationship status, and social comparison predicted depressive symptoms with a negative impact. It can be concluded that age, relationship status, and social comparison are predictors of depressive symptoms of the sampled undergraduate students during the second waves of COVID-19 in Nigeria.

It was recommended that there should be public enlightenment on the use of mental health services. By this, undergraduates could gain insight into the means of pairing social media with psychological services to manage their mental wellbeing. Therapists should incorporate self-representation and social comparison into intervention. Also, special attention should be paid to the effects of quality romantic relationships and age differences when assessing and treating depressive symptoms in university students.

Conflict of Interest

The authors declared no conflicting interests.

Ethical Approval

This study was approved by the ethical committee of social sciences at the University of Ilorin. The research was conducted following ethical standards.

Acknowledgment

The authors appreciate all the students of the University of Ilorin who participated in this study.

References

1. Buhari O, Bolarinwa O, Adegoke A, Ogunmodede AJ, Oguntayo R, Adegunloye OM. Internet-based psychological interventions to improve mental health: Preference for and willingness to use among students in a Nigerian university. East Africa Med. J. 2021; 98 (9), 4151-4159. Available from: https://www.ajol.info/index.php/eamj/article/view/215167
2. World Health organization. Depression and other Common Mental Health Disorder. “Global estimate". 2018. Available from: https://apps.who.int/iris/bitstream/handle/10665/254610/WHO-MSD-MER 2017.2-eng.pdf
3. World Health Assembly. Comprehensive Mental Health Plan for 2013 - 2020. Psychiatry Clinical and Neurosciences. 2014; 68, 585–586. https://doi.org/10.1111/pcn.12207
4. World Health Organization. Global practice in the care of those with depressive illness in Nigeria "Definition of Depression. 2017; 13389/fpsyt.2017.00266PMCID: PMC5712550PMID: 29238312
5. World Health Organization. Factsheet on Depression. World Health Organization. 2015; 15 Aug 2015. Available from: http://www.who.int/mediacentre/factsheets/fs369/en
6. Festinger L. A theory of social comparison processes. Hum. Relat. 1954; 117-131. doi:10.1177/001872675400700202
7. Marsh HW, Kong CK, Hau KT. Longitudinal multilevel models of the big-fish- little pond effect on academic self-concept: Counter-balancing contrast and reflected- glory effects in Hong Kong schools. J. Personal. and Soc. Psychol. 2000; 6:67-88. https://psycnet.apa.org/doi/10.1037/0022-3514.78.2.337
8. Theobald M. Depression and social media. Everyday Health. 2014. Available from: https://www.everydayhealth.com/hs/major-depression-resource center/depression-social-media/
9. Roosevelt T. "Becoming a Great School: Harnessing the Powers of Quality Management and Collaborative Leadership." In Kenneth, B. Cooper., Nels Gustafson and Joseph G. Salah. Book. 2013. Available from: https://www.amazon.com/Becoming-Great-School-Harnessing collaborative/dp/1475806957
10. Gibbons FX, Buunk BP. Individual differences in social-comparison: Develop of social comparison orientation. J. Personal. and Soc. Psychol. 1999; 4, 90-110. https://psycnet.apa.org/doi/10.1037/0022-3514.76.1.129
11. Appel H, Crusius J, Gerlach AL. Social comparison, envy, and depression on Facebook: A study looking at the effects of high comparison standards on depressed. Individ. J. Soc. Clin. Psychol. 2015; (7):345-355. https://doi.org/10.1521/jscp.2015.34.4.277
12. Chou HTG, & Edge N. “They are happier and having better lives than I am” impact of using Facebook on perceptions of others’ lives. Cyberpsychology, Behavior, and Social Networking. 2012; 3,56-67. https://doi.org/10.1089/cyber.2011.0324
13. Feinstein BA. Negative social comparison on Facebook and depressive symptoms: Rumination as a mechanism. 2013. Available from: https://www.researchgate.net/publication/259997458_Negative_social_comparison_on_Facebook_and_depressive_symptoms_Rumination_as_a_mechanism/stats
14. Oyeleke JT, Oguntayo R, & Popoola OA. Personality Traits and Narcissism as Predictors of Pathological Selfie among University Undergraduates in Nigeria. J. of Nig. Psycholo. Associat. 2019; 2, 83-99.
15. Haferkamp N, Krämer NC. Social comparison: Examining the effect of online profiles on social-networking sites. Cyberpsychol., Behav. and Soc. Networ. 2011; 5, 56-78. https://doi.org/10.1089/cyber.2010.0120
16. Kross E, Verduyn P, Demiralp E, Park J, Lee DS, Lin N. et al. Facebook Use Predicts Declines in Subjective Well-Being in Young Adults. PLoS ONE. 2013; 8, 1–6. http://doi.org/10.1371/journal.pone.0069841
17. Kim J, Lee JR. The Facebook paths to happiness: Effects of the number of Facebook friends and self-presentation on subjective well-being. Cyber Psychology Behavior, and Social Networking. 2011; 2, 20-30. https://doi.org/10.1089/cyber.2010.0374
18. Michikyan M, Dennis J, Subrahmanyam K. Can you guess who I am? Real, ideal, and false self-presentation on Facebook among emerging adults. Emerging Adulthood. 2015; 3,7-10.

https://doi.org/10.1177%2F2167696814532442
19. Brunskill D. social media, social avatars and the psyche: Is Facebook good for us? Australasian Psychiatry. 2013; 21(6):527-532. https://doi.org/10.1177%2F1039856213509289
20. Krämer NC, Winter S. Impression management: The relationship of self-esteem, extraversion, self-efficacy, and self-representation within social networking sites. Journal of Media Psychology: Theories, Methods, and Applications. 2008; 1, 23-30. https://doi.org/10.1027/1864-1105.20.3.106
21. Toma CL, Hancock JT. Self-affirmation underlies Facebook use. Personal. Soc. Psychol. Bullet. 2013; 39, 321–331. doi:10.1177/0146167212474694
22. Olawade DB, Olorunfemi OJ, Wada OZ, Afolalu TD, & Michael AE. Internet Addiction among University Students during Covid-19 Lockdown: Case Study of Institutions in Nigeria. J. Educat. Hum. Develop. 2020; 9, (4):165-173. https://doi.org/10.15640/jehd.v9n4a17
23. Dong H, Yang F, Lu X & Hao W. Internet Addiction and Related Psychological Factors among Children and Adolescents in China during the Coronavirus Disease 2019 (COVID-19). Epidemic. Front. Psychiatr. 2020; 11:00751. doi:10.3389/fpsyt.2020.00751
24. Schaufel MA, Nordrehaug JE, Malterud K. Hope in action—facing cardiac death: a qualitative study of patients with life-threatening disease. International Journal of Qual Stud Health Well-being. 2011; 6(1); 10-34. https://doi.org/10.3402/qhw.v6i1.5917
25. Beckie TM, Beckstead JW, Webb MS. Modeling women's quality of life after cardiac events. Western Journal of Nursing Research. 2001; 23(2):179–94. https://doi.org/10.1177%2F019394590102300206
26. Dufault K. Martocchio BC. Symposium on compassionate care and the dying experience. Hope: its spheres and dimensions. The Nursing Clinics of North America. 1985; 20(2):379–91. https://europepmc.org/article/med/3846980
27. Dunn SL, Dunn LM, Rieth N, Olamijulo GB, Swieringa LL, Holden TP, Tintle NL. Impact of home-and hospital-based exercise in cardiac rehabilitation on hopelessness in patients with coronary heart disease. J. Cardiop. Rehabiliat. Prevent. 2017; 37(1):39–48. doi:10.1097/HCR.0000000000000205
28. Fitzgerald MJ. Hope: a construct central to nursing. Nurse Forum. 2007; 4291: 12-9. doi:10.1111/j.1744-6198.2007.00061.x
29. Kornadt AE, Voss P, Rothermund K. Hope for the best, prepare for the worst? Future self-views and preparation for age-related changes. Psychology of Aging. 2015; 30(4): 967. doi: 10.1037/pag0000048
30. Bjørnnes AK, Parry M, Lie I, Falk R, Leegaard M, Rustøen T. The association between hope, marital status, depression and persistent pain in men and women following cardiac surgery. BMC Women's Health. 2018; 18, 2. https://doi.org/10.1186/s12905-017-0501-0
31. Leach LS, Butterworth P. Depression and anxiety in early adulthood: consequences for finding a partner, and relationship support and conflict. Epidemiol. Psychiatr. Sci. 2020; 29, e141. https://doi.org/10.1017/S2045796020000530
32. Hannighofer J, Foran H, Hahlweg K, Zimmermann T. Impact of relationship status and quality (family type) on the mental health of mothers and their children: A 10-year longitudinal study. *Front. Psychiat.* 2017; *8*, 266. https://doi.org/10.3389/fpsyt.2017.00266
33. Gibbons FX, & Buunk BP. Individual Differences in Social Comparison: Development of a Scale of Social Comparison Orientation. J. Personal. Soc. Psychol., 1999; 76(1), 129–142. https://psycnet.apa.org/doi/10.1037/0022-3514.76.1.129
34. Asai T, Kanayama N, Imaizumi S, Koyama S, Kaganoi K. Development of Embodied Sense of Self Scale (ESSS): Exploring Everyday Experiences Induced by Anomalous Self-Representation. Front. Psychol. 2016; 7, 1005. doi:10.3389/fpsyg.2016.0100
35. Zung WW. A self-rating depression scale. Archive of Genenral Psychiatry. 1965; 12, 63-70. doi:10.1001/archpsyc.1965.01720310065008
36. Hal K. Social comparison and mental health. Sociology department: Tilburg University, Tilburg. 2017. Available from: http://arno.uvt.nl/show.cgi?fid=143215
37. Hu Y, Zhou M, Shao Y. Wei J, Li Z, Xu S, Maguire P, Wang W. The effects of social comparison and depressive mood on adolescent social decision-making. BMC Psychiatr. 2021; 21, 3. https://doi.org/10.1186/s12888-020-02928-y
38. Montesano A, Feixas G, Casper F, Winter D. Depression and Identity; Are self-constructive Negative or Conflictua. *Front. Psychol.* 2017; *8*, 877. https://doi.org/10.1037/t00741-000
39. Andrew GM, Jeanne VA, Dina HL, Scott BP. The depression and marital status relationship are modified by both age and gender.2017;223,65-68. https://doi.org/10.1016/j.jad.2017.06.007
40. Montesano A, Feixas G, Caspar F, Winter D. Depression and Identity: Are Self-Constructions Negative or Conflictual? Front. Psychol. 2017; 8, 877. doi: 10.3389/fpsyg.2017.00877