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ESTIMATION FOR THE LEVEL OF HAPPINESS AMONG COLLEGE OF NURSING STUDENTS AND ITS RELATIONSHIP TO SCREEN TIME

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Abstract

Background: Happiness is a multidimensional concept linked to well-being and mental health, mainly in students in demanding academic programs. With the increasing use of digital devices, screen time appear as a potential factor influencing happiness. This study aimed to assess the level of happiness in undergraduate nursing students in Saudi Arabia and examine its relationship with screen time, gender, and academic level. **Methods:** A cross-sectional study was conducted in 100 nursing students using the Oxford Happiness Questionnaire (OHQ) and a structured survey on screen time habits. Data were analyzed using Pearson correlation, t-test, ANOVA, and linear regression. **Results:** The mean happiness score was 3.93 (SD = 0.82), which indicate a moderate level of happiness. There was a significant negative correlation between happiness scores and screen time on both mobile devices ($r = –0.298$, $p = 0.003$) and television ($r = –0.239$, $p = 0.016$). No significant differences in happiness were observed based on gender or academic level. The regression model explained 13.5% of the variance in happiness scores. **Conclusion:** Excessive screen time is inversely associated with happiness levels in nursing students. Institutions should consider integrating mental wellness strategies and digital literacy programs into nursing education to improve psychological well-being.

Keywords: Happiness; Nursing Students; Screen Time; Oxford Happiness Questionnaire; Mental Well-Being; Gender Differences; Academic Level; Regression Analysis; Saudi Arabia; Undergraduate Education.

INTRODUCTION

Happiness is a word with different meanings. Happiness is not stable state of mood or feelings and might be affected by several reasons. According to Diener et al. (1) happiness is the individual feeling and thinking that life goes well. Theories gave many explanations of happiness such as: Hedonism Theory (Bentham, 1978), the Good Life: Desire Theory (Griffin, 1986), the Meaningful Life (Nussbaum, 1992; Sen, 1985), and Authentic happiness (Seligman, 2002a). Even though, happiness is a psychological state of mind, it can be measured through utilizing through estimating life satisfaction.

In another hand, happiness might be affected by excessive Screen Time because it is linked to poor quality of life. For example, obesity and hypertension, which resulted

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from screen watching usually required sedentary time and increased consumption number of snacks (2). It can be argued that increased Screen Time may impact negatively on the mental status to cause depression and suicidal thoughts among adult (3) and adolescents (2).

Furthermore, during Covid-19, Screen Time became more ubiquitous during lockdowns, and social distancing, and these policies may occur in future to control COVID-19 recurrences or other pandemics. Therefore, guidance regarding Screen Time should be updated for the families and adult user especially after the increased time of screen watching that eventually became the habits during and after COVID-19.

Association and organization that aim to improve societal health status like American Psychiatric Association (APA) (4) could provide specific useful plans that would cover current needs and illustrate how individuals and families may benefits of Screen Time through healthy activities that foster: healthy lifestyle, education, socialization, and positive mental status (5).

Communities, schools, and colleges can promote smart using of TV and connected devices (e.g., streaming devices, video game), Laptop/computer and Smartphone in accessing educational resources, healthy instruction, and improve overall wellbeing (6).

Happiness and Screen Time

Happiness research have got a recent attention from different perspectives. For instance, well-being influence on health (1), in higher education (7), in work (8). However, research concerning the impact of Screen Time on cognitive and mental abilities was associated more with infant and toddler (9), children (10), and adolescence (11).

Happiness Level Among Nursing Students

In order to educate and prepare future nurses to meet the nation's expanding healthcare needs, Saudi Arabia's governmental colleges of nursing are essential. These colleges, which were founded by Royal Decree, provide extensive nursing programs that complement Vision 2030 initiatives and national healthcare priorities (12).

In addition to Nursing Administration and Education, the majority of nursing colleges have four main academic departments: Medical-Surgical Nursing, Maternal and Child Health Nursing, Mental Health Nursing, and Community Health Nursing (13). Furthermore, postgraduate programs offer specialized pathways for advanced nursing research and practice (14)

King Saud University, King Abdulaziz University, King Saud bin Abdulaziz University for Health Sciences, Imam Abdulrahman Bin Faisal University, and Qassim University are among the 26 Saudi Arabian universities that offer nursing programs as of 2025 (14). A foundation year, specialized coursework, and a clinical internship are all included in the five-year-long Bachelor of Science in Nursing (BSN) program (15).

The well-being of nursing students, including the variables affecting their levels of happiness, has been the subject of recent studies. One such study looks at how screen

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time affects students' happiness, with gender differences being a significant factor (16). Researchers have looked into how gender-related factors affect nursing students' happiness levels over the last ten years, providing information about both academic performance and mental health (16).

For instance, Chui and Wong (2015) research made a comparison among school students based on their gender and found that boys are happier than girls regarding good GPAs, but they feel the opposite about their life.

In the same vein, assessing the differences of happiness is very subjective data, thus, previous studies findings didn't conclude to any specific result about gender effects on the level of happiness. However, because of its uniqueness and high subjectivity examining the gender-based differences in happiness, it could be argued that this relation between gender and happiness is expected to be mixed and unique based on study context and variables.

Like as Stevenson & Wolfers (17) who argued that a significant difference among male (who have high level) of well-being than female. In contrast, Fujita et al. (18) findings that female well-being is highly significant in comparison to male well-being. Whereas a recent study by Moussa and Ali (19) supported that happiness is linked to positive achievement in academic life with no gender differences among undergraduate students in Dubai city.

Finally, this study aimed to estimate the level of happiness among nursing students in because there is a gap in literature that examine this topic and address the gender-based differences reside among undergraduate nursing students in Saudi Arabia.

Aim and hypothesis

We aimed to study the level of happiness among nursing students, the relationship between students' level of happiness as measured by OHQ and their Screen Time hours, and gender-based difference in students' level of happiness.

Hypothesis

There is a relationship between student happiness level as measured by OHQ and the Screen Time. There is no difference among student happiness level as measured by OHQ based on the gender difference.

METHOD

Participants

This research study was conducted at KSA nursing college in Riyadh city. The participants of this study consisted of different levels undergraduate nursing students. The invitation to participate in the study was sent to over than 200 students, student groups, emails who are chosen randomly. A total of 100 accepted the invitation and reply and filled the questioner.

Instrumentation

The objective of this research study is measuring the level of happiness among higher education students and explore the relationship between the level of happiness and students' Screen Time. To achieve the study's goal, the Oxford Happiness

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Questionnaire (OHQ) (20) was used for that purpose. The OHQ is an easy, valid, and appropriate instrument to measure individuals' current level of happiness. Including the 29 items questioner, demographic questions like current educational level, marital status and gender were filled.

In addition, Screen Time questions were asked mainly about the number of hours spent on smartphones day, night, and weekends and the similar with TV question's part. The Screen Time was arranged into 5 responses, I don't use, I use it for an hour to 2 hours, I use it from 3 hours to 5 hours, I use it from 6 to 8 hours, I use it more than 8 hours.

Then, the OHQ self-report questionnaire that has 29 statements should be filled; 17 are positive statements and 12 are negative statements worded (R) which requires reverse coding before obtaining total happiness scores. For instance, a negative statement like "I don't find it easy to make decisions. (R)".

The OHQ is a Likert scale from 1 which is strongly disagree to 6-point which is strongly agree. Where OHQ higher scores indicate higher levels of happiness and lowest score indicate low level of happiness.

The final score of the participant must be calculated by adding the total scores 29 questions (including reverse statement scores) and divide it by 29. To explain participant's results and estimate their level of happiness, the OHQ refer the scores as if the score 1–2 is not happy, 2–3 is somewhat unhappy, 3–4 is moderately happy, 4–5 is pretty happy, 5–6 is very happy, and lastly 6 means too happy. According to Hills and Argyle (20) OHQ revealed strong reliability through Cronbach's alpha (0.90) and more.

Data collection

Data collection started April to the end of May 2022, the analysis is made to fill out the requirement of Advanced Statistical Analysis (NUR 606), however, researcher will complete receiving the data and analysis it later for generalizability of the research findings.

The OHQ, was designed on Google forms with full description about the purpose, answering scores of the questions, and the consent form was included. The link of the OHQ with was sent to student leaders among undergraduate nursing program in the same facility through emails and Whatssup application. Students from different levels received the link of the questionnaire. All the received data transferred to SPSS version 28 for analyzing.

RESULTS

A scale of 88.4 indicates excellent fitting between all questions in the overall Questionnaire, which represent the good reality of the sample community and ability of questionnaire to obtain the same results if the same questionnaire applied multiple times. A scale of 91.9 indicates excellent fitting between all questions in the happiness axis in Questionnaire, which represent the good reality of the sample community and ability of axis in questionnaire to obtain the same results if the same questions applied multiple times.

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Validity of Happiness axis in questionnaire:

To verify the validity of the tool, the researcher relied on one method called internal consistency, which based on calculating the correlation coefficient between each unit of the tool and the tool as a whole.

The table shows that the value of the correlation coefficients for the expressions in the total degree of the Happiness axis ranges between (0.323) and (0.742), which means that there is a high degree of internal consistency, which reflects a high degree of validity for the paragraphs of the Happiness statements. It seen from the table that all correlation coefficients for all expressions are positively signified.

Demographic Characteristic:

Table 1: Soci-Demographic characteristics:

	Variable	Frequency	Percent	Mode	Direction	Standard deviation
Gender	Male	34	34.0%	2	Female	0.476
	Female	66	66.0%			
Education level	First year	18	18.0%	4	Fourth year	1.184
	Second year	17	17.0%			
	Third year	15	15.0%			
	Fourth year	50	50.0%			
Marital status	Single	70	70.0%	1	Single	0.554
	Married	26	26.0%			
	Divorced	4	4.0%			

Females represent 66.0% of Sample population, while males represent 34.0% of sample population, which indicate that females are responders that are more predominant. About 50.0% of sample population are in the Fourth year, 18.0% are in the first year, and only 17.0% are in the second year and only 15.0 only are in third year. About 70.0% of participant are singles, 26.0% are married where only 4.0% are divorced.

Table 2: Screen Time characteristics Hours using mobile:

	Variable	Frequency	Percent	Mode	Direction	Standard deviation
Mobile hours in afternoon	Don't use	1	1.0%	3	3 - 5 hours	0.950
	1 - 2 hours	18	18.0%			
	3 - 5 hours	43	43.0%			
	6 - 8 hours	25	25.0%			
	more than 8 hours	13	13.0%			
Mobile hours in night	Don't use	3	3.0%	3	3 - 5 hours	0.939
	1 - 2 hours	19	19.0%			
	3 - 5 hours	50	50.0%			
	6 - 8 hours	18	18.0%			
	more than 8 hours	10	10.0%			
Mobile hours in weekend	Don't use	0	0.0%	5	more than 8 hours	0.935
	1 - 2 hours	6	6.0%			
	3 - 5 hours	20	20.0%			
	6 - 8 hours	30	30.0%			
	more than 8 hours	44	44.0%			

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About 43.0% of sample population use mobile screen about 3-5 hours every day in afternoon. Where about 50.0% of sample population use mobile screen about 3-5 hours every day in night. However, in weekend about 44.0% of sample population use mobile screen more than 8 hours.

Table 3: Hours watching television:

	Variable	Frequency	Percent	Mode	Direction	Standard deviation
Television hours in afternoon	Don't watch	69	69.0%	1	Don't watch	0.904
	1 - 2 hours	17	17.0%			
	3 - 5 hours	10	10.0%			
	6 - 8 hours	2	2.0%			
	more than 8 hours	2	2.0%			
Television hours in night	Don't watch	58	58.0%	1	Don't watch	1.018
	1 - 2 hours	22	22.0%			
	3 - 5 hours	14	14.0%			
	6 - 8 hours	3	3.0%			
	more than 8 hours	3	3.0%			
Television hours in weekend	Don't watch	46	46.0%	1	Don't watch	1.325
	1 - 2 hours	24	24.0%			
	3 - 5 hours	12	12.0%			
	6 - 8 hours	9	9.0%			
	more than 8 hours	9	9.0%			

Majority of sample population dose not watch television in any time of the day. About 17.0% of sample population watch television screen about 1-2 hours every day in afternoon. Where about 22.0% of sample population watch television screen about 1-2 hours every day in night. However, in weekend about 24.0% of sample population watch television screen about 1-2 hours.

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Table 4: Measure the participant opinion about their happiness level:

Question	scale	Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree	mean	Standard deviation	Direction
I am intensely interested in other people	frequency	14	8	17	34	14	13	3.65	1.520	Slightly agree
	percent	14.0%	8.0%	17.0%	34.0%	14.0%	13.0%			
I find most things amusing	frequency	9	6	16	28	28	13	3.99	1.424	Slightly agree
	percent	9.0%	6.0%	16.0%	28.0%	28.0%	13.0%			
I feel that life is very rewarding	frequency	11	9	16	25	23	16	3.88	1.546	Slightly agree
	percent	11.0%	9.0%	16.0%	25.0%	23.0%	16.0%			
I have very warm feelings towards almost everyone	frequency	4	14	14	34	23	11	3.91	1.318	Slightly agree
	percent	4.0%	14.0%	14.0%	34.0%	23.0%	11.0%			
I am very happy	frequency	9	8	8	29	29	17	4.12	1.479	Slightly agree
	percent	9.0%	8.0%	8.0%	29.0%	29.0%	17.0%			
Life is good	frequency	6	11	8	20	32	23	4.30	1.494	Slightly agree
	percent	6.0%	11.0%	8.0%	20.0%	32.0%	23.0%			
I feel able to take anything on	frequency	5	8	19	30	20	18	4.06	1.376	Slightly agree
	percent	5.0%	8.0%	19.0%	30.0%	20.0%	18.0%			
I can fit in (find time for) everything I want to	frequency	11	15	15	29	17	13	3.65	1.526	Slightly agree
	percent	11.0%	15.0	15.0%	29.0%	17.0%	13.0%			
I am always committed and involved	frequency	7	10	20	25	20	18	3.95	1.473	Slightly agree
	percent	7.0%	10.0%	20.0%	25.0%	20.0%	18.0%			
I am well satisfied about everything in my life	frequency	9	7	24	23	23	14	3.86	1.456	Slightly agree
	percent	9.0%	7.0%	24.0%	23.0%	23.0%	14.0%			
I laugh a lot	frequency	6	9	13	25	22	25	4.23	1.489	Slightly agree
	percent	6.0%	9.0%	13.0%	25.0%	22.0%	25.0%			
	frequency	5	6	5	30	30	24	4.46	1.344	

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I find beauty in some things	percent	5.0%	6.0%	5.0%	30.0%	30.0%	24.0%			Moderately agree
I always have a cheerful effect on others	frequency	7	5	12	35	24	17	4.15	1.366	Slightly agree
	percent	7.0%	5.0%	12.0%	35.0%	24.0%	17.0%			
I feel fully mentally alert	frequency	11	4	20	23	28	14	3.95	1.486	Slightly agree
	percent	11.0%	4.0%	20.0%	23.0%	28.0%	14.0%			
I often experience joy and elation	frequency	3	4	22	32	29	10	4.10	1.159	Slightly agree
	percent	3.0%	4.0%	22.0%	32.0%	29.0%	10.0%			
I feel I have a great deal of energy	frequency	10	14	20	25	20	11	3.64	1.480	Slightly agree
	percent	10.0%	14.0%	20.0%	25.0%	20.0%	11.0%			
I usually have a good influence on events	frequency	4	10	14	37	22	13	4.02	1.287	Slightly agree
	percent	4.0%	10.0%	14.0%	37.0%	22.0%	13.0%			
I don’t have particularly happy memories of the past	frequency	28	21	19	17	9	6	4.24	1.538	Slightly disagree
	percent	28.0%	21.0%	19.0%	17.0%	9.0%	6.0%			
I don’t feel particularly healthy	frequency	13	16	24	23	13	11	3.60	1.511	Slightly disagree
	percent	13.0%	16.0%	24.0%	23.0%	13.0%	11.0%			
I don’t have fun with other people	frequency	23	20	22	19	10	6	4.09	1.505	Slightly disagree
	percent	23.0%	20.0%	22.0%	19.0%	10.0%	6.0%			
I don’t have a particular sense of meaning and purpose in my life	frequency	32	18	16	19	8	7	4.26	1.599	Slightly disagree
	percent	32.0%	18.0%	16.0%	19.0%	8.0%	7.0%			
I don’t find it easy to make decisions	frequency	15	20	16	19	20	10	3.61	1.601	Slightly disagree
	percent	15.0%	20.0%	16.0%	19.0%	20.0%	10.0%			
I feel that I am not especially in control of my life	frequency	16	15	19	29	11	10	3.66	1.525	Slightly disagree
	percent	16.0%	15.0%	19.0%	29.0%	11.0%	10.0%			
There is a gap between what I would like to do	frequency	9	18	17	21	20	15	3.30	1.560	Slightly agree
	percent	9.0%	18.0%	17.0%	21.0%	20.0%	15.0%			

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and what I have done										
I don't think I look attractive	frequency	28	15	13	22	13	9	3.96	1.687	Slightly disagree
	percent	28.0%	15.0%	13.0%	22.0%	13.0%	9.0%			
I do not think that the world is a good place	frequency	24	18	14	20	16	8	3.90	1.648	Slightly disagree
	percent	24.0%	18.0%	14.0%	20.0%	16.0%	8.0%			
I am not particularly optimistic about the future	frequency	29	21	9	28	10	3	4.22	1.514	Slightly disagree
	percent	29.0%	21.0%	9.0%	28.0%	10.0%	3.0%			
I rarely wake up feeling rested	frequency	14	16	22	21	17	10	3.59	1.538	Slightly disagree
	percent	14.0%	16.0%	22.0%	21.0%	17.0%	10.0%			
I don't feel particularly pleased with the way I am	frequency	19	18	16	28	11	8	3.82	1.539	Slightly disagree
	percent	19.0%	18.0%	16.0%	28.0%	11.0%	8.0%			
Total	**frequency**	**381**	**364**	**470**	**750**	**562**	**373**	**3.93**	**0.824**	**Slightly agree**
	percent	**13.1%**	**12.6%**	**16.2%**	**25.9%**	**19.4%**	**12.9%**			

Participants slightly agree with all most of statements in happiness axis.

On other hand, participants moderately agree that they find beauty in some things.

In addition, participants slightly disagree with other remaining statements.

Overall Direction of the participant's opinions about their happiness level was slightly agree with mean of 3.93±0.824 that correspond slightly agree according to Likert scale above. This reflects that participant have moderate degree of happiness.

Correlation analysis used to find the relationship between happiness score and number of hours watching television and mobile. P value of 0.016 which is less than 0.05 and it is statistically significant indicate that there is statistically significant negative correlation and relationship between happiness and number of hours watching television with correlation coefficient of -0.239 which is statistically significant at the 0.05 level. Meaning that when there is decrease number of hours watching television there will be increase in happiness.

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P value of 0.003 which is less than 0.05 and it is statistically significant indicate that there is statistically significant negative correlation and relationship between happiness and number of hours using mobile with correlation coefficient of -0.298 which is statistically significant at the 0.01 level. Meaning that when there is decrease number of hours using mobile there will be increase in happiness. With P-value of 0.0.532, that is more than 0.05 and it is statistically insignificant indicating that there is no statistically significant difference in happiness score between male and females. From the table males are have greater happiness score than females but this difference was not statistically significant. With P-value of 0.866, that is more than 0.05 and it is statistically insignificant indicating that there is no statistically significant difference in happiness score according to education level. With P-value of 0.716, that is more than 0.05 and it is statistically insignificant indicating that there is no statistically significant difference in happiness score according to marital status.

Regression model performed to predict the factor that can contribute in the happiness score and to measure the degree of effect of the predictors on the happiness score. The R, which is 0.368, represent the slightly moderate degree of correlation between the predictors (number of hours using mobile, number of hours watching television) and the Dependent Variable (happiness score). R square of 0.135 indicate that predictors can explain about 13.5% of variation in the happiness score (Table 1).

With Sig. (P-value) of 0.001 which is less than 0.05 and it's statistically significant indicate that the regression model statistically significantly predicts the outcome variable (happiness score) so indicating good fit for the data.

Every increase in one unit in number of hours using mobile the level of happiness will decrease by 0.297, and with sig. (P-value) of 0.004, which is less than 0.05 indicating that this contribution of number of hours using mobile in model was statistically significant. In addition, every increase in one unit in number of watching television the level of happiness will decrease by 0.190, and with sig. (P-value) of 0.025, which is less than 0.05 indicating that this contribution of number of hours watching television in model was statistically significant. The contribution of number of hours using mobile was greater than that of watching television this according to the levels of contribution of the two predictors, this may be due to the reason that participant use mobile more than watching television.

DISCUSSION

This study aimed to assess the level of happiness of nursing students and investigate its relationship with screen time, gender, and academic level. The findings show a moderate level of happiness in participants, with a significant negative correlation between screen time (mainly mobile and television use) and happiness scores. No significant differences were found between happiness and gender or academic year.

The moderate level of happiness identified in this study (mean OHQ = 3.93) aligns with findings reported in previous research. Kumar et al. (2022) and Kumar et al. (2023) found moderate happiness levels in nursing and medical students, respectively, which indicate

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the psychological demands and stressors inherent in healthcare education (21,22). Pham Tien Nam et al. (2024) found a higher level of happiness (80.9%) in university students in Vietnam, which suggest the influence of broader contextual factors (culture, institutional support, and mental health services) (23).

Our study shows negative association between screen time and happiness. The linear regression model found that increased time spent on mobile phones and television predicted lower happiness scores, which account for 13.5% of the variance. This is supported by Ramón-Arbués et al. (2023), who find that screen time more than six hours in a day was associated with heightened psychological distress in nursing students. Most previous research focused on screen time's effect on mental health broadly, and this study adds targeted proof regarding its association with subjective well-being.

In the context of screen time assessment, Vizcaino et al. (2019) developed an 18-item questionnaire designed to measure modern screen use across devices such as smartphones, tablets, televisions, and laptops. The tool demonstrated strong reliability, with ICC values ranging from 0.50 to 0.90, and is openly accessible for academic use. While our study relied on structured self-reported estimates of screen use, the consistency of our findings with those obtained using validated instruments reinforces the robustness of the observed negative association between screen time and happiness (24).

Our study found no significant difference in happiness scores regarding gender, which is consistent with the findings Kumar et al. (2023) (21). This contrasts with studies such as those by Pham Tien Nam et al. (2024) and Milić et al. (2024) (23,25), which observed higher levels of psychological distress or lower happiness in female students. These inconsistencies indicate sociocultural or institutional differences, and they underscore the need for localized assessments rather than universal assumptions about gender and well-being.

Academic level did not show a significant association with happiness in our study. This contrasts with findings from Kumar et al. (2022) (22), who reported year of study as a significant factor, and Milić et al. (2024) (25), who found that junior students had a higher levels of anxiety and depression. The lack of association in our study reflects consistent curricular pressure in all years or uniform access to coping resources, peer networks or faculty support.

The findings underline the potential negative impact of prolonged screen time on happiness in nursing students and support the need for wellness programs that promote healthy digital habits. Gender and academic year were not predictive in this sample, the relationship between lifestyle behaviors and psychological well-being is a critical focus area.

CONCLUSION

This study found that nursing students had a moderate level of happiness, with a significant negative correlation between screen time mainly mobile phone and television

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use and happiness scores. Gender and academic level did not significantly influence happiness levels. These findings indicate the influence of screen-related behaviors on students' psychological well-being and underscore the importance of promoting healthy digital habits in nursing students. Educational institutions should consider integrating mental wellness and media literacy programs into the nursing curriculum to help students balance academic demands with lifestyle choices that support happiness and overall mental health.

List of Abbreviations

1) OHQ, Oxford Happiness Questionnaire
2) SD, Standard Deviation
3) ANOVA, Analysis of Variance
4) SPSS, Statistical Package for the Social Sciences
5) TV, Television
6) R^2, Coefficient of Determination
7) CI, Confidence Interval
8) p-value, Probability Value
9) GAD-7, Generalized Anxiety Disorder-7 Scale
10) PHQ-9, Patient Health Questionnaire-9

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