3

The Mediating Role of Online Social Support on the Effect of Digital Media Time on Psychological Well-being: A Study in the Context of the COVID-19 Pandemic

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Abstract

This study aims to investigate the potential effects of the amount of time spent consuming different digital media contents such as learning, games and entertainment, on mental well-being (MWB) among Jordan university students and the mediating effect of online social support (OSS) during Corona pandemic. Data has been collected from 5 private and public universities in Jordan, where 332 students responded to (MWB) scale and (OSS) scale. Structural equation modelling has been applied. The study has found that none of the times has a significant direct effect on (MWB). Moreover, only the indirect effect of time spent on covid-19 contents is not significant, where the indirect effect of times has spent on learning, games and Entertainment are all significant. Significantly, the overall effect of time spent on digital media has been significant just in case mediated by online social support (OSS).

Keywords: Covid-19 Coronavirus, Online Social Support, Mental Well-Being, Digital Media.

الملخص

هذا البحث يهدف إلى استقصاء التأثيرات المحتملة للوقت المستغرق في استخدام محتويات وسائل الإعلام الرقمية المختلفة (مثل كوفيد-19، التعلم، الألعاب، والترفيه) على الرفاهية العقلية لدى طلاب الجامعات الأردنية، ودور الدعم الاجتماعي عبر الإنترنت في التوسط في هذه التأثيرات. تم جمع البيانات من خمس جامعات خاصة وحكومية في الأردن، حيث أجاب 332 طالبًا على مقياس الرفاهية العقلية ومقياس الدعم الاجتماعي عبر الإنترنت. استخدمت الدراسة نمذجة المعادلات الهيكلية لتحليل البيانات. أظهرت النتائج عدم وجود تأثير مباشر معنوي للوقت المستغرق في وسائل الإعلام الرقمية المختلفة على الرفاهية العقلية. علاوة على ذلك، لم يكن التأثير غير المباشر للوقت المستغرق في محتويات كوفيد-19 معنويًا. في المقابل، تبين أن التأثير غير المباشر للوقت المستغرق في التعلم والألعاب والترفيه كان معنويًا في كلتا الحالتين. والأهم من ذلك، أظهرت الدراسة أن التأثير الإجمالي للوقت المستغرق في وسائل الإعلام الرقمية كان معنويًا فقط بوساطة الدعم الاجتماعي عبر الإنترنت.

الكلمات المفتاحية: فيروس كورونا كوفيد-19، الدعم الاجتماعي عبر الإنترنت، الصحة العقلية، الوسائط الرقمية.

Introduction

The World Health Organization (WHO) declared On March 30, 2020, that COVID-19 has become a pandemic (WHO, 2019). This was after the spread of COVID-19 in Wuhan, China in 2019 (Chan et al., 2019). In fact, this was followed by a major change in people's lives, especially with regard to a high degree of panic and anxiety, as 90% of American citizens expressed in a survey that their lives have been changed (PEW, 2020; Sarault, 2020), especially in terms of having more media contact that, according to (Edson, et al., 2020), was by either seeking or scanning information related to the uncertainty around the COVID-19 outbreak. This is in full agreement with the media dependency theory (Ball-Rokeach, 1976), according to which, during a severe social breakdown, an unusually intense need appears on the part of individuals for information, to reduce the anxiety caused by the uncertainty in the occurrence of the crisis (Chen and Hong, 2010). Seeking information has become very evident through digital media which has become an increasingly common component of our daily life in today's globalized society. Digital media comprises both Internet and mobile mass communication to mostly obtain or exchange information, messages, knowledge and interact with each other regardless of the distance separating them (Sawyer, 2011 and Lenhart et al, 2015).

However, the time spent on digital media has raised concerns that its use may be negatively related to mental well-being (MWB) (Kruzan and Won, 2019). This may be why, for example, the American Academy of Pediatrics recommended restrictions on the amount of time children spend in front of screens, something that development researchers and clinicians (Ferguson & Donnellan, 2014) have questioned and created a huge controversy (Bell et al., 2015). Well-being includes the physical, social, and emotional dimensions of a person's state. However, since university students mostly experience increased levels of psychological and academic distress, mostly affecting their mental well-being (Alshehri, 2021), the study focused on the mental health and psychological well-being of college students.

Nevertheless, one of the predominant views on the effects of screen time in the literature and previous studies is the displacement hypothesis (Kraut et al., 1998). It postulates that the damage from technology is directly proportional to exposure (Hall et al., 2019). On the contrary, other authors suggest the stimulation hypothesis, which postulates that the use of digital media would influence well-being through the positive impact on time spent with friends which improves the quality of such friendships (Bryant et al., 2006). A third hypothesis addresses the paradox by suggesting that the influence of media vary according to their

communicative strength. Media richness theory suggests that different channels differ in their ability to provide detailed and timely information (Daft and Lengel, 1986; Goodman et al., 2016). Nevertheless, according to the Goldilocks alternative hypothesis, the use of technology at moderate levels is not inherently harmful and may be beneficial in a connected world (Parkes et al., 2013) where "overuse" can replace alternative activities (Valkenburg and Peter, 2009).

However, many studies showed that developing social support networks could help people effectively manage stress and eliminate or mitigate the negative effects of stress (Dietrich, 2010 and Kruzan and Won, 2019). Social support refers to the mutual financial and moral support between individuals, as well as the exchange of material and intellectual resources between individuals to achieve the satisfaction of social needs (Zhang, 2020 and Chong et al., 2020). The interaction between individuals and their social followers can create empathy and emotional well-being, thus achieving a better state of mind (Yang et al., 2018). Additionally (Glozah, 2015) believes that adequate social support can provide a sense of professional achievement through more courage, better interpersonal understanding, and increased self-efficacy which can effectively reduce stress. This includes the use of online social support (OSS), which consists of three factors. Structural aspects of the social network, work assistance already available or received and the nature of the support (LaCoursiete, 2001).

Literature review

The relationship between digital media utilisation, online social support, and mental health is intricate and multifaceted, as demonstrated by several research. Gao et al. (2020) indicate a significant incidence of mental health issues linked to frequent social media exposure during the COVID-19 pandemic, implying that digital media may adversely affect well-being. Eneizat et al. (2024) and Zhang et al. (2019) emphasise the beneficial impact of social support on mental well-being (MWB), suggesting that empathic interactions can enhance emotional health. In fact, findings from more research indicated a more complex link. Specific results were relevant to the type of technology used (Rosen et al., 2014), what individuals reveal online and the content they interact with (Meier, 2014).

Ellen and Stephen (2015) found that adolescents' depressive moods were reduced when they sought and felt social support on Facebook, while their depressive moods were intensified when they sought but did not feel social support. Yang et al. (2018) emphasize the mood-enhancing benefits of social support. Conversely, Eneizat et al. (2023a) and Ferguson (2017) found a modest but significant association between excessive screen use (more than six hours per day) and distress, depression and delinquency in a study of 6,000 students aged 12–18.

Przybylski and Weinstein (2017) reported that digital technology use had minimal effects on the mental health of more than 120,000 15-year-old students in the United Kingdom.

This complexity is further reflected in research by Twenge (2019) and Twenge & Campbell (2019), which associate frequent digital media usage with reduced mental health among teenagers, revealing that heavy users exhibit increased depression and suicidal inclinations. Bruggeman et al. (2019) observed a comparable trend in children, highlighting the significant influence of offline social networks on well-being. Ostic et al. (2021) provided a balanced perspective, recognising both beneficial and detrimental effects of social media usage concerning social capital. Akulwar et al. (2020) established a correlation between excessive screen time and lower sleep quality and the well-being in physiotherapy students, but this effect was mitigated by physical exercise. Utz & Breuer (2017) found no significant impact of social networking sites on life satisfaction or stress, despite increased online social support.

The COVID-19 pandemic created new dynamics, as evidenced by Brandtzaeg & Lüders (2021), who indicated that heightened internet usage during lockdowns was associated with diminished well-being, especially among older females. Pan and Wei (2021) discovered that interactions on social media, particularly with COVID-19 related satires, had a beneficial impact on well-being. Longest and Kang (2022) emphasised the significance of offline emotional support in alleviating depressive symptoms in young adults confronting pandemic-related uncertainty. Giebel et al. (2021) noted variations in the utilisation of social support services among older individuals and carers, with a steady enhancement in well-being over time. Research conducted by Al-Tammemi et al. (2020), Al-Salman et al. (2022) and Eneizat et al. (2023b) on university students revealed that the pandemic intensified symptoms of stress, depression, and delinquency impacted by variables such as age, motivation for remote learning, and utilization of digital technologies.

The current study is distinguished from previous studies by its emphasis on direct and indirect relationships within mental health, specifically examining the correlation between digital media use and the psychological well-being of university students, while also considering online social support as a mediating variable in this context. This method offers an extensive examination of how all of these variables combined influence psychological well-being, particularly in relation to the COVID-19 pandemic. Consequently, the study provides more thorough and nuanced findings in this domain.

Based on the insights provided above and considering the context of how much time people spend using digital media and mental health in the presence of COVID-19, this study hypothesized the following:

Hypothesis 1 (H1). *Time spent on digital media; on covid-19 issues, learning issues or games and entertainment, different impact, directly and indirectly WMB through the mediation of (OSS).*

. Hypothesis 2 (H2). The total *Time spent on digital media directly and indirectly impacts WMB through the mediation of (OSS).*

Materials and Methods

This study has examined the influence of time allocated to digital media on mental well-being (MWB) through the mediation of online social support (OSS) via questionnaires. The researcher utilised a scale to assess Mental Well-Being (MWB) established by Tennant et al. in 2007. This scale is employed to assess the happiness, life satisfaction, psychological functioning, and social functioning of participants, as utilised by Stewart-Brown et al. (2009). It comprises 14 components, as indicated in appendix (A). The researcher utilized a scale established by Nick in 2018 for OSS. This scale has 40 elements over four dimensions, as detailed in appendix (b). Both assessments employed a 5-point Likert scale (1-5). The two scales were translated into Arabic and underwent validation via confirmatory factor analysis (CFA).

 In addition, the study gathered some other demographic information as sex, the type of university and the average amount of time spent a day on different digital media contents which composed of the average number of hours spent a day in the period Oct. 1st- Oct. 30th 2020, on learning issues (LEARNING(T), on covid-19 issues(COVID(T) and on games and entertainment (G&E (T)), using five categories: 1= less than one hour a day, 2=1-2 hours a day, 3= more than two hours and less than three hours a day, 4=3-4 hours a day and 5= more than 4 hours a day. More importantly, this study involved two control variables which are sex (SEX) and type of university (TOU). Sex variable was believed in literature to have influence on (MWB) (Przybylski et al., 2017; Eynon & Helsper, 2015; Tennant et al ,.2007). However, the researcher believed that the type of universities, whether private or governmental, may have an influence on OSS or (MWB). Therefore, to prevent bias in the results, the researcher holds sex and type of university constant during the test. Thus, these control variables were recoded as dichotomous dummy variables (1 = Male, 2 = female and 1=governmental university and 2=private university. Thus, our study is limited to the above-mentioned 57 items.

Data was gathered using self-administered questionnaires distributed in private and public universities in Jordan. All instruments utilised in this research received endorsement from a panel of specialist academics. Convenience sampling was employed, resulting in 332 valid questionnaires (94.8%) returned from a total of 350 students following the data screening of univariate and multivariate analyses. The data analysis was conducted using IBM SPSS AMOS (version 23), utilising structural equation modelling (CB-SEM). Confirmatory Factor Analysis (CFA) was employed to evaluate the validity and reliability of the data. Items were assessed by item loading, error variance, Composite Reliability (CR), Average Variance Extracted (AVE), and internal reliability (Byrne, 2012). Subsequently, path analysis was conducted with Maximum Likelihood (ML) estimation. The maximum regression route for each measurement item was constrained to (1) for the purpose of model identification. The Chi-square, Adjusted Goodness-of-Fit Index (AGFI), Goodness-of-Fit Index (GFI), and Root Mean Square Error of Approximation (RMSEA) were employed to assess model fit (Hair et al., 2006).

Results

Descriptive statistics for independent and control variables.

The gender and type of university were considered in this study for 332 participants and will be used as control variables. Table (1) shows the descriptive statistics for independent and control variables.

Table 1. Descriptive statistics IV, DV and control variables.

Group	Frequency	Percentage
Gender		
Male	137	41.3
Female	195	58.7
Type of University		
Public	160	48.0
Private	172	52.0
Answers		
Variables	Mean	SD
TIME (IV)	4.1928	.83699
MWB (DV)	3.5895	.78161
OSS (MEDIATOR)	3.5151	.61663

Among the participants, 41.3 % were male and 58.7% were female. In addition, 48% of the students were from the public universities against 52% from the private universities. However, the students showed high scores in time of exploring digital media (4.1928) with a medium score of (MWB) (3.5895) and a medium score of OSS (3.5151).

Confirmatory factor analysis (CFA)

First-order CFA

The first step was to carry out the confirmatory factor analysis (CFA) for all the constructs with their components and items. This is to specify whether the underlying constructions were influencing the observed responses in a predicted way. It aims to establish the conceptual soundness of the latent constructs before implementing structural equation modeling (SEM) for path analysis. This was to ensure adequate validity of the constructions. The criteria used to assess the construct validity were based on the following fit indices cut-offs values that are listed in Table (2). Therefore, CFA executed and produced the following results: Chi-square= 3265.942, CMIN/DF= 3265.942 / 1524 = 2.143.., CFI = .827, GFI = .742, RMSEA =.0592. To test for goodness of fit for the data, these values were compared to GOF Indices shown in Table (2), where any Values outside the Recommended and Acceptable Values are considered a bad fit for the model. The results obtained for the $\chi 2/df$ and RMSEA suggested a poor model fit as GF1 are outside the good range and as the standardized regression weights or factor loadings for the 57 items were neither all statistically significant at p < .001 nor above the cut-off value of 0.5. Therefore, the items of loading ≤ 0.5 such as Esteem7, S_Companionship5, S_Companionship9, Informational_S8, Instrumental_S2, Instrumental_S7, Instrumental_S10, MWB1, MWB3, MWB10 and MWB14 were decided to be removed from the model to improve it. This has produced a better result where Chi-square was 2215.804, CMIN/DF= 2215.804 / 974 = 2.275., CFI = .924, GFI = .827, RMSEA =.062. Which suggests a good model fit. Table (3) and Fig (1) show the remaining items with their final loadings, internal reliability, composite reliability and average variance extracted.

Table 2. The overall assessment of the model fit indices

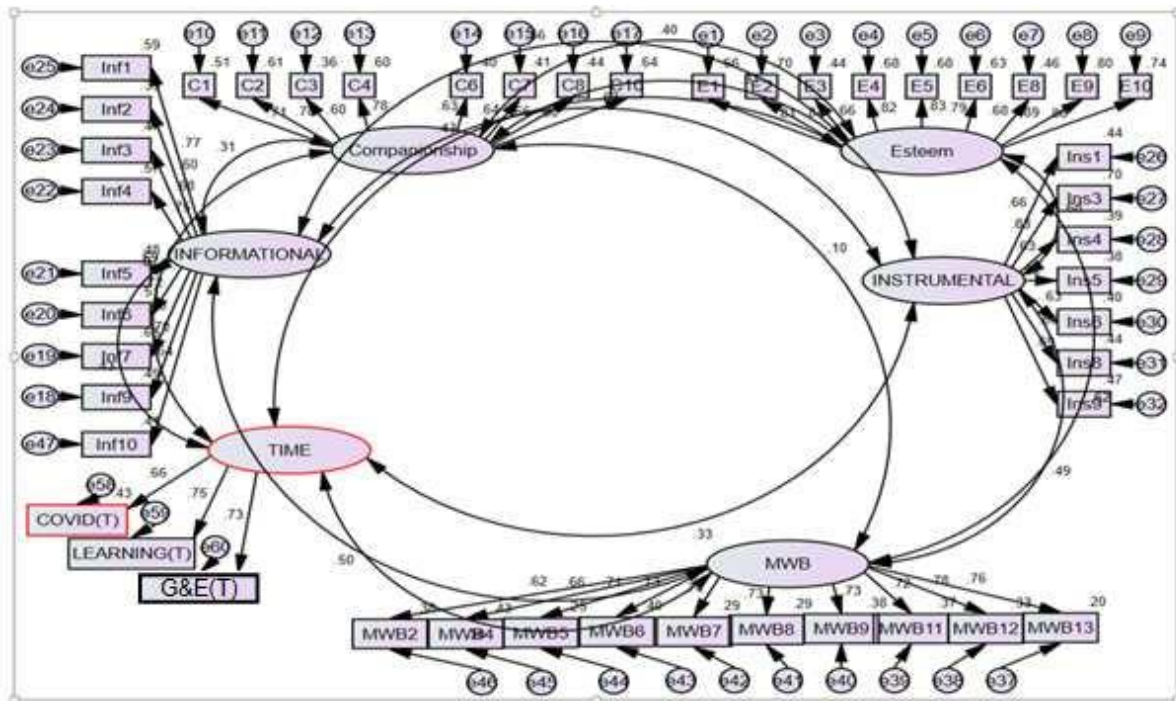| Fit index	Recommended Values	Acceptable Values	Source
CMIN ($\chi 2$)			Hooper et al., 2008).
p-value	> 0.05	≥ 0.000	Hair et al., 2006 and Karakaya-Ozyer(2018)
$\chi 2/df$	≤ 3.00	≤ 5.00	Bagozzi and Singh, 1991.
GFI	≥ 0.90	≥ 0.80	Hoyle and Kenny, 1999
CFI	≥ 0.90	≥ 0.90	Hoyle and Kenny, 1999
RMSEA	0.05 to 0.08	≤ 0.10	Schumacker and Lomax, 1996

Fig (1) the measurement model showing the remaining items with their final loadings

Table (3): Cronbach's Alpha, Composite Reliability, AVE of constructs

Construct	Cronbach's Alpha	Composite Reliability	AVE
Esteem	0.885	0.941491	0.64324
Companionship	0.929	0.886271	0.496073
INFORMATIONAL	0.899	0.900206	0.502394
INSTRUMENTAL	0.851	0.85424	0.530094
MWB	0.83	0.908579	0.503155
TIME	0.717	0.755732	0.508437

The convergent and discriminant validity

The quality of measurement is satisfied as illustrated in Table (3), where Alpha Cronbach is greater than 0.7, Composite reliability is greater than 0.5 and AVE is greater than .5 which satisfies the convergent validity (Fornell & Larcker, 1981). However, the square root of AVE was found to be always greater than the latent variables correlations which appear in Fig (1) and this satisfies the discriminant validity. However, the strong correlations between the four constructs of OSS suggests a possibility that there may be a second order factor that could account for some of those associations.

Second-order confirmatory factor analysis

The second-order confirmatory factor analysis is reported here to facilitate future adoption of the TIME-OSS-MWB measurement model in a full structural equation model. Therefore, after executing the second order CFA, shown in Fig (2), we obtained the following results: Chi-square=2244.282, CMIN/DF=2244.282 / 982 = 2.285., CFI=.911, GFI = .870, RMSEA = .062.
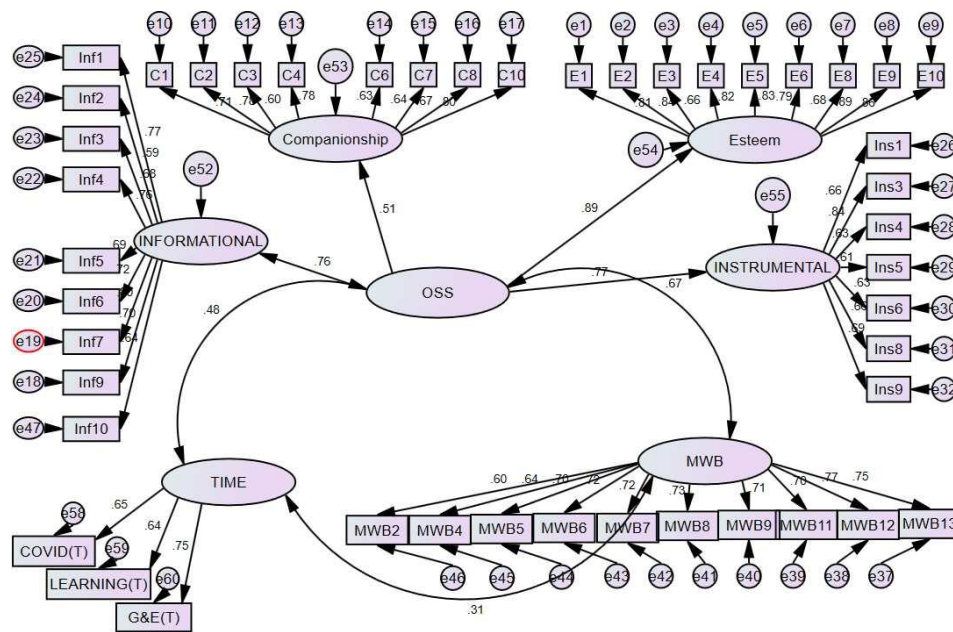
Fig (2): The second order CFA structural model showing second for time with the all-standardized regression weights and the squared multiple correlations

Path Analysis

Path analysis drawn in Fig (3) presents the mediation of OSS between each Time and (MWB) while controlling for students' demographics of SEX and TOU. The effect with its significant level of each Time on (MWB) were computed along with the squared multiple correlation. Path analysis drawn in Fig (4) presents the mediation of OSS between the total time and (MWB) while controlling for students' demographics of SEX and TOU. The effect with its significant level of the total Time on (MWB) were computed along with the squared multiple correlation.
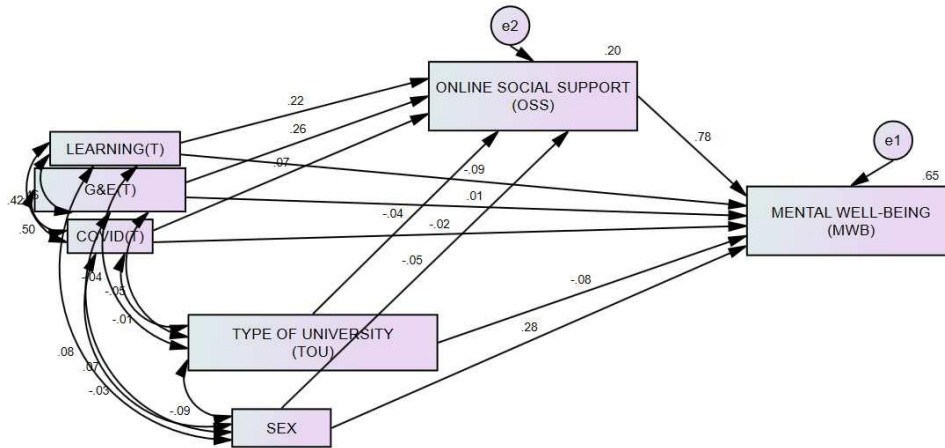
Fig (3) Path analysis showing the effects of each time
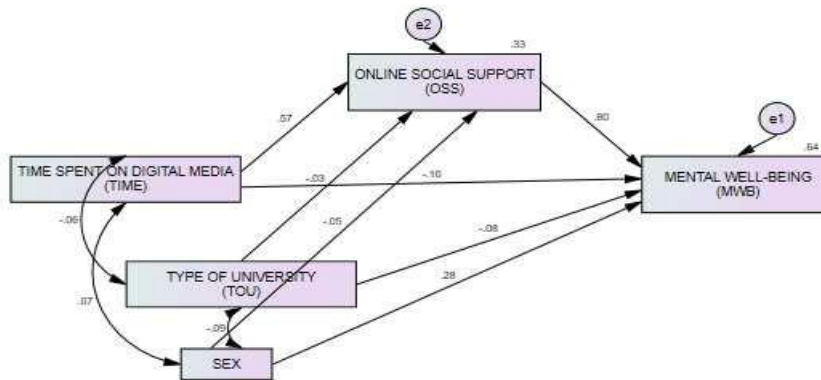

Fig (4) Path analysis showing the effects of the total time

The effect of each time on (MWB)

To study the effect of each time on (MWB), path analysis was carried out, while controlling for students' demographics of SEX and TOU, as it appears in FIG (3) with all the direct effects labeled. However, Table (4) shows the regression weights for all variables including the control variables.

Table (4): regression weights for all variables including the control variables

			Estimate	S.E.	C.R.	P
OSS	<---	TOU	-.016	.019	-.833	.405
OSS	<---	SEX	-.018	.019	-.936	.349
OSS	<---	LEARNING(T)	.040	.010	3.928	***
OSS	<---	G&E(T)	.047	.011	4.280	***
OSS	<---	COVID(T)	.013	.011	1.145	.252
MWB	<---	OSS	2.565	.121	21.230	***
MWB	<---	TOU	-.100	.042	-2.377	.017
MWB	<---	SEX	.359	.043	8.383	***
MWB	<---	COVID(T)	-.013	.025	-.501	.617
MWB	<---	G&E(T)	.003	.025	.133	.894
MWB	<---	LEARNING(T)	-.054	.023	-2.370	.018

Table (4) shows the regression weight of each time spent on the digital media and its significance while controlling for students' demographics of SEX and TOU. However, both control variables were decided to be included in the structural model and the path analysis to prevent bias in the results. This is because SEX has a strong significant positive impact of .359 on (MWB) and (TOU) has a strong negative significant impact of -.100 on (MWB) as p=.017.

Direct effect

Table (5) and Table (6) show the results of the path analysis for only the direct effects, with the Two Tailed Significance level of these effects.

Table (5): Standardized Direct Effects

	COVID(T)	G&E(T)	LEARNING(T)	SEX	TOU	OSS
OSS	.067	.256	.224	-.046	-.041	.000
MWB	-.020	.005	-.093	.278	-.078	.779

Table (6): Standardized Direct Effects - Two Tailed Significance (BC)

	COVID(T)	G&E(T)	LEARNING(T)	SEX	TOU	OSS
OSS	.252	.011	.006	.409	.356	...
MWB	.567	.876	.070	.012	.023	.014

It is clear from Table (5) and Table (6) that only the direct effects of G&E(T) on OSS, LEARNING(T) on OSS, SEX on (MWB) and TOU on (MWB) are significant

Indirect effect

Table (7) and Table (8) show the results of the path analysis for only the indirect effects, with the Two Tailed Significance level of these effects.

Table (7): Standardized Indirect Effects

	COVID(T)	G&E(T)	LEARNING(T)	SEX	TOU
MWB	.052	.199	.175	-.036	-.032

Table (8): Standardized Indirect Effects - Two Tailed Significance (BC)

	COVID(T)	G&E(T)	LEARNING(T)	SEX	TOU
MWB	.252	.009	.005	.438	.369

Table (8) shows only the indirect effects of G&E(T) and LEARNING(T) on (MWB) are significant

Total effect

As a matter of fact, the results of the direct and indirect effects will be reflected on the total effect of time spent on the digital media on the (MWB) of the universities' students in Jordan as we see in Table (9) and Table (10)

TABLE (9) Standardized Total Effects of total time on (MWB)

	COVID(T)	G&E(T)	LEARNING(T)	SEX	TOU	OSS
OSS	.067	.256	.224	-.046	-.041	.000
MWB	.033	.205	.082	.242	-.110	.779

TABLE (10) Standardized Total Effects - Two Tailed Significance

	COVID(T)	G&E(T)	LEARNING(T)	SEX	TOU	OSS
OSS	.252	.011	.006	.409	.356	...
MWB	.514	.012	.224	.014	.018	.014

These results in Table 9 and 10 show that only the total effect of G&E(T) and LEARNING(T) on OSS are significant while only G&E(T), SEX, TOU and OSS are significant on (MWB). More importantly, the squared multiple correlation for (MWB) in this model as shown in Fig (3) is 65% which is strong enough to state that there is a correlation

The effect of total time on MWB

To study the effect of total time on (MWB), path analysis, shown in Fig (4), was carried out, while controlling for students' demographics of SEX and TOU. However, Table (11) shows the regression weights for all variables including the control variables.

Table (11) shows the regression weights for all variables including the control variables.

Table (11): the regression weights for all variables including the control variables.

	Estimate	S.E.	C.R.	P
OSS <--- TIME	.163	.013	12.597	***
OSS <--- TOU	-.012	.018	-.671	.502
OSS <--- SEX	-.021	.018	-1.192	.233
MWB <--- OSS	2.617	.132	19.890	***
MWB <--- TIME	-.090	.038	-2.378	.017
MWB <--- TOU	-.101	.042	-2.400	.016
MWB <--- SEX	.361	.043	8.421	***

Table (11) shows the regression weight of each time spent on the digital media and its significance while controlling for students' demographics of SEX and TOU. However, both control variables were decided to be included in the structural model and the path analysis to prevent bias in the results. This is because SEX has a strong significant positive impact of .361 on (MWB) and (TOU) has a strong negative significant impact of -.101 on (MWB) as p=.016.

Table (12) presents the direct, indirect and total effect of the total time spent on the digital media on the (MWB) of universities' students in Jordan through the mediation of (OSS).

Table (12): standardized direct, indirect and total effect of total time on (MWB)

*	Direct effect	Indirect effect	Total effect
Total time	-.095	.454	.359
Two Tailed Significance (BC)	.026	.013	.008

Table (12) shows that the total time spent on the digital media on the (MWB) of universities' students in Jordan through the mediation of (OSS) is positively significant. However, the direct effect is negative while the indirect effect is positive. More importantly, the squared multiple correlation for (MWB) in this

model, as shown in Fig (4), is 64% while it is 33% for OSS which is strong enough to state that there is a correlation

Discussion and Conclusion

The current study aimed to measure the mediating role of online social support on the effect of digital media time on psychological well-being: a study in the context of the covid-19 pandemic. This was achieved by developing a measurement and a structural model by accomplishing CFA and path analysis, where all constructs were tested and validated. The results of the quality of measurement analysis were satisfying with the new re-specified measurement model which showed a relatively good fit with the sample data.

The results of the path analysis, combined with the two control variables, as shown in Fig (3), support the second hypothesis (H1), which states that time spent on digital media; on covid-19 issues, learning issues or games and entertainment issues, differently impacts WMB through the mediation of (OSS). In fact, there were no direct effects for these times on the (MWB) of the university student. Indeed, this is in line with the results of the study conducted by (Bell et al., 2014) and not in line with Ferguson (2017) who found a small positive association between screen time and symptoms of depression and delinquency. More importantly, the indirect effect of time spent on covid-19 and time spent on learning and games and entertainment were found to be significant where the indirect impact of the time spent on covid-19 issues was not significant. Consequently, the total impact was found to be not significant for the time spent on covid-19 issues and learning issues, where it was only significant for the time spent on games and entertainment. These mediation impacts of OSS is supported by many studies as (Eline and Steven, 2015). Eventually, our results are in line with results proposed by (Rosen et al., 2014 and Meier, 2014) when they claimed that Specific results were relevant to the type of technology and what individuals reveal online.

For the third hypothesis (H2) which states that the total Time spent on digital media directly and indirectly impacts WMB through the mediation of (OSS), the results of the path analysis showed that the direct effect of the total time was not significant while the indirect and total effect of the total time were both significant which satisfies the third hypothesis (H2).

Nevertheless, when these results were checked against theories, they demonstrated coherence with the Media richness theory which attempts to explain how social electronically mediated interactions affect well-being. Thus, it is evident from the analysis that G&E(T) and LEARNING(T) as perceived by

students, turned out to be variables which have a significant effect on (MWB) and consequently, are good predictors of (MWB). Thereby, it should be noted that COVID (T) is none effective and LEARNING(T) is the least effective. This means that students are prone to achieve better (MWB) with time spent on LEARNING(T) and G&E(T) through the mediation of OSS than with the time spent on COVID(T)

Interpretation of results

The absence of the direct effect of time on (MWB) could be explained by the role of the (OSS) (the mediator) that directly affects (MWB) and be affected by the amount of time spent on the different digital media content. In fact, the positive effects of OSS on (MWB) have been demonstrated in this study and can be supported by some previous studies such as (Zhang et al., 2019 and Yang et al., 2018). However, the absence of the indirect impact of time spent on covid-19 issues can be explained by the rumors and misrepresentations about covid-19 pandemics that widespread on digital media for different purposes as most of it was informal and more importantly, there has always been a fluctuation of good and bad news about covid-19 which are all responsible for the fluctuations of the correlation between time spent, OSS or MWB.

Further, the lesser indirect impact of time spent on learning on (MWB) may come from the lesser social support the students can get because of their new experience of online learning to the students, the educational institutions and the community in Jordan, which is the reason behind the fluctuations of feedback and point of views towards eLearning which probably impact the correlation between time, OSS or MWB. This is not to mention the pressure exerted on whoever engaged in the learning process from student to lecturer to universities or policy makers. More importantly, the high impact of time spent on games and entertainment can be explained by two reasons, first, it is optional, where students would go where they feel more comfortable of games or entertainment, and second from being originated from more trustful resources specially when it is official or belongs to academic or research center.

Implications

Based on these results and explanations, the study can conclude that time has potentials to improve (MWB) of the universities students in Jordan but only when mediated by (OSS). Therefore, the author suggests practical implications for improving (MWB) for the students. First, time spent on digital media should be differently reconsidered when targeting different digital media content as the results of this study pointed out that (MWB) varies according to where student spent their time surfing the digital media. To ensure this, universities should follow up with their students specially in building an (OSS) system that provide

social support to their students specially by involving parents and other community members who can socially support the students with certain standards. Moreover, students must start searching for what digital media content is better than the other, where universities, parents and the community members must work together to steer students to the right amount of time spent and the right contents with the right type of digital media. Lastly, these findings implicated the government's need to pay more attention to mental health problems, and combating with "infodemic".

Recommendations

Students should explore which digital media is most effective in terms of time and content, while stakeholders, including educational institutions, should monitor media exposure, set time and content limits on campus, and provide consultation and guidance offices for online support and mental well-being (MWB) issues. Stakeholders should also encourage the purposeful use of digital media and collaborate with faculty, staff, and counselors to establish rules for responsible media use. Additionally, policymakers should ensure the proper implementation of these measures and support the development of improved media ratings and blocking technologies.

For Future Research

Future research should explore the nuances of how different types of digital media content influence psychological well-being, particularly by extending the scope beyond the context of the COVID-19 pandemic. While this study highlighted the mediating role of online social support, future studies could investigate additional mediators, such as emotional regulation, cognitive engagement, or social comparison. Moreover, longitudinal designs are recommended to capture the dynamic and evolving nature of digital media usage and its effects on well-being over time. It would also be beneficial to examine how cultural and demographic factors, such as age, gender, and socioeconomic status, moderate these relationships. Additionally, incorporating qualitative methods could provide deeper insights into the subjective experiences of digital media users. Finally, future research should consider the implications of emerging technologies, such as virtual reality and AI-driven social platforms, to understand their potential impact on psychological well-being and the role of online social support in these new digital environments.

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APPENDICES

Appendix (A): Online Social Support Scale

1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Pretty Often, 5 = A Lot

Esteem 1-10

People show that they care about me online

Online, people say or do things that make me feel good about myself

People encourage me when I'm online

People pay attention to me online

I get likes, favorites, upvotes, views, etc online

I get positive comments online

When I'm online, people tell me they like the things I say or do

Online, people are interested in me as a person

People support me online

When I'm online, people make me feel good about myself

Compassionate 1-10

When I'm online, I talk or do things with other people

People spend time with me online

People hang out and do fun things with me online

Online, I belong to groups of people with similar interests

People talk with me online about things we have in common

Online, I connect with people who like the same things I do

I am part of groups online

When I'm online, people joke and kid around with me

People relate to me through things I say or do online

Online, people make me feel like I belong

Informational 1-10

When I'm online, people give me useful advice

Online, people provide me with helpful information

If I had a problem, people would help me online by saying what they would do

Online, people would tell me where to find help if I needed it

People help me learn new things when I'm online

People offer suggestions to me online

People tell me things I want to know online

When I'm online, people help me understand my situation better

If I had a problem, people would share their point of view online

Instrumental 1-10

People help me see things in new ways when I'm online

People online would help me with money or other things if I needed it

When I'm online, people help me with school or work

Online, people help me get things done

If I needed a hand doing something, I go online to find people who will help out

Online, people offer to do things for me

Online, people help me with causes or events that I think are important

When I'm online, people have offered me things I need

When I need something, I go online to find someone who might lend it to me

When I need a hand with school or work things, I get help from others online

I contact people online to get help or raise money for things I think are important

Appendix (B):

Warwick–Edinburgh (MWB) Scale (WEMWBS) 1-14

I've been feeling optimistic about the future

I've been feeling useful

I've been feeling relaxed

I've been feeling interested in other people

I've had energy to spare

I've been dealing with problems well

I've been thinking clearly

I've been feeling good about myself

I've been feeling close to other people

I've been feeling confident

I've been able to make up my own mind about things

I've been feeling loved

I've been interested in new things

I've been feeling cheerful

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