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THE RELATIONSHIP BETWEEN SOCIAL CAPITAL AND PSYCHOLOGICAL WELL-BEING: THE MEDIATING ROLE OF INTERNET MARKETING

Abstract. *The purpose of this study is to investigate the relationship between social capital and psychological well-being through perceived social support testing social media usage as a moderator. This study is based on social capital theory, which is centred on human interaction through social support to amplify the psychological well-being. Data was collected from 368 masters' students belonging to five different campuses. Using partial least squares structural equation modelling the results reveal that perceived social support significantly mediates the link between social capital and psychological well-being, and social media usage heightens the relationship between social capital and saws social support when it is used for a social cause. Findings of the study have some practical implications on how to diagnose and prevent factors that influence the feelings of isolation and loneliness in online interactions. The results are useful for digital media users and managers in higher education distance learning institutions since social interaction might indirectly benefit virtual university students' psychological well-being by increasing the perceived social support followed by social capital. Researchers agree that using social media may help to improve students' levels of life quality if educational administrators can develop novel applications that pay close attention to individuals' social and moral support. As such, social media designers could design more entertaining features to efficiently stimulate students and other users to adopt and meet their needs for social interactions. This research has established that a simple social conversation forum app should be launched by any virtual university to bring their students together where they could feel a sense of belonging and connectedness with a slice of social support. Moreover, teachers should also have a separate informal blog where they could communicate with their students each week to overcome the lack of face-to-face interaction. The administration of virtual universities has to increase the number of face-to-face gathering and seminars, i.e. it should be once in a semester rather than once in the entire study program. It will motivate the students by making references and relations with their peers. By spreading this knowledge, the students may get out of the state of isolation that will improve their performance. By demonstrating this in the higher education sector, virtual universities could reduce the service staff more intelligently through AI, and delay in response time (e.g., communication between student-to-student and student-to-teacher) could also be removed efficiently. Applying this model in virtual university settings could bring local and international students to obtain more significant social support, consequently leading to amplified psychological well-being.*

Keywords: psychological well-being, social capital, internet marketing, social media usage, perceived social support online communities, e-learning, virtual engagement, social ties, online social interaction, loneliness, and isolation.

Introduction. The rapid technological progression has pushed many organizations to switch to the modern ways of communication, socialization and education (Malik, 2017). Similarly, educational institutions are also moulding into virtual settings for collaborative and innovative learning due to time and space issues (Hussain, Hussain, & Ramzan, 2019). The benefits of online education are considered sufficient to overwhelm the challenges and barriers to an equal level of quality education (Wieser & Seeler, 2018). More and more higher education institutions (HEIs) practice various online resources and new collaborative tools by integrating digital technologies effusively within the curricula. These patterns are designed to promote students' cooperation and reduce the feelings of detachment due to distance

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learning (Ali, 2003). Muddling through these confronts, distance learning and e-learning are the best options to meet the needs of higher education by using the learner-centred approach in education (Barbara & Vakili, 2005; Ruiz et al., 2006; Ercan, 2010). In the age of e-learning, social capital is the only medium through which students' psychological well-being is enhanced by supplementing social support in social networking sites (Lee, Chung, & Park, 2016). The role of social support is of prime interest in the digital edge (Xavier & Wesley, 2018). The scope of e-learning is very high internationally by producing valuable graduates (Malik, 2017).

Technological advancement has changed the learning patterns (Sobaih et al., 2016). The government of Pakistan established the first-ever e-learning institution by the name of Virtual University of Pakistan (VU) in 2002, to educate local and overseas students. Distance learning is known for being nameless and faceless; the students strive hard to feel connected but still infer the state of loneliness and isolation, which affect their psychological well-being. For this reason, they invest their time into social capital to gain some social support from their virtual fellows through social media (Sobaih et al., 2016). The vital motive of these e-channels is augmenting online social support to the students who are dispersed virtually (Chang & Hsu, 2016; Mao & Qian, 2015; Pang, 2018). The prior studies, surrounding social networking sites (SNSs) were focused mainly on the impact of social capital on students' psychological well-being, social support, connecting, making and retaining relationships in the off-line field. Still, less care has been taken in the online domain (Hu et al., 2017).

Moreover, preceding studies have focused on the general use of SNSs (Dhir & Tsai, 2017; Hu et al., 2017; Pang, 2017). Very few studies have empirically investigated the effects of social capital on psychological well-being in the virtual sphere (Burke & Kraut, 2016; Chen & Li, 2017; Pang, 2017). This present study concentrates on the role of perceived social support in online context by using different forms of social media for support mechanisms among the students of the Virtual University of Pakistan.

Previous studies unveiled the effects of social media adoption on individuals' social connectedness and well-being (Best et al., 2014; Chan, 2015; Chang & Hsu, 2016). However, the present study extends this line of work by exploring how social media may lead to overcoming the feelings of isolation and dispersion in the digital domain. The conceptual model of this research study is an attempt to add in the literature of psychological well-being complemented by perceived social support in the higher education sector. The theoretical framework used in this study "pitching mediator and moderator in a sequence" has not been investigated yet in the virtual sphere. By applying this model on with virtual students, it was aimed to address the sense of perceived social support through which the feeling of isolation and loneliness that is caused by the issue of distance education being «nameless» and «faceless» could be reduced. This problem was originated due to lack of social support in online social ties, where the matter of virtual students' connectivity, coordination and cooperation is an emerging issue nowadays. While encountering more deeply into the problem, it uncovered less enrollment and high drop-out ratio. Therefore, the present study clarifies the modes of getting social, moral, and academic support that results in boosting up psychological well-being professed by investing in social capital. Thus, the primary purpose of the study is to analyze the relationship between social capital and mental well-being engendered through perceived social support as a mediator by intensifying the moderating effect of social media usage.

Literature Review. Schuldz introduced social Capital Theory in 1963, which emphasizes on the person's social connections and relationships by investing in social bonds (Lin, 2001). This theory was revised by Putnam (2000) in the online context. Vygotsky's Social Development Theory is the work of Russian psychologist Lev Vygotsky (1962). This theory describes human learning as a social process and the origination of human intelligence in society or culture. The major theme of Vygotsky's theoretical framework is that social interaction plays a fundamental role in the development of cognition. Social development is about putting people at the centre of development (Kozulin et al., 2003).

While cramming psychological well-being, the key focus is on life satisfaction and self-esteem; as it entails overall evaluation of one's environment, i.e. online and offline (Chen, 2017; Afzal, Khan, and Mujtaba, 2018). Additionally, the psychological outcome is the sense of community and feeling that members have of belonging (Burke & Kraut, 2016; Coll-Planas et al., 2017). SNSs users who are engaged in the frequent use of online learners networking feel a greater sense of connectedness (Raza et al., 2017). In the higher education sector, virtual students are found to be satisfied and motivated in their academic achievements due to online engagement forums (Malik, 2017). Use of social media technologies among virtual students in higher education aids in their quality of life and well-being through modernized connectivity mediums. The off-campus students get into social ties for their academic and social needs which lead them to heighten their psychological well-being only if they perceive social support (Arshad et al., 2014).

The social capital theory is functional in numerous contexts; in online social networks; it inspires the students of virtual establishments to build conviction through standard interfaces, stake knowledge, and help in career achievement (Chumg et al., 2016). Social media is a significant predictor of social capital when applied to university students (Ahmed et al., 2015). Siraj (2018) replicated Putnam's theory of social capital and concluded that social capital is the glue that holds these institutions as one. Putnam (2000) segregates between bridging and bonding social capital. Bridging exposed spanning the networks refer to creating connections between individuals who may provide useful information or new perspectives for one another but typically not emotional support in the virtual surroundings (Hsiao & Chiou, 2012). Whereas, bonding social capital entails to be emotionally attached to the individuals' close relationships, such as family and friends over social networking sites. Other researchers have discussed the third type of social capital about those connections who are engaged tightly through social media even after quitting the institution (Ellison et al., 2007; Li & Chen, 2014). Peer networking would uplift psychological well-being through social support (Lin, 2012). Online social support societies offer e-classrooms for students to come together online and share proficiencies to induce body of emotional and professional support which impacts psychological well-being positively (Jih-Hsin et al., 2016). Perceived social support deals in various forms; likewise, interactional feedback could heighten appraisal support among SNSs users (Xavier & Wesley, 2018). Esteem support can be articulated by appreciating a classmate's online activities, whereas companionship is expressed as appealing a new person to a social networking group (Robbins et al., 2014). The leading technologies that support communication between distance learning students are Facebook, WhatsApp, and Skype (Arif & Kanwal, 2016).

Social Capital and Psychological Well-Being. The literature validated that different types of social capital are positively associated with psychological well-being (Pang, 2018). Several preceding studies have evidenced the meaning of correlation between social capital and psychological well-being backed by social capital theory (Chen & Li, 2017; Yoo & Jeong, 2017; Lee, Chung, & Park, 2018). Students living abroad are connected to their families and friends through SNSs to maintain their well-being and avoid loneliness (Pang, 2018). The cons of employing social media technologies among students of higher education in Pakistan exert bright symptoms of their psychological well-being aspects (Yoo & Jeong, 2017). The students of Allama Iqbal Open University, Islamabad, Pakistan are found satisfied in their academic performance by using social media for virtual learning and social support (Arif & Kanwal, 2016). A study drawn from undergraduate students in a large Midwestern university in the United States by Lee, Chung and Park (2018) links social capital and psychological well-being in a significant pattern not only in offline but also in online settings. So, it is hypothesized as follows:

H1: There is a significant relationship between social capital and psychological well-being.

Social Capital and Perceived Social Support. The research highlighted that the stronger bridging and bonding social capital leads to maintained social capital which in turn increase perceived social support (Lemon & Wangenheim, 2009; Teng, 2017). Virtual universities deliver their course content, both

synchronously and asynchronously (Gul, Ramzan, & Batool, 2017). The students in this convention show their keen interest in online forms of social capital to get appraisal support in their social ring which elevates their esteem support by injecting the feelings of companionship (Huang et al., 2017). Social capital is a true predictor of social support found in interpersonal social environments that become the reason of happiness and sense of belonging and support to one another (Munzel, Galan, & Waarden, 2018). All social relations and structures facilitate some forms of social capital, which moulds into perceived social support (Yang & Lin, 2017). So, it is hypothesized as follows:

H2: Social capital significantly influences perceived social support.

Perceived Social Support and Psychological Well-Being. Constructing upon a study which claimed that social support perception significantly predicts an individual's well-being (Lee et al., 2018). The frequency of interaction between two or more people steps in as social support and leads to improved well-being, i.e. the more the students are engaged in using social media to get strong social ties to end up in higher degree of psychological well-being (Lee, Chung, & Park, 2016). A study conducted at Midwestern University for undergraduate students confirmed that there is a positive relationship between perceived social support and psychological well-being (Oh, Ozkaya, & LaRose, 2014). Research by Wang, Zhang, and Zeng (2018) reflected the elasticity of social support with multiple meanings of social provision to aid in psychological well-being through online means in the higher education sector. By doing so, perceived social support has seemed at its positive edge, enflaming psychological well-being features (Wohn & Lampe, 2018). So, it is hypothesized as follows:

H3: Perceived social support significantly influences psychological well-being.

Mediating Role of Perceived Social Support. The frills of online social support are seen as a mediator by Xavier and Wesley (2018) in their study from IT employees in product-based IT companies in Chennai, India and found that online social support mediates the link between social capital and well-being. Social support on the web is approved as a manifestation of social capital by Ahmed and Ali (2017). This ingredient at the virtual university raises the level of interpersonal interactions which stocks in psychological well-being through social support supplemented by social capital (Kalhoro & Mallah, 2017). Online social ties could motivate individuals by shared values and common interests to support each other and give constructive feedback (Lee et al., 2018). Psychological well-being is found to influence the physical and mental health positively if there is sufficient measure of social support perceived through such e-rings having a prime dictum to attract and retain individuals keep spending in social capital's online fringe (Lee, Chung, & Park, 2016). So, it is hypothesized as follows:

H4: Perceived social support mediates the link between social capital and psychological well-being.

Moderating Role of Social Media Usage. The students' interaction through social media usage upshots in social support (Pang, 2018). A study conducted by Mahmood, Zakar, and Zakar (2018) unveiled that intensity of social media usage inclines social capital. Several studies engrossed that high quantity of social media consumption upgraded online social support by transforming weak-ties into strong-ties even in the virtual world (Charoensukmongkol, 2014; Oh, Ozkaya, & Larose, 2014). Chinese studies have uncovered the inspirations and motives about the intensity of WeChat use that has a positive association with online social support (Wang, Zhang, & Zeng, 2018). Social use of social media is positively associated with social capital (Pang, 2018). So, it is vital to use social media among virtual students to overcome the state of isolation (Sobaih & Mustafa, 2016). Integrating social media in higher education points in better performance by strengthening the connotation between social capital and perceived social support resulting in healthier psychological well-being (Burke & Kraut, 2016; Hu et al., 2017). So, it is hypothesized as follows:

H5: Social media usage quantity considerably moderates the link between social capital and perceived social support.

The proposed conceptual model is built on prior findings, as presented in Figure 1. Social capital is anticipated to be significantly correlated to psychological well-being through perceived social support. Additionally, this model also attempts to understand the role of social media usage as a moderator with students at the Virtual University of Pakistan (VUP). Demographics (age and gender) are considered as control variables.
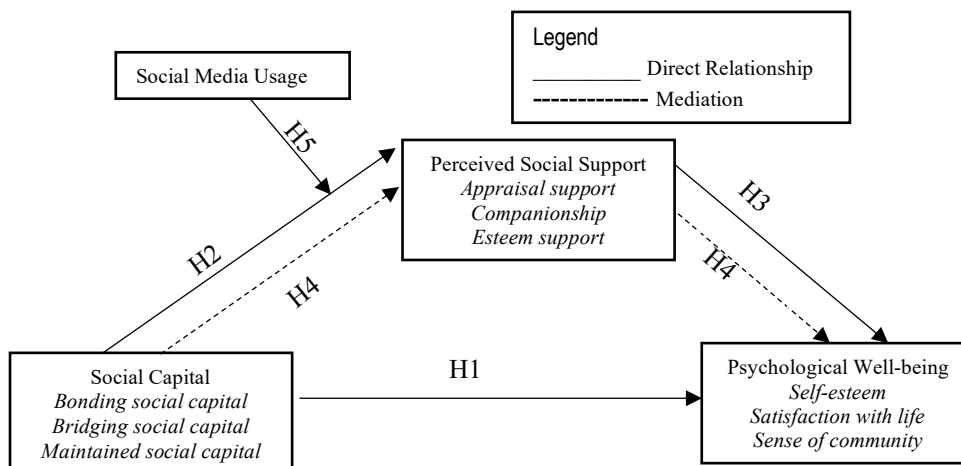

Figure 1. The theoretical framework of the investigation
Source: developed by the authors.

Methodology and Research Methods. The model was tested through the quantitative method to validate the hypotheses. Primary data were collected through online questionnaires from master's students of five campuses of Virtual University of Pakistan (VUP) functioning in Rawalpindi and Islamabad, with a total population of 896. Self-completion questionnaire's web-link was disseminated through social media networks (Facebook, Messenger, and WhatsApp) to more than 500 currently enrolled students. Overall, 368 submissions were obtained, but nine questionnaires were excluded due to incomplete and improper responses. Remaining 359 polls were selected for final data analysis. The instruments for measuring variables were well defined and have been used in previous studies. All items were measured on a 5-point Likert scale from 1=strongly disagree to 5=strongly agree. Psychological well-being (PWB) was measured by 15 items adapted from Ellison et al., (2007) which is based on Rosenberg's (1989) research. Pang (2018) used this scale in his study in an online context. These items were then averaged together and resulted in the following standardized values: α=0.882, M=3.704, SD=0.645. Social capital (SC) was measured by 19 items validated by Williams (2006). Pang (2018) used this scale in his study for Chinese students in the online context. The averaged items resulted in the following standardized values: α=0.817, M=3.582, SD=0.634. Perceived social support (PSS) was measured by nine items scale adapted from Eastin and LaRose (2005). Wang, Zhang, and Zeng (2018), Xavier & Wesley (2018) and Oh, Ozkaya, & LaRose (2014) used the scale in their research study. These items upshot in the following standardized values: α=0.887, M=3.682, SD=0.724. Social media usage (SMU) was measured by eight items scale adapted from LaRose et al., (2005). Hu et al., (2017) and Wang, Zhang, & Zeng (2018) used the scale in their research study. These items were then averaged together and resulted in the following standardized values: α=0.853, M=3.879, SD=0.672.

SPSS and SmartPLS3 were used for data analyses. Psychological well-being, social capital, and perceived social support were specified as second-order constructs with three dimensions each,

respectively. Repeated indicator approach was used for the measurement of second-order constructs. Different reports were created by running PLS algorithms. Firstly, outer leadings were measured to check the convergent validity and reliability of the instrument. Concurrent validity was measured by Fornell and Larker criterion (1981). Secondly, discriminant validity was measured by Heterotrait-Monotrait (HTMT) ratio of correlations. Finally, correlation analysis and path coefficients and their significance were measured to analyze the model.

Results. The analysis shows that 206 (57%) were male, while 153 (43%) were female. Based on the age, 114 (31.8%) were aged (25 and less), 119 (33.1%) were between 26-30, 59 (16.4%) were between 31-35, 61 (17%) were between 36-40, and 6 (1.7%) were above than 40. Out of the 359 respondents, 99 (27.6%) responded from VU Islamabad Campus, 85 (23.7%) from VU Rawalpindi-Satellite Town Campus, 78 (21.7%) from VU Rawalpindi-Saddar Campus, 59 (16.4%) from VU Rawalpindi-BMIT Campus, and 38 (10.6 %) responded from VU Rawalpindi-NICS Campus. The educational background shows that out of 359 participants; 72 (20.1%) students were in 1st semester, 137 (38.2%) in 2nd semester, 113 (31.5%) in 3rd semester, and 37 (10.3%) students were in 4th semester.

First of all, the model measurement was done with the help of reliability and validity (convergent and discriminant) (Hair, Hult, Ringle, & Sarstedt, 2016). PLS algorithms were run with the purpose to calculate the outer loadings for all constructs. All uploads were considered as good as more significant than 0.7 (Henseler, Ringle, & Sinkovics, 2009). The average variance extracted (AVE) was used to measure convergent validity, and its value should be greater than 0.5 (Henseler et al., 2009). While evaluating the measurement model, some of the items were removed due to low loadings (i.e., <0.5). Five questions were deleted from the dependent variable (PWB), 2 items from the independent variable (SC), and 1 item from mediating variable (PSS) (Hulland, 1999; Ringle, Wende, & Will, 2005). The value for Cronbach's alpha and AVE for all constructs is given in Table 1.

Table 1. Reliability and Convergent Validity

Variables	Cronbach's Alpha	AVE
Psychological well-being	0.882	0.528
Social capital	0.817	0.519
Perceived social support	0.887	0.526
Social media usage	0.853	0.511

Source: developed by the authors.

HTMT ratio of correlation was used to measure discriminant validity. Henseler, Ringle and Sarstedt (2015) described this method as a more accurate measure of efficacy as compared to the previous one. Its value should be less than 0.9, as shown in Table 2.

Table 2. Heterotrait-Monotrait (HTMT)

Variables	1	2	3	4
Psychological well-being	1			
Social capital	0.206	1		
Perceived social support	0.204	0.439	1	
Social media usage	0.218	0.332	0.683	1

Source: developed by the authors.

SRMR (Standardized Root Mean Square Residual) value less than 0.10 or of 0.08 (in a more conservative version) is considered a good fit (Hu & Bentler, 1999) to check the model fitness. Henseler et al. (2014) described the SRMR as a "goodness of fit measure" for PLS-SEM that can be used to avoid model misspecification. Consequently, NFI (Normed Fit Index) value above 0.9 usually represents an

acceptable fit, i.e. (NFI >0.9). The model was considered fit as SRMR value was 0.023, and NFI value was 0.988. Correlation analysis was used to test the association between variables. The value of the coefficient of correlation for all constructs for the present study is shown in Table 3.

Table 3. Correlation Analysis

Variables	1	2	3	4
Psychological well-being	1			
Social capital	0.547**	1		
Perceived social support	0.419**	0.808**	1	
Social media usage	0.553**	0.758**	0.632**	1

Note: **Correlation is significant at 0.01 (2-tailed).
Source: developed by the authors.

The correlation between PWB and SC was positive and significant at $p < 0.01$; $r = 0.547$**; between PWB and PSS was positive and significant at $p < 0.01$; $r = 0.419$**; between PWB and SMU was positive and significant at $p < 0.01$; $r = 0.553$**; between SC and PSS was positive and significant at $p < 0.01$; $r = 0.808$**; between SC and SMU was positive and significant at $p < 0.01$; $r = 0.758$**; and correlation between PSS and SMU was positive and significant at $p < 0.01$; $r = 0.632$**.

The present study evaluated the structural model to investigate the link between social capital and psychological well-being through the mediating effect of perceived social support applying social media usage as a moderator for supportive norms. Table 4 shows the regression results for testing the hypotheses.

Table 4. Summary of Results

Hypothesis	Relationship	Path Coefficient	t-value	p-value	Adjusted R^2	Result
H_1	SC->PWB	0.145	2.592	0.010	0.299	Accepted
H_2	SC->PSS	0.236	5.796	0.000	0.518	Accepted
H_3	PSS->PWB	0.141	2.327	0.025	0.590	Accepted
H_4	SC->PSS->PWB	0.133	2.126	0.039	0.610	Accepted
H_5	SC -> PSS	-0.008	0.224	0.822		Not Accepted

Note: PWB (psychological well-being), SC (social capital), PSS (perceived social support).
Source: developed by the authors.

The outcomes show that there was a positive and significant relationship between social capital and psychological well-being ($\beta = 0.145$, $p < 0.05$). The value of adjusted R^2 shows that 29.9% change in mental well-being is explained by social capital. The findings show that a higher level of social capital increases psychological well-being. Thus, H_1 is accepted.

Social capital significantly influenced perceived social support ($\beta = 0.236$, $p < 0.01$). The value of adjusted R^2 shows that 51.8% variation in perceived social support is explained by social capital. The findings show that vigorous time investment in social capital increases the sense of perceived social support. Thus, H_2 is accepted. Consequently, perceived social support significantly influenced psychological well-being ($\beta = 0.141$, $p < 0.05$). The value of adjusted R^2 shows that 59% change in psychological well-being is explained by perceived social support. The findings show that recognised social support mechanisms increase the mental well-being of virtual students. Thus, H_3 is accepted.

The results of mediation analysis by bootstrapping technique through perceived social support depicted that perceived social support has partially mediated the relationship between social capital and psychological well-being with $\beta = 0.133$ which is significant at and $p < 0.05$. The value of adjusted R^2 implies that there is a 61% change in the model. Hence, H_4 was supported and accepted.

The moderating effect of social media usage has been examined using the product indicator approach with 359 cases and 5000 subsamples for bootstrapping (Hair et al., 2012). The results of moderation depicted that social media usage moderates the link between social capital and perceived social support with β= -0.008, which is not significant at p< 0.822. Therefore, H_5 cannot be supported.

This investigation attempts to contribute to the existing literature on uncovering the underlying mechanism of the impact of social capital on the psychological well-being of virtual university students through perceived social support after controlling demographic variables. Moreover, this study modifies a theoretical model that further probed whether and how social media usage could play a crucial moderating role in the relationship between social capital and perceived social support. The findings supported all proposed hypotheses except H_5, i.e. moderation. The results show that social capital had a significant definite link with psychological well-being and that the higher the flow of online social support, the higher would be the level of well-being of e-learners. In the higher education sector, the geographically dispersed candidates have the only medium to stay in touch, i.e. social media networks. Findings of the study demonstrated that once the virtual students are engaged in online rooms, they are found to overcome the feeling of isolation and loneliness with a supplementary volume of perceived social support only if they use such networks for social help and support instead of using them for entertainment and fun. The study exposed that an excessive amount of social support connects individuals in a manner that they feel themselves to be part of a broader online community, where they ask for help and guidance from their classmates. The relationship between social capital and psychological well-being was found to be significant (β= 0.145, t= 2.592, p<0.05). Hence, the hypothesis (H_1) proved to be justifiable and supported. The findings revealed that social capital in the online setting has a significant positive bonding predicted in virtual students' psychological well-being. Individuals need to form intimate relations to achieve some goals that are possible only after getting some guidance. For this, they are found interacting with each other about their official and personal issues. The results of this study were following prior studies (Pang, 2018). The results concluded that satisfaction with the quality of life at VU is quite tricky as compared to face-to-face interaction in higher education institutions. But still, they strive hard to get at least some sense of belonging. That is how they are folded in a collaborative learning system to fulfil their social needs (e.g., needs of intimacy and social relationships). Without this picture, the students' emotional attachment to their organization will be reduced, which in turn affects their performance and may figure in drop-out ratio. The association between social capital and perceived social support was found to be significant (β= 0.236, t= 5.796, p<0.01). Thus, hypothesis (H_2) was accepted. The findings declared that when students perceived that they are emotionally attached to and identify with their social networking sites, they are more likely to strengthen their intention to invest more in social capital. This surely equips them to have more informational and emotional support. The results of the present study were consistent with prior studies (Lee, Chung, & Park, 2016). According to these findings, it is concluded that virtual students who perceived high chances of social relationships in online societies are more likely to be happy and motivated.

Additionally, when high school acquaintances adequately fulfilled the social needs of students, they are found more committed to the association in online structure. The results of SmartPLS3 path model (β= 0.141, t= 2.327, p<0.05) indicated statistically significant effects that perceived social support is positively associated with psychological well-being. Therefore, our hypothesis (H_3) was accepted and affirmed that virtual students who experience loneliness due to insufficient social connection or feelings of being withdrawn or isolated are more likely to draw from their subjective experiences. These perceptions would affect their well-being. The results of this study aligned well with the results of Hu et al. (2017), who proposed and found that perceived social support is positively related to psychological well-being in higher education distance learning institutions. The ties were found significant only if the students got the adequate measure of social support which ends in a step ahead in the outline of virtual students'

psychological well-being. As stated by these findings, it is concluded that social support is must, not only in face-to-face contact but also in the on-line continuum to inspire psychological well-being significantly.

The results of this present study accepted the extrapolation that perceived social support plays a mediating role between social capital and psychological well-being. The results of the mediation analysis indicated that perceived social support partially mediates the relationship between social capital and psychological well-being (β= 0.133, t= 2.126, p<0.05). So, the hypothesis (H_4) was accepted. The results were aligned following the previous findings (Lee, Chung, & Park, 2016). Based on the results, it is inferred that when students fail to satisfy their social needs due to unsupportive environment, they are more likely to experience loneliness which in turn lowers their morale. Additionally, social capital not only affects the psychological well-being, but it also affects the mediating variable (perceived social support). Therefore, perceived social support subsequently leads to positive, significant and favourable consequences. This study hypothesized and predicted that social media usage would moderate the link between social capital and perceived social support which ultimately supplements psychological well-being. The results for moderation analysis (β= -0.008, t= 1.174, p= 0.240) did not support the hypothesized interaction. Hence, the last hypothesis (H_5) was proved to be not accepted.
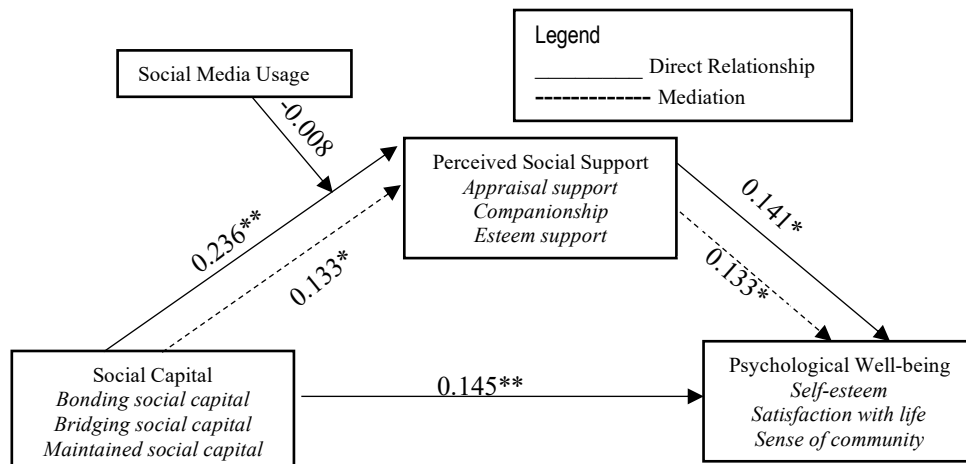

Figure 2. Path Analysis of Research Framework

Source: developed by the authors.

The results of the study directed that social media usage foster the feelings of connection and belongingness in virtual students. They resulted in favourable attitudes and behaviours by replacing the state of isolation with a team-based environment when it is used for supportive norms. According to these results, it is concluded that when a student demonstrates love, care, concern, and empathy for the well-being of others, such effort will make others feel that their virtual colleagues value them, then they will reciprocate by reducing the loneliness spirits toward themselves and others. Moderation effect of social media usage on social capital and perceived social support is considered among the students of higher education sectors when they spend time in such e-channels for collaborative and innovative learning goals as well as the primary social requisites. Moderation effect was found to be insignificant when the students use social media only for entertainment. As the issue of social support is concerned, the students were found interrelating with each other chiefly via; Facebook, Messenger, and WhatsApp. The administrators of such web-pages/groups mentioned the aim of these social media links that are supposed to be used for social and moral support devotions. Still, ominously most of the students switched to these channels

for entertainment and fun, which results adversely. The findings were aligned with, and, supported by the prior literature (Pang, 2018). The current study concentrates on the role of perceived social support in an online context by using different forms of social media for support mechanisms among virtual students. This study extends the line of work by exploring how social support may lead to overcoming the feelings of isolation and dispersion in the digital domain (Burke & Kraut, 2016; Chen & Li, 2017; Pang, 2017). The conceptual framework of this study is an attempt to add in the literature of psychological well-being complemented by perceived social support in the higher education sector. The theoretical framework used in this study has not been tested in virtual students' context, which is a vigorous contribution. This study provides in-depth knowledge of social capital and its impact on virtual students' psychological well-being. Moreover, the literature of social and psychological effects of perceived social support in the online context is augmented. From a practical perspective, the findings offer some useful implications for digital media users and managers in higher education distance learning institutions. The results indicate that social interaction on SNSs could indirectly benefit virtual university students' psychological well-being by increasing the perceived social support followed by social capital. Hence, using social media may help to improve students' levels of life quality if the university management can develop novel applications that pay close attention to individuals' social and moral support (e.g., mentoring or coaching) (Yoo & Jeong, 2017; Yuan et al., 2018; Afzal, Khan, and Mujtaba, 2018). Social media designers could design more entertaining features to efficiently stimulate users to adapt and meet the needs of social interactions (Zhan et al., 2016; Yuan et al., 2017).

The results of the present study provide understanding for future research directions and possible measures on how organizations (e.g., virtual universities) diagnose and prevent factors that influence the development of lonesomeness, solitude, high dropout ratio, and less enrolment. This study lays out several limitations that should be noted for future research. Firstly, the targeted sample was collected from a specific population, i.e., five campuses of the Virtual University of Pakistan, while future research should consider collecting data from other regions. Secondly, the cross-sectional nature of the study and use of convenient sampling would hinder chances to extend the generalizability of findings. The reason behind this limitation is time and recourses constraints. Therefore, a longitudinal or experimental study could be used to collect data for future research. So, detailed and extensive causal relationships among study variables can be achieved because this study was quantitative correlational research. Thirdly, all data were collected from students. Future study should emphasize collecting data from teachers as well. Pakistan is a country where electricity shortage and poor internet quality is countered more in rural areas as compared to urban areas. So, future research may be done with a comparative study that how rural areas' students cope with their problems and how much they have to bear to take an active part in online socialization on an equal ground along with those students who are from metropolitan cities.

Conclusion. This study is an attempt to add in the literature on the social and psychological effects of social support by examining the mechanisms involved in the relationship between social capital and mental well-being. The distinct and potential character of the mediating role of perceived social support was tested. Prominently the empirical results of perceived social support could benefit virtual university students both in communal and psychological well-being in an innovative and collaborative e-learning team-based environment. Moreover, it is confirmed by the hypothesized model that social capital has a significant definite link with psychological well-being using perceived social support as mediator. More importantly, the association of social media usage as a moderator between social capital and perceived social support was found to be insignificant if entertainment takes place on social media rather than socialization among the dispersed virtual students. The outcomes of this study revealed that virtual students prefer to be engaged in online socialization to feel part of a broader community and avoid the state of loneliness, isolation, and detachment caused due to distance learning. The study is concluded

with a beam of hope that it will provide new insight to distance learning institutions by offering practical and theoretical perceptions for supportive mechanisms.

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References

Afzal, A., Khan, M. M., and Mujtaba, B. G. (2018). The Impact of Project Managers' Competencies, Emotional Intelligence and Transformational Leadership on Project Success in the Information Technology Sector. *Marketing and Management of Innovations*, 2, 142-154. Link: http://mmi.fem.sumdu.edu.ua/en/journals/2018/2/184-195

Ali, A. (2003). Instructional design and online instruction. *TechTrends*, *47*(5), 42-45. [Google Scholar] [CrossRef]

Arif, M., & Kanwal, S. (2016). Adoption of social media technologies and their impact on students' academic performance: The only way for future survival of distance education students in Pakistan. *Pakistan Journal of Information Management and Libraries*, *18*(1), 25-36. [Google Scholar]

Arshad, M., Akram, M. S., Arshad, S., & Nazir, A. (2014). Social Networking Sites: A Path of Learning In Higher Education. *Pakistan Journal of Science*, *66*(4), 362–366. [Google Scholar]

Barbara, L. M. & Vakili, D., (2005). A Learner-Centered Framework for E-Learning. *Teacher College Record, 107*, (8), 1582-1600.

Basilisco, R., & Cha, K. J. (2015). Uses and gratification motivation for using Facebook and the impact of Facebook usage on social capital and life satisfaction among Filipino users. *International Journal of Software Engineering and Its Applications*, *9*(4), 181-194. [Google Scholar]

Best, P., Manktelow, R., & Taylor, B. (2014). Online communication, social media and adolescent wellbeing: A systematic narrative review. *Children and Youth Services Review*, *41*, 27-36. [Google Scholar] [CrossRef]

Burke, M., & Kraut, R. E. (2016). The relationship between Facebook use and well-being depends on communication type and tie strength. *Journal of computer-mediated communication, 21*(4), 265-281. [Google Scholar] [CrossRef]

Chan, M. (2015). Mobile phones and the good life: Examining the relationships among mobile use, social capital and subjective well-being. *New Media & Society*, *17*(1), 96-113. [Google Scholar] [CrossRef]

Chang, C. M., & Hsu, M. H. (2016). Understanding the determinants of users' subjective well-being in social networking sites: An integration of social capital theory and social presence theory. *Behaviour & Information Technology*, *35*(9), 720-729. [Google Scholar] [CrossRef]

Charoensukmongkol, P. (2014). Effects of support and job demands on social media use and work outcomes. *Computers in Human Behavior*, *36*, 340-349. [Google Scholar] [CrossRef]

Chen, H. T., & Li, X. (2017). The contribution of mobile social media to social capital and psychological well-being: Examining the role of communicative use, friending and self-disclosure. *Computers in Human Behavior*, *75*, 958-965. [Google Scholar] [CrossRef]

Chen, Y. (2017). WeChat use among Chinese college students: Exploring gratifications and political engagement in China. *Journal of International and Intercultural Communication*, *10*(1), 25-43. [Google Scholar] [CrossRef]

Chumg, H. F., Seaton, J., Cooke, L., & Ding, W. Y. (2016). Factors affecting employees' knowledge-sharing behaviour in the virtual organisation from the perspectives of well-being and organisational behaviour. *Computers in Human Behavior*, *64*, 432-448. [Google Scholar] [CrossRef]

Coll-Planas, L., del Valle Gomez, G., Bonilla, P., Masat, T., Puig, T., & Monteserin, R. (2017). Promoting social capital to alleviate loneliness and improve health among older people in S pain. *Health & social care in the community*, *25*(1), 145-157. [Google Scholar] [CrossRef]

Dhir, A., & Tsai, C. C. (2017). Understanding the relationship between intensity and gratifications of Facebook use among adolescents and young adults. *Telematics and Informatics*, *34*(4), 350-364. [Google Scholar] [CrossRef]

Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends:" Social capital and college students' use of online social network sites. *Journal of computer-mediated communication*, *12*(4), 1143-1168. [Google Scholar] [CrossRef]

Ercan, T. (2010). Effective use of cloud computing in educational institutions. *Procedia-Social and Behavioral Sciences*, *2*(2), 938-942. [Google Scholar] [CrossRef]

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. [Google Scholar] [CrossRef]

Gul, I., Ramzan, M., & Batool, S. (2017). The Efficacy of E-learning Technologies in Higher Education: Students' Perspective. [Google Scholar]

Hair Jr, J. F., Hult, G. T.M., Ringle,C., & Sarstedt, M. (2016*). A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage Publications. [Google Scholar] []

Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the academy of marketing science, 40*(3), 414-433. [Google Scholar]

Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., & Calantone, R. J. (2014). Common beliefs and reality about PLS: Comments on Rönkkö and Evermann (2013). *Organizational research methods, 17*(2), 182-209. [Google Scholar] [CrossRef]

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science, 43*(1), 115–135. [Google Scholar] [CrossRef]

Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. *In New challenges to international marketing*. Emerald Group Publishing Limited. [Google Scholar]

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal, 6*(1), 1-55. [Google Scholar] [CrossRef]

Hu, S., Gu, J., Liu, H., & Huang, Q. (2017). The moderating role of social media usage in the relationship among multicultural experiences, cultural intelligence, and individual creativity. *Information Technology & People*. [Google Scholar] [CrossRef]

Hu, X., Kim, A., Siwek, N., & Wilder, D. (2017). The Facebook paradox: Effects of Facebooking on individuals' social relationships and psychological well-being. *Frontiers in psychology, 8*, 87. [Google Scholar] [CrossRef]

Huang, H. Y., Chen, P. L., & Kuo, Y. C. (2017). Understanding the facilitators and inhibitors of individuals' social network site usage. *Online Information Review*. [Google Scholar]

Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic management journal, 20*(2), 195-204. [Google Scholar] [CrossRef]

Hussain, I., Hussain, I., & Ramzan, M. (2019). Future Prospects of Virtual Education in Pakistan: Opportunities and Challenges. *Journal of Research in Social Sciences, 7*(1).

Tang, J. H., Chen, M. C., Yang, C. Y., Chung, T. Y., & Lee, Y. A. (2016). Personality traits, interpersonal relationships, online social support, and Facebook addiction. *Telematics and Informatics, 33*(1), 102-8. [Google Scholar] [CrossRef]

Kalhoro, A. A., & Mallah, G. A. (2017). Rationale for E-Learning System in Pakistan: An Analysis. *International Journal of Computer Science and Emerging Technologies, 1*(1) 37-43.

Ko, H. C., Wang, L. L., & Xu, Y.T. (2013). Understanding the different types of social support offered by audience to A-list diary-like and informative bloggers. *Cyberpsychology, Behavior, and Social Networking, 16*(3), 194-199. [Google Scholar] [CrossRef]

Kozulin, A., Gindis, B., Ageyev, V. S., & Miller, S. M. (Eds.). (2003). *Vygotsky's educational theory in cultural context*. Cambridge University Press.

Lee, S., Chung, J. E., & Park, N. (2018). Network environments and well-being: an examination of personal network structure, social capital, and perceived social support. *Health communication, 33*(1), 22-31. [Google Scholar] [CrossRef]

Lee, S., Chung, J. E., & Park, N. (2016). Linking cultural capital with subjective well-being and social support: The role of communication networks. *Social Science Computer Review, 34*(2), 172-196. [Google Scholar] [CrossRef]

Lemon, K. N., & Wangenheim, F. V. (2009). The reinforcing effects of loyalty program partnerships and core service usage: a longitudinal analysis. *Journal of Service Research, 11*(4), 357-370. [Google Scholar] [CrossRef]

Li, X., & Chen, W. (2014). Facebook or Renren? A comparative study of social networking site use and social capital among Chinese international students in the United States. *Computers in Human Behavior, 35*, 116-123. [Google Scholar] [CrossRef]

Lin, T. C., Cheng, H. K., Wang, F. S., & Chang, K. J. (2012). A study of online auction sellers' intention to switch platform: The case of Yahoo! Kimo versus Ruten_eBay. *Decision Sciences, 43*(2), 241-272. [Google Scholar] [CrossRef]

Mahmood, Q. K., Zakar, R., & Zakar, M. Z. (2018). Role of Facebook use in predicting bridging and bonding social capital of Pakistani university students. *Journal of Human Behavior in the Social Environment, 28*(7), 856-873. [Google Scholar] [CrossRef]

Malik, N. A. (2017). BOOTSTRAPPING A UNIVERSITY-THE CASE OF THE VIRTUAL UNIVERSITY OF PAKISTAN. *International Journal on Innovation in Online Education*, 1(3). [Google Scholar]

Mao, Y., & Qian, Y. (2015). Facebook use and acculturation: The case of overseas Chinese professionals in western countries. *International Journal of Communication, 9*(1), 2467-2486. [Google Scholar]

Mujtaba, B. G. and Afza, T. (2013). Virtual leaps in distance education: A conversation with dr. naveed A. malik, founding rector of the virtual university of pakistan. *Journal of Applied Management and Entrepreneurship*, 18(3), 113-122. [Google Scholar]

Mujtaba, B.G. (2007). Understanding the needs and wants of virtual students: Online MBA Program at the H. Wayne Huizenga School of Business and Entrepreneurship of Nova Southeastern University. *TechTrends*, 51(6), 46. [Google Scholar] [CrossRef]

Munzel, A., Galan, J. P., & Meyer-Waarden, L. (2018). Getting by or getting ahead on social networking sites? The role of social capital in happiness and well-being. *International Journal of Electronic Commerce, 22*(2), 232-257. [Google Scholar] [CrossRef]

Oh, H. J., Ozkaya, E., & LaRose, R. (2014). How does online social networking enhance life satisfaction? The relationships among online supportive interaction, affect, perceived social support, sense of community, and life satisfaction. *Computers in Human Behavior, 30*, 69-78. [Google Scholar] [CrossRef]

Pang, H. (2017). Is smartphone creating a better life? Exploring the relationships of the smartphone practices, social capital and psychological well-being among college students. *International Journal of Advanced Media and Communication, 7*(3), 205-223. [Google Scholar] [CrossRef]

Pang, H. (2018). Can microblogs motivate involvement in civic and political life? Examining uses, gratifications and social outcomes among Chinese youth. *Online Information Review*. [Google Scholar] [CrossRef]

Pang, H. (2018). Exploring the beneficial effects of social networking site use on Chinese students' perceptions of social capital and psychological well-being in Germany. *International Journal of Intercultural Relations*, *67*, 1-11. [Google Scholar] [CrossRef]

Pang, H. (2018). Understanding the effects of WeChat on perceived social capital and psychological well-being among Chinese international college students in Germany. *Aslib Journal of Information Management*. [Google Scholar] [CrossRef]

Putnam, R. D. (2000). Bowling alone: America's declining social capital. In *Culture and politic* (pp. 223-234). Palgrave Macmillan, New York. [Google Scholar] [CrossRef]

Raza, S. A., Qazi, W., & Umer, A. (2017). Facebook is a source of social capital building among university students: evidence from a developing country. *Journal of Educational Computing Research*, *55*(3), 295-322. [Google Scholar] [CrossRef]

Ringle, C. M., Wende, S., & Will, A. (2005). SmartPLS 2.0 M3 Beta.

Robbins, S. P., & Singer, J. B. (2014). From the editor – The medium is the message: Integrating social media and social work education. [Google Scholar] [CrossRef]

Ruiz, J. G., Mintzer, M. J., & Leipzig, R. M. (2006). The impact of e-learning in medical education. *Academic medicine*, *81*(3), 207-212. [Google Scholar]

Schultz, T. W. (1961). Investment in human capital. *The American economic review*, *51*(1), 1-17. [Google Scholar]

Siraj, A. (2018). Impact of Internet Use on Social Capital: Testing Putnam's Theory of Time Displacement in Urban Pakistan. *The Journal of Social Media in Society*, *7*(1), 456-468. [Google Scholar]

Sobaih, A. E. E., & Moustafa, M. A. (2016). Speaking the same language: the value of social networking sites for hospitality and tourism higher education in Egypt. *Journal of Hospitality & Tourism Education*, *28*(1), 21-31. [Google Scholar] [CrossRef]

Teng, C. I. (2017). Strengthening loyalty of online gamers: Goal gradient perspective. *International Journal of Electronic Commerce*, *21*(1), 128-147. [Google Scholar] [CrossRef]

Vygotsky. *Human development*, *40*(2), 63-73.

Wang, G., Zhang, W., Chen, Q., & Zeng, R. (2018). How is negative affect associated with life satisfaction? The moderating role of online self-disclosure in China's context. *Personality and Individual Differences*, *135*, 60-66. [Google Scholar] [CrossRef]

Wei, L., & Gao, F. (2017). Social media, social integration and subjective well-being among new urban migrants in China. *Telematics and Informatics*, *34*(3), 786-796. [Google Scholar] [CrossRef]

Wieser, D., & Seeler, J. M. (2018). Online, Not Distance Education: The Merits of Collaborative Learning in Online Education. T*he Disruptive Power of Online Education: Challenges, Opportunities, Responses*, 125 [Google Scholar] [CrossRef]

Wohn, D. Y., Freeman, G., & McLaughlin, C. (2018). Explaining viewers' emotional, instrumental, and financial support provision for live streamers. In *Proceedings of the 2018 CHI conference on human factors in computing systems* (pp. 1-13). [Google Scholar] [CrossRef]

Xavier, N. (2018). Mediating effect of online social support on the relationship between stress and mental well-being. *Mental Health and Social Inclusion*. [Google Scholar] [CrossRef]

Yang, H. L., & Lin, R. X. (2017). Determinants of the intention to continue use of SoLoMo services: Consumption values and the moderating effects of overloads. *Computers in Human Behavior*, *73*, 583-595. [Google Scholar] [CrossRef]

Yoo, J. H., & Jeong, E. J. (2017). Psychosocial effects of SNS use: A longitudinal study focused on the moderation effect of social capital. *Computers in Human Behavior*, *69*, 108-119. [Google Scholar] [CrossRef]

Yuan, C. W., Hanrahan, B. V., Lee, S., Rosson, M. B., & Carroll, J. M. (2017). Constructing a holistic view of shopping with people with visual impairment: a participatory design approach. *Universal Access in the Information Society*, 18(1), 127-140. [Google Scholar] [CrossRef]

Zhan, L., Sun, Y., Wang, N., & Zhang, X. (2016). Understanding the influence of social media on people's life satisfaction through two competing explanatory mechanisms. *Aslib Journal of Information Management*. [Google Scholar] [CrossRef]

Zhao, L., Lu, Y., Wang, B., Chau, P. Y., & Zhang, L. (2012). Cultivating the sense of belonging and motivating user participation in virtual communities: A social capital perspective. *International Journal of Information Management*, *32*(6), 574-588. [Google Scholar] [CrossRef]

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Взаємозв'язок між соціальним капіталом та психологічним добробутом: посередницька роль Інтернет-маркетингу

Метою статті є аналіз взаємозв'язку між соціальним капіталом та психологічним добробутом на основі суб'єктивного оцінювання рівня соціальної підтримки студентів. При цьому соціальні мережі розглядались у якості посередника. Підґрунтям дослідження стала теорія соціального капіталу, в основі якої лежить комунікація людей через соціальну підтримку з метою підвищення їх соціального добробуту. Детерміновану вибірку даних сформовано на основі результатів опитування 368 студентів освітнього ступеня «Магістр» п'яти різних кампусів. Емпіричні результати використання методу PLS підтвердили гіпотезу, що соціальна підтримка є посередником між соціальним капіталом та психологічним добробутом студентів. При цьому використання соціальних мереж підсилює взаємозв'язок між соціальним капіталом та суб'єктивним оцінюванням

студентами їх соціальної підтримки у суспільних питаннях. Авторами зазначено, що отримані результати можуть бути використані для виявлення та запобігання чинників, що спричиняють відчуття ізольованості та самотності під час онлайн взаємодії. Авторами наголошено, що результати дослідження мають практичне значення для користувачів цифрових засобів інформації, а також керівників закладів вищої освіти, що впроваджують дистанційну форму навчання. У статті доведено, що підвищення рівеня суб'єктивного оцінювання студентами їх соціального добробуту та соціального капіталу сприяє поліпшенню психологічного добробуту студентів, які навчаються у віртуальних університетах. Авторами наголошено, що будь-який віртуальний університет повинен розробити та запустити додаток, що являє собою неформальний соціальний форум з метою формування віртуального студентського середовище. Даний форум забезпечить підтримку комунікації між студентами та уникнення відчуття ізольованості. У свою чергу, для викладачів запропоновано ведення неформальних блогів для комунікації зі студентами кожного тижня з метою компенсації відсутності особистого спілкування у реальному житті. Авторами зазначено, що менеджмент віртуального університету повинен забезпечити більшу кількість прямих взаємодій та семінарів (краще один раз у семестр, ніж один раз протягом усієї навчальної програми). Відповідно до результатів дослідження авторами визначено, що впровадження запропонованих заходів дозволить вирішити проблему відчуття ізольованості серед студентів. У статті доведено, що використання запропонованої моделі в умовах віртуальних університетів може надати місцевим та іноземним студентам більшу соціальну підтримку, що сприятиме покращенню їх соціального добробуту.

Ключові слова: психологічний добробут, соціальний капітал, інтернет-маркетинг, використання соціальних мереж, суб'єктивне сприйняття соціальної підтримки онлайн суспільствами, e-learning, віртуальне залучення, соціальні зв'язки, соціальна взаємодія в онлайн, самотність, усамітнення.