

# THE INVESTIGATION OF THE RELATIONSHIP BETWEEN MENTAL HEALTH INDICATORS, PROBLEMATIC USAGE OF SOCIAL NETWORKING, AND GENDER IN A SAMPLE OF TRANSYLVANIAN HUNGARIAN STUDENTS

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**ABSTRACT.** Recent research has documented an increase in loneliness and mental health problems, which are considered to be significant risk factors of mental health malfunctioning. The advent of internet and the vertiginous development of technology have provided a vast palette of opportunities for individuals to virtually reduce social isolation, thus trying to ameliorate feelings of loneliness. However, some persons are driven to use the SNSs (Social Networking Sites) in maladaptive ways, research indicating that the problematic and excessive usage of SNS may have a profound negative effect on the individual's mental health. The major objectives of our study are: 1) to investigate the possible gender differences in mental health indicators and the proclivity to dysfunctional use the social networks and the internet, and 2) to investigate the relationship between dysfunctional social networking usage and loneliness, depressive symptoms and subjective well-being in a sample of Transylvanian Hungarian students. Our study included 305 Transylvanian Hungarian first and second year students, from Babes-Bolyai University in Cluj-Napoca, Sapientia, Targu-Mures, Romania, assessed on: depression symptoms, loneliness, subjective well-being, and dysfunctional use of social media. Our results indicate that female students have significantly lower levels of subjective well-being than male students and are significantly more drawn to dysfunctional use of social networking for informational purposes.

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Those students who have moderate/severe levels of depressive symptoms experience significantly higher levels of loneliness, and significantly lower levels of subjective well-being. In the same time, they also engage significantly more in dysfunctional social networking. Finally, the regression analyses indicated that loneliness is the best predictor of both depression and subjective well-being, while dysfunctional use of social networks explaining only a small amount of the variance for both depression and subjective well-being. Our results may be useful in the development of appropriate prevention and intervention programs targeting the optimization of levels of loneliness, thus enhancing the indicators of mental functioning.

**Keywords:** *problematic usage of social networking, loneliness, depression, subjective well-being, gender.*

## **Introduction**

A plethora of recent research has documented an increase in loneliness and mental health problems (depression, anxiety, suicide, personality disorders as narcissism, etc.) worldwide (Abbott, 2011; Andrade, et al., 2003; Erzen & Çikrikçi, 2018; Hawkey & Cacioppo, 2010; Peen, Schoevers, & Dekker, 2010; Perissinotto, Stijacic Cenzer, & Covinsky, 2012; Prina, Ferri, Guerra, Brayne, & Prince, 2011; Twenge & Campbell, 2009; Victor & Bowling, 2012; Weehuizen, 2008). The 2018 CIGNA report indicates that nearly half of Americans report that they feel alone (46%) or left out (47%) sometimes or always. Almost one third (27%) of them said that they feel not understood by others, over 40% report that they consider that their relationships are not meaningful, and 54% said they always or sometimes feel that no one knows them well (Cigna, 2018). Results are similar in the European Union as well (Age UK Loneliness Evidence Review, 2015). Contrary to popular beliefs, loneliness is reported more frequently in childhood and adolescence than in older age (Mushtaq, Shoib, Shah, & Mushtaq, 2014). 80% of adolescents below 18 years of age, and 40% of adults over 65 years of age report occasional feelings of loneliness (Berguno, Leroux, McAinsh & Shaikh, 2004; Weeks, 1994). Loneliness and social isolation were found to be detrimental to

physical and mental health outcomes (Cacioppo & Patrick, 2008; Holt-Lunstad, Smith, & Layton, 2010; Uchino, 2006). Based on substantial evidence, the U.S. Department of Health and Human Services considers loneliness and social isolation significant risk factors of mortality, as mental health malfunctioning, substance abuse, obesity, injury and violence, environmental quality, immunization, and access to health care, etc. (as cited in Holt-Lunstad, Smith, Baker, Harris, & Stephenson, 2015).

Furthermore, depression, schizophrenia, epilepsy, dementia, substance dependence (and use), neurological and other mental disorders contribute to over 13% of the global burden of diseases, percent that surpasses that of cardiovascular diseases and cancer together (Collins, Patel, Joestl, March, Insel, & Daar, 2011). At a global level, depression is estimated to affect 5.8% of all men and 9.5% of all women in any given year (Gonzalez, Hartig, Patiel, Martinsen, & Kirkevold, 2009). Estimations suggest that by 2020 1.5 million people will die early by suicide, and over 30 million people will attempt to commit suicide (Bertolete & Flieschmann, 2002). Other statistics (Nock, Borges, Bromet, Cha, Kessler, & Lee, 2008) suggest an average of one death every 20 seconds and an attempt every one to two seconds. A 2010 meta-analysis indicated that the urban population presents a 39% higher risk for developing affective disorders and 21% higher risk for anxiety disorders than people living in rural areas (Peen et al., 2010). One of the plausible explanations might be that during evolution, humans have lived for tens of thousands of years in considerably tight, relatively small communities which offered high levels of security. With the dramatic intensification of migration towards urban areas, specific to the last century, urbanized humans began living a whole new way of life, with less secure communities, dominated by individualism and competition (Griffith, Kuss, Demetrovics, 2014). One of the specific characteristics of urban stress is the simultaneous exposure to social density and social isolation, completed with the feeling of exposure to an uncontrollable environment (Adli, 2011). However, the innate need to live in a close, secure, and predictable community that was fulfilled along evolution by living in small, intimate, and secure communities, has not changed (Griffiths, et al., 2014).

In this socio-cultural and psychological context, those individuals who have not had access to the psychologically fulfilling traditional environments attempt to compensate for this shortage by implication in

different surrogate activities (e.g., sports, hobbies, community work, appurtenance to religious communities). Moreover, the advent of internet and the vertiginous development of technology have provided a vast palette of opportunities for individuals through which they could form similar interpersonal relationships as those specific to small social communities (Griffiths, et al., 2014). Thus, the appearance and flourishing of Social Networking Sites (SNSs), at least theoretically offers individuals the possibility of a secure and predictable communal life, in many ways similar to the traditional community life as discussed before (Griffiths, et al., 2014).

Since its appearance, due to its obvious advantages, the internet has attracted an incredibly large number of individuals, number that is constantly increasing (Global Digital Report, 2019). Worldwide, in the mid-2019 there were 4.39 billion internet users, an increase of 9 % compared to January 2018, and 3.48 billion social media users, with 3.26 billion people using social media on mobile devices (Global Digital Report, 2019). In the last decade the use of SNSs has significantly grown all around the world, phenomenon that was facilitated by both the increasingly larger Internet availability as well as the diversification of the devices from where SNSs could be accessed (PCs, laptops, smartphones, tablets, etc.) (Donnelly & Kuss, 2016; Kuss & Griffith, 2017). Literature has identified many positive aspects of SNS use, as: the possibility to establish and maintain relationships; quick access to information; there is always somebody who responds to one's virtual needs; the possibility to share information, emotions; apparent ease to conduct a conversation (e.g., emoticons, familiar abbreviations), etc. (Donnelly & Kuss, 2016; Turkle, 2015; Zaidieh, 2012). However, regardless its considerable advantages, some persons are driven to use the SNSs in maladaptive ways (e.g., excessively, compulsively). A plethora of research has indicated that the problematic and excessive usage of SNS may have a profound negative effect on the individual's mental health (e.g., depression, well-being, life-satisfaction, self-esteem, self-perception) (Chou & Edge, 2012; Collins, et al., 2011; Jelenik, Eickhoff, & Moreno, 2013; Kross, Verduyn, Demiralp, Park, Lee, Lin, et al., 2013; Turkle, 2015). Another of the relevant drawbacks inherent in the maladaptive use of the internet and SMSs especially in childhood, adolescence, and young adulthood is that the efficient development of social skills is compromised. Namely, due to constant, but

superficial connection with other people one's ability to develop skills necessary for the maintenance of healthy, meaningful conversations is throttled (Turkle, 2015). One of the most frequently used terms to describe this phenomenon is that of "*being alone together*", in other words, always connected but in the same time extremely isolated and lonely (Turkle, 2011).

Worldwide, Internet access is quite inexpensive and almost omnipresent. Consequently, for a considerable number of individuals, it may become difficult to exert adequate self-control in regulating his/her media consumption, which may easily intensify and become pathological media abuse (LaRose, 2010; Song, LaRose, Eastin, & Lin, 2004; Ziegler, Mishra, & Gazzaley, 2015). The tendency of excessive and maladaptive use of technological devices and SMSs has been observed not only in adolescents and young adults, but also in the case of children as well (Childwise, 2012; DeBell & Chapman, 2003; Findahl, 2012; Pew Internet and American Life Project, 2002; Roberts, Foehr, & Rideout, 2005; Teuwen, De Groff, & Zaman, 2012). The importance of the investigation of the maladaptive use of SNSs is manifold. As such, maladaptive use of technology is a risk factor for developing social networking addiction (Wu, Cheung, Ku, & Hung, 2013), disorder that significantly impacts one's overall functioning (Griffith, Kuss, & Demetrovics, 2014). Furthermore, even if one does not develop addiction, the development of essential abilities (social skills, communication abilities, self-control, emotional control) are severely impeded especially at young ages, when their normal development is essential (Turkle, 2015).

Mental health is defined as not only the absence of negative symptomatology, but also as presence of subjective well-being (WHO, 2006). The present learning and work-conditions require in a larger degree than ever the presence of mental health and well-being to attain efficiency and efficacy (Weehuizen, 2008). Namely, present job conditions require more flexibility and autonomy, better abilities to efficiently manage time and tasks, and constantly adopt to the rapidly changing work requirements. However, these requirements are usually accompanied by high levels of responsibilities, which are also extremely demanding (Weehuizen, 2008). Thus, the major objectives of our study are:

- 1) to investigate the possible gender differences in mental health indicators. Namely, we expect that female participants report higher levels of depression, loneliness, and lower levels of subjective well-being, as previous

studies have documented such gender dependent differences (e.g., Kállay, 2015; Kállay, Pinteá, & Papuc, 2018), and the proclivity to dysfunctional use the social networks and the internet;

2) to investigate the relationship between dysfunctional social networking usage and loneliness, depressive symptoms and subjective well-being in students.

## **Study**

### **Participants**

Our study included 305 Transylvanian Hungarian first and second year students, 203 from Babes-Bolyai University in Cluj-Napoca, Romania, and 72 from Sapientia, Targu-Mures, Romania. The minimum age of the participants was 18 years, while the maximum 38, with a mean age of 20.01 years ( $SD=2.11$ ). of the 305 participants 79 were male (25.97%), and 226 female students (74.03%). After providing informed consent, participants completed the questionnaire packets that took 45 minutes to fill, in a face-to-face assessment session with the researcher.

### **Instruments**

**Demographic variables** were: age and gender.

**Depression tendencies** were measured with the Beck Depression Inventory-II (BDI, Beck, Rush, Shaw & Emery, 1979; Romanian adaptation David & Dobrea, 2012). The BDI is a 21-item, multiple-choice format inventory, designed to measure the presence of depression in adults and adolescents. Each of the 21 items assesses a symptom or attitudes specific to depression, inquiring its somatic, cognitive and behavioral aspects. By its assessments, single scores are produced, which indicate the intensity of the depressive episode. Scores ranging from 0 to 9, represent normal levels of depression. Scores situated between 10 and 18 represent mild to moderate depression; values between 19 and 29 represent moderate to severe depression, while scores above the value of 30 represent severe depression. Internal consistency indices of the BDI are usually above .90. In our study we did not use clinical cut-off points for analysis or selection of participants, but treated depression tendencies as a continuum ranging from minimal to maximal scores obtained by participants on the BDI scale.

**Subjective well-being** was assessed with the 5-item WHO well-being questionnaire (WHO Collaborating Centre in Mental Health, 1999), focusing on the assessment of positive affective states. Each of the five items is rated on a 6-point Likert scale from 0 (not present) to 5 (constantly present). Scores are summed, with raw scores ranging from 0 to 25. Then the scores are transformed to 0-100 by multiplying by 4, with higher scores meaning better well-being. This scale was adapted for Hungarian population by WHO (WHO Collaborating Centre in Mental Health, 1999).

**Loneliness** and **perceived social isolation** was measured with the 20-item UCLA Loneliness Scale (revised UCLA Loneliness Scale; Russell, Peplau, & Cutrona, 1980). Participants are asked to respond to each item on a 4-point Likert scale, from 'never' to 'always'. The scale's items are worded to suggest a general, present-day experience that relate to both social and emotional dimensions of loneliness (e.g., "*No one really knows me well*"; "*My interests and ideas are not shared by those around me*", and "*I feel in tune with the people around me*"). The UCLA Loneliness Scale consists of both positively and negatively worded items, with a possible total score of 20 to 80 points with no identified cut-off score that would define loneliness. The scale has good internal consistency with a Cronbach's  $\alpha$  of 0.94 (Russell et al., 1980; Russell, 1996). Mean scores for university students usually vary between 36 and 39 (Anderson, Miller, Riger, Dill, & Sedikides, 1994).

**Dysfunctional use of social media** was assessed with the 5-point Likert type, 29-item self-report questionnaire (SMAS-SF, Social Media Addiction Scale-Student Form, Şahin, 2018). The SMAS has four sub-scales: 5 items regarding virtual tolerance (measuring the need for internet connection, e.g., "*Going on social media is the first thing I do when I wake up in the morning*"); 9 items within the virtual communication sub dimension (measuring the preference for virtual communication on social media networks, e.g., "*I usually prefer to communicate with people via social media*"); 9 items regarding virtual problem (measuring the occurrence of problems due to excessive use of social media and internet, e.g., "*I use social media so frequently that I fall afoul of my family*"), and 6 items constitute the virtual information (measuring the conscious reasons for

using social media and the internet, e.g., “*I am always active on social media to be instantly informed about what my kith and kin share.*”) sub dimension. The psychometric properties of the original scale are good, the internal consistency coefficient being .93, and for the subscales as follows: virtual tolerance = .81, virtual communication = .81, virtual problem = .86, and virtual information = .86.

## Results

Firstly, we present the descriptive characteristics of our data (see Table 1).

**Table 1.** Descriptive statistics

	Min.	Max.	Mean	SD	Shapiro-Wilk	p
BDI	0	34	10.36	8.12	.91	.000
UCLA	20	68	40.67	9.51	.95	.000
WHO-5	4	84	51.08	17.29	.97	.000
SMAS virtual tolerance	6	23	12.81	3.36	.97	.000
SMAS virtual communication	9	34	16.81	4.77	.93	.000
SMAS virtual problems	8	30	14.61	4.79	.93	.000
SMAS virtual information	6	30	18.22	4.57	.96	.000

If previous studies indicated that means scores for university students is between 36.67 and 39.07, in our sample, loneliness has a mean score of 40.67, which is relatively similar to previous findings (Anderson et al., 1994).

Since indicators of mental health and maladaptive use of social networks may depend on gender, we continued our investigation with identifying differences in this regard (results are presented in Table 2). Due to the distribution of our data (see Table 1), we conducted the non-parametric Mann-Whitney U-test.



**Table 2.** Differences in depression, loneliness, subjective well-being and maladaptive use of social networking depending on gender

	Mean	SD	Z	p	$\eta^2$
BDI	m=9.62 f=10.61	8.06 8.14	NS		
UCLA	m=41.65 f=40.11	10.31 9.24	NS		
WHO-5	m=55.31 f=49.93	17.64 16.91	-2.43	.015	.019
SMAS virtual tolerance	m=11.35 f=13.27	2.90 3.38	-4.216	.000	.058
SMAS virtual communication	m=16.56 f=16.80	4.67 4.79	NS		
SMAS virtual problems	m=14.47 f=14.68	4.74 4.80	NS		
SMAS virtual information	m=16.93 f=18.66	4.84 4.36	-2.86	.004	.026

Our results indicate that there are significant differences in subjective well-being, virtual tolerance and virtual information between the assessed male and female Transylvanian Hungarian students. More specifically, male students experience significantly higher levels of subjective well-being than female students ( $Z=-2.43$ ,  $p<.001$ ), though the effect size for this difference is small. Furthermore, female students experience significantly higher levels of incapacity to tolerate absence of the access to the internet and social media ( $Z=-4.216$ ,  $p<.000$ ), this difference producing a marginally medium effect size ( $\eta^2=.058$ ), and female students use significantly more the internet and social media for information than male students ( $Z=-2.86$ ,  $p<.004$ ), however, the effect size of this difference being small. These findings are partially different from those in the mainstream literature, since in most studies there are gender differences in depression, namely female participants report significantly higher levels than males (e.g., Nolen-Hoeksema, 2001). Quite surprisingly, regarding mental health indicators, our results showed such differences only in the case of subjective well-being.

Next, since the BDI uses cut-scores, we conducted an ANOVA analysis of variance to investigate if there are significant differences depending on the levels of depression (normal, mild and moderate-severe) in the dysfunctional use of social media. Since our sample sizes were unequal (N=156 normal levels of depressive symptoms, N=95 mild levels of depressive symptoms, and N=54 moderate and severe levels of depressive symptoms), we used post-hoc Sheffe to compare differences among the three groups of depression. Results are presented in Table 3.

**Table 3.** Differences in the dysfunctional use of social media depending on the levels of depression (normal, mild and moderate-severe)

	Mean	SD	F	p	$\eta^2$
UCLA	Gr1=35.82 (Gr2, Gr3)*	7.27	75.40	.000	.33
	Gr2=42.53 (Gr1, Gr3)*	7.88			
	Gr3=50.50 (Gr1, Gr2)*	9.09			
WHO	Gr1= 59.82*(Gr2, Gr3)*	1.15	64.81	.000	.30
	Gr2=46.14*(Gr1, Gr3)*	1.48			
	Gr3=35.63*(Gr1, Gr2)*	1.96			
SMAS_VT	Gr1=12.07 (Gr3)*	2.72	10.43	.000	.06
	Gr2=12.94 (Gr3)*	3.79			
	Gr3=14.40 (Gr1,)*	3.58			
SMAS_VC	Gr1=15.90 (Gr3)*	4.05	6.99	.001	.04
	Gr2=17.07	5.46			
	Gr3=18.59 (Gr1)*	4.77			
SMAS_VP	Gr1=13.44 (Gr2, Gr3)*	3.98	12.44	.000	.07
	Gr2=15.28 (Gr1)*	4.78			
	Gr3=16.87 (Gr1)*	5.85			

There were significant differences in loneliness between the three groups, the highest levels of loneliness being attained by the moderate-severe group, differences attaining large size effect (.33). The three categories of depressive levels also produced significant differences in subjective well-being, namely, those participants who reported moderate/severe levels of depression experienced significantly lower levels of subjective well-being as those in the normal and the mild depression groups (large size effect, .30). Results are similar in the dysfunctional use

of social media. Those from the moderate/severe depressive symptoms group reported significantly higher levels of dysfunctional levels of intolerance when impeded to use social networks and/or internet, but there were no significant differences in this SMAS subscale results between those who reported normal and mild levels of depression (medium size effect, .06). Regarding communication, significant differences were found between the normal and the moderate/severe group with a medium effect size (small to medium size effect, .04). A medium size effect was produced by the differences in virtual problems between the normal and the mild, respectively moderate/severe depressive symptom groups, but no significant difference between the mild and moderate/severe depressive symptom groups (.07).

Next, we conducted a correlation analysis, and the results are presented in Table 4.

**Table 4.** Pearson correlation matrix between depressive symptoms, loneliness, subjective well-being, and the subscales of maladaptive social networking usage

	BDI	UCLA	WHO	SMAS_VT	SMAS_VC	SMAS_VP	SMAS_VI
BDI	1						
UCLA	.61**	1					
WHO	-.62**	-.45**	1				
SMAS_VT	.23**	.19**	-.16**	1			
SMAS_VC	.22**	.25**	-.23**	.54**	1		
SMAS_VP	.30**	.30**	-.31**	.43**	.56**	1	
SMAS_VI	-.02	-.08	-.01	.39**	.14*	.26**	1

\* $p < .05$ ; \*\* $p < .01$

Our results indicate that there is a strong significant positive association between depressive symptoms and loneliness ( $r=.61, p<.01$ ), strong significant negative association with subjective well-being ( $r=-.62, p<.01$ ), and significant positive associations with virtual tolerance ( $r=.23, p<.01$ ), virtual communication ( $r=.22, p<.01$ ), and virtual problem ( $r=.30, p<.01$ ). These results are similar to those found in the literature (Cacioppo & Patrick, 2008; Holt-Lunstad, Smith, & Layton, 2010; Jelenik, Eickhoff, &

Moreno, 2013; Kross, Verduyn, Demiralp, Park, Lee, Lin, et al., 2013; Turkle, 2015; Uchino, 2006). Moreover, loneliness is positively associated with the maladaptive use of the internet and social networking, with weaker but significant associations between loneliness and virtual tolerance ( $r=.19, p<.01$ ), virtual communication ( $r=.25, p<.01$ ), and somewhat stronger with virtual problem solving ( $r=.30, p<.01$ ). In the same time, our results indicate a significant negative association between subjective well-being and virtual tolerance ( $r=-.16, p<.01$ ), virtual communication ( $r=-.23, p<.01$ ), and somewhat stronger with virtual problem solving ( $r=-.31, p<.01$ ).

Next, we conducted two hierarchical multiple regression (HMR) analyses in order to investigate the degree to which depressive symptoms (as measured with the BDI scale) (Table 5) and subjective well-being (Table 6) are predicted by the variables that correlated with them.

**Table 5.** Hierarchical Regression Model of Depressive symptoms, with loneliness and dysfunctional use of social media as predictors

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	β	t
Step 1	.61	.37***					
UCLA				.54	.03	.61	13.47***
Step 2	.63	.39*	.20*				
UCLA				.48	.04	.57	12.00***
SMAS_VT				.21	.13	.08	1.63 (NS)
SMAS_VC				-.04	.10	-.02	-.47 (NS)
SMAS_VP				.17	.09	.10	1.03 (NS)

Based on the correlation matrix for depressive symptoms in the first step of the HMR we entered gender since we intended to control for this demographic variable. In step two we introduced loneliness. In the third step, we introduced the three subscales of SMAS (dysfunctional use of social media). After running the regression analyses, we selected those variables which significantly predicted perceived stress. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity and homoscedasticity. Results are presented in Table 5 for depressive symptoms and Table 6 for subjective well-being.

Model one with loneliness as predictor of depression proved to be statistically significant ( $F_{4,294}=181.51, p<.001$ ), predicting 37% of the variance in depressive symptoms. Next we introduced the three components of dysfunctional use of social media (that presented a significant correlation with depressive symptoms see Table 3, virtual tolerance, virtual communication, virtual problem) which also proved statistically significant ( $F_{4,294}=48.86, p<.001$ ), explaining an additional 2% of the variance in depressive symptoms.

**Table 6.** Hierarchical Regression Model of subjective well-being (WHO), with loneliness and dysfunctional use of social media as predictors

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	β	t
Step 1	.45	.20***					
UCLA				.81	.09	-.45	-8.75***
Step 2	.48	.23**	.03**				
UCLA				-.70	.09	-.38	-7.24***
SMAS_VP				-.69	.19	-.19	-3.64**

Model one with loneliness as predictor of subjective well-being (as measured with the 5-item WHO subjective well-being scale) proved to be statistically significant ( $F_{1,301}=76.85, p<.000$ ), predicting 20% of the variance in subjective well-being. Next we introduced the three components of dysfunctional use of social media (that presented a significant correlation with depressive symptoms see Table 3, virtual tolerance, virtual communication, virtual problem), and since only the subscale of virtual problems had a significant predictive power, we rerun the regression analysis with loneliness and maladaptive use of social media in order to solve problems. This model also proved statistically significant ( $F_{4,297}=46.61, p<.000$ ), explaining an additional 3% of the variance in subjective well-being.

## Conclusions

In the last four-five decades the quality of life- and work-conditions has significantly increased especially in the Western world (Harari, 2015). However, according to the statistics published by Ipsos Mori (2014), due to the significant changes in the social, economic, technological, moral-value systems (Amundson, 2006; Bauman, 2000, 2001, 2006, Curran & Hill, 2017; Nolen-Hoeksema, 2003), we have to confront increasingly tougher and diverse social, economic, and psychological pressures (Carr, 2010; Verhaeghe, 2014). In the same time, the incidence of mental health problems (suicide – WHO, 2019; depression – e.g., Andrade et al., 2003; Gonzales, et al., 2009; WHO, 2017) and loneliness has dramatically increased (Cacioppo & Patrick, 2008; Hawlkey & Cacioppo, 2010). According to the evolutionary explanation of the development and persistence in time of loneliness (Cacioppo, Hughes, Waite, Hawkley, & Thisted, 2006; Cacioppo, Cacioppo, & Boomsma, 2014), feeling lonely may be considered a signal with adaptive value that motivates the person to change his/her behavior in a way that would help him/her to reconnect socially with others, thus enhancing one's chances for adaptation and survival. However, a very critical aspect of reconnection with others involves the type and quality of this process. Thus, in the light of the extremely rapid technological development and its positive and negative repercussions on the human functioning, a crucial question regards the way in which individuals use such devices to reconnect in a virtual manner. Recent research has documented that there may be a strong relationship between mental health problems and dysfunctional use of social networking, association that may further impact the person's subjective and psychological well-being, and adaptive processes.

Since previous studies indicated that the young population may experience mental health difficulties, we started to investigate if the easily available and affordable social networking may affect their functioning, and in which way. Our study focused on the investigation of these variables in a sample of Transylvanian Hungarian first and second year students. The results indicated that contrary to our expectations and the findings in the literature, depressive and loneliness levels were not significantly different in male and female students, however, female students are significantly less happy (lower subjective well-being) than male students.

Also, female students are significantly more drawn to dysfunctional use of social networking for informational purposes. When depressive scores are grouped into categories of normal, mild and moderate/severe categories, our results indicate that those students who have moderate/severe levels of depressive symptoms experience significantly higher levels of loneliness, and significantly lower levels of subjective well-being. In the same time, they also engage significantly more in dysfunctional social networking. Finally, the regression analyses conducted to identify what predicts more the two major health indicators (depression and subjective well-being). Results indicated that loneliness is the best predictor of both depression and subjective well-being, predicting 37% of the variance for depression and 20% for subjective well-being. Dysfunctional use of social networks explains only 2% of the variance in depression and 3% for subjective well-being.

Based on our results, we may conclude that female students are at higher risk for lower levels of the subjective well-being component of the mental health indicators, but all students who score moderate to high on depressive symptoms present both an increased level of loneliness and dysfunctional use of social networks, and significantly lower levels of subjective well-being. Since dysfunctional use of social networking explained only a relatively low percentage of both depressive and subjective well-being, it seems that the most benefic intervention in enhancing mental health indicators would be the one that targets the reduction of loneliness. Further research should focus on investigating the possible changes in the dysfunctional use of social media after implementing a program for reducing levels of loneliness.

### **Acknowledgement**

This research was supported by a 2019 Domus Hungarica senior research scholarship/grant (2528/20/2019/HTMT) awarded by the Hungarian Scientific Academy to Éva Kállay.

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