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An Insight of the Nexus between Psychological Distress and Social Network Site Needs

Mei Peng Low and Siew Yen Lau

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Mei Peng, Low[1[0000-0002-3141-3081]] and Siew Yen, Lau[2]

[1, 2] Faculty of Accountancy and Management,
Universiti Tunku Abdul Rahman
Kajang, Selangor, Malaysia
lowmp@utar.edu.my

Abstract. The passage of time has brought mankind to a seamless communication universe with informational technologies and social network sites (SNS). This study endeavors to examine the correlation between psychological distress and SNS among the general public. Five SNS needs were examined. Quantitative research design specifically a cross-sectional approach with a self-administered questionnaire was used to reach to the pool of respondents. As symmetrical sampling is not the main concern in this study, the purposive sampling method was applied. A total of 210 responses were collected from Malaysians aged 18 and above. The findings reveal that overall psychological distress has led to the SNS needs with personal integrative needs (β = 0.332) emerged as the core needs followed by diversion need (β = 0.241), affective needs (β = 0.239), social interactive needs (β = 0.210) and cognitive needs (β = 0.197). While bulk of the studies examines the use of SNS leading to psychological distress, the current study empirically relates psychological distress as the antecedents of SNS usage. The findings offer insights to the respective authorities and mental associations for drawing up recouping strategies and programs to cope with mental health issues via SNS.

Keywords: Social Network Sites (SNS), SNS needs, psychological distress.

1 Introduction

The internet is a product of technological innovation that connects the global wide area network and computer systems worldwide [1]. The advent of new technological revolution has augmented the internet's functions to be more visible and influential. As a result, people are greatly impacted by technological innovation. Recently, social network via the internet platforms, namely social network sites have become prevalent. In fact, the influences have cascaded to economic advancement, human life, and social development [2]. The evolution of internet and social network sites coupled with technological innovations are immersing into all aspects of human society, extending to international relations, and the international strategic pattern. **The work by Al-Qaysi, Mohamad-Nordin, and Al-Emran [3] have highlighted the perverseness of SNS in particular the Facebook usage.**

SNS was an internet-based service that allowed users to establish a public or semi-public profile within a limited system, articulate a list of other users with whom they share a connection, and get their list of connections within the system [4]. The dynamic

nature of the internet has altered the definition of SNS over the last 25 years. More recently, Aichner et al. [4] defined SNS as a networked communication platform in which participants (1) have profiles that are uniquely recognizable based on user-supplied information, the information given by other users, and/or system information; (2) describe openly relationships that others can observe and explore; and (3) consume, create, and/or engage with user-generated content streams given by others. Currently, the SNS users worldwide has accounted for more than half of the world population of 7.9 billion [6]. In Malaysia, there are 27.43 million of SNS users which accounts for 86% of the Malaysia total population [6,7].

Year 2020 was unthinkable that hit hard by COVID-19 pandemic. Various measures were implemented by the governments such as nationwide lockdown, cessations of public activities and social distancing practices. People and organizations worldwide have had to adjust to new norms of work and life. Accordingly, a new phenomenon is observed with an inevitable surge of digital technologies demand and internet usages [8]. These changes come along with numerous social challenges such as general public's mental health and internet addictions [9].

According to the World Health Organization (WHO) [10], mental health encompasses subjective well-being, self-perceived, freedom, competency, interpersonal relying, and self-actualization of one's mental and moral capacity, among others. WHO describes mental health as a condition of well-being in which the individual realizes his or her abilities, able to cope with the usual demands of life, able to work successfully and meaningfully, and ability to contribute to a particular group.

The COVID-19 attack have exacerbated to rising mental health issues such as suicide cases and self-harming acts. The Royal Malaysian Police have reported an astounding number of 468 suicides between January and May of 2021 [11]. The figure indicates that there is average three suicide cases each day which has tripled the number in 2020. The alarming statistics deserve some immediate attention.

Putting the pervasiveness of SNS and COVID-19 pandemic together, the development has inseminated many research interests. Against this background, we explore the possible correlation between psychological distress and SNS needs as part of the digital surge scenarios during the pandemic.

2 Literature Review

Past relevant studies were examined to develop current research. The concerns of psychological distress was referred through various medical journals such as *International Journal of Mental Health and Addiction* and journals from *US National Library of Medicine National Institutes of Health*. For SNS needs, *Cyberpsychology, Behavior, and Social Networking Journal, Computers in Human Behavior, Telematics and informatics Journals* were examined to build the research idea and variables of interest.

2.1 Psychological Distress

Psychological distress is a widespread mental health issue in the population [12]. It is an emotional discomfort caused by daily pressures and obligations that are difficult to manage. Generally, emotional discomfort can be typified by exhaustion, depression and anxiety symptoms [13]. These symptoms frequently cohabit and co-occur with typical somatic complaints, a variety of chronic illnesses, and medically unexplained disorders. When an individual encounters excessive demands and inadequate support from external factors, and simultaneously experiences lack of internal control, psychological distress would occur.

World Health Organization [9] enlightened the five psychological distress features displayed by patients are perceived incapacity to cope, changes in an emotional state, suffering, communication of irritation, and self-harm. These features could be reflected in six fundamental daily idioms of low morale and pessimism about the future, suffering and pressure, self-depreciation, social retreat and isolation, somatization and self-back down [12]. Failure to properly identify and seek immediate treatment can lead to chronicity, attempt suicide and tragedy.

2.2 Social Network Sites (SNS) Needs

According to Chen [14], SNS has emerged as a need in everyday interpersonal interactions. People are increasingly concerned about the considerable impacts of SNS in numerous aspects of their lives including social difficulties, performance decline, interference with school, family, and job, and mental issues. In fact, Wang et al., [15] confirmed a reciprocal link between the passive use of SNS and subjective well-being. Passive SNS use may be harmful to subjective well-being since it lacks social support and may elicit envy and jealously.

Referring to Katz, Haas and Gurevitch [16]'s earlier work, there are five needs people acquired from mass media, specifically diversion, cognitive, personal integrative, social integrative, and affective needs. Lately, Ali, Danaee and Firdaus [17] and Sharif [18] adopted the same five needs to expound on SNS needs.

2.2.1 Diversion Needs

Diversion needs are also known as tension free needs. Cressey and McDermott [19] and McQuail [20] described diversion needs as "escape from boredom or challenges, as well as an emotional release." People listen to music and access social media to reduce tension or to pass time when they are bored. Also, people may have numerous pressures in their lives that they do not want to confront, therefore they use media to escape from them. As such, one of the SNS needs is diversion needs.

2.2.2 Cognitive Needs

Cognition refers to the mental processes involved in learning and comprehension [21]. Thinking, knowing, remembering, analyzing, and problem-solving are examples

of cognitive processes. These are the higher-level brain processes that include language, imagination, perception, and planning [21]. Meanwhile, cognitive psychology is the set of behavioral individuals thinking mechanism and processes that occur during cognition. People utilize social media to obtain information and to satisfy their mental and intellectual requirements [22]. Often, people watch the news to satisfy this cognitive desire. Likewise, people join social groups in SNS to search for information. Hence, SNS is a mean to meet the needs for knowledge, understanding, curiosity, exploration, predictability, creativity, and discovery that represents the intellectual desire.

2.2.3 Personal Integrative Needs

Personal integrative needs include self-esteem and respect. People want reassurance to build their position, trustworthiness, strength, and authority, which is accomplished via the use of SNS. They utilize SNS to watch commercials and learn which items are in vogue, and they adapt appropriately to modify their lifestyle and fit in with others. Besides, gratifications acquired from SNS use also include the methods of reinforcing particular ideals [23]. In this vein, people rely on SNS to meet their desire for self-esteem [24] by rescuing their status, to gain respect, credibility, confidence, stability as 5well as power [25].

2.2.4 Affective Needs

Affective needs refer to the emotional fulfilment and pleasure that people obtain from SNS. Typically, affective needs focus on awareness and growth in attitudes emotions, and feelings [26]. The affective domain describes people's emotional reactions and their capacity to sense the delights or suffering of others [27]. Often, people are identified with the characters and the emotions they exhibit. If they experience sorrow, the audience will feel sad along with them, and if they are happy and joyful, the audience will share the similar mood with them.

2.2.5 Social Integrative Needs

Aristotle, the Greek philosopher once said that human beings are “social creatures” and naturally seek the companionship of others as part of their well-being. The sayings reinforced in the social integrative needs to interact and socialize with family, friends, and society. Social integrative needs are based on individual connection and interaction with the outside world [28]. People utilize SNS to connect, to interact and to improve their social connections with their friends, family and alliances by discussing various issues. SNS fulfils the social integrative needs by presenting a platform and avenue for individuals to connect, to discuss subjects, to contribute ideas and to give opinions among their networks [18].

2.3 Uses and Gratification Theory and Hypotheses Development

Uses and Gratification Theory (UGT) by Katz et al., [16] explains how and why people are actively seeking out specific types of media. The central focus of UGT is "What do people do with media?" and “Why do people use media?”[20, 29]. Following the scholarly research by Sundar and Limperos [30] and Gil de Zúñiga et al., [31], they

unanimously informed that people receive gratifications through media that fulfil their social, informational and leisure needs. Applying to current psychological distress conditions as the consequence of lockdown and social distancing, UGT is used to examine the correlations between psychological distress and the five SNS needs.

From a therapeutic perspective, when people encounter a stressful state of mind, it is recommended to attempt a diverting activity to mitigate the stress level. According to Orchard et al., [32] social maintenance and freedom of expression are some of the motivations for SNS usage. With this, we hypothesize that people face with physiological distress are diverting the negative emotions toward SNS usage. H1 is developed.

H1: Psychological distress leads to SNS diversion needs.

Cognitive psychology describes the set of behaviors relate to the effort of understanding and exploring to fulfil our curiosity and predictability. This intellectual seeking effort is known as the cognitive needs. According to Phua et. al., [33, 44], people increasingly embrace SNSs as tools for communication and information purposes. We are of interest to uncover the plausible relations between physiological distress and cognitive needs via the SNS usage in H2.

H2: Psychological distress leads to SNS cognitive needs.

Personal integrative needs are construed as the self-esteem need. People use media to reassure their status, gain confidence and credibility. Park et al [34, **44**] found that one of the reasons for users to participate in Facebook groups is self-status. Therefore, we hypothesize that people encounter psychological distress use SNS to regain their confidence and status. With this, H3 is formed.

H3: Psychological distress leads to SNS personal integrative needs.

Affective needs relate to sentiments, strengthening aesthetic, and emotional experience. It encompasses all kind of emotions and moods which sought for gratification through SNS. Likewise, study by Phua et al., [33] also informed that SNS is used to meet the emotional and social desires. H4 is developed to investigate the correlation between psychological distress and affective needs.

H4: Psychological distress leads to SNS affective needs.

Social interaction needs reflect the nature of humankinds that needs interaction and not isolation. Gil de Zúñiga et al., [32] explained that SNS usage led to enhanced social interaction, knowledge, diversion, escapism and civic participation. We hypothesize the social interaction needs is a natural mean when people encounter with psychological distress. H5 is produced.

H5: Psychological distress leads to SNS social interaction needs.

2.4 Research Framework

Against the backdrop set forth, the following framework is posited to proceed with current research (figure 1).

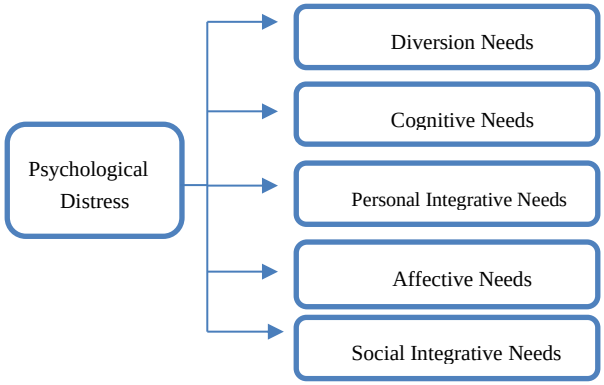

Fig 1. Research Framework

3 Research Methodology

Quantitative research design specifically cross-sectional approach through the use of self-administered questionnaire was operationalized in this study. As a symmetrical sampling was not the main concern in this study, purposive sampling method was applied. Targeted respondents were contacted and given the explanation of the research objectives before seeking for their voluntary participation. The data collection took three months and successfully collected a total of 210 responses from the Malaysians aged 18 and above.

The questionnaire was structured in three sections; respondents' demographic profile; experience of psychological distress and SNS needs. Hopkins Symptom Checklist (HSCL-10) from Yuan [35] was adopted to measure psychological distress while the five SNS needs were adopted from Ali et al., [22]. The respondents were required to rate their level of agreement based on Five-point Likert statements in the questionnaire. The complexity of the path modeling in SNS needs justified the use of Partial least square structural equation modeling (PLS-SEM) in performing the statistical analysis [36].

4 Research Findings

Table 1 provides an overview of the respondents' profiles. The majority of respondents are in the age groups of 18 – 39 years old (81.43%) with females made up 57.62 % of the total polled. Most of respondents are with upper secondary school qualifications (32.38%) and degree (29.05%). The employed (41.43%) and self-employed (20.0%) dominated the responses.

Table 1. Respondents' Profile

Demographic	Value	Frequency	Percentage (%)
Age	18 - 29 years old	91	43.33
	30 - 39 years old	80	38.10
	40 - 49 years old	24	11.43
	50 - 59 years old	13	6.19
	60 and above	2	0.95
Gender	Female	121	57.62
	Male	89	42.38
Educational Level	Primary School	3	1.43
	Lower Secondary	14	6.67
	Upper Secondary	68	32.38
	Pre-University	17	8.10
	Diploma	40	19.05
	Bachelor Degree	61	29.05
	Post Graduate	2	0.95
	Others	5	2.38
Occupation	Student	63	30
	Employed	87	41.43
	Self-employed	42	20.00
	Unemployed	11	5.24
	Retired	7	3.33
Living Area	Urban Area	167	79.52
	Rural Area	12	5.71
	Suburban Area	31	14.76

Hair et al., [36] recommended that the analysis of PLS-SEM approach begins with the measurement model assessment before proceeding to structural mode assessment. Measurement model assessment entails reliability assessment that encompasses variables factor loadings, composite reliability (CR), and average variance extracted (AVE). In term of validity, discriminant validity was assessed using heterotrait–monotrait (HTMT) as suggested by Henseler et al., [37].

Table 2 shows that all the measurement items surpass the recommended threshold for factor loading, Cronbach's Alpha, CR and AVE. The HTMT in Table 3 informed that none of the HTMT values were greater than 0.90 [36, 37]. Henceforth, it concludes that measurement reliability and discriminant validity for the present study had been established.

Table 2. Measurement Model Assessment

Construct/ Item	Factor Loading > 0.7	Cronbach's Alpha> 0.8	CR > 0.7	AVE > 0.5
Diversion Needs				
D1	0.788	0.860	0.902	0.697
D2	0.832			

D3	0.851			
D4	0.865			
Cognitive Needs				
C1	0.902	0.920	0.943	0.805
C2	0.901			
C3	0.930			
C4	0.855			
Personal Integrative Needs				
PI1	0.875	0.913	0.938	0.790
PI2	0.914			
PI3	0.876			
PI4	0.891			
Affective Needs				
A1	0.710	0.859	0.904	0.703
A2	0.907			
A3	0.854			
A4	0.869			
Social Integrative Needs				
SI1	0.875	0.891	0.924	0.754
SI2	0.912			
SI3	0.823			
SI4	0.861			
Psychological Distress				
PD1	0.881	0.952	0.959	0.704
PD2	0.793			
PD3	0.894			
PD4	0.739			
PD5	0.897			
PD7	0.887			
PD8	0.873			
PD9	0.890			
PD10	0.879			

Table 3. HTMT Discriminant Validity

	1	2	3	4	5	6
Affective Needs						
Cognitive Needs	0.805					
Diversion Needs	0.890	0.854				
Personal Integrative Needs	0.841	0.626	0.729			
Psycho Distress	0.240	0.200	0.249	0.333		
Social Integrative Needs	0.890	0.880	0.889	0.732	0.226	

Prior to assessing the structural model, the issue of collinearity was addressed using variance inflated factor (VIF) [39]. Table 5 indicates that all the VIF values below 3.3, informing the absence of collinearity in the model.

Thereon, bootstrapping procedure was performed using 1,000 resampling to generate the t-values to measure the statistical significance of the path coefficients. The results of path co-efficient assessment is presented in Table 4 in which all the proposed hypotheses (H1 to H5) were found to be significant with p value < 0.05.

Subsequently, R^2, the variance explained in the dependent constructs, i.e., the five SNS needs, Q^2 predictive relevance and f^2 effect size were also being examined and the results are shown in Table 5. Overall, the R^2 for SNS needs are below 0.100 except personal interactive needs is 0.108, which indicates that 10.8% of the variance in personal interactive needs can be explained by psychological distress. Meanwhile, the overall Q^2 values are larger than 0 indicate that exogenous constructs possess predictive capacity over psychological distress. The results further show that among all the exogenous constructs, psychological distress has the medium effect on personal integrative needs (f^2= 0.121) while others have low effect size (f^2 ranging from 0.004 to 0.064).

Table 4. Hypotheses Testing

Hypothesis	Path Coefficient	Standard Deviation	T Statistics	P Values	**Decision**
H1: Psychological Distress -> Diversion Needs	0.241	0.056	4.281	0.000	**Supported**
H2: Psychological Distress -> Cognitive Needs	0.197	0.060	3.280	0.001	**Supported**
H3: Psychological Distress -> Personal Integrative Needs	0.332	0.060	5.492	0.000	**Supported**
H4: Psychological Distress -> Affective Needs	0.239	0.055	4.354	0.000	**Supported**
H5: Psychological Distress -> Social Integrative Needs	0.210	0.058	3.640	0.000	**Supported**

Table 5. Structural model assessment: collinearity, coefficient of determination, predictive relevance and effect size

Construct	VIF	R^2	R^2 Adj	Q^2	f^2
Affective Needs	1.001	0.055	0.050	0.033	0.058
Cognitive Needs	1.023	0.039	0.034	0.028	0.004
Diversion Needs	1.069	0.060	0.055	0.033	0.064
Personal Integrative Needs	1.369	0.108	0.104	0.075	0.121
Social Integrative Needs	1.410	0.046	0.041	0.031	0.048

5 Discussion and Conclusion

The research examines the correlations between psychological distress and SNS needs. The results demonstrate a positive relationship between psychological distress and the five SNS needs. The findings explicate that when people experience psychological distress, they use SNS to fulfil their needs. However, among the five SNS needs that we had examined, personal integrative needs is the strongest needs followed by diversion needs and affective needs. The findings show consistency with the UGT.

The fact behind the significant personal integration needs during psychological distress could be attributed to the speed of information dissemination [40]. By using SNS, it can reach a large number of audiences in a short period of time. Therefore, it was used as an avenue to meet personal integration needs. In term of the diversion needs, it is related to the concept of escapism. According to Wu, et al., [41], diversion needs is also known as escapism by engaging in activities that are absorbing to the point of offering an escape from unpleasant realities, problems, and pressures. Hence, this offers an explanation to the correlation between psychological distress and SNS diversion needs. Meanwhile, recent research by Pang [42] highlighted the positive affective values of mobile social media. Drawing from the hedonic values, SNS users' affective responses underline emotional profits and self-sufficiency. Hence, a positive relationship is posited between psychological distress and affective needs.

The research findings produce two conclusions. First, there is a positive relationship between psychological distress and SNS needs. Second, psychological distress arouses the SNS usage as it enables the fulfilment of different types of SNS needs. With majority of the respondents were dominated by Gen Y and Z, it was observed that when psychological distress attack, they used SNS to meet the personal integrative needs, diversion needs and affective needs but less on cognitive needs and social integrative needs. These findings could serve good insights to mental health association and social network sites policy makers to cultivate a healthy mindset in the society as well as tackling the concern of rising suicide cases during the pandemic. Some of the past studies have indicated the dark side of SNS, however, current research enlightens that SNS could serve a practical platform for counselling too.

Despite that this research had provided some informative insights of the correlation between psychological distress and SNS needs, it suffers from a few shortcomings. The main flaw stem from the sample size in the context of societal well-being research. Notwithstanding that this research follow the guidelines of the recommended sample size, yet in order to generalize the findings, a larger pool of responses would be beneficial for social well-being context. In addition, current research does not embrace the uniqueness potential arise from diverse demographic profile. It will be of interest to conduct a multigroup analysis by segmenting various demographic such as age, race, income levels to obtain more comprehensive findings. To further validate the findings, it is also recommended to use weighted PLS (WPLS) algorithm to attain better average population evaluations when a set of appropriate weight is possible [43].

Future researchers may desire to address these shortcomings and further expand to scope of data collection from many sources to validate the information gained. In-depth interviews with respondents would be beneficial, particularly because the psychological distress component varies depending on the situation and background.

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