The Relationship between Social Connectedness and Perceived Stress during COVID-19 Lockdown in High School Students in Pathumwan District, Bangkok

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ABSTRACT: The COVID-19 pandemic has imposed hefty tolls upon humanity. Aside from tremendous fatalities and indelible damage inflicted upon the bodies of many recovered afflicted, lockdown and quarantine orders that it instigated have been shown by previous studies to have a psychological impact on humans. Ostensibly, gregarious animals like humans would lose the sense of belonging to society when occluded from the outside world, which is the case of lockdown and quarantine, and the loss thereof would precipitate negative mentalities. Measuring the former can be executed through the social connectedness scale, whereas one of the ways to gauge the latter is through the perceived stress scale. By conventional notion, perceived stress would have an inverted relationship with social connectedness, as suggested by previous studies. However, a long time has passed since they were conducted and sundry technologies have come to life ever since. People today, especially younger ones, are inclined to use these technologies for entertainment, and past research unveiled their efficacy in alleviating stress. This study was, therefore, commenced on the premise that low social connectedness during COVID-19 lockdown does not necessarily entail high stress among high school students in Thai schools in the Pathumwan district of Bangkok, who were of young ages and whose average household income exceeds that of many of their geographical counterparts. According to responses from the participants (n=374), there is no correlation between social connectedness and perceived stress, which supported the premise. While a conclusion can be drawn that technology use helps reduce the stress that would otherwise rise amidst the lockdown and would be responsible for the noncorrelation, more research is required to identify the clear cause of this astonishing outcome.

KEYWORDS: COVID-19 Lockdown; High School Students; Perceived Stress; Social Connectedness

INTRODUCTION

Humans are a gregarious species; we rely on our conspecifics for our health and welfare (Snyder-Mackler *et al.*, 2020). Indeed, according to Baumeister RF and Leary MR (1995), social connection is integral to human development and well-being. Conversely, dissociation from society can entail grave reverberations, both physically and psychologically (Bzdok & Dunbar, 2020; Holt-Lunstad, 2018). On the psychological side, physically distancing from other humans is shown to be intertwined with a feeling of distress for many individuals (Rajkumar, 2020). Accordingly, the social connectedness scale has been devised to gauge our sense of belonging to a social relationship or network purported to be a critical facet of our species, and unsurprisingly, various experiments have reported higher levels of social connectedness among those engaging in more social interactions (Margolis & Lyubomirsky, 2020). Unfortunately, since the dawn of the COVID-19 pandemic, multiple lockdown and quarantine orders have been imposed to deter the spread of Coronavirus. The conventional notion is that, with scanty opportunity to socially interact with others, the mental state of many individuals, as could be determined by such measures such as the perceived stress scale (an instrument designed to appraise how much individuals deem the situations in which they are stressful), would be deteriorated. Strikingly, data from past research seem corroborative of that predicate. Cohen & Syme (1985) and Zaki & Williams (2013) suggested that social connectedness helps to bolster those with negative emotions, particularly in times of adversity and uncertainty, to which the present time precisely conforms. Lee, *et al*. (2002) also directly found that social connectedness is correlated with perceived stress amongst men and women alike. Nevertheless, those previous studies were done under circumstances that were much different to what we are

embroiled in today. Exponential technological advances in the past few years have furnished us with access to novel means of entertainment such as social media, online streaming (as embodied by Netflix and others), and video games. These could serve to alleviate whatever negative impact self-isolation has on stress as suggested by many studies, such as one by Russoniello, *et al.* (2009), which stated that casual video games help to better mood and diminish stress. Access to technology and the accustomation thereto are especially extensive in younger generations that have grown with the technologies and in those more well-heeled, who are inclined to be able to afford them, and these groups can potentially present a distinct deviation from the aforementioned notion about social connectedness and perceived stress.

This research was therefore initiated to investigate the correlation between the 2 items amidst COVID-19 lockdown in high school students in Pathumwan District, Bangkok, Thailand. Intriguingly, the demographic backgrounds of the subject group, such as age and household income, have been found by the Pew Research Center (2017) to correspond with internet use, which seems promising for that potential deviation. A hypothesis was established that, despite social connectedness being acknowledged to lessen stress, the lack thereof does not necessarily correlate with high perceived stress.

METHODOLOGY

In order to attain all requisite data for the research, a comprehensive questionnaire was devised to measure social connectedness and perceived stress. The social connectedness portion of the questionnaire was derived from the Social Connectedness Scale (SCS) invented by Lee & Robbins (1995), whereas the Perceived Stress Scale (PSS) created by Cohen, *et al.* (1983) contributed to the perceived stress portion. The 2 original scales were subject to apropos modifications and each question would be answered on a scale of 1 (strongly disagree/never) to 5 (strongly agree/very frequently). Additional questions were included as a preliminary, inquiring about the respondent's age, school grade, and gender. Afterward, the questionnaire was sent to 4 experts to determine its Item Objective Congruence (IOC) and adjusted following their recommendation to reach the required minimum IOC score of 0.5. To enhance its credibility and reliability, a pilot test was conducted upon a small sample group, providing an output subsequently utilized for an internal reliability test with the Statistical Product and Service Solutions (SPSS) software. The test yielded a result of 0.896 on the Cronbach's alpha, surpassing the 0.7 thresholds necessary for acceptability stipulated by Cortina (1993). Proven reliability, the questionnaire was then arranged into an online form on the Google Forms platform and disseminated to a sample group of high school students studying at Thai schools in the Pathumwan district of Bangkok. Out of over 6,500 Thai school students in the district, 374 responses were collected, which were sufficient to represent the total population, according to Krejcie & Morgan (1970). The responses were then analyzed to determine the correlation between perceived stress and social connectedness. The SPSS software and Pearson correlation coefficient were selected as a means to complete the task.

RESULTS

Table 1: Statistics of the respondents' demographics including gender, age and educational level (n = 374)

Personal information	Number of participants	Percentage
1) Gender		
Female	239	63.9
Male	85	22.7
LGBTQ+	50	13.4
Total	374	100
2) Age		
15	57	15.3
16	134	35.8
17	104	27.8
18	77	20.6
19	2	0.5
Total	374	100

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3) Education Level		
Grade 10	165	44.1
Grade 11	108	28.9
Grade 12	101	27
Total	374	100

According to this table, the vast majority of respondents (n = 374) were female, who contributed 63.9% of the total responses. The samples were somewhat evenly split between the age of 16 to 18, each comprising over 20%, with a relatively slighter share of 15-year-olds and a minuscule number of 19-year-olds. The plurality of respondents were at grade 10, while the rest were almost equally divided between 11th graders and 12th graders.

Table 2: Statistics of the answers to the social connectedness portion of the questionnaire. The portion consisted of 8 statements to which participants (n = 374) could respond by answering on a scale of 1 (strongly disagree) to 5 (strongly agree).

Question	Mean rating (out of 5)	Standard Deviation	N
1) In the last month, I feel disconnected from the world around me.	3.11	1.216	374
2) In the last month, even around people I know, I don't feel that I really belong.	2.75	1.340	374
3) In the last month, I feel so distant from people.	3.24	1.324	374
4) In the last month, I have no sense of togetherness with my peers.	2.71	1.332	374
5) In the last month, I don't feel related to anyone.	2.44	1.332	374
6) In the last month, I catch myself losing all sense of connectedness with society.	2.55	1.390	374
7) In the last month, even among my friends, there is no sense of brother/sisterhood.	2.20	1.361	374
8) In the last month, I don't feel that I participate with anyone or any group.	2.48	1.363	374
Overall descriptive	2.6838	1.03117	374

This table illustrates the statistical means of responses to most statements that were skewed towards "disagree" (these means were close to 2) and even those of the responses to the remaining were in the proximity of 3, which translated into "neutral". The overall mean of responses to all statements were 2.6838 with an overall standard deviation of 1.03117, which meant that the samples collectively "disagreed" with the statements. Since all statements in this section of the questionnaire were negative and agreeing with them would amount to reporting loss of social connectedness, it could be concluded that respondents collectively felt socially connected despite COVID-19 lockdown.

Table 3: Statistics of the answers to the perceived stress portion of the questionnaire. The portion consisted of 9 statements to which participants (n = 374) could respond by answering on a scale of 1 (never) to 5 (very frequently).

Question	Mean rating (out of 5)	Standard Deviation	N
1) In the last month, how often have you been upset because of something that happened unexpectedly?	3.18	1.264	374
2) In the last month, how often have you felt that you were unable to control the important things in your life?	2.94	1.193	374
3) In the last month, how often have you felt nervous and stressed?	3.53	1.335	374
4) In the last month, how often have you NOT felt confident about your ability to handle your personal problems?	3.09	1.319	374
5) In the last month, how often have you felt that things were NOT going your way?	3.30	1.241	374
6) In the last month, how often have you found that you could not cope with all the things that you had to do?	2.93	1.196	374
7) In the last month, how often have you NOT been able to control irritations in your life?	2.93	1.140	374
8) In the last month, how often have you been angered because of things that happened that were outside of your control?	2.88	1.220	374
9) In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	2.94	1.357	374
Overall descriptive	3.079	0.98297	374

This table demonstrates the statistical means of responses to all questions that were in the neighborhood of 3 or "sometimes". The overall mean was 3.079 with a standard deviation of 0.98297, indicating the moderate nature of the responses. Because the experiences or feelings outlined in all questions were negative and indicative of stress, answering "frequently" would be tantamount to reporting high perceived stress. Therefore, it can be concluded that the participants felt a temperate amount of stress during the lockdown.

Table 4: A correlation test between respondents' social connectedness (shortened as "connectedness") and perceived stress (shortened as "stress")
Descriptive Statistics

	Mean	Std. Deviation	N
Connectedness	2.6838	1.03117	374
Stress	3.0790	.98297	374

Correlations

		Connectedness	Stress
Connectedness	Pearson Correlation	1	.052
	Sig. (2-tailed)		.317
	N	374	374
Stress	Pearson Correlation	.052	1
	Sig. (2-tailed)	.317	
	N	374	374

Per the result of this test, a Pearson correlation efficient of 0.052 was not statistically significant, meaning that social connectedness and perceived stress are not correlated, and that this result supports the initial hypothesis of the research.

DISCUSSION

The results indicated that social connectedness and perceived stress are not correlated during persistent COVID-19 lockdown, conflicting with findings from previous research conducted years ago. One plausible rationale for this unorthodox phenomenon is that the participants, precisely in an age range that is contemporary with the exponential expansion of the digital sphere, had entertained themselves with digital media in solitude, decreasing the necessity of social interactions in keeping afloat their mentality. For example, statistical data featured a surge in video game sales during the pandemic (Statista, 2021), and the past research found that video games could alleviate stress and boost mental health (Mandryk *et al*., 2020). Other media also experience an increase in use during the same time frame, such as social media (Wold, 2020), television, and online news (Oxford Business News, 2020). Studies in the past demonstrated a positive relationship between these media and stress reduction. Depp *et al*. (2010) found TV watching to be associated with less stress, an effect that attenuated with age, which implied that participants of our survey, who were especially young, could strongly be subject to this effect. Nabi & Krcmar (2004) also suggested that media consumption helps alleviate stress. This would explain how high school students would turn to the media amid COVID-19 quarantine for stress relief and amusement, which resulted in a rise in media use that supports our findings, a noncorrelation between social connectedness and perceived stress.

CONCLUSION

This research was initiated to determine the correlation between social connectedness and perceived stress during Covid-19 lockdown in High school students in Pathumwan district, Bangkok. As per the outcome, this basis was confirmed using the Pearson correlation coefficient; no statistically significant correlation was found. These data can potentially be beneficial in designing how activities in academic and professional fields will be conducted in the near future. Since a non-correlation was found, more virtual classes and work-from-home sessions could be planned for these students and their posterities. However, it must be noted that the finding of this research only strictly applies to the group of interest (high school students in Pathumwan district, Bangkok) or any group on par. Studying the same topic with those in other categories, who are more acclimatized to socializing and reliant upon it, may yield different results. In any case, more studies and meticulous scrutiny are required for such virtual activities that are planned to be implemented.

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