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# The Association Between Well-Being and Virtual Interactions

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## INTRODUCTION

- The objective of this study was to examine the correlation between virtual interactions and well-being.
- Studies that were previously conducted during the COVID-19 pandemic have found that social media may be an effective coping strategy to decrease feelings of anxiety (Cauberghe et al., 2020).
- Further studies have suggested that the pandemic is in fact having a negative impact on the mental health of college students (Son et al., 2020).

### Hypotheses:

- An increase in social virtual interactions will be associated with an increase in well-being.
- An increase in academic virtual interactions will be associated with a decrease on well-being.

## METHODOLOGY

### Participants

- 47 college students recruited through psychology subject pool
- Mean age = 19.02 ( $SD = 1.277$ )
- Predominantly female (68.1%)
- Predominantly Caucasian (63.8%)
- Predominantly college Freshmen (74.5%)

### Procedure

- Participants completed a survey via Qualtrics.
- Sample was conducted using convenience sampling of the General Psychology subject pool.
- Participants received academic credit upon completing the survey.

### Measures

- **Personal Well-Being Score (PWS)** (Benson, et al., 2019)
  - Four questions using a 4-point scale
- **Patient Health Questionnaire (PHQ-9)** (Downey, et al., 2016)
  - Nine questions using a 4-point likert scale
  - Assessed frequency of depression
- **Generalized Anxiety Disorder Scale (GAD-7)** (Kertz, et al., 2013)
  - Seven questions using a 4-point likert scale
  - Assessed symptoms of Generalized Anxiety Disorder
- **Modified Social Networking Usage** (Gupta & Bashir, 2018)
  - Fourteen questions using 11-point scale
  - Assessed frequency of engagement in virtual interactions

## Figure 1

**Modified Social Networking Usage Questionnaire (Gupta & Bashir, 2018) :**

**Instructions:** Participants were asked to read 14 statements regarding virtual interaction, in which they may have used virtual interaction platforms (such as Zoom, Discord, and/or Microsoft Teams) and/or video phone call platforms (such as FaceTime, Skype, WhatsApp, and/or Google Duo), during the past week via an 11-point scale.



1. During the past week, I used virtual interaction platforms and/or video phone calls to become more sociable.	2. During the past week, I used virtual interaction platforms and/or video phone calls to keep in touch with my relatives.
3. During the past week, I used virtual interaction platforms and/or video phone calls to seek academic help from teachers.	4. During the past week, I used virtual interaction platforms and/or video phone calls to share new ideas.
5. During the past week, I used virtual interaction platforms and/or video phone calls to attend social gatherings.	6. During the past week, I used virtual interaction platforms and/or video phone calls to get information regarding current social events.
7. During the past week, I used virtual interaction platforms and/or video phone calls for online academic group discussion.	8. During the past week, I used virtual interaction platforms and/or video phone calls for sharing pictures.
9. During the past week, I communicated with my friends via virtual interaction platforms and/or video phone calls to prepare for an exam.	10. During the past week, I used virtual interaction platforms and/or video phone calls as a way of relief from academic stress.
11. During the past week, I used virtual interaction platforms and/or video phone calls for watching movies with others.	12. During the past week, I used virtual interaction platforms and/or video phone calls for collaborative learning.
13. During the past week, I used virtual interaction platforms and/or video phone calls to solve my academic related problems.	14. During the past week, I used virtual interaction platforms and/or video phone calls to share funny messages and/or videos with others.

## TABLE 1

**Bivariate Correlations:** Correlations between the types of virtual interactions and well-being, depression, and anxiety .

Virtual Interaction	Correlations		
	Personal Well-Being Scale (PWS/Well-Being)	Patient Health Questionnaire (PHQ-9/Depression)	Generalized Anxiety Disorder Scale (GAD-7/Anxiety)
Social Virtual Interactions	$r = .042$	$r = -.080$	$r = .005$
	$p = .778$ N = 47	$p = .603$ N = 45	$p = .975$ N = 47
Academic Virtual Interaction	$r = -.175$	$r = -.288$	$r = -.106$
	$p = .238$ N = 47	$p = .055$ N = 45	$p = .477$ N = 47

## RESULTS

- Our results did not support of our hypotheses (See Table 1).
- The correlations between social virtual interactions and the measures of well-being are so small in magnitude that they likely reflect no association between those variables.
- The correlations between academic virtual interactions and the measures of well-being, although not significant, are as follow:
  - As academic virtual interactions increased, there was a slight decrease in well-being.
  - And improved depression and anxiety scores.
  - But, again, these associations were not significant.
- It is interesting to note that well-being was positively correlated with both depression and anxiety. Although we did not have a hypothesis related to the correlations between the well-being measures, this stood out as odd and worth noting.

## DISCUSSION

- We did not support our hypotheses.
  - It is possible that our study was under-powered due to the small sample size, and that is why we did not detect an association between academic virtual interactions and well-being.
  - However, because the correlations between social virtual interactions and well-being were so small, it is likely that our failure to support our hypothesis is not due to power.
- In terms of the odd findings related to the correlations between the well-being measures, we altered the scoring of the PWS, which may have impacted the construct validity.
- There were multiple limitations in this study, including a homogenous sample of mostly white, female, college freshmen students.

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