11-2020

Social Support During COVID-19 Social Distancing

Josiah P. Stryd
Grand Valley State University

Social Support During COVID-19 Social Distancing

Josiah P. Stryd

Grand Valley State University

This study was completed to fulfill the Honors College senior project, HNR 499, requirement

Dr. Lawrence Burns

November 15, 2020

Abstract

This pilot study measured emotional affect, social support, and use of digital communication technologies during the early 2020 COVID-19 stay at home order in Michigan among 65 Grand Valley State University Alumni Association members. The study used an online survey and was designed to examine the relationship between digital communication and social support during physical social distancing, and how this impacted emotional affect. Overall, the pilot study found largely unchanged reported emotional affect and social support before and during the stay at home order. A future study with larger sample size would aim to find if these results are replicated and examine correlation between scores on the affect and social support measures, digital communication frequency and type, and demographic variables.

Background

COVID-19, a viral respiratory illness, was first noted in China in December 2019, and has since then spread across the globe (*WHO Timeline - COVID-19*, n.d.). On March 23, 2020 the governor of Michigan issued an executive stay at home order, requiring citizens to stay in their homes except to do essential errands and jobs, as well as recreate outdoors alone. This order was extended several times, ending on June 1, 2020 (Hutchinson, 2020). Although the pandemic is still ongoing at the time of writing, this study is concerned with the period when the stay at home order was in place in Michigan, from March 23-June 1, 2020.

Infectious diseases are a common source of fear and anxiety, which can be aggravated by reports of media and scientists (Pappas et al., 2009). A study of Chinese college students in February of 2020 during the COVID-19 outbreak found that students had unusually high levels of anxiety and depression, which were associated with panic about the outbreak and concern with exposure respectively (Liu et al., 2020). An exploratory study in China during mass quarantine orders due to the COVID-19 outbreak found that the majority of quarantined individuals reported increased stress levels (Zhang et al., 2020). Increased stress was associated with smoking, alcohol consumption, and extensive electronic device use, while decreased stress was associated with inter-personal communication with family members, regular housework, and regular physical exercise (Zhang, et al.).

In more general circumstances, elderly individuals who are lonely are at an increased risk for depression (Heikkinen & Kauppinen, 2004). Social support in general can have a buffering effect on high stress situations, mediating how events are interpreted (Cohen & Hoberman,

1983). In a study about elderly relocated typhoon survivors in Taiwan, social support was

positively associated with positive coping methods and higher satisfaction with their living

circumstances (Chao, 2017). For those with physical disabilities, social support has been found

to positively impact quality of life, whether this support was through the internet or in person

(Leung & Lee, 2005). Another study found that while the social networking sites could provide

aspects of social support, their use was not connected with emotional social support (Lee & Cho,

2019). Studies on elderly patients who are hospitalized or in long term care facilities show that

video calling can reduce loneliness and increase feelings of social connectedness and support

(Mickus & Luz, 2002; Morris et al., 2014). In respondents age 18-70 in long distance dating

relationships, video call formats were seen as promoting feelings of closeness despite distance

(Janning et al., 2018). Although this research has examined social support in different contexts,

the current situation has brought physical isolation to many who would otherwise not experience

it.

A Gallup poll found that from March 27-April 9 27% of U.S. adults completely self-

isolated, having no contact with people outside their household, with only 3% reporting that they

were not isolating at all (Rothwell, 2020). Many opportunities for social support which existed

before the stay at home order, like school, work, or other group activities, have been cancelled.

Personal groups and business alike sought to use technology to overcome physical isolation, with

popular video conferencing site Zoom seeing daily peaks in users rise from about 10 million in

December 2019 to over 300 million in April 2020 (*Zoom Revenue and Usage Statistics (2020)*,

2020).

Due to a small sample size this study was analyzed as a pilot study. By way of self-report

this project aimed to assess and analyze psychological distress during the stay at home order and

inform mental health care and community practices in the months going forward. By asking

members of the GVSU alumni association questions about emotional affect, life disruption, and

social support the study aims to help provide emotional and social support for our communities

during future stay at home orders and voluntary shut ins. This study is distinctive in that it

addresses a particular community (West Michigan and Grand Valley students and graduates) and

time period (affected by COVID-19). While at least one similar study has been performed (Yu et

al., 2020), this study aimed to give the GVSU community a focused, and in some sense specific,

look at itself. Those who completed the survey and opted in will be anonymously sent the results

to encourage this.

Methodology

A Qualtrics survey was sent out through email to 2,379 randomly selected members of

the GVSU Alumni Association. This survey included demographic questions about sex, age,

occupation, employment status during the stay at home order, living situation during the stay at

home order, and income. It also asked how much respondents have social distanced and whether

the respondent or someone they knew had been diagnosed with COVID-19 before or during the

stay at home order. Respondents were eligible only if they were residents of Michigan during the

stay at home order.

In total the study received 65 responses. The low response rate may reflect participant

fatigue as the Alumni Association does send periodic queries for survey participation. We also

eschewed any form of participant renumeration, which is commonly used to reward participants.

The survey was also sent weeks before the 2020 general election, which likely joined a large

number of election-based surveys. It is possible that these may have contributed to the low

response rate. In the future, if a similar study was run, using a lottery or other incentive for response, as well as recruiting a larger group, likely including students, may be helpful.

Measures

The survey contained the ten item short form Positive and Negative Affect Schedule (PANAS), which has been validated in cross cultural populations (Thompson, 2007). In this study the PANAS was used to ask about positive and negative emotions during the stay at home order, from March 23 - June 1 2020. The same questions were also asked with a general focus, to allow a comparison of trait, baseline affect and state affect caused by these circumstances (Merz & Roesch, 2011). Populations of both young and elderly individuals are shown to rate overall positive and negative affect similarly momentarily and after a year, suggesting that a retrospective measurement of affect will align with what respondents felt in the past. The study used the Social Provisions Scale 5 (SPS-5) to measure social support before the stay at home order and during it. This measure gives data about different facets of social support, including guidance, reliable alliance, reassurance of worth, attachment, and social integration, with higher scores correlating with higher levels of social support (Orpana et al., 2019). A summed score above 15 is considered the cutoff for a high level of social support (Orpana et al., 2019). The SPS-5 has been validated in several Canadian populations, including the general population and college students (Orpana et al., 2019). To specifically analyze methods of social support we asked respondents how (i.e., group video chat, phone call, messaging service) they communicated with social groups during the stay at home order and how often they did so.

Results

	Before the stay at home order	During the stay at home order

Mean positive affect	17.02	16.14
Positive affect standard deviation	3.48	3.54
Positive affect median	17	17
Positive affect range	7-25	8-25
Mean negative affect	8.93	11.20
Negative affect standard deviation	2.98	3.74
Median negative affect	9	12
Negative affect range	5-18	5-22
Mean SPS-5	16.19	15.80
SPS-5 standard deviation	3.98	4.02
SPS-5 Median	17	16
SPS-5 Range	6-19	5-19

The average age of respondents was 42.7, with a minimum age of 21 years and a maximum age of 74 years. In total 51 females and 12 males responded to the study. The majority of respondents (43) stated that they social distanced as much as possible during the stay at home order, only interacting with those who they lived with. A minority reported meeting with close friends and family during this time, and only 3 respondents social distanced partly or not at all. The majority of respondents were employed full time both currently and during the stay at home order. The number of people who had frequent in-person contact with others for their employment increased from 13 to 25 from the stay at home order to their employment at the time

the survey was sent. Although the study asked about in person contact with others at work or in

seeking employment, an additional question for those who were employed about working from

home and changes in workplace location would probably be helpful for any future studies.

Measurement of affect in the study showed the expected trend, with a decrease in mean

total positive affect from 17.0 to 16.1 for baseline affect and affect during the stay at home order,

respectively, which corresponds to a lower respondent rating of positive affect during this period.

Negative affect increased 8.9 to 11.2 over the same period, indicating that respondents rated their

negative affect as increased during the stay at home order (Thompson, 2007). Due to the low

sample size these changes were not analyzed for statistical significance. During the COVID-19

epidemic in China increased anxiety and depression were also seen in college students, which is

consistent with the observed increased negative affect during the stay at home order (Liu et al.,

2020). A longitudinal study from Stony Brook University, which was in progress at the time of

writing, found a significant increase in anxiety pre-pandemic to pandemic peak, which correlates

well with negative affect (D. Klein, personal communication, October 21, 2020) (Ng et al.,

2019). The Stony Brook study also began to collect daily affect data before pandemic peak and

found generally linearly decreasing negative affect and increasing positive affect as the pandemic

peak passed. This limited data aligns with the idea that the pandemic was associated with a low

point in positive affect and a high point in negative affect, which is now resolving, although

without more concrete analysis or longitudinal data collection this is speculation. If a second

round of data collection were undertaken this would be something to consider, i.e., that

momentary affect could change repeatedly and be different for subsequent stay at home orders.

Only four respondents left the survey between the first and second set of PANAS questions,

despite this being a possible problem point for survey fatigue.

The mean total SPS-5 social support score was 16.19 before the stay at home order compared to 15.80 during the stay at home order. This is similar to a mean of 17.93 found by the Canadian Community Health Survey in 2017, and overall indicating a high level of social support (Orpana et al., 2019). A larger sample size would aim to see if the lack of significant change was replicated.

Many respondents reported communicating digitally through all three of the listed modes of communication (video chat, phone call, and messaging) at least once in a week. 9 respondents said that they did not use a video chat at all in a week, compared to one and two respondents who reported that they did not communicate with a phone call or messaging service respectively. Overall the results suggest frequent use of these digital modes of communication, which a later study could confirm. Past studies have shown that social media use in those with physical disabilities led to greater social support and lower levels of depression (Lee & Cho, 2019). A study of elders in nursing homes found that they were able to use videophones to improve social interactions with those who were socially distant (Mickus & Luz, 2002). These results in other populations suggest connections between digital communication and affect across multiple age groups. A later study could confirm these connections in the surveyed populations during the stay at home order.

Discussion

Together, the measures used suggest that further data collection could offer valuable confirmation and measurement of social support and how it relates to emotional affect during the pandemic. The apparent lack of change in reported social support could be related to the efficacy of digital communication in providing social support. Results would likely have been influenced by including college students, who reported concern about academic performance, difficulty

concentrating during online changes, and stress from moving back in with family (Son et al., 2020), in addition to stressors reported by the general population, such as fear of infection and financial difficulties (Park et al., 2020). The method of comparison of baseline affect and affect at a specific time (i.e. trait vs state affect) may be generalizable, and could be used for other situations, such as before or after hospitalization for example. This method may be prone to retrospective bias, and this should be considered when interpreting results. Key to the understanding of possible results of this study is that social support would buffer, rather than alleviate, stress due to the pandemic. Even with a small sample size and limited analysis, the results of this pilot study suggest that during the stay at home order social support changed and shifted rather than disappeared, and likely provided valuable help with coping.

References

Chao, S.-F. (2017). Social support, coping strategies and their correlations with older adults'

    relocation adjustments after natural disaster. *Geriatrics & Gerontology International*,

    17(6), 1006–1014. https://doi.org/10.1111/ggi.12807

Cohen, S., & Hoberman, H. M. (1983). Positive Events and Social Supports as Buffers of Life

    Change Stress1. *Journal of Applied Social Psychology*, *13*(2), 99–125.

    https://doi.org/10.1111/j.1559-1816.1983.tb02325.x

Heikkinen, R.-L., & Kauppinen, M. (2004). Depressive symptoms in late life: A 10-year follow-

    up. *Archives of Gerontology and Geriatrics*, *38*(3), 239–250.

    https://doi.org/10.1016/j.archger.2003.10.004

Hutchinson, D. (2020, June 2). *Michigan stay-at-home order timeline: 70 days, 4 extensions,*

    ever-changing restrictions. WDIV.

    https://www.clickondetroit.com/news/local/2020/06/02/michigan-stay-at-home-order-

    timeline-70-days-4-extensions-ever-changing-restrictions/

Janning, M., Gao, W., & Snyder, E. (2018). Constructing Shared "Space": Meaningfulness in

        Long-Distance Romantic Relationship Communication Formats. *Journal of Family*

        Issues, *39*(5), 1281–1303. https://doi.org/10.1177/0192513X17698726

Klein, D. (2020, October 21). *RE: COVID-19 Longitudinal Study* [Personal communication].

Lee, H. E., & Cho, J. (2019). Social Media Use and Well-Being in People with Physical

        Disabilities: Influence of SNS and Online Community Uses on Social Support,

        Depression, and Psychological Disposition. *Health Communication*, *34*(9), 1043–1052.

        https://doi.org/10.1080/10410236.2018.1455138

Leung, L., & Lee, P. S. N. (2005). Multiple determinants of life quality: The roles of Internet

        activities, use of new media, social support, and leisure activities. *Telematics and*

        Informatics, *22*(3), 161–180. https://doi.org/10.1016/j.tele.2004.04.003

Liu, X., Liu, J., & Zhong, X. (2020). *Psychological State of College Students During COVID-19*

        Epidemic (SSRN Scholarly Paper ID 3552814). Social Science Research Network.

        https://papers.ssrn.com/abstract=3552814

Merz, E. L., & Roesch, S. C. (2011). Modeling trait and state variation using multilevel factor

        analysis with PANAS daily diary data. *Journal of Research in Personality*, *45*(1), 2–9.

        https://doi.org/10.1016/j.jrp.2010.11.003

Mickus, M. A., & Luz, C. C. (2002). Televisits: Sustaining long distance family relationships

        among institutionalized elders through technology. *Aging & Mental Health*, *6*(4), 387–

        396. https://doi.org/10.1080/1360786021000007009

Morris, M. E., Adair, B., Ozanne, E., Kurowski, W., Miller, K. J., Pearce, A. J., Santamaria, N.,

        Long, M., Ventura, C., & Said, C. M. (2014). Smart technologies to enhance social

connectedness in older people who live at home. *Australasian Journal on Ageing*, *33*(3), 142–152. https://doi.org/10.1111/ajag.12154

Ng, T. W. H., Sorensen, K. L., Zhang, Y., & Yim, F. H. K. (2019). Anger, anxiety, depression, and negative affect: Convergent or divergent? *Journal of Vocational Behavior*, *110*, 186–202. https://doi.org/10.1016/j.jvb.2018.11.014

Orpana, H. M., Lang, J. J., & Yurkowski, K. (2019). Validation of a brief version of the Social Provisions Scale using Canadian national survey data. *Health Promotion and Chronic Disease Prevention in Canada*, *39*(12), 323–332. https://doi.org/10.24095/hpcdp.39.12.02

Pappas, G., Kiriaze, I. J., Giannakis, P., & Falagas, M. E. (2009). Psychosocial consequences of infectious diseases. *Clinical Microbiology and Infection*, *15*(8), 743–747. https://doi.org/10.1111/j.1469-0691.2009.02947.x

Park, C. L., Russell, B. S., Fendrich, M., Finkelstein-Fox, L., Hutchison, M., & Becker, J. (2020). Americans' COVID-19 Stress, Coping, and Adherence to CDC Guidelines. *Journal of General Internal Medicine*, *35*(8), 2296–2303. https://doi.org/10.1007/s11606-020-05898-9

Rothwell, J. (2020, April 21). *Americans' Social Contacts During the COVID-19 Pandemic*. Gallup.Com. https://news.gallup.com/opinion/gallup/308444/americans-social-contacts-during-covid-pandemic.aspx

Son, C., Hegde, S., Smith, A., Wang, X., & Sasangohar, F. (2020). Effects of COVID-19 on College Students' Mental Health in the United States: Interview Survey Study. *Journal of Medical Internet Research*, *22*(9). https://doi.org/10.2196/21279

Thompson, E. R. (2007). Development and Validation of an Internationally Reliable Short-Form

   of the Positive and Negative Affect Schedule (PANAS). *Journal of Cross-Cultural

   Psychology*, *38*(2), 227–242. https://doi.org/10.1177/0022022106297301

WHO Timeline—COVID-19. (n.d.). Retrieved April 27, 2020, from https://www.who.int/news-

   room/detail/27-04-2020-who-timeline---covid-19

Yu, H., Li, M., Li, Z., Xiang, W., Yuan, Y., Liu, Y., Li, Z., & Xiong, Z. (2020). *Coping Style,

   Social Support and Psychological Distress in the General Chinese Population in the

   Early Stages of the COVID-2019 Epidemic* (SSRN Scholarly Paper ID 3556633). Social

   Science Research Network. https://papers.ssrn.com/abstract=3556633

Zhang, Y., Wang, J., Zhao, J., Tanimoto, T., Ozaki, A., Crump, A., Chen, W., Wang, J., Chen,

   L., Yu, J., & Jiang, Q. (2020). *Association Between Quarantined Living Circumstances

   and Perceived Stress in Wuhan City During the COVID-19 Outbreak: A Rapid,

   Exploratory Cross-Sectional Study* (SSRN Scholarly Paper ID 3556642). Social Science

   Research Network. https://papers.ssrn.com/abstract=3556642

Zoom Revenue and Usage Statistics (2020). (2020, April 9). Business of Apps.

   https://www.businessofapps.com/data/zoom-statistics/