



## American Journal of Psychiatric Research and Reviews (ISSN:2637-479X)



# Cabin Fever and Psychological Problems during a COVID-19 Lockdown

Rachel Steele, Tiffany Field, Shantay Mines, and Samantha Poling

Fielding Graduate University, University of Miami

### ABSTRACT

Cabin fever has been reported to have a deleterious impact on mental health in the COVID-19 literature. In this COVID-19 lockdown Survey Monkey study, as many as 75% of 260 respondents reported feeling cabin fever. Demographic correlations suggested that cabin fever occurred more frequently in non-Hispanic white participants. The significant correlations for the scales suggested that those experiencing feelings of cabin fever engaged in fewer health activities like self-care, feeling spiritual, and liking being at home; they spent more time on the internet including receiving and sending messages about the virus; they scored higher on the Stress Scale including worrying about the virus and their finances; they reported feeling more isolated, lonely, bored, and touch deprived; and they presented with higher scores on anxiety, depression, fatigue, sleep disturbances, and PTSD scales. A regression analysis suggested that 44% of the variance in the cabin fever scores was explained by the stress and fatigue scale scores. The generalizability of these results is limited by the homogeneity of the sample (predominantly non-Hispanic white females). Nevertheless, they highlight the negative effects of feelings of cabin fever during a COVID-19 lockdown.

**Keywords:** cabin fever, anxiety, depression, stress, PTSD, fatigue, COVID-19 lockdown

### \*Correspondence to Author:

Rachel Steele

Fielding Graduate University

### How to cite this article:

Rachel Steele, Tiffany Field, Shantay Mines, and Samantha Poling. Cabin Fever and Psychological Problems during a COVID-19 Lockdown. American Journal of Psychiatric Research and Reviews, 2022; 5:38.

 eSciPub  
eSciPub LLC, Houston, TX USA.  
Website: <https://escipub.com/>

Cabin fever has often been identified as the most prevalent psychosocial health problem during the COVID-19 pandemic (Ekpanyaskul & Padungtod, 2022). Yet, it has not been sufficiently researched throughout the COVID-19 literature. It is well known that mental health decline is a common negative consequence of socially isolating experiences during a quarantine (Brooks et al., 2020, Field et al., 2020b). More specifically, Field et al. (2020a) discovered that young adults living alone during a COVID-19 lockdown reported feeling lonely, depressed, and fatigued. Additionally, Holmes et al. (2020) suggested that social isolation and loneliness are strongly correlated with anxiety, depression, self-harm, and suicide attempts throughout the lifespan. Expanding upon this concept, Crawford and Crawford (2021) asserted that cabin fever develops from prolonged confinement and isolation. As such, it is important to distinguish between terms such as isolation and cabin fever, as they are related but should not be used synonymously.

Cabin fever is not defined as a medical condition, but a folk syndrome that most often refers to feelings of dissatisfaction in response to confinement, bad weather, routine, isolation, or lack of stimulation (Crawford, 2021; Ekpanyaskul & Padungtod, 2022). Individuals with cabin fever can experience sleep disturbances (i.e., insomnia and hypersomnia), paranoia, and trouble making practical decisions or choices (Crawford and Crawford, 2021). Further, they posited that severe cabin fever may lead to compulsive acts to escape restricted spaces or routines, not regarding external environments or personal cost to self. Of clinical relevance, cabin fever can result in violence towards self or others, including suicide (Crawford & Crawford, 2021).

In March 2020, the COVID-19 pandemic was recognized as an epidemiological and psychological crisis (WHO, 2020). In addition to the negative physical consequences of COVID infection, three factors contributed to an international mental health crisis in those who

contracted the virus and those who did not: preventative social isolation measures (quarantines and lockdowns), extreme changes to everyday living situations (social distancing, curfews, deceased family members and friends, jobs declared as essential, unemployment), and psychological symptoms related to COVID-19 (Bueno-Guerra, 2022). As such, the psychological health connected to routine rewarding events (family or friend visits, trips or outdoor leisure time) or schedules (such as going to school/work or shopping) was significantly reduced. The COVID-19 lockdowns and their effects are still being explored as one of the only worldwide quarantines within the last century.

The existing COVID-19 literature on psychological problems has focused primarily on stress, anxiety, depression, sleep problems, and PTSD (Kwok et al., 2020; Qiu et al., 2020; Zhang et al., 2020). The purpose of the present data analyses was to examine the relationships between self-reported feelings of cabin fever, depression, fatigue, and sleep problems. Cabin fever has rarely been studied as a psychological issue or as a correlate of lockdown issues. The purpose of the present data analyses was to assess the relationships between feeling cabin fever and health activities, stress, anxiety, depression, fatigue, sleep disturbances, and PTSD symptoms in individuals experiencing a COVID-19 lockdown. Based on the few articles on cabin fever and COVID-19, feeling cabin fever was expected to be correlated with both over-aroused mental states including COVID-related stress and anxiety, as well as under-aroused states including depression and fatigue (Bueno-Guerra, 2022; Crawford & Crawford, 2021). Additionally, based on the reviews on quarantines, including COVID-19, reported feelings of cabin fever were also expected to be associated with PTSD and infection fears (Kwok et al., 2020; Qiu et al., 2020; Zhang et al., 2021).

## **Method**

### **Participants**

A G\* power analysis indicated that a sample size of 224 was required for an alpha of .05 and 80% power. The participants included individuals (N=260) who ranged from 18-82 (M=47 years). Gender was distributed 79% female, 18% male and 3% other (non-specified). Ethnicity was distributed 68% Non-Hispanic White, 21% Hispanic, 3% Black and 8% other (non-specified). Professions were distributed 35% office worker, 30% academic, 15% managerial, 12% medical and 8% labor. The average income was \$72,572, 28% were unemployed and 69% worked at home. Twenty-three percent lived alone.

## Procedure

A flyer was posted on Facebook giving a brief description of the study, including some sample items and the age criterion of being greater than 18 years old. The Facebook flyer included a link to Survey Monkey, an online survey development cloud-based software where participants completed the COVID-19 Lockdown Activities Survey which consisted of 11 scales and a total of 87 items. The survey was conducted between April 1, 2020, and April 30, 2020, and the data were directly transported to SPSS for data analyses.

## Measures

The survey included demographic items including, including those previously highlighted (age, gender, ethnicity, profession, income, type of employment, working at home, and living alone). The following five scales were created specifically for this survey to relate to activities and stress associated with the COVID-19 lockdown. The participants rated the items on the scales from zero meaning "not at all" to three meaning "a lot" including the:

**1) Health Scale** (15 items) (Cronbach's alpha=.66) which included exercise (inside exercise, outside exercise, and outside exercise with others as well as the types of exercise like walking and running), touching (touching partner, touching kids, and touching self, e.g. brushing in shower, yoga, and stretching as well

as the types of touching like hugging and backrubs), COVID- 19-related safety practices including washing hands and social distancing, self-care, spiritual activities (meditating and feeling spiritual), and liking being at home. A factor analysis yielded three factors contributing to 47 % of the variance on the Health Scale score: Factor 1 "Self/Spiritual Care" included Meditating (.74), Self-Care (.68), and Feeling Spiritual (.77) items that together explained 23 % of the variance; Factor 2 "Touching" included the items Touching your kids (.75) and Touching your partner or friend (.72) that explained 14% of the variance; and Factor 3 "Exercise" included the items Outside exercise (-.89) and Exercise outside with someone else (-.76) that explained 10% of the variance;

**2) Media/Communications Scale** (10 items) (Cronbach's alpha=.58) including talking on the phone, texting, on Internet, gaming, Facebook/Instagram time, receiving and sending messages/media about the virus, engaging in Zoom/Skype/Facetime activities (e.g., Yoga, meditation), watching the news, watching other TV programs, and watching movies. A factor analysis yielded four factors contributing to 61 % of the variance on the Media/Communication Scale score: Factor 1 "Entertainment" included the items Watching movies (.84) and TV programs (.80) that explained 23 % of the variance; Factor 2 "Communication" included phone use (.80), texting (.70) and Zoom (.63) that explained 14% of the variance; Factor 3 "Social Media" included being on internet (.78) and Facebook time (.60) that explained 13% of the variance; and Factor 4-"COVID News" that included watching the news (.79) and messaging about the virus (.60) that explained 11% of the variance;

**3) Connecting Scale** (4 items) (Cronbach's alpha=.41) which included connecting with friends, trying to connect with old friends, helping children do homework, and receiving support from others;

**4) Working Scale** (6 items) (Cronbach's alpha=.61) including cooking, caregiving,

housekeeping, paperwork, creative work, and working on projects/hobbies; and

**5) Stress Scale** (11 items) (Cronbach's  $\alpha=.78$ ) which included worrying about getting a virus, worrying about your financial status, wanting this experience to end, feeling isolated, feeling lonely, feeling bored, feeling touch deprived, snacking, drinking alcohol, napping, and getting "cabin fever". A factor analysis yielded three factors contributing to 56 % of the variance on the Stress Scale score: Factor 1 "Stimulation deprivation" included the items Feeling Isolated (.86), Feeling lonely (.86), Feeling bored (.74), Getting cabin fever (.70), and Feeling touch deprived (.65) that together explained 34 % of the variance; Factor 2 "Worrying" included the items Worried about finances (.67) and Worried about the virus (.47) explained 12% of the variance; and Factor 3 "Stress behaviors" included the items Napping (.68) and Snacking (.53) that explained 10% of the variance.

The standardized scales on the survey included 4 PROMIS Subscales (each item was rated on a 5-point scale as 1= never, 2= rarely, 3= sometimes, 4= often, and 5=always) which included the: 1) **PROMIS Anxiety Subscale** (4 items) (Cronbach's  $\alpha=.88$ ) which included I felt fearful, I found it hard to focus on anything other than my anxiety, my worries overwhelmed me, and I felt uneasy; 2) **PROMIS Depression Subscale** (4 items) (Cronbach's  $\alpha=.91$ ) that included I felt worthless, helpless, depressed, and hopeless; 3) **PROMIS Fatigue Subscale** (3 items) (Cronbach's  $\alpha=.92$ ) including I felt fatigued, I had trouble starting things because I'm tired, and I felt run-down; and 4) **PROMIS Sleep Disturbance Subscale** (4 items) (Cronbach's  $\alpha=.86$ ) that included my sleep quality was bad, my sleep is not refreshing, I had a problem with my sleep, and I had difficulty falling asleep.

The second standardized scale was a PTSD Screener entitled "**PTSD-8: A short PTSD Inventory**" (8 items) (Cronbach's  $\alpha=.92$ ).<sup>15</sup> This inventory is introduced by the statement "If

you're being reminded of a traumatic experience, please rate how much the following have bothered you during the lockdown" as: 0) not at all, 1) rarely, 2) sometimes, and 3) most of the time. The items are recurrent thoughts and memories of the event, feeling as though the event is happening again, recurrent nightmares about the event, sudden emotional or physical reactions when reminded of the event, avoiding activities that remind you of the event, avoiding thoughts or feelings associated with the event, feeling jumpy/easily startled, and feeling on guard.

The last item on the COVID-19 Lockdown Activities survey was an open-ended question "Please tell us about anything you feel that has been positive about the lockdown." Survey Monkey then provided a listing of the most frequently used words and the percentiles for that item.

## Results

### Correlation Analyses Yielding Significant Coefficients for Cabin Fever

Results indicated that 75% of 260 respondents reported getting cabin fever, including 31% who rated themselves as getting a little cabin fever (rating of 1), 22% reporting moderate feelings of cabin fever (rating of 2) and 22% as getting cabin fever "a lot" (rating of 3). Correlation analyses revealed multiple significant correlation coefficients for the cabin fever variable (at  $p < .05$  level; see Table 1 for the correlation coefficients for the scales' total scores) including 1) demographic variable indicating cabin fever was more frequently reported by non-Hispanic white females; 2) a negative correlation for the **Health Scale** total score and specific items indicating less self-care, less feeling spiritual, and less satisfaction in being at home; 3) a positive correlation with the **Stress Scale** total score and numerous items, suggesting more worrying about the virus and finances, a desire for the experience to end, feeling more isolated, lonely, and touch deprived, more snacking and napping, drinking more alcohol, and feeling bored; 6) a positive correlation with the **PROMIS**

**Anxiety Subscale** score and all its items including feeling fearful, having difficulty focusing on anything other than my anxiety, worries overwhelming me and feeling uneasy; 7) a positive correlation for the **PROMIS Depression Subscale** total score and all its items including feeling worthless, helpless, depressed and hopeless; 8) a positive correlation for the **PROMIS Fatigue Subscale** total score and all its items including fatigue, tired, and rundown; 9) a positive correlation for the **PROMIS Sleep Disturbance Subscale** total

score and all its items including sleep quality, refreshing sleep, problem sleeping, and difficulty falling asleep; and 10) a positive correlation for the **Posttraumatic Stress Inventory-8** total score and 7 of its items including being reminded of other traumatic experiences, thoughts or memories of the event, feeling that the traumatic experience is happening again, avoiding activities that remind you of the event, avoiding thoughts or feelings associated with the event, feeling jumpy/easily startled, and feeling on guard.

**Table 1 Correlation coefficients for significant relationships between feelings of cabin fever and scores on COVID-19 Lockdown Activities Survey scales and subscales**

Measure	Correlation coefficient	p level
Health Scale Score	-.15	.026
Stress Scale Score	.66	.000
PROMIS Anxiety Subscale Score	.42	.000
PROMIS Depression Subscale Score	.45	.000
PROMIS Fatigue Subscale Score	.42	.000
PROMIS Sleep Disturbance Subscale Score	.33	.000
PTSD-8 Inventory Score	.25	.001

**Table 2 Stepwise Regression Analysis: Significantly Related Psychological Problem Scale Scores**

Model	R	R <sup>2</sup>	F value	p level
Stress	.66	.43	185.11	< .001
Stress, Fatigue	.66	.44	97.48	< .001

**Table 3 Mean scale scores for significant ANOVAs for cabin fever versus not getting cabin fever groups (standard deviations in parentheses)**

Measure	Cabin Fever	No Cabin Fever	F value	p level	eta <sup>2</sup>
Stress	28.83 (5.86)	22.16 (.60)	66.97	< .001	.21
Anxiety	10.50 (3.57)	7.89 (2.83)	27.85	< .001	.10
Depression	9.10 (3.97)	6.09 (2.80)	31.48	< .001	.11
Fatigue	8.64 (2.95)	6.37 (3.00)	28.23	< .001	.10
Sleep Disturbance	14.41 (4.44)	12.04 (4.43)	13.25	< .001	.05
PTSD	15.08 (5.93)	12.86 (5.38)	4.79	.030	.03

## Regression Analysis on Psychological Problems Significantly Related to Cabin Fever

A stepwise regression analysis was conducted to determine the amount of the variance on the cabin fever variable that was explained by the mood scale scores that were moderately to highly significantly related to the cabin fever variable including stress ( $r = .66$ ), anxiety ( $r = .42$ ), depression ( $r = .45$ ), fatigue ( $r = .42$ ), and sleep disturbance ( $r = .33$ ) scale scores. Stress, anxiety, depression, fatigue, and sleep disturbance were entered as the predictor variables in the stepwise progression. The stress scale and fatigue scale scores were the only scores to enter the analysis. The stress scale score contributed to 43% of the variance and the fatigue scale score added only 1% of the variance for a total of 44% of the variance on the cabin fever variable (see Table 2 for the regression analysis).

## Analyses of Variance Comparisons on the Cabin Fever and the No Cabin Fever Groups

Analyses of variance were conducted to provide confirmatory evidence for the correlation and regression analyses. As demonstrated in table 3, the cabin fever and no cabin fever groups significantly differed on all the scale scores except the connecting, work, and media scores which was consistent with the correlation and regression analyses results.

## Discussion

While cabin fever has been less frequently studied during COVID-19 lockdowns than common psychological problems such as anxiety and depression, data from the present study emphasize the prevalence of cabin fever at 75%. The significance of cabin fever in a lockdown environment was highlighted by the positive correlation between cabin fever and the majority of negative items on most of the psychological scales. Specifically, the positive correlations between cabin fever and other psychological problems of stress, anxiety, depression, fatigue, sleep disturbances, and

PTSD symptoms indicate that it should be studied alongside those problems that have received more attention in the current COVID-19 literature (Kwok et al., 2020; Qiu et al., 2020; Zhang et al., 2020). Of these psychological problems, only the Stress and Fatigue Scale scores entered the stepwise regression on cabin fever in the current analyses, although as two variables the model explained a moderate amount of the variance (44%).

This result is not surprising as the Stress Scale was developed to evaluate lockdown-related stressors in this survey, comprised of multiple items that significantly loaded on the stimulation deprivation factor, the primary factor on the Stress Scale. This factor included feeling isolated and lonely, as well as feeling touch deprived and bored. These items were strongly correlated with cabin fever including feeling isolated ( $r = .55$ ), lonely ( $r = .53$ ), and touch deprived ( $r = .34$ ) as well as feeling bored ( $r = .54$ ). These specific lockdown-related stressors have been identified as significant issues in prior analyses of this database including feeling isolated, lonely, or touch deprived (Field et al., 2020a, 2020b, 2020c). Unexpectedly, in those data analyses and the current analysis, lockdown-specific worries were less related to cabin fever including worries about the virus ( $r = .17$ ) and about finances ( $r = .13$ ).

That the strongest correlations with cabin fever occurred for the “stimulation deprivation” factor items is consistent with the existing literature on cabin fever (Bueno-Guerra, 2022; Crawford & Crawford, 2021; Ekpanyaskul & Padungtod, 2022). According to Ekpanyaskul and Padungtod (2022), cabin fever syndrome can result from under-arousal and over-arousal. In the stepwise regression analysis of this study, both depression and fatigue were observed to reflect under-arousal while stress and anxiety to reflect over-arousal. Of note, only the Stress and Fatigue Scales contributed to the variance, but for a significant amount of the variance (44%). However, the Stress Scale contributed to 43% of the variance, while the Fatigue Scale only

contributed to 1%, suggesting that the cabin fever in this sample largely reflected over-arousal rather than under-arousal. While these data are suggestive, a laboratory study that included physiological measures would provide a more valid assessment of over-arousal versus under-arousal. It is possible that the effects of cabin fever on arousal may be an inverted U function indicating that cabin fever can have both under-arousal and over-arousal effects.

Like cabin fever, the absence of self-care is a well-known problem associated with COVID-19 lockdowns (Brooks et al., 2020; Bueno-Guerra, 2022). The results of the current study indicate that the greater the amount of cabin fever experienced by participants, the less participants engaged in self-care, feeling spiritual, and liking being in their homes. These negative relationships emphasize the possibility that these three activities may reduce the impact of cabin fever.

Methodological limitations of these data included sampling and assessment issues. Being a predominantly non-Hispanic, white female sample suggests that these data may not be generalizable to the larger population. The self-report data are subject to questionable bias and reliability, although their anonymity suggests that they may have not been falsely reported. The direction of the effects, i.e., the predictive value of stress and fatigue for cabin fever cannot be determined given that the data are cross-sectional rather than longitudinal. As in most other studies in the COVID-19 psychological problems literature, no baseline data were available. And the unpredictable duration of the lockdown as well as the anonymity of the survey precluded the collection of longitudinal data.

Despite the noted methodological limitations, these survey data suggest that cabin fever is a significant lockdown problem that has been called over-arousing and under-arousing as well as frustrating and depressing (Bueno-Guerra, 2022; Crawford, 2021; Crawford & Crawford, 2021; Ekpanyaskul & Padungtod, 2022). In this sample, cabin fever was most related to

stressors including feeling isolated, lonely, touch deprived, and feeling bored. That the stress scale and fatigue scale scores were the only significant predictors that explained a moderate amount of the variance on cabin fever suggests at least for this sample, cabin fever was mostly over-arousing. Although a slight amount of the variance in cabin fever was explained by fatigue (1%), that finding is suggestive that lockdown cabin fever symptoms may be exacerbated by feelings of fatigue and alleviated by care activities. Laboratory and longitudinal studies could further inform the literature on cabin fever as well as interventions that may alleviate the feelings of cabin fever associated with lockdowns such as COVID-19.

## References

- [1]. Brooks, S.K., Webster, R.K., Smith, L.E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G.J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, 395, 912 - 920.
- [2]. Bueno-Guerra, N. (2022). COVID-19 and Psychological Impact. *Encyclopedia of COVID-19*, 2, 400 - 408. <https://doi.org/10.3390/encyclopedia2010024>
- [3]. Crawford, P., & Crawford, J. O. (2021). *Cabin Fever: Surviving lockdown in the coronavirus pandemic*. Emerald Publishing.
- [4]. Crawford P. (2021). Editorial Perspective: Cabin fever - the impact of lockdown on children and young people. *Child and adolescent mental health*, 26(2), 167 - 168. <https://doi.org/10.1111/camh.12458>
- [5]. Ekpanyaskul, C., & Padungtod, C. (2022). Cabin fever syndrome: the emerging indoor environment quality related problems during lockdown in the pandemic era. *Safety and Health at Work*, 13, S136. <https://doi.org/10.1016/j.shaw.2021.12.1176>
- [6]. Field, T. Mines, S., Poling, S., Diego, M., Bendell, D. & Veazey, C. (2020a). Young, Alone, and Young Alone During a COVID-19 Lockdown. *Journal of Mental Health and Psychology*, 4(4), 1 - 38.
- [7]. Field, T., Mines, S., Poling, S., Bendell, D. & Veazey, C. (2020b). Touch deprivation and exercise. *Medical Research Archives*, 8 (8), 1 - 12.
- [8]. Field, T., Poling, S., Mines, S., Bendell, D. & Veazey, C. (2020c) Exercise during a COVID-19

- [9]. lockdown. *Journal of Community Medicine and Public Health*, 4(3), 196 - 202.
- [10]. Field, T., Poling, S., Mines, S., Bendell, D., & Veazey, C. (2020d). Feeling isolated and lonely during a COVID-19 lockdown. *Archives of Health Science*, 4 (1), 1 - 9.
- [11]. Holmes, E.A., O'Connor, R.C., Perry, V.H., Tracey, I., Wessely, S., Arseneault, L., & Bullmore, E.D. (2020). Multidisciplinary research priorities for the COVID-19 pandemic: A call for action for mental health science. *The Lancet Psychiatry*, 7, 547 - 560.
- [12]. Jo, H. (2022). Effects of Psychological Discomfort on Social Networking Site (SNS) Usage Intensity During COVID-19. *Frontiers in Psychology*, 13, 1 - 14. <https://doi.org/10.3389/fpsyg.2022.939726>
- [13]. Kwok, K.O., Li, K.K. Chan, H.H., Yi, Y.Y., Tang, A., Wei, W.I. et al. (2020). Community responses during the early phase of the COVID-19 epidemic in Hong Kong: Risk perception, information exposure and preventative measures. *Med Rxiv*, <https://doi.org/10.1101/2020.02.26.20028217>
- [14]. Qiu, J., Shen, B., Zhao, M., Wang, Z., Xie, B., & Xu, Y. (2020). A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. *General Psychiatry*, 33, :e100213. <https://doi.org/10.1136/gpsych-2020-100213>
- [15]. Waters, L. Algae, S. B., Dutton, J., Emmons R. Fredrickson, B. L., Heaphy, E., Moskowitz, J. T., Neff, K., Niemiec, R., Pury, C. & Steger, M. (2021). Positive psychology in a pandemic: buffering, bolstering, and building mental health. *The Journal of Positive Psychology*, 3, 303 – 323. <https://doi.org/10.1080/17439760.2021.1871945>
- [16]. World Health Organization. (2020). *Mental health and psychosocial considerations during the COVID-19 outbreak, 18 March 2020* (No. WHO/2019-nCoV/MentalHealth/2020.1). World Health Organization.
- [17]. Yamada, Y., Čepulić, DB., Coll-Martín, T., Debove, S., Gautreau, G., Han, H., Rasmussen, J., Tran, T. P., Travaglino, G. A., Lieberoth, A., & COVIDiSTRESS Global Survey Consortium. (2021). COVIDiSTRESS Global Survey dataset on psychological and behavioral consequences of the COVID-19 outbreak. *Scientific Data* 8, 1 - 23. <https://doi.org/10.1038/s41597-020-00784-9>
- [18]. Zhang, S.X., Wang, Y., Rauch, A. & Wei, F. (2020). Unprecedented disruption of lives and work: Health, distress and life satisfaction of working adults in China one month into the COVID-19 outbreak. *Psychiatry Research*, 112958.

