

Family Relationships as a Predictor of COVID-19 Preventive Behavioral Intention and Pandemic Fatigue Among Young Filipino Undergraduates

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Abstract

Cognizant of the role of the family in influencing health behaviors among its young members, especially during the time of COVID-19 in the Philippines where stay-at-home measures were in place from March 2020 until March 2022, this study sought to determine the predictive relationship of family relationship to COVID-19 preventive behavioral intention and pandemic fatigue among young Filipino undergraduates. A total of 1,665 undergraduate students participated in this cross-sectional online survey. Findings reveal that family cohesion significantly increases COVID-19 prevention behavioral intention among undergraduates. Moreover, students who report high levels of conflict in the family are less likely to comply with preventive behaviors and exhibit higher levels of pandemic fatigue.

Keywords: COVID-19, COVID-19 preventive behaviors, family relationships, pandemic fatigue, youth, Philippines

The family is one of the social institutions that have been greatly impacted by the 2019 coronavirus disease (COVID-19) pandemic. During periods of lockdown, most of the population in COVID-stricken countries were required to stay at home, with their

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families, for long periods of time (Rabacal et al., 2020). Work and school transitioned to an online mode and were relocated to people's homes. Families had to adapt to these changes, while also keeping each member safe from the virus (Prime et al., 2020).

The youth (15-24 years old), who were previously categorized as a low-risk group, became more vulnerable to COVID-19 than during the start of the pandemic because of the emergence of the highly infective B.1.617.2 (Delta) variant (McLaws, 2021). Evidence suggests that young people are less adherent to COVID-19 regulations compared to their older counterparts (Hutchins et al., 2020). One and a half years into the pandemic, this poor adherence or inconsistent practice of health behaviors (Rabacal et al., 2022) may have been worsened by pandemic fatigue, which refers to an individuals' exhaustion and decreased commitment to adhering to behavioral regulations related to COVID-19 and consuming COVID-related information, developed after being exposed to long periods of restriction (Lilleholt et. al., 2021; World Health Organization [WHO], 2021). For the youth pursuing college studies at home via remote learning, their families were their primary and most proximate source of social support and external motivation to continue protecting themselves from the virus.

Scholars have highlighted the role of family relationships in promoting positive health and life outcomes of its members amid the COVID-19 pandemic (Hart et. al., 2020; Prime et. al., 2020; Walsh, 2020). This present study considers three dimensions of family relationships (Fok et al., 2014), which have been indicated to have links with various health outcomes by previous research before and during the pandemic. These are cohesion (Hwang et. al., 2020; Park & Cho, 2021), expressiveness (Iloh et. al., 2018) and conflict (Behar-Zusman et. al., 2020; Kiani Chelmardi et. al., 2018). We hypothesize that these three aspects of family relationships also have an influence on COVID-19 behavioral outcomes among undergraduate students, especially in the Philippines, where stay-at-home orders were still in place while this study was conducted and distance learning was still the dominant mode of education in higher education, (Oducado et al., 2022).

During the eighteenth month of the pandemic, the Philippines still encountered challenges in mitigating the spread of the virus and had been ranked second to last among countries in terms of COVID-19 resilience (Chang et. al., 2021). As of September

3, 2021, more than two million cases and a 27.4% positivity rate of COVID-19 were registered in the country (Department of Health, 2021). Pandemic fatigue increases due to prolonged exposure to unresolved challenges related to COVID-19 response, and these continued challenges had a likely negative psychological impact (Egcas et al., 2021; WHO, 2020). Moderate levels of pandemic fatigue have already been noted in an online survey among Filipino adults (Cleofas & Oducado, 2021; Cleofas & Oducado, 2022a). As of August 2021, in addition to being placed in the longest lockdown in the world at that time, the Philippines was also one of only five countries that had not held in-person classes since March 2020 (Deiparine, 2021); some limited in-person classes finally resumed in the last quarter of 2021. Thus, in the first eighteen months of quarantine, Filipino college students attended school online and via distance learning, while mostly being at home with their family.

In line with this, family-orientation is one of the deeply held values among Filipinos that is central to their individual sense of well-being (Samaco-Zamora & Fernandez, 2016). Previous COVID-19 studies have suggested that family resilience can decrease psychological distress among its members (Aruta, 2021). Qualitative evidence has demonstrated the emerging roles of Filipino families in response to the presence of the pandemic, which includes reminding members to follow COVID-19 protocols and monitoring each other's health status (Cleofas, Eusebio, & Pacudan, 2021). The family was identified as a primary source of COVID-19 information in a study of Filipino college students (Superio et al., 2021). However, evidence also demonstrates that being with the family for long, uninterrupted periods of time can cause a strain in the relationship. Lack of personal spaces at home, presence of conflicts with the family, and financial distress have been noted as barriers to optimal functioning among university learners (Baticulon, 2021). Current evidence on the links between family relations and COVID-19-related behaviors in the Philippines represent an earlier snapshot of the pandemic, and did not specifically consider the aspects of cohesion, expressiveness, and conflict. We assert the importance of examining how the nature of family relationships influences the engagement in COVID-19 preventive behaviors among Filipino college students after a long period of time attending classes at home.

The Present Study

The theoretical underpinning of the study is anchored on one of the propositions of the Filipino grounded theory of *Kaginhawaan* (translated to wellness or well-being) by Samaco-Zamora and Fernandez (2016). This proposition posits that, for Filipinos, family well-being facilitates positive physical health behaviors and outcomes (Samaco-Zamora & Fernandez, 2016). A strong sense of belongingness to proximate social groups, such as the family, improves individuals' attitudes towards and engagement in preventive health behaviors (Marinthe et al., 2022). This proposition posits that for Filipinos family well-being is a precursor to positive physical health behaviors and outcomes. For this study, this proposition is tested in the context of the COVID-19 pandemic. Particularly, the independent variable that represents family well-being in this study is quality of family relationships, which is a construct comprised of three dimensions: cohesion, expressiveness, and conflict (Fok et al., 2014). There are two dependent variables that represent physical health in this study. First is COVID-19 protective behavioral intention. Second is pandemic fatigue, which refers to the extent of demotivation and exhaustion of individuals in terms of engagement in pandemic behaviors (Lilleholt et al., 2021). Testing these relationships can provide insights on the social influence of the family in reinforcing positive health behaviors, especially in periods of crisis such as pandemics. The study can help inform community- and family-based health promotive and preventive strategies.

Cognizant of the role of the family in influencing the health behavior of younger members who are attending college, this study sought to determine the predictive relationship between family relationships and two COVID-behavioral outcomes: COVID-19 preventive behavioral intention (H₁) and pandemic fatigue (H₂) among young Filipino undergraduate students.

Methods

Participants and Procedure

This cross-sectional study was a part of a larger online survey research project that explored the health status and behaviors of Filipino university students a year

into the pandemic. The participants for this study are legally aged/non-minor youths (18-24 years old) enrolled in undergraduate programs at a state college in Visayas, Philippines. A total of 1,665 students who responded to the survey were included in the analysis. The survey was administered in July 2021.

A plurality of the undergraduate student respondents are 21 years old ($n = 559$, 33.6%, $\mu = 20.9 \pm 1.32$), females ($n = 1,212$, 72.8%), single ($n = 1,651$, 99.2%), coming from low-income households ($n = 1,157$, 69.5%), not engaged in work or employment ($n = 1,283$, 77.1%), living in urban areas ($n = 917$, 55.1%), and in their third year of college ($n = 661$, 39.7%). In terms of personal and family characteristics related to COVID-19, only 13 (0.8%) of the student respondents admitted to having a history of being diagnosed with COVID-19. Moreover, 116 (7.0%) students report at least one family member contracting COVID-19, while 29 (1.7%) had lost at least one relative who had the disease. The proportions are somewhat similar to those found in other COVID-19 studies conducted with undergraduate student populations in the Philippines (Cleofas, Dayrit, & Albao, 2022; Oducado et al., 2022). These demographic characteristics also served as covariates in the study.

This study was compliant with the principles of the Declaration of Helsinki and the Data Privacy Act of the Philippines. After gaining permission from the administrators of the institution, the link to the survey was sent to the email addresses of all students ($N = 6,893$) with the assistance from the Management Information System of the school. Informed consent was secured digitally. Privacy and confidentiality of the data collected were protected.

Research Instruments

The independent variable was measured using the Brief Family Relationship Scale (BFRS; Fok et al., 2014). BFRS assesses three dimensions of family relationships. The dimensions with their corresponding items and Cronbach alpha scores for this sample are: cohesion (7 items, $\alpha = 0.94$), expressiveness (3 items, $\alpha = 0.91$) and conflict (6 items, $\alpha = 0.91$). Responses ranged from 1 (strongly disagree) to 5 (strongly agree).

The first dependent variable, COVID-19 preventive behavioral intention, was measured using a four item-scale by Lilleholt et al. (2021) that inquire about their

intention to comply with four major behaviors recommended to prevent contracting the virus: physical distancing, hand hygiene, masking, and information seeking, in the next two weeks, answerable through a 7-point scale. The Cronbach alpha of the scale is 0.91 (Lilleholt et al., 2021).

For the second dependent variable, Pandemic Fatigue Scale (PFS) was used (Lilleholt et. al., 2021).² PFS, a six-item scale that assesses the extent of an individual's informational and behavioral exhaustion related to COVID-19 protocols using a 5-point scale, had an acceptable reliability score of $\alpha = 0.87$ (Cleofas & Oducado, 2022a, 2022b). The mean was used as the overall score for the three scales.

Data Analysis

JASP version 0.14.1 was used to run two multivariate linear regression tests (enter mode), one for each of the outcome variables in the study. The main explanatory variables are the three dimensions of family relationships, while demographic variables were entered as covariates. The data demonstrated acceptable skewness and kurtosis ($<|2|$). Tests for autocorrelation and multicollinearity yielded acceptable levels as well, warranting the use of linear regression for analysis. Bootstrapping using 5,000 replicates was done to address other threats of non-normality. The significance level was set at .05.

Results

Descriptive results indicate that the respondents have high levels of protective behavioral intention ($M = 6.2 \pm 1.2$ out of 7) and moderate levels of pandemic fatigue ($M = 3.8 \pm 1.4$ out of 7). On the other hand, high levels of family cohesion ($M = 4.2 \pm 0.8$ out of 5) and expressiveness ($M = 3.8 \pm 1.1$ out of 5), and low levels of family conflict ($M = 2.3 \pm 1.0$ out of 5).

² All three instruments used in this study can be accessed upon request to the original developers of the tools.

Table 1**Multiple Regression Tests for Predictors of COVID-19 Outcomes¹**

Predictors	Model 1: COVID-19 Protective Behavioral Intention ²				Model 2: Pandemic Fatigue ³				
	B	SE	p	CI	B	SE	p	CI	
	$r^2=0.054$		$F=7.286$	$p<.001$	$r^2=0.053$		$F=7.085$	$p<0.001$	
				Upper				Upper	
				Lower				Lower	
Profile Variables									
Age	-0.03	0.02	.258	-0.07	0.02	0.03	.053	-0.00	0.13
Sex assigned at birth (1=Male)	-0.26***	0.06	<.001	-0.39	-0.14	0.08	.199	-0.06	0.25
Marital status (1=Married)	0.21	0.28	.477	-0.50	0.67	0.46	.647	-0.68	1.12
Household income (1=Middle-High Income)	-0.03	0.06	.616	-0.14	0.08	0.08	.894	-0.14	0.16
Working status of student (1=Working)	-0.09	0.07	.151	-0.22	0.04	0.09	.011	0.05	0.38
Nature of current residence (1=Urban)	0.04	0.05	.452	-0.06	0.14	0.07	.336	-0.20	0.07
Year level	0.03	0.03	.394	-0.04	0.10	0.05	.319	-0.05	0.14
Respondent's COVID-19 history (1=Yes)	0.13	0.22	.683	-0.36	0.52	0.35	.909	-0.61	0.76
Family member with COVID history (1=Yes)	0.07	0.12	.547	-0.19	0.29	0.18	.959	-0.36	0.32
COVID-19 death within family (1=Yes)	-0.30	0.25	.177	-0.83	0.17	0.34	.575	-0.48	0.83
Family Relationship³									
Cohesion	0.26***	0.06	<.001	0.15	0.38	0.07	.068	-0.01	0.26
Expressiveness	-0.05	0.04	.160	-0.13	0.02	0.05	.494	-0.13	0.06
Conflict	-0.06*	0.03	.030	-0.12	-0.00	0.04	<.001	0.19	0.34

Note. ¹Bootstrapping based on 5,000 replicates

²range = 1 to 7; 1.00 to 3.00 = low; 3.01 to 5.00 = moderate; 5.01 to 7.00 = high

³range = 1 to 5; 1.00 to 2.33 = low; 2.34 to 3.66 = moderate; 3.67 to 5.00 = high

* $p < .05$, ** $p < .01$, *** $p < .001$, $N = 1,665$

Table 1 shows the results of the bootstrapped ($n = 5,000$) multiple regressions which tested the dimensions of family relationship as predictors of COVID-19 outcomes (model 1 = COVID-19 preventive behavioral intention; model 2 = pandemic fatigue) with profile variables as covariates. The results in the first regression test indicated that the model significantly predicted COVID-19 preventive behavioral intention ($F = 7.29, p < .001$) and explained 5.4% of its variance. Among the dimensions of family relationships, intent to practice COVID-19 prevention behavior was significantly positively predicted by cohesion ($B = 0.26, p < .001$) and negatively by conflict ($B = -0.06, p = .030$). In addition, sex at birth also significantly contributed to the model ($B = -0.26, p < .001$), with females demonstrating higher intent to practice.

The second regression test indicated that the overall model significantly predicted pandemic fatigue ($F = 7.09, p < .001$) and explained 5.3% of its variance. As regards to the dimensions of family relationships, pandemic fatigue was positively predicted by conflict ($B = 0.27, p < .001$). Moreover, working status ($B = 0.215, p = .011$) significantly contributed to the model, with students engaged in work reporting higher pandemic fatigue.

Discussion

The study sought to determine the predictive relationship between family relationships, COVID-19 preventive behavioral intentions, and pandemic fatigue among young Filipino undergraduates. This is one of the early large-scale investigations that examined how family cohesion, expressiveness, and conflict can impact pandemic-related behaviors in the Philippines. Descriptive results show that despite having moderate levels of pandemic fatigue, a majority of college students still adhere and consider engagement in protective behaviors important, as seen in some previous research, although there are reports that these precautionary behaviors are not consistently followed (Borges & Byrne, 2022; Li et al., 2022; Rabacal et al., 2022). From a public health and leadership standpoint, this reflects the medical populist stance of governance in the Philippines; wherein, despite the people's demotivation and exhaustion towards limiting policies related to the lockdown, they are still

compelled to comply because of the structures and discourses that place mitigation responsibility on individuals, instead of institutions (Hapal, 2021).

The findings of this study suggest that undergraduate students with more cohesive families exhibit higher intentions to practice COVID-19 preventive behaviors. This confirms the results of Park and Cho (2021), which demonstrated that better health promotion behaviors related to the pandemic were seen among children of families with high cohesion. Our findings extend the pediatric study of Park and Cho (2021) by replicating their findings in an older population (i.e., college-attending youth). A local qualitative study among Filipino families demonstrated that frequent reminders among members to practice behaviors to avoid getting infected with COVID-19 contribute to the closeness and harmony of their relationships, even among those who are physically distant from each other (Cleofas et al., 2021).

Further, this current research indicated the negative influence of family conflict on undergraduate students' preventive behavioral intention. This finding is supported by the work of Behar-Zusman et al. (2020), which included personal hygiene, home health care, and maintaining personal space as possible indicators of household conflicts during the time of COVID-19. In the same vein, the students in this study who report higher conflict scores also demonstrated high pandemic fatigue. Family conflict increases students' exhaustion from engaging with COVID-19 behavior and information. Aside from health-protective behaviors as reasons for conflicts among families during the pandemic, Behar-Zusman et al. (2020) other factors which include news, social media, politics, and common sources of COVID-19 information are on the list. With the family being a facilitator of COVID-19 behaviors (Prime et al., 2020) and a salient source of mis/information (Tang & Zou, 2021), disruptive family interactions can decrease the members' commitment to actions to mitigate the spread of the disease. Taken together, the partial confirmation of the hypotheses in this study confirms the theoretical proposition of Samaco-Zamora and Fernandez (2016) on the salient role of family dynamics in fostering the sense of well-being and the health behaviors of Filipinos.

Moreover, females exhibited significantly higher levels of COVID-19 preventive behavioral intention compared to their male counterparts, which replicates other

findings from the Philippines (Tuppal et al., 2020) and elsewhere (Al-Sabbagh et. al., 2022). Also, working students were found to have higher levels of pandemic fatigue. On-site workers who willingly expose themselves to contagion have been a common feature in the Philippines during the pandemic, especially among the poor who have no choice but to brave the dangers in order to earn money to provide for their families (Baticulon et al., 2021; Bekema, 2021).

Despite its large sample size, this study's generalizability is limited by being conducted in a single institution. Moreover, since this study is cross-sectional in nature, the causal nature of the relationships cannot be assured. A longitudinal study utilizing a longitudinal approach is recommended to future researchers. Even with these limitations, we can conclude that health behaviors may vary as a function of certain facets of family relationships.

Conclusion

This study presents empirical evidence that demonstrates the role of family relationships in protecting young undergraduate students from infectious diseases during periods of outbreak-induced confinement. In particular, family cohesiveness can facilitate prevention behaviors. On the other hand, conflict in the family can decrease adherence to COVID-19 mitigation practices through decreased intention and heightened pandemic fatigue. Hence, the family can be an important social system where risk communications related to emerging diseases can be provided.

Faculty members and other concerned personnel in colleges and universities are therefore encouraged to regularly assess the home conditions of their students who are engaged in online learning and coordinate with family members to foster healthy behaviors during the pandemic. Findings also signify the importance of health promotion and education strategies that are targeted to families in improving protective behaviors and attitudes towards health and disease. The results of the present study also confirm the theoretical link between the nature of social belongingness in the family and functional health outcomes among its members.

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