



(RESEARCH ARTICLE)



Differences in the perceived spheres of control of selected college students in the aftermath of the pandemic

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Abstract

A diligent search of published studies revealed that there is an apparent lack of scientific literature on Filipinos' sense of control, specifically in relation to the COVID-19 pandemic. This study attempted to ascertain the respondents' perceived level of control. 46 college students from a private school in Metro Manila volunteered as respondents. The Spheres of Control Scale¹³, which measures an individual's sense of Personal, Interpersonal and Socio-political control was administered on the respondents. Based on the computed composite means of the respondents' scores in the three domains, Personal control had the highest composite mean of 5.223, followed by Interpersonal control with 4.592 and lastly by Socio-political control with 4.334. Significant differences were found between Personal and Interpersonal control as well as between Personal and Socio-political control. The respondents' perceived sense of Personal control was significantly higher than their perceived sense of Interpersonal control and their perceived sense of Socio-political control. These results could imply that for the respondents of this study, their perceived sense of Interpersonal control and Socio-political control may have been adversely affected by the uncertainties that they had experienced during the COVID-19 pandemic.

Keywords: Spheres of Control; Personal control; Interpersonal control; Socio-political control; College students

1. Introduction

Worldwide, the coronavirus disease 2019 (COVID-19) pandemic resulted in medical, financial, and mental health challenges. It is believed that adolescents may have been the hardest hit. Different societies may have experienced psychological effects on adolescents differently since dissimilar cultures have diverse dominant learning styles, which may affect how people handle uncertainty and feel in control of their lives¹.

The pandemic also posed a serious threat to mental health when it restricted both public and private life. Students in particular may have had added and distinct stressors since the widespread adoption of digital learning environments largely replaced traditional classroom settings, resulting in a further reduction in social interactions and an increased risk of psychological problems².

Several studies have been undertaken in the course of the pandemic in order to explore an individual's perceived sense of control and what affects this as well as what it influences.

For instance, one study using survey methodology gathered data twice in the Republic of Ireland (January 2022 and May 2022). Five months later, time 1 participants (n = 314) were requested to repeat the measures; of these, 172 consented to be contacted again, and 47 completed all of the measures at both time periods. Results indicated that depression at Time 1 was predicted by both the perception of control (w = 0.43) and the experience of limits (w = 0.14).

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At Time 2, participants' sense of control was stronger and their likelihood of depression was lower. Depression at Time 2 was predicted by the Time 1 sensation of control through perceived restrictions ($w = 0.45$). Overall, these findings demonstrate the connection between public health limitations and the sense of control, as well as the strong and enduring impact that the sense of control has on depressive status under restricted circumstances, even after these have been lifted³.

In Germany, 403 social work students participated in a study which presented ratings from both the pre-pandemic era and the present (February/March 2021). In addition, 324 social workers were included in order to examine variations between the two groups. For professionals and students alike, locus of control dramatically changed during the epidemic from internal to external. Moreover, a higher external and a lower internal locus of control were associated with greater mental load².

A study conducted in China compared the period immediately before and during the coronavirus outbreak using two large-scale nationwide surveys ($N_1 = 11,131$; $N_2 = 3,000$) discovered that the start of the coronavirus epidemic resulted in a 74% decline in total emotional well-being. People who thought they knew more than others were able to feel happier throughout the outbreak, regardless of how much knowledge they actually held. The variations in emotional well-being were mediated by a larger sensation of control, which was linked to higher perceived knowledge. Even after accounting for a wide range of demographic and economic factors, these trends remained⁴.

In one study done in Thailand, anxiety, a sense of control, and confidence in information sources all had a major impact on social behaviors and health. These characteristics were examined in a study using a nationally representative on-street survey ($N = 1000$, May 2020, response rate 82.6%) collected throughout five regions. There was no significant difference between personal anxiety in the two surveys ($F(1, 1197) = 0.72$, $p = .40$) when comparing the results with similar cross-sectional data on anxiety collected at the beginning of the pandemic. However, perceived control was lower in the later survey ($F(1, 1197) = 6.72$, $p = .01$). Results point to a decrease in perceived control as the epidemic spread and shed light on the potential detrimental effects of fear and a diminished sense of control on pandemic behaviors⁵.

Concerns about the future are frequently brought on by uncertainty about the future, and these anxieties can be detrimental to one's health and general well-being. Nonetheless, worry's harmful effects might be lessened if it serves as a catalyst for initiatives to avert unfavorable future events. In one study, a novel model of uncertainty, worry, and perceived control was used to predict psychological and physical well-being among four samples obtained in the United States (Studies 2-4, during four weeks in May 2020, four weeks in November 2020, and cross-sectionally between April and November 2020) and China (Study 1; during the early COVID-19 outbreak in China). A study, which was based on the feeling-is-for-doing theory of emotions, conjectured (and discovered) that a person's level of ambiguity about their risk of catching COVID-19 would lead to increased anxiety about the virus and that increased anxiety would then indicate a lower quality of life. The study also postulated—and found some evidence for—that worries were associated with lower well-being when people believed they had no control over their risk of getting COVID-19⁶.

Studies done before the pandemic have also revealed several factors that are affected by an individual's sense of control.

There is a wealth of studies on the impact of belief in a just world on people's mental health. One study looked at the relationship between subjective well-being and belief in a just reality, primarily concentrating on the mediating function of sense of control. 372 undergraduate Chinese university students participated in the study by completing the Subjective Well-Being, Sense of Control, and Belief in a Just World scales. The findings showed a substantial correlation between their subjective well-being and both their sense of control and belief in a just world. The influence of belief in a just world on subjective well-being was found to be partially mediated by sense of control, according to structural equation modeling study⁷.

Another study examined the relationship between youth investments in education and their sense of control over their lives. It was shown that adolescents who possess a greater internal locus of control are more likely to complete secondary education and, if they do, are more likely to successfully fulfill the prerequisites for university admission. Furthermore, compared to their contemporaries who have a more external locus of control, university entry rank holders with an internal locus of control attain somewhat higher rankings⁸.

Lower social class is believed to be linked to perceived inferior position and less resources. The authors of one study conjectured that a lesser sense of personal control would be strongly correlated with social class, and that this correlation would account for why people from lower socioeconomic classes prefer contextual explanations of social occurrences over dispositional ones. Individuals belonging to a lower social class, as determined by their subjective

socioeconomic status (SES), expressed support for contextual explanations of economic trends, general social outcomes, and emotion in four different investigations. The relationship between subjective SES and contextual explanations was shown to be mediated by the sense of control in all investigations⁹.

By utilizing information from a nationally representative survey among working individuals living in the United States, a study demonstrated that education has a positive correlation with a feeling of personal control. Higher status employment for the educated include more control over schedules, demanding, fascinating, and fulfilling work, more financial security and rewards, and a higher degree of trust. When taken as a whole, these patterns significantly influence the relationship that exists between education and control. The study also noted that a demanding work environment has a detrimental influence on one's sense of control, but this effect only becomes apparent when other higher status job conditions that align with expectations are taken into account¹⁰.

Using a questionnaire, 915 Swedish high school students participated in a study that looked into specific control and stress. Six stress domains were identified by factor analysis: workload, psychosocial issues, uncertainty, issues in close relationships, demands to be met, and issues with the physical environment. The Control-Stress Index was used to gauge how well control and stress were balanced. It seemed that the majority of the teenagers' stress was related to their coursework. Compared to male students, female students had higher levels of stress and a greater lack of control, particularly in academic programs¹¹.

The relationship between personal control, stress, and psychological health is well-established. However, these associations may reflect a Western bias. The importance of a sense of personal control may only represent individualistic Western beliefs, which are different from Eastern collectivist values¹².

A study hypothesized that in collectivistic cultures, where social learning is more common, adolescents' sense of control may be strengthened by their participation in societal preventive efforts, whereas in individualistic cultures, where individual learning predominates, adolescents' sense of control may be undermined by societal disease-control regulations that limit personal freedoms².

A diligent search of published studies revealed that there is an apparent lack of scientific literature on Filipinos' sense of control, specifically concerning the COVID-19 pandemic. It is for these reasons that this study was undertaken. Using the Spheres of Control Scale¹³, which measures an individual's sense of personal, interpersonal and socio-political control, this study attempted to ascertain the perceived levels of control of selected Filipino college students in the aftermath and decline of the COVID-19 pandemic.

Specifically, the study sought to address the following research questions:

- What are the respondents' perceived sense of control in terms of the domains of
 - Personal
 - Interpersonal, and
 - Socio-political?
- Are there significant differences between the respondents' domains of perceived sense of control?

2. Materials and methods

46 college students were conveniently sampled from a private college located in Marikina City, Metro Manila, Philippines. There were 12 males and 34 females. Their ages ranged between 20-32 with a mean age of 22.26. The Spheres of Control Scale¹³, which measures an individual's sense of personal, interpersonal and socio-political control, with each domain having 10 items each, was administered on the respondents. A number of items were reverse scored and this was taken into account when the item weighted means were computed.

3. Results

The following tables present the data gathered and the statistical treatments applied.

Table 1 Scale of Interpretation for Item Weighted Means

Item weighted mean range	Verbal interpretation
1.000 – 1.857	Strongly disagree
1.858 – 2.714	Disagree
2.715 – 3.571	Somewhat disagree
3.572 – 4.428	Neither agree nor disagree
4.429 – 5.285	Somewhat agree
5.286 – 6.142	Agree
6.143 – 7.000	Strongly agree

Table 2 Respondents' Item Weighted Means for Interpersonal Control

	Statement	Weighted Mean N=46	Verbal Interpretation
2	In my personal relationships, the other person usually has more control than I do. (reverse)	4.000	Neither agree nor disagree
5	I have no trouble making and keeping friends.	6.021	Agree
8	I'm not good at guiding the course of a conversation with several others. (reverse)	3.532	Somewhat disagree
11	I can usually develop a personal relationship with someone I find appealing.	4.745	Somewhat agree
14	I can usually steer a conversation toward the topics I want to talk about.	5.383	Agree
17	When I need assistance with something, I often find it difficult to get others to help. (reverse)	3.575	Neither agree nor disagree
20	If there's someone I want to meet, I can usually arrange it.	5.681	Agree
23	I often find it hard to get my point of view across to others. (reverse)	3.489	Somewhat disagree
26	In attempting to smooth over a 6ment, I sometimes make it worse. (reverse)	4.213	Neither agree nor disagree
29	I find it easy to play an important part in most group situations.	5.277	Agree
	Composite weighted mean	4.592	Somewhat agree

Table 2 presents the 10 items of the Spheres of Control questionnaire in the realm of Interpersonal Control and the respondents' item weighted means. Based on the composite weighted mean of 4.592, it would appear that the respondents' overall verbal interpretation for Interpersonal Control is somewhat agree.

Table 3 Respondents' Item Weighted Means for Personal Control

	Statement	Weighted Mean N=46	Verbal Interpretation
1	I can usually achieve what I want if I work hard for it.	6.681	Strongly agree
4	Once I make plans, I am almost certain to make them work.	6.362	Strongly agree
7	I prefer games involving some luck over games requiring pure skill. (reverse)	4.617	Somewhat agree
10	I can learn almost anything if I set my mind to it.	6.426	Strongly agree
13	My major accomplishments are entirely due to my hard work and ability.	6.383	Strongly agree
16	I usually do not set goals because I have a hard time following through on them. (reverse)	4.234	Neither agree nor disagree
19	Bad luck has sometimes prevented me from achieving things. (reverse)	4.213	Neither agree nor disagree
22	Almost anything is possible for me if I really want it.	5.915	Agree
25	Most of what happens in my career is beyond my control. (reverse)	3.340	Somewhat disagree
28	I find it pointless to keep working on something that's too difficult for me. (reverse)	4.064	Neither agree nor disagree
	Composite weighted mean	5.223	Somewhat agree

Table 3 shows the 10 items of the Spheres of Control questionnaire in the realm of Personal Control and the respondents' item weighted means. The composite weighted mean was 5.223, which indicated that the respondents' overall verbal interpretation for Personal Control is somewhat agree.

Table 4 Respondents' Item Weighted Means for Socio-political Control

	Statement	Weighted Mean N=46	Verbal Interpretation
3	By taking an active part in political and social affairs, we the people can influence world events.	6.021	Agree
6	The average citizen can have an influence on government decisions.	5.532	Agree
9	It is difficult for us to have much control over the things politicians do in office. (reverse)	3.000	Somewhat disagree
12	Bad economic conditions are caused by world events that are beyond our control. (reverse)	2.894	Somewhat disagree
15	With enough effort we can wipe out political corruption.	4.936	Somewhat agree
18	One of the major reasons we have wars is because people don't take enough interest in politics.	5.021	Somewhat agree
21	There is nothing we, as consumers, can do to keep the cost of living from going higher.	3.447	Somewhat disagree
24	It is impossible to have any real influence over what big businesses do. (reverse)	3.723	Neither agree nor disagree

27	I prefer to concentrate my energy on other things rather than on solving the world's problems. (reverse)	2.787	Somewhat disagree
30	In the long run, we the voters are responsible for bad government on a national as well as a local level.	5.979	Agree
	Composite weighted mean	4.334	Neither agree nor disagree

In Table 4, the item weighted means of the 10 items of the Spheres of Control questionnaire in the realm of Socio-political Control are displayed. Judging from the computed composite weighted mean of 4.334, it would seem that the respondents' overall verbal interpretation for Socio-political control is neither agree nor disagree.

Table 5 Significant Difference between the Respondents' Interpersonal, Personal and Socio-political Control

Repeated Measures Analysis of Variance				
	Treatments			
	Interpersonal Control	Personal Control	Socio-political Control	Total
N	46	46	46	138
$\sum X$	2093	2385	1982	6460
Mean	45.5	51.8478	43.087	46.812
$\sum X^2$	97243	125709	87256	310208
Std.Dev.	6.6858	6.7527	6.425	7.5479
Result Details				
<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	
Between-treatments	1884.0145	2	942.0072	<i>F</i> = 19.94846
Within-treatments	5921.087	135	43.8599	
Error	4249.9855	90	47.2221	
The F-ratio value is 19.94846. The p-value is < .00001. The result is significant at p < .05.				

A repeated measures analysis of variance was calculated using the responses in the three domains of Personal, Interpersonal and Socio-political control. The results of this calculation are shown in Table 5. An F-ratio of 19.94846 was computed and with a p value of less than .00001, it would appear that there are significant differences between the scores of these 3 domains. This result necessitated further computations to ascertain between which domains a difference existed. The following tables are the paired t-tests that indicate where such differences were found.

Table 6 Significant Difference between the Respondents' Interpersonal and Personal Control

Paired t-test results	
Mean: 6.35 $\mu = 0$ $S^2 = SS/df = 4584.43/(46-1) = 101.88$ $S^2M = S^2/N = 101.88/46 = 2.21$ $SM = \sqrt{S^2M} = \sqrt{2.21} = 1.49$	T-value Calculation $t = (M - \mu)/SM = (6.35 - 0)/1.49 = 4.27$
The value of t is 4.265474. The value of p is .0001. The result is significant at p < .05.	

Table 6 presents the paired t-test computation between the respondents' Interpersonal and Personal control scores. A t-value of 4.265474 was obtained with a p value of 0.0001, which indicated that the difference is significant.

Table 7 Significant Difference between the Respondents' Interpersonal and Socio-political Control

Paired t-test results	
Mean: -2.41 $\mu = 0$ $S^2 = SS/df = 3975.15/(46-1) = 88.34$ $S^2M = S^2/N = 88.34/46 = 1.92$ $SM = \sqrt{S^2M} = \sqrt{1.92} = 1.39$	T-value Calculation $t = (M - \mu)/SM = (-2.41 - 0)/1.39 = -1.74$
The value of t is -1.741299. The value of p is .08846. The result is not significant at $p < .05$.	

Table 7 shows the paired t-test computation between the respondents' Interpersonal and Socio-political control scores. A t-value of -1.741299 was calculated with a p value of 0.08846, which indicated that the difference is not significant.

Table 8 Significant Difference between the Respondents' Personal and Socio-political Control

Paired t-test results	
Mean: -8.76 $\mu = 0$ $S^2 = SS/df = 4190.37/(46-1) = 93.12$ $S^2M = S^2/N = 93.12/46 = 2.02$ $SM = \sqrt{S^2M} = \sqrt{2.02} = 1.42$	T-value Calculation $t = (M - \mu)/SM = (-8.76 - 0)/1.42 = -6.16$
The value of t is -6.157526. The value of p is $< .00001$. The result is significant at $p < .05$.	

Table 8 presents the paired t-test computation between the respondents' Personal and Socio-political control scores. A t-value of -6.157526 was computed with a p value of less than .00001, which indicated that the difference is significant.

4. Discussion

Based on the computed composite means of the respondents' scores in the three domains, Personal control had the highest composite mean of 5.223, followed by Interpersonal control with 4.592 and lastly by Socio-political control with 4.334.

Whether or not these differences were significant was ascertained using a repeated measures analysis of variance. This resulted in an F value and a p value that indicated significant differences.

To identify between which pair combinations of the three domains had significant differences, paired t-tests were calculated. Significant differences were found between Personal and Interpersonal control as well as between Personal and Socio-political control.

Taking these significant differences into consideration and looking at the composite means, since Personal control had a composite weighted mean of 5.223, which is higher than Interpersonal control composite weighted mean of 4.592, it can be inferred that the respondents' perceived sense of Personal control is significantly higher than their perceived sense of Interpersonal control.

Moreover, the composite weighted mean of Socio-political control is 4.334, which is lower than the composite weighted mean of Personal control, it can be further inferred that the respondents' perceived sense of Personal control is significantly higher than their perceived sense of Socio-political control.

These results could imply that for the respondents of this study, their perceived sense of Interpersonal control and Socio-political control may have been detrimentally affected by the uncertainties that the respondents had undergone during the COVID-19 pandemic.

These results appear to intersect with the findings of a German study that found that locus of control shifted from internal to external during the height of the COVID-19 pandemic, which implied the development of a lack of control over one's reality². In another study, the belief in a just world was influenced by the respondents' sense of control⁷.

It has been asserted that collectivist societies like the Philippines could benefit from providing opportunities for adolescents to participate in societal preventive efforts especially in the face of widespread social challenges such as a pandemic². Unfortunately, Filipino adolescents were restricted from engaging in any such efforts given the danger the pandemic posed.

Given these findings, the researcher recommends programs that would increase the respondents' sense of Interpersonal and Socio-political control. In addition, further research could be undertaken to confirm whether these results are common for college students in different locations across the country. In addition, studies into the connection between Spheres of Control and college students' mental health may also be pursued.

5. Conclusion

Based on the findings of the study, it would seem that the respondents' sense of socio-political control suffered the most as a result of the COVID-19 pandemic, since they perhaps felt that the constantly changing social health restrictions were unpredictable.

The respondents' sense of personal control remained the strongest and was found to be the significantly highest among the three spheres of control. This result was reasonably expected because one's own self is the only thing that truly remains within a person's control.

The potential long-term effects of this loss of control over external events experienced during the COVID-19 pandemic may yet to be seen in terms of the future behavior and attitudes of the respondents.

Compliance with ethical standards

Statement of ethical approval

The author declares that strict adherence to the ethics of research was observed in all stages of the study.

Statement of informed consent

Informed consent was obtained, freedom to withdraw at any time from the study was made known to the participants, their identities were anonymized, the participants' well-being was safeguarded and the results were used for research purposes only. The researcher further ensured steps to prevent bias in their interpretation of the data.

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