Correlates of Perception of COVID-19 health risk among Filipino youth in a private university in Manila, Philippines

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Abstract - *This is a cross-sectional study that aimed to determine the correlations of the perception of risk towards COVID-19 among college students from a private university in Manila, Philippines with their extent of use of different sources of COVID-19 information, their level of self-efficacy, and their perceived importance of behavioral preventive measures towards COVID-19. A total of 756 college students participated in the online survey. Data were analyzed using descriptive statistics and correlation tests. Findings showed that the internet (M = 4.47, SD= .75) was their most accessed source of COVID-19 information, but the Pearson R test revealed no correlation with their perception of risk. A significant positive correlation (r = .097, n = 759, p = .008) was found between extent of use of television (M = 3.86, SD= 1.105) and their perception of risk (M = 3.86, SD= 1.105). Results also showed a high level of self-efficacy (M = 4.59, SD = 0.82) and a high level of perceived importance of their behavior to fight COVID 19 (M = 3.93, SD = 0.80). A significant inverse weak correlation between perception of risk and self-efficacy (r = -.150, n = 756, p = .000), and a significant positive weak correlation between perception of risk and perceived importance of health behavior (r = .175, n = 756, p = .000). Thus, a higher self- efficacy yields lowered COVID-19 perception of risk, and a higher COVID-19 perception of risk increases higher perceived importance to behavioral preventive measures. The findings can be used to promote targeted and evidence based intervention programs informed of the correlates of the Filipino youth's COVID-19 perception of risk. Identifying correlates of COVID-19 perception of risk allows calculation of contextualized actions and strategies toward cost-effective management of the COVID-19 situation. Thus, ensuring success of intervention programs that aim to protect the Filipino youth from contracting COVID-19*.

Keywords: *COVID-19, perception of risk, self-efficacy, sources of COVID-19 information*

INTRODUCTION

The World Risk Report 2020 ranked the Philippines with the ninth (9th) highest risk exposure among 180 countries surveyed. The Philippines' risk exposure is enhanced by its geographical location [1] not only attracts the regular occurrence of natural disasters but a primary traffic location for tourism. On the other hand, human-made disasters posed dangers often unexpectedly to the most vulnerable segment of the population [1]-[2]. The World Health Organization (WHO) declared that a coronavirus named SAR-CoV-2 (COVID-19) outbreak constituted a public health emergency of international concern; subsequently, a pandemic was declared in March 2020 [3]. The pandemic exposed the status of the Philippines' health systems and the delivery of vital health services. A pandemic is a significant health threat that causes disruptions of regular activities, such as trade, tourism, construction, transportation, and education [2].

Perception of risk is critical in a public health emergency like COVID-19. Risk perception refers to how the individuals think and feel about the risk that he or she is facing and is an essential determinant of protective behavior [3]. Thus, public health intervention programs' success is mostly dependent on individual risk perception behavior [4]. Several factors affect people's perception and the nature of their risk exposure [5]-[7] like sources of information, self-efficacy, and perceived importance of protective behavior.

Kasperson et al. [5] reiterated the importance of the source and system of information as crucial for an individual's risk perception. An individual's risk perception is influenced by the community of people that continuously interact/s with, where the system of information emanates from, and influences him/her/them and their behavior [8]. Knowledge plays a vital role in understanding risk perception and self-efficacy; hence, the availability of information is critical not only for policymakers but also to the affected public, particularly the students. According to WHO - Novel Coronavirus (2019-nCoV) Situation Report - 11, COVID-19 cases in China reached 9,720 and recorded 213 mortalities at the end of January 2020, one month when it was first reported in December 2019 in Wuhan, China. The rapid transmission from one continent to another raised a global alarm, and the WHO announced COVID-19 a public health emergency of international concern. In less than two months, COVID-19 surpassed the number of deaths caused by severe acute respiratory syndrome (SARS). Moreover, the spike of transmission and deaths in other regions of the world raised the global risk of spread from "high" to "very high." WHO eventually declared COVID-19 a pandemic in March 2020.

Lack of knowledge due to insufficient assessment and understanding of risk will make decision-making unfounded and futile, and thus solutions may be ineffective [9]. Public dissemination of information is of primary importance, especially in measuring perception of risk and altering individual behavior that can help in protecting themselves [10] or in preventing the widespread of the virus. This is where the national and local government plus institutions like the media, church, and educational institutions will play a pivotal role in shaping peoples' perceptions of risk. Various media sources are crucial to influencing the level of an individual's perception and management of risk. It is said that "news media serves as a key mediator of risk information by highlighting or downplaying certain messages and influencing the volume of certain messages about an event received by the public [11]." In a study conducted in Singapore, credible information coming from authorities and openness to dialogue and communication lead people to adherence to precautionary behavior [12]. In the coronavirus epidemic in China, many Chinese universities made significant strides in emergency risk management such as, "alumni resource collection, medical rescue, and emergency management, mental health maintenance, control of staff mobility, and innovation in online education models [13]". The role of the universities in altering disease preventive behaviors was highlighted in a study [14] arguing that "young people approximately 16 to 24 years old are known to be more receptive to and compliant with recommended behavior changes, being more likely to change the way they live their lives in order to follow these behaviors" [15].

With perceived self-efficacy and perception of risk, the role of the educational institution is significant in providing correct information that empower young individuals to use appropriate preventive measures address health concerns. It is argued that young individuals with high perception of self-efficacy have a lower perception of risk [16]. Thus, institutions should provide information on the risks of viruses like COVID19. Information sources are crucial in developing self-efficacy and trust in a health emergency. Self-efficacy is adjusting to a new situation and capability of taking one's action [17]. Self-efficacy is a behavioral health change that determines how an individual feels, thinks, and motivates themselves to act [18]. As reiterated by Bandura, "Outcome expectancy is a person's estimation that certain behaviors will lead to certain outcomes, whereas the efficacy expectancy is the belief that one can successfully carry out specific behaviors to produce the outcomes. Both expectations are personal beliefs about one's capabilities and behavioral outcome links rather than actual capabilities [17]." Sources of information, whether formal (government and media) and informal (interpersonal), are crucial in developing self-efficacy [19]. High trust on media information is associated with understanding, prevention and self-efficacy. High trust in interpersonal information is negatively linked with perceived personal susceptibility. It is also associated with higher social distancing [4]. The self-efficacy theory has been applied to various facets of human behavior under a new situation and played a significant role in the diverse health behavior of the affected public in a pandemic. Taking into consideration while the first line of defense against any virus is risk perception, which ultimately affects behavioral measures. Previous studies in the United Kingdom[15] and Canada [20] show a strong correlation between perceived susceptibility to avoiding public places and following quarantine rules and restrictions. A study done in Hong Kong shows that adolescents up to older adults who have higher perceived self-efficacy tend to undertake preventive behaviors [21]. A similar conclusion is presented in a study done in the United States [14] and in South Korea [22] arguing that those who are

confident about their ability to prevent being infected by a virus are more likely to carry out disease-preventive measures.

The public health emergency triggered by the COVID-19 situation disrupts many aspects of human lives like the work setting, economic and political transactions. Likewise, university affairs leading to increased attention to health care measures, search for alternative learning, disruption in extra-curricular activities, and others [23]. Formulating policies that will support educational institutions from the impact of COVID-19 and protect young people from COVID 19 are of high importance, and generating data that will help understand young people's perception of risk, source of COVID-19 information, perceived self-efficacy, and perceived importance of individual's behavior are crucial in the process.

OBJECTIVES OF THE STUDY

This is a cross-sectional study aimed to determine the perception of risk towards COVID-19 of college students in a private higher educational institution in Manila, Philippines. It also intended to ascertain the correlations of their perception of risk to COVID-19 with their sources of information and their extent of use, their perceived level of self-efficacy, and their perceived importance of individual behavioral to promoting effective COVID-19 preventive measures

MATERIALS AND METHODS

Sampling and Ethical Considerations

A total of 756 college students from a private university in Manila, Philippines took part in this cross-sectional study. An online survey utilizing Google Form was conducted from 15 February to 11 March 2020. A sample size of 378, from a total population of 20,772 (February 2019), was set using a margin of error = .05 and p≤.05. In the actual online survey, the study yielded 766 responses, but after the data cleaning, 756 gave consent to participate and fully completed the survey.

Students were invited to take part in an online survey based on the following criteria: 1.) the student should be 18 years old and above, 2.) have heard if the new coronavirus (COVID-19), 3.) officially enrolled in an undergraduate program, and 4.) willing to give informed consent to participate in the online survey.

Proper ethical considerations were followed in the conduct of this study. Respondents were informed of the selection criteria, that they should be 18 years old, that their participation is purely voluntary, and no incentive will be given in answering the online survey. They were also informed that they could withdraw and stop answering the questionnaire anytime. Confidentiality and protection of their data were assured before they confirmed their voluntary participation in the survey by clicking a confirm box and proceeding to the next section.

Survey Questionnaire

The data for this study were gathered through a self-structured survey questionnaire developed through a review of the literature. The survey included closed-ended questions with responses using the Likert scale. Questions included those that would measure the respondents' perception of risk, the perceived importance of their behavioral response to COVID-19, and self-efficacy towards addressing various concerns during this time of health crisis. The instrument was subjected to a peer-review process to ensure its face and content validity. Pre-testing of the tool was also done for purposes of checking both the reliability of the instrument. Cronbach test for the instrument was yielded (self-efficacy = 0.78; perceived importance = 0.84) to evaluate the test items.

Data Analysis

The study used Statistica version 13.5 to process quantitative data. The data analysis included descriptive statistics and correlations tests to look at the relationship between variables such as the perception of risk, extent of use of different COVID-19 sources of information and their extent of use, their perceived level of self-efficacy and their perceived level of importance of appropriate behavioral response to COVID-19 preventive measures. Using both ordinal and scale type data, there was a need to perform normality test using the Shapiro-Wilk and Kolmogorov-Smirnov tests. Normality was achieved with the results $p > .05$. thus, the Pearson correlation coefficient or Person R was applied to measure the statistical relationship of the variables perception of risk with their extent of use of COVID-19 information, their self-efficacy, and their perceived importance of individual behavior to avoid contracting the disease.

To describe the results, the following guides were used: level of perception of risk and extent of use of social media: 1 – 1.79: Very Low; 1.8 – 2.59: Low; 2.6 – 3.39: Moderate; 3.4 – 4.19: High; 4.20 – 5.00: Very High. For the perceived level of self-efficacy: 1-1.29: Very Low; 1.20-2.39: Low; 2.40-3.59: Moderate; 3.60-4.79: High; 4.80-6.00: Very High; and perceived level of importance of appropriate behavioral response to

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COVID-19: 1.00 – 1.79: Unimportant; 1.8 – 2.59: of Little Importance; 2.6 – 3.39: Moderate Importance; 3.4 – 4.19: High Importance; 4.20 – 5.00: Very High Importance.

RESULTS AND DISCUSSION

Table 1. Awareness of Human Corona viruses and Perception of Risk towards COVID-19 (n = 756)

COVID-19 Awareness and Perception of Risk	f	(%)
Heard about the Severe Acute Respiratory Syndrome (SARS)		
Yes	640	84.7
No	116	15.3
Heard about the Middle East Respiratory Syndrome Coronavirus (MERS-CoV)		
Yes	523	69.2
No	233	30.8
Most Risky among the Corona Diseases		
SARS	298	39.4
MERS-CoV	78	10.3
COVID-19	157	20.8
No Idea	223	29.5
	Mean	**SD**
Perception of Risk towards COVID-19	3.28	1.13

Table 1 shows that most of the respondents or four out of five respondents reported that they have heard of SARS (640, 84.70 %) and about seventh-tenth of them heard of MERS-CoV (523, 69.20 %). All of them heard of COVID-19. A vast majority of them identified SARS (523, 69.20%) as the most risky among the human corona viruses compared to MERS-CoV and COVID-19. Findings show that their perception of risk s towards COVID-19 is moderate (*M* =3.28, *SD* = 1.13).

Extent of Use of COVID-19 Information and Correlation with their Perception of Risk about COVID-19

Access to information increases individuals' motivation to cope with the situation by seeing how others cope with the same problem and are thriving. This argument is supported by a study that contends that both informational and socializing usage of media increases an individual's self-efficacy [19].

Table 2 shows that the internet is the topmost source (very high) of COVID-19 information among the respondents *(M = 4.47, SD = .75)* followed by the school *(M = 4.15 , SD = .88)*. Among the traditional sources of information, the television *(M = 3.86, SD = 1.105)* got high rating while the print media *(M = 2.92, SD = 1.70)* and radio *(M = 2.89, SD = 1.28)* only got moderate rating. Correlation tests show that their extent of use of television (r = .097, n = 756, p < .01) and print media (r = .083, n = 756, p < .05) are positively correlated with their perception of risk. Positive correlations were also found between perception of risk and extent of use of information shared by the government (r = .078, n = 756, p < .05) and peers (r = .080, n = 756, p < .05).

This study shows that the internet does not have a significant effect on the students' perception of risk even though the majority of them are saying that they get information from it. This study revealed that traditional mass media, like television and prints, have a significant relationship with the students' perception of risk rather than the internet. Students trust the local television and print to localize the context of the situation. This is especially true if the information comes from local government officials.

Table 2: Different Sources of COVID-19 Information and Correlation between the extent of use of different sources of information about COVID-19 and Perception of risk on Contracting COVID-19 (n = 756)

Sources of Information	M	SD	Extent of Use of Social Media	Perceived risk of contracting COVID-19	
				Pearson r	Sig. (2-tailed)
Internet	4.47	.75	Very High	.007	.858
School	4.15	.88	High	.044	.257
Medical doctors	3.87	1.13	High	.031	.391
Television	3.86	1.10	High	.097**	.008
Family	3.84	.99	High	.017	.650
Peers	3.84	.91	High	.080*	.027
DOH officials	3.76	1.11	High	.062	.086
Government officials	3.38	1.16	High	.078*	.032
Print media	2.92	1.70	Moderate	.083*	.023
Radio	2.89	1.28	Moderate	.055	.133

This could be explained by a study [24] arguing that apprehension on the use of the internet as the main source of information is anchored on the tendency for an overwhelming amount of unverified information. Another study [25] even argues that news and information on the internet may be tainted with sensationalism as it fits within a limited number of characters and reading time-limit.

The HEI that the respondents belong to is effective as another primary source of information and for giving guidance on appropriate behavior about COVID-19. The results of the study yielded a lower perception of risk because of the respondents' high self-efficacy and high perceived importance of individual behavior to prevent contracting the CONVID-19 as guided by adequate information from trusted news sources and university information dissemination. A study suggested the development and provision of various institution-based education programs built on the characteristics of the students especially their perception of risks, knowledge and health behavior [26] and that these programs will change informed students to have "the social and self regulative skills required to translate informed concern into effective preventive action [27]." The peer group is also influential in their perception of risk. A study [28] found that the students' use the internet not mainly for information but for purposes of entertainment and still sees the school, the family, and friends as reliable sources of health information. In a study that examined trust in science-based on exposure to social media [29], it pointed out that fake misinformation news has become prevalent. The advantage of television lies in the capacity of the students to trust institutions presenting locally contextualized news and information rather than individuals, which are more common in social media and the internet [30]

The affiliated HEI of the respondents took a proactive approach as it began to publish a series of health bulletins starting 30 January 2020 when the first COVID- 19 patient was confirmed in the Philippines. Health bulletins were shown in the TV monitors inside the campus, sent through the emails of all stakeholders of the university, published in posters, and other paraphernalia were also cascaded on campus. A study argued that students, especially in the context of epidemics, follow recommended preventive behavior given adequate and appropriate information [31].

Overall, when asked regarding the respondents' belief on their personal capacity to perform preventive measures in relation to COVID-19, Table 3 results show high rating ($M = 4.59$, $SD = .82$). A very high level of efficacy was reported on their belief to execute preventive measures such as wearing a mask, avoiding crowded places, washing hands, etc. ($M = 5.14$, $SD = .97$). They also reported a very high level of self-efficacy for their personal capacity to prevent contracting the disease ($M = 4.80$, $SD = 1.17$).

Respondents also reported a high level of self-efficacy on the remaining areas: 1. acquiring knowledge about preventive measures against contracting the disease ($M = 4.57$, $SD = 1.05$), 2. effectiveness of the different preventive measures ($M = 4.54$, $SD = 1.09$), 3. Getting adequate information to effectively protect themselves from COVID-19 ($M = 4.54$, $SD = 1.09$), 4. having resources to continue performing the preventive measures until the disease is contained ($M = 4.43$, $SD = 1.15$), 5. assured that can isolate themselves if contracted by the disease ($M = 4.40$, $SD = 1.32$), and 6. confident in their capacity to recover from the disease in case they contract it ($M = 4.33$, $SD = 1.34$).

Table 3. Self-efficacy Beliefs of the Respondents (n = 756)

Self-efficacy Belief	Mean	SD	Qualitative interpretation
Execute preventive measures (wearing of a mask, avoiding crowded places, washing of hands, etc.)	5.14	0.97	Very High
Personally prevent contracting COVID-19	4.80	1.17	Very High
Acquiring enough knowledge about preventive measures against contracting COVID-19	4.57	1.05	High
Confident to effectively use different COVID-19 preventive measures	4.54	1.09	High
Getting adequate information to adequately protect one's self from COVID-19	4.54	1.09	High
Sufficient resources to maintain preventive measures until the disease is contained	4.43	1.15	High
Self-assured that can be in isolation if will get COVID-19	4.40	1.32	High
Confident of recovering from the COVID-19 in case it is contracted	4.33	1.34	High
Weighted mean	4.59	0.82	High

The efforts of the HEI to disseminate COVID-19 information allowed the respondents to equip themselves with enough information to establish a high level of self-efficacy. With the widespread false and unreliable information in the internet the respondents used the information given by their HEI for their action to be guided and supplemented those COVID-19 with what they are getting from the different forms of social media like the internet to establish their self-efficacy. A study suggests that the higher or more positive the self-efficacy of an individual, the lower is their perceived vulnerability or risk [32].

Table 4. Perceived Importance of Individual Behavior to Prevent Contracting COVID-19 (n = 756)

Behavior	Mean	SD	Qualitative Interpretation
Education-related Measures			
Read more information about COVID-19	4.44	.91	Very High
Monitor developments about COVID-19	4.39	.94	Very High
Inform others of the facts that are known about COVID-19	4.31	1.00	Very High
Weighted mean	4.38	.91	Very High
Hygiene-related Measures			
Cover the mouth when sneezing	4.66	.70	Very High
Wash hands with soap and water as much as possible	4.65	.72	Very High
Bring sanitizer and alcohol to prevent contacting with COVID-19	4.60	.77	Very High
Throw used tissue/napkin in the trash can	4.52	.90	Very High
Take a bath to keep clean from viruses outside	4.38	.97	Very High
Immediately change clothes once at home	4.16	1.06	High
Clean and disinfect frequently touched objects and surfaces	4.12	1.10	High
Avoided touching railings and knobs in public places	4.02	1.10	High
Wear a mask when going out of the residence	4.01	1.09	High
Avoided eating street foods since the news about COVID-2019 spread out	3.73	1.22	High
Avoided gestures like shaking hands when encountering friends	3.57	1.29	High
Avoided using public toilets	3.53	1.26	High
Wear hand gloves	2.74	1.40	Moderate
Weighted mean	4.05	.75	High
Health Monitoring Measures			
Check body temperature regularly	3.82	1.16	High
Visited the hospital/clinic to check the health condition	3.77	1.24	High
Weighted mean	3.80	1.07	High
Physical Distancing Measures			
Not going out of residence except for attending class	3.77	1.19	High
Move away from someone who is coughing	3.73	1.20	High
Avoiding large gatherings (dance parties and concerts)	3.70	1.25	High
Avoiding to use mass transport (MRT/LRT, PUV, Bus) since the news COVID-19 spread out	3.69	1.22	High
Avoiding people who are coughing	3.66	1.19	High
Go straight to the residence after class	3.66	1.27	High
Avoiding to seat near people who look sick	3.63	1.20	High
Not going to malls	3.51	1.26	High
Spent time alone	3.36	1.35	Moderate
Weighted mean	3.63	1.04	High

Overall	3.93	.80	High

Especially true on issues of public health, these beliefs on individual's self-efficacy lead to protection motivation and, thus, changes in attitude, perception, and behavior [33]. Another study further found that the cues for the students to follow preventive behavior is most effective when the cues are well integrated into their environment, like the school [34], and that these cues come not only from the school administrators but also from their parents and even school staff [31].

Overall, Table 4 shows that the respondents reported high agreement on the importance of individual behavior (M = 3.93, SD = .80) to prevent contracting COVID-19. Education-related Measures. Health literacy is important. Disseminating correct COVID-19 information is perceived to be of very high importance among the respondents with the weighted mean of 4.38.and SD of .91. Included are: reading up on COVID-19 information (*M* = 4.44, *SD* = .91), monitoring developments about the pandemic (*M* = 4.39, *SD* = 1.00), and sharing of information about the disease (*M* = 4.31, *SD* = 1). These findings imply that respondents seek for more information about COVID-19, being a new disease. There is a need for timely and pertinent information from reliable sources. With the ease and speed of sharing information online among peers, any inaccurate data could easily lead to inappropriate behavioral responses from students. With no way of recovering shared erroneous information, the actual health ramifications could be harmful to the recipients. College students are exposed to multiple sources of information about COVID-19. Giving the young people correct and timely information regarding COVID-19 will give them sense of control and active role in protecting themselves from COVID-19. The role of the HEI is pivotal to providing correct information that will empower them to use appropriate preventive measures address health concerns. This study confirms that the young individuals with high perception of self-efficacy have a lower perception of risk [16].

Hygienic practices. Findings revealed high importance (M = 4..05, SD = ..75) of hygiene related practices among the respondents Very high self-rating covered practices such as covering one's mouth when sneezing (*M* = 4.66, *SD* = .70), washing of hands with soap and water whenever possible (*M* = 4.65, *SD* = .72), bringing sanitizer and alcohol (*M* = 4.60, *SD* = .77), throwing used tissue, napkin in the trash bin (*M* = 4.52, *SD* = .90), and taking a bath (*M* = 4.38, *SD* = .97). High importance on these hygienic practices were generated: changing clothes immediately after arriving home (*M* = 4.16, *SD* = 1.06), cleaning and disinfecting frequently touched objects and surfaces (*M* = 4.12, SD= 1.10), avoiding touching railing and knobs in public places (*M* = 4.02, *SD* = 1.10), wearing of mask when leaving one's residence (*M* = 4.01, *SD* = 1.09), avoiding eating street foods (*M* = 3.73, *SD* = 1.22), avoiding shaking hands (M = 3.57, SD = 1.29), and avoiding use of public toilets (*M* = 3.53, *SD* = 1.26) were only deemed highly important by the respondents..

The results indicate that the respondents are fully aware of the importance of hygiene to combat COVID-19. HEIs effort to educate the young people of COVID-19 is crucial for the young people to now as to how to protect themselves and avoid the spreading of the disease. The students are knowledgeable and capable of behaviorally shielding themselves from COVID-19. The discipline to continue practicing good hygiene can create big impact to avoid the further spread of the disease, Although, the study indicates that the students started practicing these desired protocols at the start of the pandemic when only a few cases were detected in the country. Thus, they are accorded extra time in making these changes as part of their daily ritual.

Health Monitoring. Monitoring one's health which include behaviors such as regular checking of body temperature (*M* = 3.82, *SD* = 1.16) and hospital/clinic visits (*M* = 3.77, *SD* = 1.24) were considered highly importance by the respondents.

The study also yielded a result that argues that the more the respondents perceive themselves to be at risk, the higher that they perceive their individual behavior as important. Another study argued that there is a strong relationship between people's trust in the government and their actions and the perceived risks or benefits of their individual actions [35]. The results of the study confirm as well with the argument of the Hyogo Framework for Action, which says that those who give higher importance to their behavior and self-capacity to protect themselves tend to exhibit a lower perception of risk because of the confidence that the individuals already have. Previous studies argued the same correlation is true even if the cause variable and effect variable is in reverse [36]-[37]. This confidence can be brought about by various factors, such as knowledge and other health resources.

Physical Distancing. Results show high importance of social distancing (*M = 3.63, SD1.04*) to prevent contracting COVID-19. The respondents that these actions are of high importance for social distancing to work: leaving the residence only for classes (*M = 3.77, SD = 1.19*), moving away from people with cough (*M =3.73, SD 1.20*), avoiding large gatherings (*M = 3.70, SD = 1.25*), avoiding to use mass transportation (*M =3.69, SD 1.22*), avoiding sitting with people who look sick (*M = 3.63, SD = 1.20*), and avoiding going to the mall (*M = 3.51, SD = 1.26*). Spending time alone (*M = 3.36, SD = 1.35*), however, was only considered moderately important by the respondents. This means that students are knowledgeable and capable of implementing social distancing in response to the new circumstance. The respondents are not passive recipients of information but active players in preventing further the spread of COVID-19. It is therefore crucial that the students be provided with accurate COVID-19 information for their individual responses.

Table 5 shows a significant inverse weak correlation between perception of risk and self-efficacy (r = .150, n = 756, p = .000), and a significant positive weak correlation between perception of risk and perceived importance of individual behavior.

Table 5. Correlation of perception of risk, self-efficacy beliefs and perceived importance of individual behavior (n = 756)

Correlations	M	SD	Perceived risk of contracting COVID-19	
Self-Efficacy Beliefs	4.59	.82	Pearson r	-0.150**
			Sig. (2-tailed)	.000
Perceived Importance of Individual Behavior	3.93	.80	Pearson r	0.175**
			Sig. (2-tailed)	.000

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

CONCLUSION AND RECOMMENDATION

The respondents of this study, college students of a private University in Manila, Philippines, showed a moderate level of perception of risk towards COVID-19, high level of self-efficacy, and recognized high importance of individual behavior to prevent contracting COVID-19. The internet was reported to be the leading source of COVID-19 information but not correlated with their perception of risk to COVID-19. Television, peers, print media, and information from government officials were positively correlated with their perception of risk. Thus, while internet is easy to access to COVID-19 information, they relied more on traditional sources of information to contextualize and validate COVID-19 information and thus have a more significant influence on their perception of risk. Correlation test results exposed a significant inverse weak correlation between perception of risk and self-efficacy and a significant positive weak correlation between perception of risk and perceived importance of health behavior. Thus, a higher self-efficacy yields pull-down COVID-19 perception of risk, and a higher COVID-19 perception of risk upturns higher perceived importance to behavioral preventive measures.

Trusted sources of information and institutional initiatives should be supported to influence the behavioral responses of young Filipino toward COVID-19. Correct information enabled the youth to act accordingly and see the importance of their individual behaviors in order to protect themselves and avoid contracting the virus. Their high self-efficacy belief and high recognition of the importance of individual behavior play an essential role in their actual observance of COVID-19 preventive measures, which will lower the actual risk of contracting the virus. Specifically for the organization where the students belong to, formulation of appropriate policies that will fight COVID-19 requires an appreciation of local data to manage the people's perception of risk as influenced by their sources of information, their level of self-efficacy, and perceived importance of individual behavior to fight contracting the disease. The experiences related to the students' health-seeking behavior can be a credible basis for the formulation of more effective information, education and communication materials, which could be used in various platforms, especially since there is a transition to distance learning. Similar studies may be conducted to verify why there is such mistrust to information gathered through social media, even if it is the most accessible source. A replication study can be done in response to the changing context and condition that the community is in, which may also include a nationwide sample as source of wider range of data.

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