



**EMOTIONAL RESPONSES AND SELF-PROTECTIVE BEHAVIOR WITHIN DAYS OF
THE COVID-19 PANDEMIC-A QUESTIONNAIRE BASED SURVEY**

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ABSTRACT

Aim: To assess Emotional responses and self-protective behavior within days of the covid-19 pandemic. **Objective:** 1. Assessment of their engagement in self-protective behaviors. 2. Assessment of their emotional and behavioral responses to the situation. 3. Assessment of perceived subjective knowledge. 4. Assessment of, perceived credibility of different sources of information. **Methodology:** A prospective online based observational survey was carried out using the information gathered from general population in Kerala. This study provides the Emotional responses and self-protective behavior within days of the covid-19 pandemic. The study was carried out for a period of 1 month and have sample size of 150 participants. The data were collected using questionnaires. **Results and Conclusion:** The participants reported some degree of concern and fear of contracting COVID-19 even before the first case of COVID-19 was confirmed. The reported severity of the disease and perceived possibilities of containing its spread before it reached were rated at females being slightly more afraid and perceiving the disease as more severe. The findings of this study suggest that public have of a relatively high level of self protective behaviour within the days of COVID-19. In addition, good emotional response and self protective behaviours is associated with higher education level and medical profession suggesting that health professionals including medical doctors, pharmacists, nutritionists and dentists can play an important role in educating communities. Low education population have more emotionally vulnerable and least self protective behaviours. The health authorities should concentrate on these groups in order to further prevent COVID 19 pandemic from spreading.

KEYWORDS: COVID-19, mass communication, information credibility, negative emotions, self-protective behaviors, psychological response, health communication.

INTRODUCTION

The cases of countries where COVID-19 spread rapidly are telling in how important it is for people to know (and apply) basic protective measures in order to contain the spread of the disease, especially in the critical period after the first few confirmed cases, when the possibility of containment is the highest. Hence, it seems important that crucial information about the current pandemic is communicated by credible sources – for example, health care professionals and scientists (e.g., epidemiologists, virologists). In the present study, we were thus interested in how initial perceptions and responses were formed within hours of the first confirmed case of COVID-19. We also wanted to know how the emotional responses and self-protective behavior within days of the covid-19 pandemic. Indeed, extant research shows that the perceived quantity and credibility of information received correlates with adherence to infection prevention behavior, e.g., frequent hand washing, avoiding close contact, etc which is crucial in fighting the spread of the disease. While media can help with

promoting healthy behavior change this is exceedingly important in the early stages of the epidemic when the possibility of its containment is highest. Alarmist framing and intensive reporting of mass media can, on the contrary, spark fear and even hysteria resulting in the reduced possibility of mobilizing the public. Such emotions can be further amplified by prolonged exposure to negative reporting, while personal experience with the disease is limited. The level of trust in sources of information also plays an important role in motivating the engagement in self-protective behaviors. However, results may depend on the source of information – a higher level of trust in official government communication was found to result in higher self-efficacy and hand washing. Conversely, relying on informal interpersonal information results in heightened perceived threat and avoidance behaviors.

The first case of COVID-19 was confirmed on 31 december 2019, after the disease had already spread to all neighboring countries. However, the media had been

covering the global spread of the disease extensively since January of that year. We thus looked into how people gathered information about the COVID-19 Pandemic, what their emotional response to the threat was. Previous studies have shown that people's anxiety tends to increase sharply at the beginning of an epidemic. For this reason, we expected that general feelings of concern and fear of contracting COVID-19 would increase significantly after the first confirmed case of COVID-19 in Slovenia. At the same time, we were interested in the size of the change, seeing as the time span between our two points in time was only between 2 and 4 days. In the present research, we thus focused on constructs to self-protective behavior, which was mediated by the effect of negative emotions and subjective knowledge about the disease.

MATERIALS AND METHODS

Participants

In total, 150 people have responded to the survey. 81.7% were women, eight stated their gender as other. The analysis was therefore performed on a sample of 150. The average age of 150 participants was between 18 and 40.

Study Design and Procedure

The link was shared on social medias and forums and circulated through the institute's and researchers' own mailing lists using a snowball sampling method (the survey was shared by more than 80 individuals). As the goal of the study was to capture their engagement in self-protective behaviours and emotional and behavioural responses to the situation.

Measures

The measures presented were a part of a battery of tests. We assessed the participants' perceptions of the situation, their emotional and behavioral responses to the situation (i.e., self-protective behavior), their perceived subjective knowledge and trust, as well as the perceived credibility of different sources of information. We also collected demographic information (age, gender, educational level, and region of residence). Additionally, we assessed the participants' objective knowledge about COVID-19. The selection of measures was guided by our research questions. All measures were translated.

RESULT

A prospective observational questionnaire study was conducted to assess the emotional responses and self-protective behavior within days of the covid-19 pandemic among public. The data was collected from 150 Participants using questionnaires. The questionnaire consisted of two sections. Section one was about demographic and socioeconomic data (age, gender, income, education) whereas section two was about epidemiological data of COVID 19.

1. Distribution of Gender

The data was collected from 150 participants. Among 150 participants 50 (33%) of the respondents were males while 100 (67%) were females.

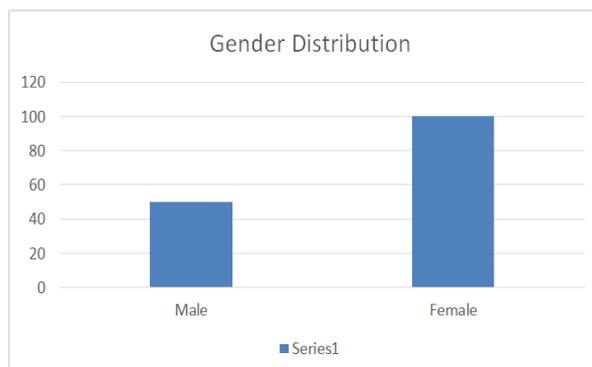


Figure 1.

2. Distribution of Age

The age of the respondents participants was from 20 to 65 years old and it was distributed in 3 categories as follows: 20 to 34-yearsold (90 respondents or 60%), 35 to 50 years old (35 respondents or 23%) and 51 to 65 years old (25 respondents or 17%).

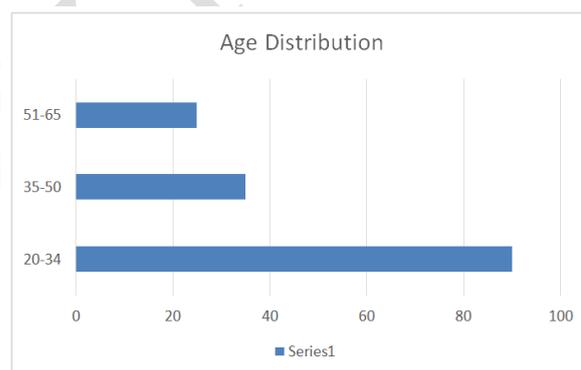


Figure 2.

3. Percentage of all answers between males and females

There was no significant difference ($P < 0.05$) between males and females. 85% of the females gave the correct answers comparing with 78% of males.

Table 1.

Gender	Yes	No	Don't No	Total
Female	85(85%)	9(9%)	6(6%)	100
Male	39(75%)	8(16%)	3(6%)	50

3. Percentage of all answers among age groups

With regard to the correct answers among the age groups, there was a significant difference among the groups. The highest percentage of the correct answers were in the age group 20-34 years with 83% of people of this group had the correct answers followed by age group 35-50.

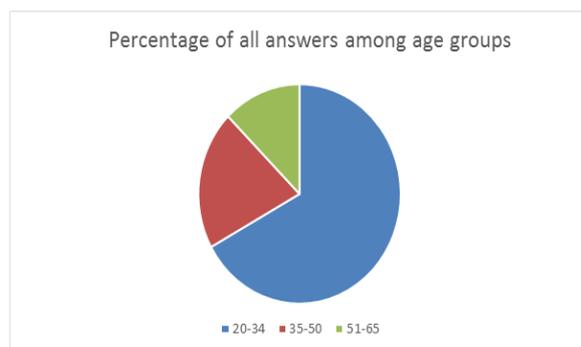


Figure 3.

Years where 66% of the group had correct answers. The last group was 51-65 in which 56% only gave that correct answers.

4. Percentage of all answers among education groups

Education level played an important role in the COVID 19 knowledge and awareness. The number of respondents gave the right answers increased with the level of education. The highest percentage of respondents gave the correct answers was in the group who had college education (79%) followed by those who had high school (66%) and primary education (48%). The difference was significant between college education level and high school and primary education at $P < 0.05$.

Table 2.

Education level	Yes	No	Don't No	Total
Primary	12	9	4	25
High school	38	12	8	58
College	53	9	5	67

DISCUSSION

One of our research interests was the impact of the first confirmed case of COVID-19 on the general level of concern and fear of contracting the virus. We expected that the general feeling of concern and fear of contracting COVID-19 would be consistent and increase significantly after the first confirmed case. In line with this, our results have shown that within 2 days of the first confirmed case, participants reported a significant change in all perceptions assessed. The participants reported that they were now more worried and anxious, thought more about the disease, perceived it as more severe and assessed the chances of containing the disease as worse than before the first confirmed case of COVID-19. This is especially important in the early phases of the outbreak, when medical staff is not yet preoccupied with caring for people who have contracted the disease, and when self-protective measures are most efficient. Moreover, our results support previous findings about the relation between perceived credibility and behavioral actions. In summary, future policy change should include the optimization of communication channels by emphasizing the role of professionals in communication. Of special importance is online communication, where people gather most information about the spread of the

disease and learn of various protective measures. In later stages, however, the relaying of information could be passed to scientists relevant to the situation. Assessment of engagement in self-protective behaviors via negative emotions and perceived knowledge of self-protective measures. This suggests that information relayed by credible sources can lead to lower levels of negative emotional responses, which can be important as epidemics are emotionally taxing. Even though the variances in self-protective behavior scores explained by our model are modest, even a small boost in engagement in self-protective behaviors could go a long way in viral epidemics like the one we are faced with today and help lower the number of infected people (aka flattening of the curve). The research was conducted in the early stages of the epidemic. At that point, emotional responses might not have been as severe as in the later stages. Additionally, the perceived importance of adhering to protective measures, along with the intensity of reporting on said measures, could be much lower, which could result in lower correlations. The results may not be easily transferable to other societies, especially those where governments receive high levels of trust or use different means of informing the public. In future studies, our findings should thus be cross-culturally validated, and explored in later stages of the epidemic.

Furthermore, our study has some limitations include Questionnaires can be only filled by People who can understand possess smartphones with Internet connectivity, so this cannot be generalized to the whole community. The time duration of the data collection was a little bit less. This, coupled with the fact that data were collected online, could mean that the sample is biased in terms of information literacy and stated sources of information. The study could also not reach some of the most vulnerable groups in the current epidemic (e.g., the elderly). However, during the epidemic, other means of data collection are less feasible, and specific groups likely differ from the general population in terms of their perceptions, responses, but also needs (e.g., stricter protective measures). While females were also overrepresented in the sample, they were similar to males in terms of demographics, and no differences were observed in perceived trust and credibility of information sources. Moreover, our results suggest that such communication could be effective in positively reframing the pandemic situation. It would serve as a protective factor in an emotionally taxing environment, where isolation measures have left people without interpersonal contact, uncertain and afraid as to what the future might hold for them, in terms of both health and their financial status.

Limitations

- Questionnaires can be only filled by People who can understand and possess smartphones with Internet connectivity, so this cannot be generalized to the whole community.

- The time duration of the data collection was a little bit less

CONCLUSION

The findings of this study suggest that public have of a relatively high level of self protective behaviour within the days of COVID-19. In addition, good emotional response and self protective behaviours is associated with higher education level and medical profession suggesting that health professionals including medical doctors, pharmacists, nutritionists and dentists can play an important role in educating communities. Low education population have more emotionally vulnerable and least self protective behaviours. The health authorities should concentrate on these groups in order to further prevent COVID 19 pandemic from spreading.

Data Availability Statement

The raw data supporting the conclusions of this article will be made available by the authors.

Ethics Statement

The studies involving human participants were reviewed and approved by the Ethics Commission of the Faculty of pharmacy practice. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

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CONFLICTS OF INTEREST

The author declares no conflict of interests.

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