



The Impact of the Severity Perception of COVID-19 on Attitudes Towards Vaccination and Safety Measures

Muhammad Nasir ¹ Muhammad Nadeemullah ²

Abstract: *The rapid spread of COVID-19 threatened and endangered the lives as well as the well-being of the people. In particular, the vulnerable population suffered more losses than anybody else due to social and economic problems caused by it on a vast scale throughout the world. The purpose of this study is to examine the severity perception of novel coronavirus on attitudes towards vaccination and safety measures. To obtain an overall image, the present cross-sectional quantitative study was conducted. Data for the study was collected online from a sample of 368 respondents from the whole province of Balochistan using a closed-ended Likert scale questionnaire. As expected by the conceptual framework, the correlation between severity perception and safety attitude, as well as the relationship between severity perception and attitude towards vaccination, was found to be positive. Moreover, the correlation between both of the hypotheses was also positive.*

Key Words: COVID-19, Pandemic, Epidemic, Outbreak

Introduction

The most significant and urgent/important and burning issue of our time is the outbreak of novel coronaviruses. The newly discovered coronavirus (COVID-19) has been classified as an outbreak of a pandemic by the World Health Organization (WHO). A pandemic occurs when a disease spreads quickly and widely. Numerous disease outbreaks have ravaged humanity throughout history. (World Health Organization WHO, [2019](#))

Similarly, every pandemic has terrified mankind in every period in a different way. As the number of fatalities increases globally, a pandemic and its spread are a given, according to science. Studies have shown that stress in the nursing profession is related to several factors, including patient demands, work overload, in-work conflicts, lack of staff, lack of organizational and supervisor support, and role ambiguity. (Omoush et al., [2023](#))

COVID-19 is a highly contagious respiratory illness caused by the novel coronavirus. SARS-CoV2. It emerged in late 2019 and quickly spread across the world, leading to a pandemic. (Christopher Vannabouathong, [2020](#)) The disease primarily spreads through respiratory droplets when an infected person coughs, sneezes, talks, or breathes. The rapid spread of COVID-19 threatened and endangered the lives as well as the well-being of the people. In particular, the vulnerable population suffered more losses than anybody else due to social and economic problems caused by it on a vast scale throughout the world. (Khan et al., [2020](#))

The entire world was battling the deadly and contagious coronavirus disease while also evaluating how the general public felt about safety precautions and how to handle a pandemic emergency. This study will contribute to a better understanding of how people feel about its seriousness, safety, and immunization. Regarding halting the transmission of infectious diseases like the coronavirus, isolation, and quarantine are crucial safety measures (Khasawneh et al., [2020](#)). Unrelated to sex, socio-demographic factors were not significantly associated with the distribution of information collected, despite the fact that the study's primary goals were to examine perceptions and positions across Poland and Italy. This is an important

¹ Ph.D. Scholar, Department of Social Work, University of Karachi, Karachi, Sindh, Pakistan.

² Department of Social Work, University of Karachi, Karachi, Sindh, Pakistan.

finding of the current investigation. This study found that people were more concerned with their jobs and health and that people had a favorable opinion of the social constraints that had been put in place in Italy and Poland to stop the spread of COVID-19. (Loretto, L. [2021](#)).

The three most popular strategies used by the students to prevent themselves from contracting this contagious disease were staying at home, paying closer attention to personal hygiene, and routine hand washing, according to a similar study among students' coercive health protection measures for safety measures. 2020 (Khasawneh1, [2020](#)). The explanation is partially supported by the article, which states that regarding safety measures and social distance practices, people responded that during the period of the pandemic, they had observed social distancing procedures and stopped gatherings, and also suggested hygiene habits and handwashing frequency are important with reference to preventing the spread of the deadly virus of coronavirus and moreover wearing a mask and covering the face is another important measure to prevent from disease (Mahmood et al., [2020](#)).

In the present study, our objective is to examine the attitude toward safety and precautionary methods used by common masses during the recent pandemic of COVID-19. Reports show that in practice in the Kingdom of Saudi Arabia, coronavirus has appeared as a new threat to the health of people. In the absence of vaccine availability, precautionary measures are critical with reference to the coronavirus infection ratio and its spread. It shows compliance of people to the precautionary and controlling/minimizing steps is influenced by their level of awareness, belief, and practice. (Mohammed K. Al-Hanawi, [2020](#)).

The rapid development of a coronavirus vaccine poses a concern since it may give the public the idea that the vaccine won't be adequately vetted for safety and efficacy. Considering these results, we can point out the following indicators of the intentions to get the COVID-19 vaccine: insurance and education, high subjective norms score, a positive approach toward the vaccine, and perception of susceptibility towards COVID-19, high self-efficacy score, low barriers to the vaccine and perception of higher benefits of vaccine. Health behavior change theory also corresponds with these relationships. The TPB specifically forecasts that stronger personal values and a more positive approach toward vaccines tend to result in stronger intent to get the vaccine. Moreover, HBM concludes that susceptibility to health threats and benefits outweighing barriers induce individuals to get the vaccine. Also, a high level of education and insurance work toward overcoming barriers. (Jeanine P.D. Guidry, [2021](#)).

The outbreak of novel coronavirus CoV-2 spread without warning and spread like wildfire. There are many perceptions about this virus, and many theories have been developed about its origin and its spread, but until today, its origin remains a mystery and phenomenon. It seems that it is impossible to control the spread of this virus/disease. Consequently, our country is facing profound psycho-social and economic crises. The aftermath of COVID-19 is still lingering, and these crises have destabilized trade, energy education, the health stock market, and the energy supply chain globally. Improvement and growth become impossible after this pandemic. It is needless to say, this coronavirus already exists in the world, and today's novel coronavirus is a new type of that old coronavirus. This is not the first time human history has been full of such diseases and their spread, but centuries ago, towns and cities were more isolated; unfortunately, the facilities of transportation and aviation available today were not available years ago. Thanks to global trade and travel, these novel viruses are continually crossing borders, and, in each place, they encounter a different and mixed environmental condition, which creates new variants of disease spread far beyond the borders and makes problems more intense than before.

Importance

The research focuses on the novel coronavirus COVID-19, its effects, and its impact on the people of Baluchistan. This study is an attempt to explain how this deadliest virus is transmitted to humans and how this virus traveled to different countries of the world in general and in Pakistan and Baluchistan in particular. Geographically, Baluchistan is the largest and the least developed province of the country, with a largely scattered population. The poverty rate in this province is higher than in other provinces of the country. The socio-economic condition of the people of Baluchistan is not good. People work for wages and small-scale businesses for their livelihood. The province has been suffering from hunger and starvation, and after this recent pandemic novel coronavirus, the impact on socio-economic development affected a lot of common people of the province conditions after this pandemic became even worse. This



study is an attempt to highlight the understanding and perception of common masses regarding this recent pandemic of coronavirus COVID-19 and how these perceptions are developed. Because understanding this disease and its impacts on the common masses and on the economy is still a complex phenomenon because this disease directly affects the common people of the country and the economy indirectly affects common masses of the country, this research study is an attempt to identify that what multiple actions have been taken for improvement of life of common masses at the grass root level, and what policies and strategies have been so far made by the government of Pakistan and the provincial government of Balochistan.

The Balochistan province of Pakistan is the largest province, covering almost 43% total area of Pakistan, and was recently recognized as highly vulnerable to this global pandemic because of its long and open geographical borders with Iran and Afghanistan. Meanwhile, this long border mostly has no fence or any other proper mechanism to stop the movement of the people. The majority of the population is involved in trade with neighboring countries, and this is the only source of income for the people who live in these border areas. Therefore, this province was at high risk during this pandemic because stopping this trade between people meant making their lives even harder. Because on one side, people had a lockdown situation, and on the other side, there was a closure of small-scale trade. Furthermore, at the same time, many pilgrims, after performing religious rituals, entered Pakistan from Iran, and Iran after China was 2nd largest victim of coronavirus.

To describe the circumstances of this latest epidemic, numerous studies and research articles have already been published, but only a few of them are able to provide a whole scenario. Additionally, the literature on the subject has needed to offer a realistic understanding of this pandemic. By assessing the general public's attitude during the lockdown, this research project will give a broad perspective of how policies are used. Having this information will help the government create policies that will ultimately assist the province's most affected populations. The government of Pakistan in the province would benefit from this research on COVID-19 in developing policies regarding a potential pandemic.

Utility and Rational of Study

The direct and short-term effects of COVID-19 are observed, and different studies have been conducted by different scholars in different parts and regions around the globe. However, police and strategies to control this pandemic have gone unnoticed so far. This study will contribute to understanding the long-term planning for this pandemic and the psycho-social and economic impact of COVID-19 in Baluchistan. As we all know, Baluchistan is the largest but least developed province of Pakistan, and COVID-19, a natural disaster, is pertaining to and affecting common mass lives in the province. Therefore, among all these hardships and socio-economic problems faced by the common public of the province. The current pandemic quickly attracted the urgent attention of the state, which recognized its importance and the serious effects of the coronavirus on the general populace. COVID-19 is a serious psycho-social and economic threat that makes it difficult for a region to pursue sustainable development. It has been challenging to assess the full impact of COVID-19 since it first emerged. The unique coronavirus will persist for a longer period of time after it has passed. (World Health Organization WHO, [2019](#)).

Scope Strengths and limitations of the study:

The scope of the research endeavor outlines the parameters that the study will operate within and describes the depth to which the research area will be investigated. Therefore, this focuses on the overall situation caused by the recent pandemic of novel coronavirus COVID-19 in Pakistan in general and in Balochistan province as a whole. However, Quetta, is capital city of Baluchistan, is selected for primary data collection, and all other district other than the capital city of the province are also included for primary data collection, and those districts' headquarter are proposed area of investigation for this research study. This study assesses current and past experiences of coronavirus in general and COVID-19 in particular. This research study is an effort to assess how different classes have survived this recent pandemic and also tries to explain different perceptions and attitudes toward COVID-19 in the province. This study primarily focuses on the psycho-social and economic hardships of common people in lockdown situations. This study is limited to only studying the psycho-social and economic impact of COVID-19 and what policies and

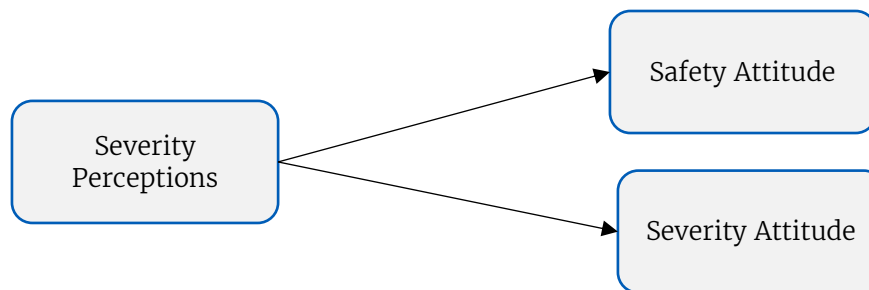
strategies are made by the government of Pakistan and the provincial government to tackle the challenges that emerged in this global pandemic in this region.

Strengths of this research study include a large and diverse sample size, which provided sufficient control to test the hypothesis with confidence. Furthermore, the study was conducted and completed during the lockdown period when this novel coronavirus pandemic had first begun in the world. This provided significant insights into the initial phase of an outbreak of the pandemic. Hypothesis Development:

H1: Perceptions about the severity of COVID-19 are positively associated with attitude towards safety measures.

H2: Perceptions about severity are positively associated with attitude towards getting vaccination.

Conceptual Framework



Research Methodology

Research Design

This research is correlational and quantitative in nature. To obtain an overall image of things as they stand at the time of study, a cross-sectional study design has been selected.

Measures

Since already developed scales in the context of the current study were not sufficiently available, new scales were constructed specifically for the current study. Content validity is used to evaluate the quality of research instruments. It usually indicates how well a method, technique, and instrument test and measure something. Content validity refers to the accuracy of a measure and the content of the instrument. The research data's content validity and the study methods used were its main priorities. The material that serves as the foundation for a study's findings must be accurate and meaningful in order for the tools to be considered valid. Additionally, it aids in evaluating the study's findings, which are gathered from an analysis of actual facts related to the research topic. Since the instruments were built rather than modified, the researcher in this study aimed to improve them. Before beginning the real data collection procedure, the questionnaires were piloted and pre-tested. Following the correction and modification of the instrument's flaws, 30 randomly chosen people from the general population were used for the piloting and pre-testing. Additionally, certain foreign-trained research scientists who were pros in the subject were approached for their thoughts and to raise the caliber of the equipment. The researcher was able to improve the instrument by pre-testing and expert consultation, which ultimately guaranteed the validity of the study under inquiry.

Reliability of the Constructed Measures

The perceptions about the severity of COVID-19 were measured with an 11-item scale. A sample item for the scale is "Covid-19 has a higher rate of mortality". The Cronbach's alpha for the 11-item scale measuring perceptions about the severity of COVID-19 was .792, showing a high level of reliability.

The attitude towards safety measures was also measured with an 11 developed specifically for the current study. A sample item for measuring safety is "wearing masks along with other safety measures like physical distancing are effective ways to protect someone from this virus." The Cronbach's alpha for the scale of safety was 0.763, showing a high level of reliability for the scale.



Finally, the attitude towards vaccination was measured through an 11-item scale developed for the current study. A sample item from the scale is “Vaccines are effective in limiting the spread of this pandemic.” The Cronbach’s alpha for the scale was .873, showing a very high level of reliability.

Sampling

We used the convenience sampling method to collect data from a sample of 368 respondents within the province of Balochistan. The questionnaires were developed and designed on Google Forms and distributed among the participants through an online link. All the responses were kept strictly confidential and used only for the current research as grouped data. Since the data was collected during the ongoing pandemic, online questionnaires were the most suitable option available for the collection of data at that time.

Results and Analysis

Descriptive Statistics and Correlations

Results of Descriptive and Correlation Analysis

Table 1

Descriptive and Correlation Analysis

	1	2	3
	Severity Perceptions	Safety Attitude	Vaccination Attitude
1. Severity Perceptions	.790		
2. Safety attitude	.440**	.763	
3. Vaccination attitude	.222**	.503**	.873
Mean	3.59	3.85	3.64
Standard Deviation	.586	.492	.649

* $p < .05$, ** $p < .01$.

Table 1 provides a summary of the correlation analyses' findings along with mean and standard deviations. The top row of each column of the appropriate variable contains diagonally aligned Cronbach's alpha reliability measures for each scale. The mean and standard deviations towards safety attitude, vaccinations, and severity perception were 3.59 (.586), 3.85 (.492), and 3.64 (.649), respectively.

As expected by the conceptual framework, the correlation between severity perceptions and safety attitude was found to be significantly Positive ($r = .440, p < .01$). The relationship between severity perceptions and attitude towards vaccination was also found to be positive ($r = .222, p < .01$). Moreover, the correlation between safety attitude and vaccination attitude was also positive ($r = .503, p < .01$).

Results of Regression Analysis

Regression analysis was used to assess the impact of the variables under consideration on each other in order to empirically test the hypothesis. The regression analysis produced the following results:

Table 2

Variable	Safety attitude (Dependent Variable)		
	Effect (Unstandardized)	Standard Error	Confidence Intervals Lower Upper
Independent Variable			
Severity Perceptions	.370**	.039	.292 .447
<i>Effect of severity perception on safety attitude</i>			
	.193		
F	87.704		

* $p < .05$, ** $p < .01$.

The results of the regression analysis to test the main effects of severity perceptions on attitude towards

safety measures are presented in Table 2. According to the findings, severity perceptions had a positive impact on safety attitude ($\beta = 0.370, p < .01$), implying that hypothesis 1 was supported. It was found that severity perceptions explained a significant proportion of the total variation in attitude towards safety, as shown by $R^2 = 0.193$.

Table 3

Variable	Vaccination attitude (Dependent Variable)			
	Effect (Unstandardized)	Standard Error	Confidence Intervals Lower	Confidence Intervals Upper
Independent Variable				
Severity Perceptions	.246**	.056	.135	.357
R ²	.049			
F	19.054			

* $p < .05$, ** $p < .01$.

The results of the regression analysis to test the main effects of severity perceptions on attitude towards vaccination are presented in Table 3. According to the findings, severity perceptions had a positive impact on vaccination attitude ($\beta = 0.246, p < .01$), implying that hypothesis 2 was also supported. It was found that severity perceptions explained a significant proportion of the total variation in attitude towards vaccination, as shown by $R^2 = 0.049$.

Discussion

The COVID-19 pandemic has had profound effects on societies around the globe. This research article aimed to explore the impact of severity perceptions on vaccine attitude and attitude toward safety measures. COVID-19 on various aspects of life, including public policy, public health, the economy, and psycho-social dynamics. The analysis revealed that COVID-19 presented significant challenges to the public health system of the country in general and the province in particular. The rapid spread of the virus strained healthcare resources and overwhelmed hospitals in many regions of the country. The implementation of preventive measures such as mask-wearing, hand hygiene, physical distancing, and lockdowns played a crucial role in mitigating the transmission of the virus. Additionally, testing, contact tracing, and vaccination campaigns were instrumental in controlling the outbreak of disease.

This paper aims to assess the relationship and the correlation between severity perceptions and safety attitudes towards vaccination. The finding of this paper shows that there was a relationship found to be significantly Positive ($r = .440, p < .01$). Meanwhile, the relationship between severity perceptions and attitude towards vaccination was also found to be positive ($r = .222, p < .01$). Moreover, the correlation between safety attitude and vaccination attitude was also positive ($r = .503, p < .01$). The finding of this study will help expand knowledge and respond to call for further research on relationship between safety measure and severity perception attitude towards vaccination.

According to the findings of Table 2. severity perceptions had a positive impact on safety attitude ($\beta = 0.370, p < .01$), implying that hypothesis 1 was supported. It was found that severity perceptions explained a significant proportion of the total variation in attitude towards safety, as shown by $\Delta R^2 = 0.193$.

According to the findings of Table 3, severity perceptions had a positive impact on vaccination attitude ($\beta = 0.246, p < .01$), implying that hypothesis 2 was also supported. It was found that severity perceptions explained a significant proportion of the total variation in attitude towards vaccination, as shown by $\Delta R^2 = 0.049$.

Conclusion

In conclusion, the COVID-19 pandemic has had a profound and lasting impact on society. It has strained the healthcare systems of Pakistan in general and Balochistan in particular, caused economic upheaval,



and disrupted the country's social dynamics and worldwide. The implementation of public health measures, specific advancements in vaccine development, and the resilience of communities have played critical roles in mitigating the effects of the pandemic.

References

- Al-Hanawi, M. K., Angawi, K., Alshareef, N., Qattan, A. M., Helmy, H. Z., Abudawood, Y., Alqurashi, M., Kattan, W. M., Kadasah, N. A., Chirwa, G. C., & Alsharqi, O. (2020). Knowledge, attitude and practice toward COVID-19 among the public in the Kingdom of Saudi Arabia: A cross-sectional study. *Frontiers in Public Health*, 8. <https://doi.org/10.3389/fpubh.2020.00217>
- Guidry, J. P., Laestadius, L. I., Vraga, E. K., Miller, C. A., Perrin, P. B., Burton, C. W., Ryan, M., Fuemmeler, B. F., & Carlyle, K. E. (2021). Willingness to get the COVID-19 vaccine with and without emergency use authorization. *American Journal of Infection Control*, 49(2), 137-142. <https://doi.org/10.1016/j.ajic.2020.11.018>
- Khan, M., Adil, S. F., Alkhathlan, H. Z., Tahir, M. N., Saif, S., Khan, M., & Khan, S. T. (2020). COVID-19: A global challenge with old history, epidemiology and progress so far. *Molecules*, 26(1), 39. <https://doi.org/10.3390/molecules26010039>
- Khasawneh, A. I., Humeidan, A. A., Alsulaiman, J. W., Bloukh, S., Ramadan, M., Al-Shatanawi, T. N., Awad, H. H., Hijazi, W. Y., Al-Kammash, K. R., Obeidat, N., Saleh, T., & Kheirallah, K. A. (2020). Medical Students and COVID-19: Knowledge, Attitudes, and Precautionary Measures. A Descriptive Study From Jordan. *Frontiers in Public Health*, 8. <https://doi.org/10.3389/fpubh.2020.00253>
- Loretto, L., Mastrangelo, G., Stepien, J., Grabowski, J., Meloni, R., Piu, D., Michalski, T., Waszak, P. M., Bellizzi, S., & Cegolon, L. (2021). Attitudes and perceptions of health protection measures against the spread of COVID-19 in Italy and Poland. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.805790>
- Mahmood, S., Hussain, T., Mahmood, F., Ahmad, M., Majeed, A., Beg, B. M., & Areej, S. (2020). Attitude, perception, and knowledge of COVID-19 among general public in Pakistan. *Frontiers in Public Health*, 8. <https://doi.org/10.3389/fpubh.2020.602434>
- Omoush, O. A., Abushosha, G. M., Oweidat, I. A., & Nashwan, A. J. (2023). Work stressors and intention to leave among Jordanian nurses during COVID-19: A cross-sectional study. <https://doi.org/10.21203/rs.3.rs-2481399/v1>
- Vannabouathong, C., Devji, T., Ekhtiari, S., Chang, Y., Phillips, S. A., Zhu, M., Chagla, Z., Main, C., & Bhandari, M. (2020). Novel coronavirus COVID-19. *Journal of Bone and Joint Surgery*, 102(9), 734-744. <https://doi.org/10.2106/jbjs.20.00396>
- World Health Organization WHO. (2019). Retrieved from Coronavirus disease (COVID-19): How is it transmitted?: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/coronavirus-disease-covid-19-how-is-it-transmitted?gclid=Cj0KCQjwmtGjBhDhARIsAEqfDEfq3IqlySelEJa6HgAP644VodXo2dvtNBo9uJ6x5RsrCkM3RV426QAaAlWoEALw_wcB