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Mediating and Moderating Effects Perception of Vulnerability to Adverse Effects of the Influence of a COVID-19 Vaccine or COVID-19 Concern as well as Vaccination Intention among Adults in their 20s

Hye-Gyeong Cha[1] and Hee-Joo Lee[2]
[1](Namseoul University)
hgcha@nsu.ac.kr
[2](Sangmyung University)
foremost@smu.ac.kr

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ABSTRACT

Identifying variables was the goal of this investigation. Affecting Plans to vaccinate against COVID-19 and to investigate the mediating and moderating effects of perception of vulnerability to adverse effects of COVID-19 vaccines examines the connection between apprehension over COVID-19 as well as vaccination intentions among Korean adults in their 20s. Participants in this study included 161 South Korean 20-something adolescents who were surveyed using an online questionnaire. COVID-19 vaccination intentions differed significantly by gender ($t = 10.291$, $p = .001$), occupation ($t = 5.430$, $p = .021$), searching for information ($t = 6.455$ $p = .012$), number of vaccinations ($t = 22.671$), $p < .001$), the dread of COVID-19 ($\beta = .224$, $p = .002$). COVID-19 vaccination intentions in the participants were significantly positively correlated with and apprehension of COVID-19 ($r = .251$, $p < .01$) as well as imagined vulnerability to the vaccine's unfavorable outcomes ($r = .362$, $p < .001$). Perceived sensitivity to COVID-19's negative consequences vaccines moderated the connection among COVID-19 anxiety as well as COVID-19 vaccination intentions ($b = -.036$, 95% CI [-0.07, -0.01], $t = - 2.473$, $p = .015$), however, it had no mediating consequence ($b = -0.02$, 95% CI [-0.06, -0.02]). Vaccination intentions were significantly higher in those with low ($b = 0.264$, 95% CI [0.143, 0.385], $t = 4.316$, $p < .001$) and average ($b = 0.191$. 95% CI [0.197, 0.286], $t = 3.993$, $p < .001$) perceived susceptibility to the adverse effects of COVID-19 vaccines. Therefore, it is necessary to share the country's reliable information and adopt appropriate follow-up measures for the adverse effects of COVID-19 vaccines that can lower perceived susceptibility to the vaccine's adverse effects among adults in their 20s. In addition, the recommendations for further studies the link between aversion to COVID-19 or vaccinations plus various factors distressing COVID-19 vaccination intentions according to age, and further studies regarding factors affecting estimated sensitivity to COVID-19's detrimental consequences and ways to control them are also suggested.

Keywords: fear of COVID-19, Purpose of the COVID-19 vaccination and estimated vulnerability to its side consequences.

1. NECESSITY OF THIS STUDY

Corona virus sickness has been designated by the World Health Organization (WHO) for 2019. (COVID-19), brought on by Coronavirus-2, severe acute respiratory syndrome (SARS-CoV-2) by droplet transmissions, an epidemic in March 2020. Consequently, vaccines were presented as the most effective means so as to stop the expansion and growth of COVID-19, and the importance of herd immunity thus emerged (Koirala, Joo, Khatami, Chiu, & Britton, 2020). In other words, vaccination is one of the preventive measures used to counter a disease through herd immunity (Choi, 2020). After the H1N1 influenza vaccination, the prevalence of HINI influenza cases rapidly decreased, reducing the HINI influenza pandemic from the pandemic crisis stage to the alert stage (Lee, Shin, Jun & Lee, 2010). From the experience of such a precedent, it was determined that vaccination was the most practical method for creating herd immunity (Jung & Kim, 2020).

Thus, South Korea began immunizing against COVID-19 on February 26, 2021, with the goal of vaccinating more than 80% of the total population (Korea Disease Control and Prevention Agency, 2021). In addition, the government authorities planned immunity formation for 60–70% of the total population, as well as a safe and orderly recovery of daily life (Ministry of Health and Welfare, 2021a). Prior to the start of the COVID-

19 vaccination in this country, the proportion of those with vaccination intentions was 61.4% (Ministry of Health and Welfare, 2021b), although it gradually increased. As of April 2022, the proportions of those initially, secondly, or 3rd vaccinations it was stated that 87.6%, 86.6%, and 63.8%, respectively (Ministry of Health and Welfare, 2022).

Although, the proportion of those with vaccination intentions was the lowest among adults in their 20s (Korea Disease Control and Prevention Agency, 2021; Wang & Kim, 2021). In particular, college students had low vaccination intentions due to anxiety about the vaccines (Bae & Kim, 2021), and such low vaccination intentions among those in their 20s, who are the most active, led them to the age group Nevertheless, based on the largest number of COVID-19 instances February 2022. Moreover, in foreign countries, the rates of vaccination intentions and delays in vaccinations were also the lowest among those in their 20s (Fisher, Bloomstone, Walder, Crawford &Mazor, 2020; Lazarus, Ratzan, Palayew, Gostin& El-Mohandes, 2021; Machida, Nakamura, Kojima, Saito & Inoue, 2021). People may hesitate or refuse to receive vaccination due to distrust in the effects of the vaccines and concerns over serious adverse effects of the vaccines, which can lead to antipathy towards the government's infectious disease response policies, causing social conflicts (Fancourt, Steptoe & Wright, 2020; Fisher, Bloomstone, Walder, Crawford &Mazor, 2020). Therefore, it is necessary to identify factors negatively affecting vaccination intentions in young adults in their 20s.

Meanwhile, people are hesitant to get vaccinated due to COVID-19 vaccine safety concerns. As of August 2020, the rate of negative responses to vaccination intentions was reported at 54% (Wang & Kim, 2021). A close examination of previous studies regarding the factors affecting vaccination intentions among adults included sensitivity, perceived barriers, and media exposure (Wang & Kim, 2021), whereas the factors affecting vaccination intentions among nursing college students included fear of the COVID-19 vaccine and either being present or not underlying diseases (Cha & Lee, 2022), and the factors affecting vaccination intentions among university students included confidence, perceived constraints, calculation, and collective responsibility (Bae & Kim, 2021).At contrast, COVID-19 anxiety or of COVID-19 and the vaccines was reported to be high in adults (Bae, 2022) and fear of COVID-19 was reported to affect health attitudes and phobias (Seong, Kang, Kim & Lee, 2021). In addition, the perceived risk and trust in science have been reported to significantly affect vaccination intentions and vaccination intentions in the event of adverse effects (Kim, Heo, Lim & Park, 2017; Wang & Kim, 2021), indicating a tight connection exists among the dread of COVID-19 as well as vaccination intentions.

Meanwhile, it was reported that perceived risks and concerns associated with COVID-19 among Finnish citizens had a decisive influence on vaccination intentions (Karlsson, Soveri, Lewandowsky, Karlsson &Antfolk, 2021). Even in Korean adults, perceived susceptibility to COVID-19 was reported to affect vaccination intentions (Wang & Kim, 2021). It was also reported that the more people perceived that they would be susceptible to contamination with COVID-19, the more probable they were to get immunized to avoid the risk of COVID-19 infection (Hong & An, 2022). However, studies regarding the effects of perceived susceptibility to the adverse effects of the COVID-19 vaccine on the relationship between fear of COVID-19 and vaccination intentions are scarce.

Therefore, this investigation aims to research the mediating or moderating Implications of anticipated sensitivity to COVID-19 vaccination negative impacts on the connection between COVID-19 dread as well as COVID-19 vaccination intentions among adults in their 20s with low vaccination intentions and vaccination rate, and to provide basic data for improving herd immunity formation and for future studies regarding national health policies related to emerging infectious diseases.

2. METHODS

2.1. Study design

This observational investigation aims to examine the mediating or modulating effects of perceived vulnerability to COVID-19 vaccination adverse reactions on the association between COVID-19 fear and COVID-19 infection. vaccination intentions in men and women in their 20s in South Korea during the ongoing COVID-19 pandemic as of April 2022.

2.2. Participants

Participating in such study included men and women ages 20 to 30 from South Korea who are part of the target population for COVID-19 vaccination. When the numeral of participants necessary for such an investigation wascomputed using a median effect size (f2) =.15, a significance level α = .05, power = 1-β = .95, and 6 random predictors consuming the G*Power 3.1.9 programmed, the bare minimum participants obligatory for multiple regression analysis was calculated to be 146. With a 10% drop - out rate, there have been 161 registrants in all selected via the Internet using convenience sampling. Those who recognizing the significance of thisexamineas well as consented to take part. in it were surveyed using an online questionnaire, and data from 161 participants were finally analyzed.

2.3. Instruments

- Concern about COVID-19 - The dread of COVID-19 has been assessed utilizing Korean Ahorsu et alFCV-19S .'s (Fear of COVID-19 Scale) variant. Produced the basic version (2020). It was translated and tested for its accuracy or consistency by Seong et al. (2020). This tool is a 7-item 5-point range, with every item is rating scale 5-point Likert scale starting with “strongly disagree” = 1 point to “strongly agree” = 5 points. A higher rating corresponds to a greater fear of COVID-19. According to research by, the tool's accuracy was Cronbach's alpha =.87. Seong et al. (2020), and its reliability was Cronbach’s α = .87 in this investigation.
- Plans to protect against The COVID-19: COVID-19 virus vaccination aims refer to an individual’s intentions to get vaccinated with COVID-19 vaccines for the prevention of COVID-19. In this study, COVID-19 vaccination intentions were measured using 4 items, which were modified and supplemented by Hong (2022) from items used in a study by Witte et al. (1996). Every object was evaluated Using a Likert - type scale with a maximum score of 5, where 1 represents severely disapprove and 5" represents agree wholeheartedly. A higher score implies a greater desire to get the COVID-19 vaccine . The consistency of the tool was Cronbach’s α =.88 in a study by Hong (2022), and itsCronbach's alpha for such research was.76.
- Perceived vulnerability to a negative impact of the COVID-19 vaccination: Risk perception towards the detrimental effects of the COVID-19 vaccine relates to how susceptible someone feels they are likely to experience the unconstructive results of the COVID-19 vaccine. In this investigation , perceived vulnerability to the COVID-19 vaccine's complications was measured using a tool that was also used in a study by Hong (2022). This tool is on a 4-item, 5-point Likert strongly disagree = 1 point to strongly agree = 5 points on a measure. Inside the study of Hong (2022), this tool's dependability was Cronbach's alpha =.80, whereas during our investigation, it was Cronbach's alpha =.78

2.4. Data analysis

Utilizing SPSS WIN 25.0 and the Hayes SPSS PROCESS macro 4.0 tool, the gathered information wereanalysed.

- • The respondents' overall demographics, including their concern of COVID-19, COVID-19 vaccination intention and Analysis on estimated consequences to the COVID-19 vaccine's negative consequences occurred often and percentage, mean and standard deviation.
- Variations in COVID-19 vaccination intentions based on the fundamental traits of the participants were scrutinized using an independent A post hoc analysis, one-way ANOVA, or t-test were carried out. using the Scheffé test.
- • Possible connection between COVID-19 immunization and COVID-19 dread intentions, and perceived sensitivity to the COVID-19's detrimental consequences vaccine in the participants wasutilizing Pearson's association values to examine.
- • Affecting variables COVID-19 vaccination aims in the participants were analyzed using stepwise multiple regression.

- The mediating and moderating effects of the perceived susceptibility to the adverse effects of the COVID-19 vaccine about the connection between the dread of COVID-19 as well as plans to vaccinate against COVID-19 participants were analyzed using Hayes PROCESS models 1 and 4. Publisher: Beijing Jiaotong University.

3. RESULTS

3.1. Dread of COVID-19 as well as plans to vaccinate against COVID-19

There was a significant difference in COVID-19 vaccination intentions according to gender (t = 10.291, p = .001), occupation (t = 5.430, p = .021), searching for information (t = 6.455 p = .012), and number of vaccinations (t = 22.671, p < .001) among the fundamental traits of the participants (Table. 1).

Table. 1: COVID-19 vaccination intentions according to the generic participation attributes (N=161)

Characteristics	Categories	n (%), Mean ± SD	Vaccination intentions	
			Mean ± SD	t or F(*p*) Scheffe
Gender	Male	54 (32.5)	11.07 ± 3.46	10.291 (.001)***
	Female	107 (64.5)	12.99 ± 3.63	
Age (years)	Mean age	23.22 ± 2.045		
Education level	High school	11 (6.6)	12.63 ± 2.41	0.072 (.789)
	University	150 (90.4)	12.32 ± 3.76	
Occupation	Student	127 (76.5)	12.69 ± 3.75	5.430 (.021)*
	Professionals and others	34 (20.5)	11.05 ± 3.12	
Religion	Yes	58 (34.9)	12.48 ± 3.81	0.121 (.728)
	No	103 (97.0)	12.27 ± 3.62	
Cohabitant	Living alone	29 (17.5)	11.86 ± 3.54	0.614 (.434)
	≥ 2 cohabitants	132 (79.5)	12.34 ± 3.71	
Information search	Yes	140 (84.3)	12.62 ± 3.67	6.455 (.012)*
	No	21 (12.7)	10.47 ± 3.20	
Number of vaccinations	1st,2nd vaccinations	49 (29.5)	10.38 ± 3.61	22.671 (< .001)***
	3rd vaccination	112 (67.5)	13.20 ± 3.38	
Experience of adverse effects	Yes	95 (57.2)	12.28 ± 3.52	0.069 (.793)
	No	66 (39.8)	12.43 ± 3.92	
Experienced adverse effects	None	65 (39.2)	12.52 ± 3.89	0.145 (.865)
	Local reactions	36 (21.7)	12.33 ± 3.64	
	Systemic relations	60 (36.1)	12.16 ± 3.50	

* $p < .05$, ** $p < .01$, *** $p < .001$

3.2. COVID-19 vaccination aspirations, COVID-19 dread, or estimated sensitivity to the vaccine's side effects

The mean score for COVID-19 vaccination intentions was 12.34 ± 3.68 points (range: 4–20 points), the Their overall average for COVID-19 phobia was18, 90 ± 6.35 points (range: 7–35 points), and the mean score for the perceived sensitivity to COVID-19 vaccination side effects were 15.91 ± 2.70 points (range: 4–20 points) (Table. 2).

Table. 2: COVID-19 vaccination intentions, fear of COVID-19, and perceived susceptibility to the adverse effects of the COVID-19 vaccine (N=161)

Variables	Range	Min	Max	Mean ± SD
COVID-19 vaccination intentions	4–20	4.00	20.00	12.34 ± 3.68
Fear of COVID-19	7–35	7.00	35.00	18.90 ± 6.35
Perceived susceptibility to COVID-19 vaccine adverse effects	4-20	6.00	20.00	15.91 ± 2.70

3.2. Correlations between COVID-19 vaccination intentions, apprehension about COVID-19 and a sense of vulnerability to the unfavorable outcomes of the COVID-19 vaccine

COVID-19 vaccination intentions in the participants had a strong link between the anxiety and the positively of COVID-19 ($r = .251$, $p < .01$), and the fear of COVID-19 had a significant positive correlation with the perceived susceptibility to the adverse effects of COVID-19 vaccine ($r = .362$, $p < .001$) (Table. 3).

Table. 3: Correlation between general characteristics and key variables (N=161)

Variables	COVID-19 vaccination intentions	Dread of COVID-19	Perceived susceptibility to COVID-19 vaccine adverse effects
COVID-19 vaccination intentions	1		
Fear of COVID-19	**.251****	1	
Perceived susceptibility to COVID-19 vaccine adverse effects	.001	.362***	1
$^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$			

3.3. 3.3. Factors influencing people's desire to vaccinate against COVID-19 the participants

Stepwise multiple regression was performed to identify elements affecting COVID-19 vaccination intentions in the participants using the fear of COVID-19, which was noticeably correlated with COVID-19 vaccination intentions, as well as gender and the number of vaccinations, which showed a significant difference in COVID-19aspirations for vaccination, as dummy variables, and then entering themas autonomous constants. The results of the stepwise a number of regressions revealed that the number of vaccinations ($\beta = -.221$, $p < .001$), fear of COVID-19 ($\beta = .224$, $p = .002$), and gender ($\beta = -.169$, $p = .021$) affectedRespondents' plans to vaccinate against COVID-19. In other words, A greater level of COVID-19 anxiety was linked to higher COVID-19 vaccination intentions. With regard to the general characteristics, those who received only the first and second vaccinations and male participants had lowerthe aim to vaccinate against COVID-19, as explanatory power of these variable quantity was 19.9% (Table. 4).

Table. 4: Factors affecting intent to vaccinate against COVID-19 (N=161)

Variable	B	S. E	β	t	p
(Constant)	11.142	.883		12.618	<.001
No. of vaccinations =1st, 2nd vaccinations	-2.638	.569	-.221	-4.634	<.001
Fear of COVID-19	.130	.041	.224	3.124	.002
Gender = male	-1.312	.561	-.169	-2.336	.021
Adjusted $R^2 = 0.199$, $F(p) = 14.290(< .001)$ $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$					

3.4. Mediating effects of the perceived susceptibility to the adverse effects of the COVID-19 vaccine on the the connection between aversion with COVID-19 vaccination intentions in the participants

There was a noteworthydirect influence on the connection between the dread of COVID-19 and COVID-19 vaccination intentions as the outcome variable (b = 0.17, p = .001). However, there was no indirect effect of perceived susceptibility to the adverse effects of the COVID-19 vaccine on the relationship between dread of COVID-19 and COVID-19 vaccination intentions (b = -0.02, 95% CI [-0.06, -0.02]) (Figure. 1).

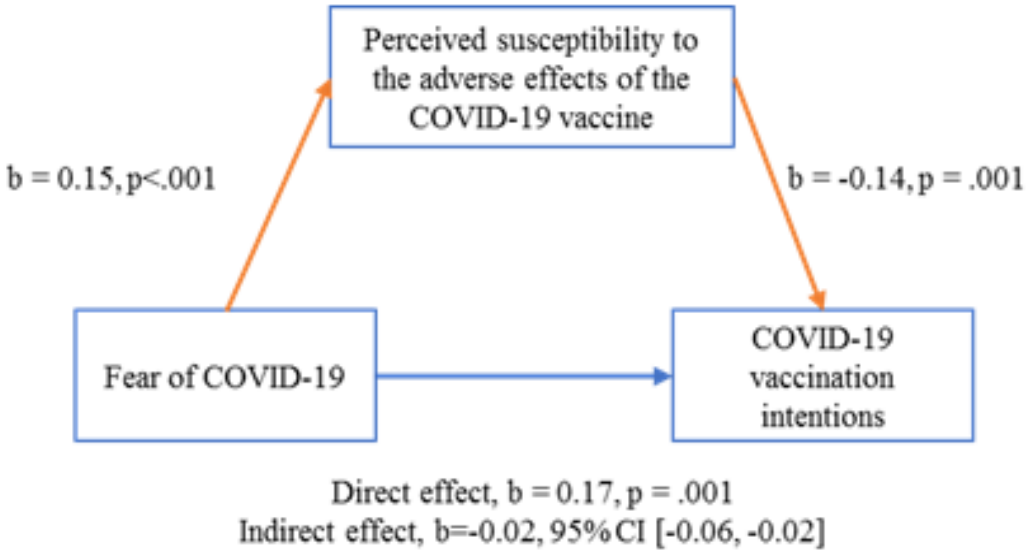

Fig. 1: Mediation effects of the perceived susceptibility to the adverse effects of the COVID-19 vaccine on the connection between COVID-19 vaccination aspirations with COVID-19 fears in the participants (N=161)

3.5. Verification of the moderating and conditional effects of the perceived susceptibility to the adverse effects the impact of the COVID-19 vaccination on the connection seen between dread of COVID-19 vaccination intentions

Table. 5 reveals that the perceived susceptibility of the adverse effects of the COVID-19 vaccine moderated the relationship between the fear of COVID-19 and COVID-19 vaccination intentions (b = -.036, 95% CI [-0.07, - 0.01], t = -2.473, p = .015).

Table. 5: Verification of the moderating and conditional effects of the perceived susceptibility to the adverse effects of the COVID-19 vaccine about the connection between COVID-19 immunisation with COVID-19 concern intentions(N=161)

Variable	B	S. E	t	*p*
(Constant)	1.314[-7.42, 10.05]	4.423	0.297	.767
A: Fear of COVID-19 (centered)	.771[0.28, 1.26]	0.249	3.098	.002
B: Perceived susceptibility to the adverse effects of the COVID-19 vaccine (centered)	.477[-0.06, 1.02]	0.273	1.747	.082
A*B	-.036[-0.07, -0.01]	0.015	-2.473	.015
R^2 = 0.107, F(*p*) = 6.26(< .001) $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$				

As the interactions between the fear of COVID-19 and the alleged vulnerability to the adverse effects of the COVID-19 vaccine were significant, the conditional effects of the perception sensitivity to the COVID-19 vaccine's adverse effects were determined by selecting specific values for the moderating variable (-1SD, Mean, +1SD) using the SPSS Process macro (Hayes &Matthes, 2009).

Low perceived susceptibility to the negative consequences of COVID-19 vaccine (b = 0.264, 95% CI [0.143, 0.385], t = 4.316, p < .001), and the average perceived susceptibility to negatively impacting the COVID-19 vaccination (b = 0.191. 95% CI [0.197, 0.286], t = 3.993, p < .001) in the participants had a significantly positive impact of the COVID-19 vaccine intentions, whereas high estimated sensitivity to the COVID-19 vaccine's side effects (b = 0.083, 95% CI) [-0.032, 0.197], t = 1.423, p = .157) in the participants had no effect on COVID-19 vaccination intentions (Table. 6).

Table. 6: Verification of the conditional effects of the perceived sensitivity to harmful effects of the COVID-19 vaccine (N=161)

		Perceived susceptibility to the adverse effects of the COVID-19 vaccine	**b**	**SE**	**t**	***p***	**LLCI**	**ULCI**
COVID-19 vaccination intentions	-1SD	14.00	0.264	.061	4.316	< .001***	.1431	.3845
	Mean	16.00	0.191	.048	3.993	< .001***	.1966	.2858
	+1SD	19.00	0.083	.058	1.423	.157	-.0320	.1969

****p < 0.001, **p < 0.01*

4. DISCUSSION

This investigation looked at the mediating or moderating effects of the perceived susceptibility to the adverse effects of the COVID-19 vaccine on the relationship between the concern of COVID-19 as well as COVID-19 intention to vaccinate among Korean adults in their 20s. The findings of this concequences include discussed as following:

This study originates that women and university students had significantly higher COVID-19 vaccination intentions compared to men and employees, respectively. In addition, higher dread of COVID-19 was allied with higher vaccination intentions. Previous studies involving university students (Bae, Kim, 2021; Jung, 2022; Hong, Lee, Lee, Heo, & Yoon, 2022) have reported that There was no discernible variation in COVID-19 vaccination intentions between genders, and a study regarding booster vaccination intentions in adults reported that booster vaccination intentions were significantly higher in female adults (Noh, Son, Yoo, & Lee, 2022). Despite that fact that it is challenging to properly correlate the findings of this research with earlier studies involving university students and adults, higher COVID-19 vaccination intentions in women are attributed to a greater desire among women to reduce anxiety and stabilize their lives. In addition, there were significantly higher COVID-19 vaccination intentions among those who received the third vaccination compared to those who received only the first and second vaccinations. This was thought to be because if vaccinations were repeated without any special adverse effects, individuals might expect that there would be no specific adverse effects associated with vaccinations in the future. Therefore, when individuals have a high fear of COVID-19 infection, they may have higher COVID-19 vaccination intentions to lower anxiety and maintain a stable life. In addition, COVID-19 vaccination intentions were significantly higher in those searching for information. This can be presumed to be because those with a high fear of COVID-19 infection might search for more information, and such attitudes might lead toPlans to vaccinate against COVID-19.

Meanwhile, according to a research, COVID-19 anxiety significantly positive relationship with COVID-19 vaccination intentions and perceived sensitivity to the negative consequences of the COVID-19 vaccine. In addition, perceived susceptibility to the adverse effects of the COVID-19 vaccine significantly moderated the connection between the fear of COVID-19 and COVID-19 vaccination intentions, but there was no mediating effect. A recent study by Hong & An (2022) reported that reported vulnerability to COVID-19 as well as the actual vulnerability to its harmful consequences had a mediating effect, while another study by Seong, Kang, Kim & Lee (2021) stated that the fear of COVID-19 indirectly affected phobia through health attitudes, which was similar to the results of this study. Therefore, it was considered necessary to verify various influencing factors related to

COVID-19 in the changing COVID-19 scenario. The results of this study are significant as they found that the The link between anticipated vulnerability to the detrimental consequences of COVID-19 vaccinations and the fear of COVID-19 and COVID-19 vaccination intentions among adults in their 20s, whereas there was no mediating effect on The connection between COVID-19 phobia with vaccination intentions in them.

This investigation also found that COVID-19 vaccination intentions were significantly higher in those with low or averageperception sensitivity to the COVID-19 medication's side effects, which is in line with the results of a previous study by Karlsson et al. (2021), who reported that perceived risks and concerns over COVID-19 affected vaccination intentions, while the results of another study reported that the perceived susceptibility affected vaccination intentions in the event of adverse effects (Wang & Kim, 2021). These results presumably suggest that when they have COVID-19 infection or vaccine adverse effects, adults in their 20s are less likely to progress to a critical condition and that they have higher information-searching skills and thus have relatively lowerperceived sensitivity to COVID-19 vaccination side effects. On the contrary, if they have a high perceived sensitivity to COVID-19's negative effects vaccines, they may presume that the contrary effects of COVID-19 vaccines may be severe, thereby inevitably lowering their vaccination intentions. Therefore, it is important to share reliable information for the country and to adopt appropriate follow-up measures for the adverse effects of COVID-19 vaccines that can lower the perception of vulnerability to the vaccine's side effects among adults in their 20s.

Interpreting the findings of this study may be difficult given that studies on COVID-19 vaccines have been ongoing for the past two years, and the COVID-19 control guidelines are changing as a result of the implementation of the fourth COVID-19 immunization drive. However, various related follow-up studies should be conducted.

Based on thefindings of this research, our suggestions are following:

Initially, it is suggested that future studies investigate the relationship between various factors affecting COVID-19 vaccination intentions according to the number of COVID-19 vaccinations and age.

Second, it is recommended that future studies need to be conducted to identify factors affecting those listed below: vaccines and ways to control them.

5. CONCLUSION

This study demonstrated that the alleged vulnerability to the adverse effects of COVID-19 vaccines among adults in their 20s with low vaccination intentions and vaccination rate had a moderating effect on the Connection among COVID-19 phobia as well as COVID-19 vaccination intentions but had no mediating effect. In addition, COVID-19 vaccination intentions were significantly higher in those with low or average perceived sensitivity to COVID-19's negative consequences vaccines. Therefore, to lower the estimated sensitivity to the COVID-19 vaccine's side special effects among adults in their 20s, it is imperative that the country must share reliable information and take appropriate follow-up measures to counter the adverse effects of COVID-19 vaccines. Further studies such as the verification of various influencing factors are also required.

6. REFERENCES

[1] Ahorsu, D. K., Lin, C. Y., Imani, V., Saffari, M., Griffiths, M. D., &Pakpour, A. H. (2020). The fear of COVID-19 scale: development and initial validation. International journal of mental health and addiction, 1-9.

[2] Bae, N. R. (2022). A Study on COVID-19 Fear, Vaccine Acceptance, and Quality of Life. Journal of The Korea Convergence Society, 13(1), 253-259.

[3] Bae, S. Y., & Kim, H. J. (2021). Influencing Factors of COVID-19 Vaccination Intention among College Students: Based on Andersen's Model. Journal of Korean Public Health Nursing, 35(3), 384-400.

[4] Cha, H. G., & Lee, H. J. (2022). Factors influencing Nursing Students' COVID-19 Vaccination Intentions. Journal of Korea Society for Wellness, 17(2), 441-447.

[5] Choi, E. K. (2020). Ethical debates surrounding the development of vaccines during COVID-19 pandemic. Biological Ethics and Policy, 4(2), 1-18.

[6] Fancourt, D., Steptoe, A., & Wright, L. (2020). The cummings effect: Politics, trust, and behaviours during the COVID-19 pandemic. Lancet, 396(10249), 464–465. doi:
[7] 10.1016/S0140-6736(20)31690-1.
[8] Fisher, K. A., Bloomstone, S. J., Walder, J., Crawford, S., Fouayzi, H., &Mazor, K. M. (2020). Attitudes toward a potential SARS-CoV-2 vaccine: A survey of U.S. adults. Annals of Internal Medicine, 173(12), 964-973. doi:10.7326/M20-3569.
[9] Hayes, A. F., &Matthes, J. (2009). Computational procedures for probing interactions in OLS and logistic regression: SPSS and SAS implementations. Behavior research methods, 41(3), 924-936.
[10] Hong, J. N., & An, S. T. (2022). COVID-19 media reports and vaccination intentions: Mediating effects of infection susceptibility and susceptibility to adverse effects of vaccination. Korean Journal of Journalism & Communication Studies, 66(1), 5-42.
[11] Hong, M. J., Lee, Y. J., Lee, K. M., Heo, J. H., & Yoon, N. H. (2022). Factors influencing COVID-19 vaccine booster shot in adults in their 20s-50s: Focusing on the health belief model. Korean Journal of Health Education Promot, 39(1), 1-10.
[12] Jung, H. U. (2022). Factors Influencing COVID-19 Vaccination Intention Among University Students (Unpublished master's thesis). Ajou University, Suwon.
[13] Jung, J. H., & Kim, O. J. (2020). Ethics of COVID-19 (SARS-CoV-2) vaccine research. Asia Pacific Journal of Health Law & Ethics, 13(3), 1-25.
[14] Karlsson, L. C., Soveri, A., Lewandowsky, S., Karlsson, L., Karlsson, H., Nolvi, S., ... Antfolk, J. (2021). Fearing the disease or the vaccine: The case of COVID-19. Personality and Individual Differences, 172, 1-11.
[15] Kim, Y. H., Heo, E. J., Lim, H. S., & Park, E. J. (2017). A study on the impact of health belief model on the prevalence of influenza vaccination intention. The Journal of Humanities and Social Science. 8(5), 149-166.
[16] Koirala, A., Joo, Y. J., Khatami, A., Chiu, C., & Britton, P. N. (2020). Vaccines for COVID-19: The current state of play. Paediatric Respiratory Reviews, 35, 43-49.
[17] Korea Disease Control and Prevention Agency. (2021). COVID-19 Vaccination November-December Implementation Plan. https://www.kdca.go.kr/index.es?sid =a2#serch.
[18] Lazarus, J. V., Ratzan, S. C., Palayew, A., Gostin, L. O., Larson, H. J, & El-Mohandes, A. (2021). A global survey of potential acceptance of a COVID-19 vaccine. Nature Medicine, 27, 225-228.
[19] Lee, D. H., Shin, S. S., Jun, B. Y., & Lee, J. K. (2010). National level response to pandemic (H1N1) 2009. Journal of Preventive Medicine and Public Health, 43(2), 99-104.
[20] Machida, M., Nakamura, I., Kojima, T., Saito, R., Nakaya, T., Hanibuchi, T., . . . Inoue, S. (2021). Acceptance of a COVID-19 vaccine in Japan during the COVID-19 pandemic. Vaccines, 9(3), 210. doi: 10.3390/vaccines9030210.
[21] Ministry of Health and Welfare. (2021). Vaccination against COVID-19 for daily recovery begins now.http://www.mohw.go.kr/react/search/search.jsp
[22] Ministry of Health and Welfare (2021). Seven out of ten non-vaccinated people are willing to get vaccinated. http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU _ID=04&MENU_ID=0403&page=4&CONT_SEQ=365875.
[23] Ministry of Health and Welfare. (2022). COVID-19 Vaccinations and Domestic Occurrence Status.http://ncov.mohw.go.kr/tcmBoardView.do?brdId=3&brdGubun=31&dataGubun=&ncvContSeq=6303&contSeq=6303&board_id=312&gubun=BDJ
[24] Noh, S. Y., Son, S. M. Yoo, K. H., & Lee, K. S. (2022). Factors influencing COVID-19 vaccine booster shot in adults in their 20s-50s: Focusing on the health belief model. Korean Journal of Health Education Promot, 39(1), 11-23.
[25] Rosenstock, I. M. (1974). Historical origin of the health belief model. Health Education Monographs, 2(4), 328-335.
[26] Seong, M. H., Kim, I. S., Kang, M. R., & Lee, M. S. (2020). Validity and Reliability Evaluation of the Korean Version of the Fear of COVID-19 Scales. Journal of Korea Society for Wellness, 15(4), 391-399.
[27] Seong, M. H., Kang, M. R., Kim, I. S., & Lee, M. S. (2021). Relationship Between Fear of COVID-19 in Adults, Health Attitudes, and Phobia. The Journal of Humanities and Social Sciences 21, 12(5), 63-374.

[28] Wang. J. S., & Kim. S. W. (2021). Analysis of Factors Influencing Intent to Vaccine for COVID-19. Proceedings of the spring academic presentation of the Korean Association for Policy Studies. 1-16.

[29] Witte, K., Cameron, K. A., McKeon, J. K., & Berkowitz, J. M. (1996). Predicting risk behaviors: Development and validation of a diagnostic scale. Journal of Health Communication, 1, 317-341.

[30] World Health Organization [WHO] (2020). Coronavirus disease (COVID-19) pandemic. https://www.who.int/emergencies/diseases/novel-coronavirus-2019.

[31] Hymavathi, K., and Rao, Sekhara K.S. (2020). Impact of Emotional Intelligence on Quality of Work Life: A study on Jute Industry in Andhra Pradesh and West Bengal, India. Textiles Trends, 63 (3), 25-30.

[32] Dash, K. K., Dash, S. S., and Satpathy, S. (2021). A Study on Gender Differences in Workplace Communication across Organizations. Rupkatha Journal on Interdisciplinary Studies in Humanities, 13 (3), 2021, 1-10. https://doi.org/10.21659/rupkatha.v13n3.15