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Understanding How People Make Decision about Preventive Behavior against COVID-19: A Case from Rural Areas in Western Iran

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ABSTRACT

The COVID-19 pandemic is the most significant health challenge humans experienced since World War 2, and its course can be affected by the stringency in undertaking individual and collective protective behavior. In this study, the health belief model structures in adopting the protective behaviors during the COVID-19 pandemic were assessed. A sample of 375 household heads living in the rural areas of Lorestan Province was selected through a multi-stage stratified and random sampling method. Structural equation modeling showed that knowledge, perceived susceptibility, perceived severity, self-efficacy, and cues to action affect the protective behaviors of Iranian rural households during COVID-19. Cues to action and knowledge were the most important predictors of protective behaviors in rural households. The results suggest the necessity to emphasize enhancing knowledge to highlight the negative impacts of COVID-19 and train rural households regarding the proper and effective preventive measures.

Keywords: COVID-19 pandemic, Lorestan Province, Perceived susceptibility, Protective behavior, Rural households.

INTRODUCTION

The COVID-19 pandemic is the most critical global health challenge that has caused severe economic, social, cultural, and even political impacts in different countries (Tisdell, 2020). Although the virus is less deadly than other emerging viruses of the Corona family, such as SARS and MERC, it has spread rapidly and developed specific pathogenic behaviors that have made it very difficult to control (Petrosillo *et al*., 2020). The outbreak of a new coronavirus outbreak (COVID-19) began in December in Wuhan Province, China, and spread worldwide in less than three months (Li *et al*., 2020). After outbreaks in china in late 2019, COVID-19 became widespread in countries such as Iran, South Korea, and Italy in late February and early March 2020 (Zhan *et al*., 2020). Iran is one of the countries that have been seriously hit by the COVID-19 pandemic (Jin, 2020). The Ministry of Health and Medical Education of Iran has verified 3,306,080 infected patients and 85,241 deaths in the country so far i.e. 07.07.2021. The COVID-19 has spread to most cities in Iran, but agriculture, businesses, and communities are particularly affected (Yazdanpanah *et al*., 2021).

Less access of rural residents to healthcare and social inequities have put them at greater risk of getting COVID-19. Any health insurance does not cover most rural people (Smith *et al*., 2020). Also, social coherence in rural areas is vital. People are involved in intense, lifelong mutual relationships and regularly travel outside their village for work or to buy necessities and inputs (Wiskerke, 2007; Beekman *et al*., 2009). Moreover, rural

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areas are geographically defined communities with a large proportion of older persons (Durazo *et al*., 2011; Heide-Ottosen, 2014), which increases the risk for severe illness from COVID-19. Therefore, disease control in rural areas is one of the main factors in preventing and managing an epidemic (Zhang and Xiang, 2020; Yazdanpanah *et al*., 2020). Several studies have shown that rural residents are less likely to engage in COVID-19-related protective behaviors (Floss *et al*., 2020; Lakhani *et al*., 2020; Lihua *et al*., 2020). Many rural households are unaware of the adverse effects of the COVID-19 on their life and do not believe that the disease may hurt their health. Lack of adequate knowledge of illness causes a negative feeling in people, and this can lead to a behavioral reaction that more complicates the control of the disease (Jose *et al*., 2020; Yap *et al*., 2010).

Therefore, preventive measures are essential to prevent and control the rapid spread of COVID-19 (Chakraborty and Maity, 2020). During the previous pandemics, studies found that individual perceptions and beliefs influence behavioral changes. Therefore, the individual and community take preventive measures and protective behavior when they have higher perceived effectiveness of practices, higher perceived threat of the disease, and more knowledge (Yap *et al*., 2010). Hence, identifying factors affecting behavior can help develop protective behaviors in epidemics. Iran is still one of the countries facing the most cases of COVID-19 infection and subsequent deaths (Rassouli *et al*., 2020), so, it is essential to study protective behaviors against COVID-19 in the country. Also, recent studies have focused more on urban areas and less on rural areas. This study aimed to fill that gap by providing helpful information to help support the health of rural communities. In addition, the Health Belief Model (HBM) behavioral model is a good choice for analyzing the conservative behavior of villagers against COVID-19. Therefore, the current study aimed to develop HBM behavioral model and assess the factors affecting protective behaviors of rural households against COVID-19.

MATERIALS AND METHODS

The Health Belief Model

This model was developed to determine why one group of people succeed in taking responsibility for protecting themselves from disease, and another group fails? The HBM was generally used to examine or explain health-related behaviors (Hjelm *et al*., 2002) and is a comprehensive model that can have an essential role in preventing diseases. This model is based on motivating people to take positive health actions (Lambert *et al*., 2017). The HBM contains the key five constructs: perceived susceptibility, perceived severity, perceived barriers, perceived benefits, and cues to action (Raheli *et al*., 2020; Zhao *et al*., 2012). Perceived susceptibility is an individual's belief that they are likely vulnerable and at risk for a disease. Perceived severity refers to perception regarding the seriousness of the illness and also negative consequences on performance in working and social life (Glanz *et al*., 2008).

Perceived benefits are defined as beliefs regarding the positive consequences related to behavior in reply to a true or perceived threat (Chandon *et al*., 2000). Perceived barriers refer to a person's feelings on the problems of doing a suggested health behavior (Glanz *et al*., 2008). According to Mirzaei *et al*. (2021) and Mohaddes *et al*. (2021), perceived barriers and perceived benefits were the critical determinants of COVID‑19‑preventive behaviors. People who have higher perceived benefits and lower perceived barriers to taking preventive measures are more likely to respond appropriately to COVID-19 (Yalew *et al*., 2021; Costa, 2020; Shewasinad Yehualashet *et al*., 2021).

Researchers later added the two influential constructs for increasing the explained behavior, comprising self-efficacy, and cue to action (Orji *et al*., 2012). The cues to action

include stimuli that speed up decision-making to adopt a suggested health measure, such as friends, neighbors, radio, and television (Carpenter, 2010). According to Roberts *et al*. (2021), experiencing possible symptoms of COVID-19 and conversations among friends and colleagues influence preventive behaviors.

Moreover, the results of research by Prati *et al*. (2011) show that exposure to media campaigns negatively affects compliance with protective behaviors against influenza H1N1. Self-efficacy is defined as a person's perception of their ability to take behavior effectively and affect the choice of tasks and persistence while performing them (Glanz *et al*., 2008). Self-efficacy is the most critical predictor of health-related behaviors (Orji *et al*., 2012). People who believe that they can control a COVID-19 pandemic are more likely to comply with the recommended preventive behaviors (Mirzaei *et al*., 2021; Kim *et al*., 2020). The results also showed that self-efficacy was the strongest predictor of protective behaviors against COVID-19 among people (Shahnazi *et al*., 2020; Fathian-Dastgerdi *et al*., 2021). The HBM model assesses the relationship between health beliefs and protective behaviors (Yazdanpanah *et al*., 2021; Razmara *et al*., 2018). Many researchers have studied other variables that are not in this framework and believe that increasing the prediction ability of the model (Yadav and Pathak, 2016; Bird *et al*., 2018). Despite the importance of HBM, this model lacks the concept of Knowledge (Sadeghi *et al*., 2018; Louis, 2016). Knowledge can be considered a strong predictor of protective behavior. It has been reported that people with inadequate knowledge are more likely to have adverse health consequences (Jose *et al*., 2020; Sopjani *et al*., 2019; Neupane, 2011). HBM is a theoretical framework that has been widely used in studies on epidemic diseases such as SARS, HIV, Influenza, Chikungunya, Dengue, MERS, and Ebola (Anderson *et al*., 2020; Gong *et al*., 2020; Othman *et al*., 2019; Karimy and Zareban, 2018; Alsulaiman and Rentner, 2018; Kelly *et al*., 2015; Wong and Yang, 2005). Therefore, this study examined the effects of HBM domains and knowledge on protective behavior during COVID-19 (Figure 1).

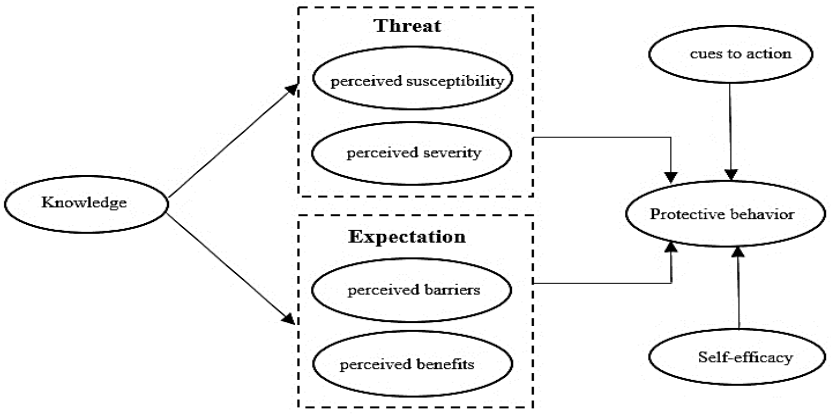

Figure 1. The extended HBM framework.

Study Design and Participants

This cross-sectional research was conducted between July and August 2020 in Lorestan Province in the west of Iran. The research population included 17,623 household heads who were living in rural areas. The correlational research model was used in the study. Cochran's formula was used to calculate the finite sample size as

follows:

$$n=\frac{\frac{t^2pq}{d^2}}{1+\frac{1}{N}\left(\frac{t^2pq}{d^2}-1\right)}$$

Where, n is the sample size, t equals 95% (the error rate equals 1.96), N is the population size, p represents the presence of trait and equals 50%, q is the lack of trait and equals 50%, and d stands for the probability of error and equals 0.05. After the values were put in the Cochran Formula, the sample size was estimated to be 375 individuals. The individuals were selected by the multistage cluster random sampling method. The first stage was stratified by counties (Khoram Abad, Aligoodarz, Borujerd, Kuhdasht, Nur Abad, and Pol Dokhtar). Then, 62 districts were selected based on geographical distribution. In the third stage, 10% of the villages were randomly selected in these districts and, finally, rural household heads were selected in each village using random sampling.

Data Collection

Collected data was obtained by a questionnaire including three parts. The first section consisted of demographic information (such as sex, age, education level, income, occupation). The second section consisted of questions related to the knowledge of villagers about COVID-19 and preventive measures. The third section included 48 questions for measuring the HBM constructs: perceived susceptibility (6 questions), perceived severity (5 questions), perceived benefits (6 questions), perceived barriers (10 questions), cues to action (5 questions), self-efficacy (6 questions), and behavior (10 questions). Questionnaire items were designed based on the same previous studies (Lau *et al*., 2010; Coe *et al*., 2012; Scherr *et al*., 2017; Othman *et al*., 2019; Gong *et al*., 2020). The scoring of the questionnaire questions was as follows: in the knowledge section, a score of 1 was given to the correct answer, and a score of 0 was given to the incorrect answer, and "I do not know". A 5-point Likert scale (1= Strongly Disagree to 5= Strongly Agree) was used for Health Belief Model constructs and self-efficacy. In protective behaviors, a score of 1 was given to the correct behavior to prevent infection in Corona, and a score of 0 was given to the incorrect behavior. The face and content validity of the questionnaire was assessed and approved by expert-based panels in the fields of agriculture extension, rural development, and health education. Cronbach's Alpha coefficient measured the reliability of the questionnaires. Values ranging from 0.78 to 0.93 were obtained that indicated the questions attained acceptable internal consistency (Hair *et al*., 2014).

Statistical Analysis

The collected data were analyzed using path analysis. Structural Equation Modelling (SEM) was applied to test the fit between the research model and the data by AMOS 24 and SPSS (version 25). SEM is a powerful, multivariate technique for test and evaluates direct and indirect causal relationships. SEM in this study mainly assessed the "goodness" of the theoretical causal model compared to the observed data. SEM can model chains of direct and indirect causal relationships, multiple independent and dependent variables, and estimate variance and covariance, validity, and reliability of the latent constructs (Lowry and Gaskin, 2014).

The index of Variance Inflation Factor (VIF) and tolerance were used to assess the multicollinearity of endogenous variables. According to Hair *et al*. (2014), a value of VIF less than 5 or 3 and a value of the tolerance more prominent than 0.10 could be the ideal cut-off threshold to measure multicollinearity. Since values of VIF for each variable were below five and the tolerance values were above 0.10, no multicollinearity concern existed across those variables. Confirmatory factor analysis was used to evaluate the suitability, validity, and reliability of research constructs, i.e., attitude,

subjective norms, perceived behavioral control, risk perception, intention, and behavior (Table 1). The results showed that the goodness of fit indices in both measurement models was adequate. The extended model had better goodness of fit as compared with the original model.

Table 1. A summary of the goodness of fit indices for the measurement model.

Fit index	SRMR	D-G1	D-G2	NFI	RMS-Theta
Recommended value	< 0.1	> 0.05	> 0.05	> 0.90	< 0.12
Estimated original TPB	0.08	0.395	0.514	0.93	0.07
Estimated extended TPB	0.09	0.415	0.621	0.97	0.09

Also**,** the convergent validity was calculated using the Average Variance Extracted (AVE), considering values of AVE ≥ .50 (Fornell and Larcker, 1981; Hair *et al*., 2014) and the Composite Reliability (CR) adopting (≥ .70) as the cut-off values, as suggested by Hair *et al*. (2014). The measurement of CR and AVE unveiled that their values were acceptable, perceived sensitivity (AVE= 0.54; CR= 0.81), perceived severity (AVE= 0.61; CR= 0.78), perceived benefits (AVE= 0.53; CR= 0.63), perceived barriers (AVE= 0.58; CR= 0.67), self-Efficacy (AVE= 0.52; CR= 0.60), cues to action (AVE= 0.65; CR= 0.74), knowledge (AVE= 0.60; CR= 0.69), and behavior (AVE= 0.54; CR = 0.66).

RESULTS

Sociodemographic Characteristics

Descriptive findings indicated that most rural household heads (97.2%) were male, and 2.8% were female. The average age of the respondents was 45.33 years (SD= 11.21, in the range of 18–76 years). In other words, a large part of the statistical population of the study was middle-aged villagers. Most participants were married (92.7%). Overall, 10 percent of respondents had attended primary school, 15 percent had a secondary education, 32 percent had a diploma education, and 43 percent had higher education. The majority of villagers (75%) had over five years' experience in agriculture. The average farm size was 3.8 acres in rural areas of Lorestan Province.

Protective Behaviors Status

Descriptive analysis of HBM constructs indicated that the cues to action (83.8%) and the perceived susceptibility (81.5%) had the highest, and the behavior (47.2%) had the lowest score of the maximum possible score. The mean and standard deviation of protective behavior was 21.26 and 4.01, respectively, which showed villagers achieved only 47% of the maximum achievable score of protective behaviors. An analysis of the correlation among constructs of HBM and protective behavior of villagers, the results indicated that behavior had a negative and significant correlation with perceived barriers (r= -0.59, P< 0.01); and perceived severity (r= -0.290, P< 0.01) had a positive and significant correlation with perceived sensitivity (r= 0.42, P< 0.01), knowledge (r= 0.52, P< 0.01), self-efficacy (r= 0.36, P< 0.01), and cues to action (r= 0.72, P< 0.01). Other constructs of the model indicated no significant relationship with behavior. The mean, standard deviation, and score range of research variables and the correlation coefficients between them are shown separately in Table 2.

Table 2. Descriptive analysis of variables.

	Variable	Mean (SD)	Possible range	1	2	3	4	5	6	7	8
1	Perceived sensitivity	12.22(1.76)	3-15	1							
2	Perceived severity	9.86 (1.20)	3-15	0.168	1						
3	Perceived benefits	11.33 (2.74)	3-15	0.075	-0.143	1					
4	Perceived barriers	19.37 (4.36)	6-30	-0.086	0.093	-0.004	1				
5	Self-Efficacy	9.96 (2.34)	3-15	0.179	0.181	0.414[a]	-0.235	1			
6	Cues to action	16.77 (2.45)	4-20	0.550[a]	0.191	0.391[a]	-0.051	0.356[a]	1		
7	Knowledge	11.35 (2.96)	0-15	0.381[a]	0.313[b]	0.027	-0.089	0.284[b]	0.497[a]	1	
8	Behavior	21.26 (4.01)	9-45	0.421[a]	-0.290[a]	0.215	-0.589[a]	0.362[a]	0.723[a]	0.519[a]	1

[a] Correlation is significant at the 0.01 level (2-tailed), [b] Correlation is significant at the 0.05 level (2-tailed).

Structural Equation Model (SEM)

In this study, the SEM was constructed to describe possible relationships between the study variables and protective behavior. Six indexes were used to assess the model fit. The results indicate that the hypothesized model match the data well: χ^2/df= 0.960, CMIN/df= 1.40, (P-value= .09, P> 0.05), NFI (Δ1)= 0.943, RFI (ρ1)= 0.990, GFI= 0.959, TLI (ρ2)= 1.000, CFI= 1.000, RMSEA= 0.000 (See Table 3). The model is presented in Figure 1, and the detailed path coefficients are provided in Table 4. The final model derived from SEM analysis revealed that five constructs of the HBM could predict 75% of the variance in protective behavior (Figure 2). The model shows that perceived susceptibility (β= 0.29, P< 0.001), perceived severity (β= -0.28, P< 0.001), self-efficacy (β= 0.36, P< 0.001), cues to action (β= 1.05, P< 0.001) and knowledge (β= 0.25, P< 0.001) had direct effects on protective behavior. Besides, the knowledge (β= 0.81, P= 0.003) indirectly affected protective behavior with perceived susceptibility, perceived severity, self-efficacy, and cues to action. In addition, the result showed that the most significant predictor of protective behavior was cued to action about performing protective behavior against COVID-19 (β= 0.64, P< 0.001). However, the other constructs of the health belief model did not affect protective behaviors.

DISCUSSION

This study focused on investigating the predictor factors of protective behavior among villagers against COVID-19. The study results showed that knowledge, perceived susceptibility, perceived severity, cues to action, and self-efficacy are the factors affecting the protective behaviors of villagers against COVID-19. These variables can predict a variance of 75% in applying protective behavior. Therefore, the HBM was pretty good at explaining the protective behaviors of villagers against COVID-19. The results of the present study showed that undertaking protective behaviors by villagers was weak. Different studies performed in different countries have stated that rural people's adoption of protective behaviors against epidemic diseases is low (Nwafor *et al*., 2020; Lihua *et al*., 2020; Chen and Chen, 2020). Various reasons have been cited for the low level of applying protective behavior

Table 3. The indices of goodness of fit test.

Indices of goodness of fits	Evaluation criteria of acceptable values of indices
χ^2/df= 0.960	Nonsignificant≥ 0.05 (Jöreskog and Sörbom, 1993)
CMIN/df= 1.40	< 2 (Hair *et al*., 1998)
NFI (Δ1)= 0.943	≥ 0.95 good, 0.90 to 0.95 acceptable (Bentler, 1990)
RFI (ρ1)= 0.990	> 0.90 (Bentler, 1992)
TLI (ρ2)= 1.000	≥ 0.95 Or ≥0.90 (Hu and Bentler, 1999; Weston and Gore, 2006)
CFI= 1.000	≥ 0.90 (Hu and Bentler, 1999; Weston and Gore, 2006)
RMSEA= 0.000	≤ 0.5: Very good fit (Browne and Cudeck, 1993; Kline, 2005)

Table 4. Structural model values.

	Relationship between variables	Estimates	SE	CR	P[a]
1	Knowledge → Perceived severity	0.312	0.054	5.777	***
2	Knowledge → Cues to action	0.501	0.100	5.010	***
3	Knowledge → Self-efficacy	0.284	0.105	2.704	***
4	Knowledge → Perceived susceptibility	0.386	0.076	5.078	***
5	Knowledge → Perceived barriers	0.131	0.203	0.647	0.923
6	Knowledge → Perceived benefits	0.054	0.075	0.720	0.426
7	Perceived benefits → Behavior	0.140	0.117	1.196	0.541
8	Perceived barriers → Behavior	-0.506	0.049	-10.267	0.201
7	Cues to action → Behavior	1.056	0.113	9.371	***
9	Self-efficacy → Behavior	0.363	0.095	3.821	***
10	Knowledge → Behavior	0.248	0.090	2.751	***
11	Perceived severity → Behavior	-0.283	0.187	-1.513	***
12	Perceived susceptibility → Behavior	0.293	0.147	1.993	***

[a] P= Significant Probability; ***: Represents significant probability with P< 0.001.

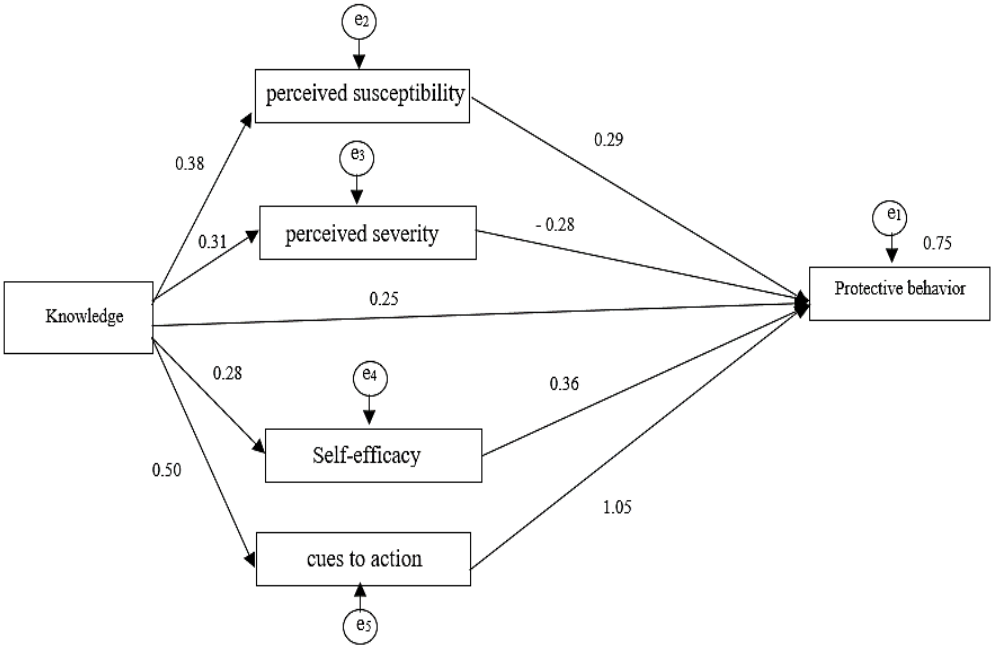

Figure 2. Structural equation modelling and standardized path coefficients.

by villagers. However, as the results of the structural equations showed, protective behavior is associated with perceived susceptibility, perceived severity, cues to action, self-efficacy, and knowledge.

Cues to action were the most effective predictor of the protective behavior of villagers. Here, it refers to that information from close others, the social media, or health care actors that prompt rural people to take protective measures against COVID-19. This result may be explained by the fact that villagers' decision-making behavior is greatly influenced by the opinions of family, friends, peers, and trusted advisors (Ritter *et al*., 2015). The opinions of trusted people could affect villager behavior by providing formal or informal advice or the means of social pressure (Mills *et al*., 2017). The results of some studies were in line with this study (Gong *et al*., 2020; Flood *et al*., 2010; Maurer *et al*., 2010). Perceived susceptibility is another significant predictor of protective behavior among villagers. It refers to beliefs about the likelihood of experiencing an illness (Glanz *et al*., 2008). This finding is

following the studies of Brewer *et al*. (2007), Condon and Sinha (2010), Sim *et al*. (2014), and Barati *et al*. (2020). Based on the HBM model, to undertake protective behaviors, villagers must feel at risk for COVID-19. This sensitivity will not occur unless villagers are aware of the risks and consequences of not taking precautions against the coronavirus. In this regard, the results of the study conducted by Beaujean *et al*. (2013) showed that, if persons neglect their risk, they have less tendency to perform protective behavior. Also, SEM results showed that the perceived severity construct was a significant predictor of protective behaviors among villagers. It is defined as a person's mental belief about the extent of harm that can occur by acting or not acting as a preventive behavior (Bishop *et al*., 2015).

In our study, if rural people feel that there would be severe health, social, and financial impacts in infecting the COVID-19, then they may perceive COVID-19 to be a specifically tricky situation.

Due to the low reported mortality rate in rural areas (due to the low population of the village), many villagers do not have a proper understanding of the severity of the virus. Therefore, they do not perform protective behaviors to an acceptable level. This finding is consistent with the results of the studies performed by Eastwood *et al*. (2009), Lau *et al*. (2010), Anderson *et al*. (2020), and Gong *et al*. (2020). They found that reports of deaths, threats to public health and the economy, and an increase in anxiety and concern for self and /or family correlate with the raised social adoption of wearing facemasks. Therefore, it is essential to enhance knowledge of the severity of the COVID-19 to encourage protective behaviors.

Self-efficacy is another determinant of villagers' protective behavior against COVID-19. It refers to beliefs about performing certain health behaviors (Schwarzer and Luszczynska, 2006). Therefore, villagers who have higher self-efficacy are usually more likely to undertake protective measures against COVID-19. In this regard, a study by Bults *et al*. (2011) at the beginning of the epidemic in the Netherlands indicated that high self-efficacy affected having a solid intention to carry out preventive measures advised by the government in the future and adoption of protective behavior. Also, self-efficacy can increase people's trust in government and its information during the pandemic (Liao *et al*., 2010).

Results from SEM analysis indicated that knowledge had a direct effect on protective behavior and indirectly affected behavior through susceptibility perceived, severity perceived, cues to action, and self-efficacy. Our results are consistent with Riad *et al*. (2020) and Mya Kyaw *et al*. (2020), who indicated that an individual's COVID-19-related knowledge significantly and positively influenced protective behaviors. Also, about the indirect effect of knowledge on behavior, the results of studies showed that having a proper knowledge regarding the mortality rate and severe cases of disease affected the perceived severity and decision to use protective measures (Kuo *et al*., 2011; Yap *et al*., 2010). Also, higher levels of knowledge about the disease result in increased self-efficacy among people to change their health behavior (Chen *et al*., 2014). Individuals who have adequate knowledge about the complications of the disease and consider themselves at risk of infection are more likely to engage in protective measures (Sadique *et al*., 2007; Yıldırım *et al*., 2020). Besides, individuals with high knowledge may be easily persuaded to adopt protective behavior against COVID-19 after seeing a public announcement.

CONCLUSIONS

The results of our study showed that knowledge, perceived susceptibility, perceived severity, cue to action, and self-efficacy are the determinant protective behavior of villagers against COVID-19. Also, the finding showed that cues to action

were the most important predictor of behavior among villagers. Therefore, it is suggested to inform villagers about the severe complications of coronavirus on human health and the importance of protective measures against COVID-19.

In this context, radio and television programs can be used to accurately display the suffering of persons with COVID-19 and its consequences for their families. Also, governments should be providing exact information such as the actual rate of fatality so that villagers understand the severity and susceptibility of this disease. Individuals generally do not believe that they are at risk for a disease until they experience it themselves. Therefore, the government has a heavy responsibility for making people take COVID-19 seriously. Also, considering the effect of self-efficacy on protective behaviors, it is suggested that training workshops be held with physicians in the villages and, using appropriate educational strategies, cultivate a sense of ability to perform protective behaviors in the villagers as much as possible. For example, the health authorities can use their innovations to convey the necessary information about preventive measures to the villagers in an attractive way and encourage them to perform protective behaviors at the village level. Also, using virtual space to form communication networks between villagers to inform them about health issues and send electronic journals and educational brochures can help increase their knowledge.

Limitations and Future Research

This study has some limitations that can be addressed in future work. First, because the study was conducted during quarantine, access to research samples was difficult due to health protocols. Second, the study was based on the self-reported questionnaire, leading to inaccuracies due to social desirability bias. However, the questionnaire was anonymous, which will reduce such bias. Third, rural people are reluctant to provide their information due to a lack of trust in the government agencies. However, by clearly and openly communicating with them and providing transparency about using the data, we minimized their fears and built trust. Fourth, because many villagers did not wear masks and did not maintain social distance, communicating with them and distributing questionnaires was associated with problems such as fear of contracting the coronavirus. Finally, since the research samples were heads of households and most of them were men, the generalizations of the findings may be limited.

Despite the above limitations, this is one of the few studies that evaluate the knowledge and constructs of the Health Belief Model on COVID-19 preventive behaviors among rural people in Iran. Further studies can focus on combining this model with other models that incorporate constructs such as social norms and community assumptions. In the future, a deeper investigation of cues to action that could improve explanatory capacity is needed. External and internal cues such as media exposure and perceived COVID-19 symptoms might be better addressed separately. Moreover, further research with other university students throughout the country is needed to confirm the findings.

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درک نحوه تصمیم گیری مردم در مورد رفتار پیشگیرانه در برابر کووید-۱۹: یک مورد از روستاهای غرب ایران

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چکیده

همه گیری کووید-۱۹ مهمترین چالش بهداشتی بشر پس از جنگ جهانی دوم است و روند آن می تواند تحت تأثیر سختگیری در رفتارهای محافظتی فردی و جمعی قرار گیرد. در این مطالعه، ساختار مدل اعتقاد بهداشتی در اتخاذ رفتارهای محافظتی در طول همه گیری کووید-۱۹ مورد ارزیابی قرار گرفته است. نمونه ای از ۳۷۵ سرپرست خانوار ساکن در مناطق روستایی استان لرستان به روش نمونه گیری طبقه ای و تصادفی چند مرحله ای انتخاب شدند. مدل سازی معادلات ساختاری نشان داد که دانش، حساسیت

درک شده، شدت درک شده خودکارآمدی و نشانه های اقدام بر رفتارهای محافظتی خانوارهای روستایی ایران در طول کووید-۱۹ تأثیر می گذارد. راهنماهای عمل و دانش مهمترین پیش بینی کننده رفتارهای محافظتی در خانوارهای روستایی بودند. نتایج نشان می دهد ضرورت تأکید بر افزایش دانش برای برجسته ساختن آثار منفی کووید-۱۹ و آموزش خانوارهای روستایی در مورد اقدامات پیشگیرانه مناسب و مؤثر است.