

Original Research

Sociodemographic variables as predictors of covid-19 risk perception and containment measure: Evidence from Ikolomani Subcounty Kenya

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ABSTRACT:

Background: To reduce Covid-19 infection, the government of Kenya through the Ministry of Health has had a number of strategies proposed, including knowledge training for prevention and control, isolation, disinfection, categorized protections at various levels in infection regions, and protection of both suspected and confirmed cases. **Objectives:** The goal of this study was to determine the general community's understanding, attitude, and practice of COVID-19 in relation to risk perception. **Methods:** Across-sectional study was conducted in the Ikolomani Subcounty of Kakamega County, Kenya in the year 2020. To collect data, the Questionnaire contained two segments. The first segment included a sociodemographic data collection set that included age, gender, marital status, and educational level, followed by a standard questionnaire on risk perception of an infectious disease outbreak, and finally a perception interview. The Questionnaire was administered to the target population via interview while adhering to the Covid 19 Precautions. Frequency and Percentage were used to summarize continuous variables. The quantitative data was analyzed using SPSS Version 25.0, and the qualitative data was analyzed using thematic content analysis. **Results:** The findings revealed that 33% of respondents were between the ages of 18 and 29 and were unconcerned about Covid-19. On the other side, the results suggest that covid-19 was a major concern for 25% (60) of the respondents. Covid-19 is considered to be more harmful than other disorders by 29 percent of responders. The findings also revealed that 24 percent of respondents aged 40 to 50 are more likely to contract covid-19. The study also revealed that 26 percent of respondents will reduce their risk of contracting covid-19 by limiting their visits to friends and family outside the home, while 22 percent will try to keep a two-meter distance from others when outside. 33% of respondents aged 40-49 wore face masks, 30% of respondents aged 40-49 washed their hands, and 100% of respondents aged 50-59 were maintaining physical distance and disinfecting objects and surfaces. Prayer is used by 67 percent of responders aged 60 and up. The researcher was also interested in learning about some of the obstacles that respondents were facing in their efforts to prevent covid-19. According to the findings, 24% of respondents aged 18 to 49 lacked the financial means to purchase personal protection equipment, while 24% of those aged 40 to 49 struggled with social and cultural practices and acceptance. The responders had varied knowledge, a positive attitude, and sensible behaviours when it came to COVID-19. **Conclusion:** During the COVID-19 pandemic, messages aimed at encouraging the adoption of preventive behaviors should include enhancing the perception of severity, risk perception, self-efficacy to deal with the pandemic, and the success of the behavioral measures chosen for risk reduction. Health education programs customized to specific sociodemographic groups are critical for boosting the adoption of outbreak prevention measures by raising public awareness, perceptions, and attitudes.

Keywords: COVID-19; knowledge; practice, Attitude, perception seriousness, Ikolomani

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BACKGROUND

The new highly pathogenic, fast-mutating, deadly, Coronavirus disease 2019 (COVID-19) or 2019 Cov, was initially identified as an outbreak of viral pneumonia in Wuhan, Hubei province, in the People's Republic of China, in December 2019 - a home to 11 million people (Chan, Huang, Lo, Hung, Wong, & Wong, 2020). Most of the infections initially centered in its capital city, Wuhan, where the outbreak is believed to have begun at a wildlife market. Since December, 2019, when China reported its first cases to WHO, coronavirus has spread to over 215 countries and territories in the world. As of July 20th 2020, new infections and deaths continue to grow exponentially on a daily basis, resulting in over 14,537,353 positive cases and over 581,300 deaths worldwide (Dkhar, Quansar, Saleem, & Khan, 2020). By 21st July, 2020, United States of America had borne the heaviest brunt of the pandemic, gaining a global hotspot code together with Russia, Brazil, United Kingdom and Spain (John Hopkins University & WHO, 2020).

Across the globe, corona virus has attained a label – 'black swan event' (Resilient leadership responding to COVID-19) and is likened to the economic scene of World War Two (Shewale, Sane, Ujagare, Patel, Roy, Juvekar, Kohli, Bangar, Jadhav, Sahay, & 2021). Its effect on global healthcare systems with a ripple effect on every sector of the economy, every aspect of human life is unsurmountable (Savadori, & Lauriola, 2021). COVID 19 outbreak has disrupted life, attacked societies to the core by claiming lives, ravaging communities, spreading human suffering and, up ending people's life. Its macro-economic impact has been huge, leaving many jobs at risk along the value chain across all sectors. Business sectors such as tourism and travel, well as service industries like education are on the knees with millions of children and youth no longer physically in schools and colleges across many jurisdictions. As a consequence. Ultimately, on January 30th, 2020, WHO declared the outbreak not only a "public health emergency of international concern" but also one of the worst human health, economic and social crisis in the 75-year history of the United Nations (Sohrabi et al., 2020)

As of May 10th, Kenya was the fourth most impacted country in the continent, only behind Djibouti, Sudan and Somalia. By July 14th cases in East Africa had crossed the 3,000 mark. Kenyan cases continue to steadily rise each day, coding it the highest affected in the East and Horn of Africa region. The virus earlier known as an imported infection is now spreading fast within communities and has hit 44 counties in Kenya, ten (10) of them coded as high-risk zones with two urban cities- Mombasa and Nairobi as epicenters (Ministry of Health, 2020). As Government of Kenya continues to battle with pandemic by locking down a handful of counties, imposing a night-time curfew, expanding its testing

capacity, among others, more new cases continue to emerge. As of 23 July 2020, 796 new confirmed COVID-19 cases were reported bringing the total number of confirmed cases in Kenya to 15601 cases. Out of 15601, 14714 (97%) confirmed cases are local (community) transmissions. The total number of deaths reported since the beginning of the outbreak is 263, with a case fatality rate (CFR) is 1.7 percent. Forty-four (44) out of 47 counties have reported cases with Kakamega reporting 14 cases (MOH, 2020)

The Government of Kenya efforts to forestall COVID 19 spread is enforcing approved mitigation measures by WHO and further developed context specific protocols in response to the threat (eg. Home Base Care Guideline) with the overall aim of curbing ongoing infections and reducing importation of virus (Ministry of Health, 2020). Communities are expected not only to be aware but to also use the MOH guidelines in their day to day operations (Pagnini et al., 2020). Some of these include the temporary closure of schools and workplaces, working from home, travel restrictions, cancellation of mass gatherings, social distancing, avoidance of handshakes, kissing and hugs, washing of hands, use of sanitizers, wearing of face masks, border closures, closing the airspace except for essential services, minimizing crowds within social facilities, intense laboratory surveillance to pick up COVID-19 cases in the community, selected cessation of some counties and nightly curfew for a period of time to flatten the epidemic peak and delay the spread.

LITERATURE REVIEW

According to Darker C, risk perceptions are people's subjective judgments or opinions about the risk of injury or failure (Chan et al., 2020). The understanding of risk has a major impact on the adoption of preventive measures. In the absence of a simple therapy for infectious infections, preventive measures remain the cornerstone of controlling the covid 19 outbreak. In order to openly follow preventive measures, people must be conscious of and understand the danger. People's perceptions of pandemic-related risk, according to Shahin (2020), are key factors leading to increased public engagement in disease prevention measures. The study's aim was to look at public perceptions of the coronavirus disease 2019 (COVID-19) outbreak. A convenience sample of 723 participants was recruited from the general population of Saudi Arabia, Egypt, and Jordan, using a descriptive, cross-sectional design (Shahin, & Hussien, 2020). In April 2020, data was collected using a structured risk perception evaluation questionnaire. Saudi Arabian participants had significantly higher mean scores for the perception of COVID-19 severity, as well as for the perception of disease vulnerability and the level of anxiety, than Egyptian and Jordanian participants. Egypt's participants had significantly lower mean

scores for perceived effectiveness and self-efficacy in dealing with COVID-19, as well as a significantly lower commitment to follow COVID-19 precautionary steps than the other populations. For the entire study, there was a strong positive association between COVID-19 seriousness, perception and self-efficacy to manage COVID-19. The primary motivation for participants to take such COVID-19 prevention steps was a sense of responsibility for their own wellbeing, accompanied by the desire to avoid transmission to others and the belief that COVID-19 is a serious disease. The majority of the study participants expressed an interest in learning more about COVID-19 therapy, disease prevention, and the incubation time for the novel coronavirus. Furthermore, the vast majority of the study participants reported that they prefer to receive COVID-19 notifications from national authorities. During the COVID-19 pandemic, communications aimed at encouraging the adoption of preventive behaviors should emphasize increasing the sense of seriousness, risk perception, self-efficacy to deal with the pandemic, and the effectiveness of the therapeutic interventions adopted for risk reduction. The study concluded that health education initiatives targeted to different sociodemographic groups are critical for increasing the adoption of outbreak prevention measures by raising public awareness, expectations, and attitudes.

There is no scientific evidence of the population's understanding, perceptions, attitudes, and behavior patterns (Chan, Huang, Lo, Hung, Wong, & Wong, 2020). From March 22 to April 1, 2020, a computerized randomized automated dialing, cross-sectional, population landline-based telephone survey was conducted in Hong Kong Special Administrative Region, China. Data was collected on sociodemographic traits, intelligence, attitude, and risk perception, as well as self-reported COVID-19-related Health-EDRM behavior patterns. The total number of participants in the study was 765. Despite the fact that individuals (68.6%) believed they had comparable obligations to the government (67.5%) in terms of infection prevention, fewer than half of the respondents believed they had adequate health risk management expertise to protect their health and well-being. Significant discrepancies were observed between attitude and practice in regards to handwashing with soap, ordering takeout, wearing masks, avoiding public places or taking public transportation, and avoiding travel to COVID-19-confirmed regions among the Health-EDRM measures examined. According to logistic regression, the elderly were less concerned about COVID-19 infection. Public social distancing was found to have lower enforcement than personal and household hygiene practices (Chan et al, 2020).

The results support another study which also gathered demographic information such as respondents' age, education, income, gender, and ethnicity

(Zhang, Wang, Bayiz , Shah, & Qing, 2021). The demographic characteristics were then linked to risk perceptions using regressions. There are some broad generalizations that can be made. According to the findings, women, people with lower levels of education and income, younger people, and blacks are more afraid of dangers. The exception is age-related diseases, which are, understandably, dreaded by the elderly. We cannot substantiate the claim that these groups of people are less knowledgeable about hazards and thus less tolerant of them, contrary to previous literature. The perceived personal exposure to the danger is the most likely leading reason for the relationship between demographic factors and dread of a hazard. People who believe they are more exposed to a threat are more afraid

For virtually all risk domains, being male was associated with higher incident experience but lower risk perception (Sund, Svensson, & Andersson, 2017). Lower socioeconomic status was linked to a higher incidence of falls and becoming a victim of crime, but a lower incidence of road traffic accidents. A lower socioeconomic status was also linked to a greater fear of falling. Respondents' risk perceptions were nearly identical to the rating of actual incident experience when ranking the various domains, with the exception that the risk of becoming a victim of abuse was rated higher than suggested by actual incident experience. Men and those with a high degree of education interpret their risks to be smaller than what is predicted based on their actual incident experience (Badri , Sardá , Moncada , Merçon , Rezai , Weinstein , & Trick, 2021).

RESEARCH METHODOLOGY

The study examined community's knowledge, perception and acceptability of COVID 19 containment measures with regard to Covid 19 pandemic in Ikolomani Subcounty, Kakamega, Kenya. Phase one of the study adopted a Mixed Method Research (MMR) approach. Which allowed drawing on strengths of both qualitative and quantitative paradigms, contributing to better results in terms of quality and scope in depth and breadth analysis that would not be clear if one approach would be adopted (Johnson & Onwuegbuzie, 2004). The specific design was Cross sectional and Correlation designs. The justification for the choice of cross-sectional survey was to collect data (views, concerns perspectives) from a cross section of key respondents in the shortest time possible and within the Covid 19 containments guidelines by MOH, 2020. This quick fix of mining data allowed enough time for analysis to provide adequate time to design the platform for use. The design also allowed utilization of other complementary tools such as Interviews Guides, Focused Group Discussions and Observation Guides that enabled corroboration of self-reports from respondents. A correlation design was later used to determine causal links. (Litosseliti

,2010) contend that the two designs are critical in public health, since phenomena is systematically observed and causal relationships between risk factors, determinants and their outcomes can then be determined.

THE STUDY AREA

The study area was Ikolomani sub county which has an approximate population of 104,669 people. It sits on an area of 143.6, square km. Administratively it is divided into 4 wards that is Idakho south, Idakho east, Idakho north and Idakho central. It has features like negative religious teachings, ignorance, existence of traditional birth attendants and negative Perception towards the health system, high poverty (Ng'ambwa, Okoth, & Sum, 2021)..Agriculture is the main source of income. Over 80 percent of the population in this sub county live in the rural areas with more low wage earners earning their livelihoods in motorcycle transport, low scale gold mining and local beer brewing.

SAMPLE SIZE DETERMINATION

The study sample was determined using the Fisher's method of Mugenda, 2003as cited in (Ng'ambwa,2020).This research used multistage sampling to generate concrete scientific conclusions for the study. According to Brattacherjee (2012) multistage sampling combines various sampling frames depending on the diverse populations under investigation. Various sampling frames were employed, first purposive sampling was used for sampling Ikolomani sub county which was recorded to have the highest population of people engaged in informal sector due to small scale unproductive land holding and high illiteracy levels. Simple random sampling method was used to obtain samples from (a) primary respondents (most at risk / vulnerable population: people in at-risk areas, migrants, travelers, businesses, health workers (i.e., sub county medical officers, community social workers and nurses), administrative leaders (i.e. chiefs and Sub-chiefs), caregivers, elderly, policy-makers, local leaders, women and youth groups, religious and elders' groups, volunteers, and people who have real-life experience with COVID-19 etc. and (b) secondary respondents: people who act as spokespeople or representatives, influencers, agents of change, etc.), were included in the study as key informants who participated in structured FGD discussions and interviews. Telephone interviews were used in contexts where a respondent was geographically indisposed at the time of data collection. The use of the voice recorder was of great assistant during the sessions. Their perception, knowledge, existing barriers that prevented people to uptake the promoted behaviors were important for this study(Bults,Beaujean, Wijkmans, Richardus, & Voeten, 2014).The study involved a survey of Ikolomani community knowledge of the disease, risk

perceptions, social norms and community dynamics and threats or any barriers (psycho-socio –economic) that prevent uptake of the promoted behavior. Based on questionnaires, observation checklists and interviews guidelines and focused group discussions.

PILOT STUDY

A pilot study was conducted before the main study to ensure that the scales were clear and that the study was feasible. The pilot study was done on 10% of the projected study sample using the same inclusion criteria to test the applicability of the data collection instrument and the feasibility of the investigation. According to the results of the pilot study, the average time needed to complete the questionnaire was 20 to 25 minutes, depending on the respondent's degree of knowledge and cooperation. The questionnaire was finalized based on the findings of the pilot study. The pilot study participants were not included in the main study sample due to changes made to the some of the questionnaire items.

VALIDITY AND RELIABILITY

A panel of eleven specialists from the domains of medicine, public health, first aid, social work, community development, education, and medical-surgical nursing evaluated the questionnaire's content and face validity, both of which were found to be acceptable. A test-retest comparison was used to measure reliability, and Cronbach's alpha was calculated, which demonstrated adequate reliability (Cronbach's alpha = 0.8).

ETHICAL CONSIDERATIONS

Before beginning data collecting, the research proposal was submitted to Masinde Muliro University's ethics committee and approved. Participants were also requested to grant informed consent before beginning the questionnaire after reading the study's introduction information. Anonymity and confidentiality were promoted by using survey identification numbers and an anonymous questionnaire, with no personal identifiers such as names, phone numbers, or other information that may be used to identify participants or link people to data being collected. Other than the potential inconvenience connected with the time required to engage in the study, there was no danger of discomfort to the participant, and participants did not receive any kind of compulsion or financial compensation because participation was voluntary and with full autonomy. In conformity with the Declaration of Helsinki, all ethical norms governing medical research involving human participants were observed.

RESULTS

The results in Table 1, shows that 26% of the respondents will reduce the risk of contracting covid-19 by Minimizing the visits to friends and family

outside the home while 22% of the respondents will try to keep distance of two meters from others when outside. The results also shows that 3% of the

respondents will do nothing or just continue with their normal lifestyle.

Table 1: Reducing the risk of contracting covid-19

Variable	Frequency (%)
Minimized visiting friends and family outside the home	27(25.5)
Tried to keep distance of two meters from others when outside	23(21.7)
Washed hands more than normal	19(17.9)
Stayed home more than normal	16(15.1)
Stayed at home and isolated oneself from others when sick	6(5.7)
Went to hospital /sought doctor/medical professional advice whenever I get strange flu	4(3.8)
Used mask very time	4(3.8)
Went to work even while sick	4(3.8)
Did nothing/Continued with life as normal	3(2.8)

The results in Table 2 shows that 33% of the respondents between ages 18-29 and 30-39 are not worried about covid-19. On the other hand, the results shows that 25% of the respondents who are 60 and above are much worried about covid-19. On the

other hand, 29% of respondents who are 60 and above are of the opinion that covid-19 is more dangerous compared to other diseases. The results also shows that 24% of the respondents between 40-50 years are more likely to contract covid-19.

Table 2: Likert scale on community risk perception

Variables		Age of the Respondent				
		18-29	30-39	40-49	50-59	60 and above
How much worried are you with COVID 19	Not worried	3(33)	3(33)	2(23)	1(11)	0
	A little worried	5(19)	6(22)	5(19)	3(11)	8(29)
	Somewhat worried	4(24)	2(12)	6(35)	2(12)	3(18)
	Very worried	9(17)	11(21)	8(15)	12(23)	13(25)
In your assessment what is the extend of danger posed by covid-19 in comparison to other diseases	less dangerous	3(25)	6(50)	2(17)	0(0)	1(8)
	Almost the same danger	2(15)	3(23)	3(23)	2(15)	3(23)
	More dangerous	4(9)	4(9)	9(21)	12(24)	13(29)
	I don't know	8(22)	7(19)	8(22)	6(17)	7(19)
What are your likely chances of contracting covid-19 within the next one month	Not likely	15(30)	9(18)	10(20)	6(12)	10(20)
	Unlikely	1(9)	4(36)	3(27)	1(9)	2(19)
	Very likely	8(32)	5(20)	6(24)	4(16)	2(8)
	Likely	1(6)	1(6)	6(35)	4(24)	5(29)
	Don't know	0	1(33)	1(33)	0	2(34)

In Table 3, the researcher sought to find out the containment measures that the respondents were taking to reduce the risk of contracting covid-19 and challenges encountered. From the analysis in Table 1, the results shows that 33% of the respondents between 40-49 years were wearing face masks, 30% of the respondents between 40-49 years were washing hands while 100% of the respondents between 50-59 years were maintaining physical distance and disinfecting objects and surfaces. The results also shows that 67% of the respondents who were 60 and above years resort to prayers. The researcher also sought to find out some of the challenges the respondents were encountering in their efforts towards preventing covid-19. The results

shows that 24% of the respondents between 18-49 years lacked money to buy protective items, 24% between 40-49years had social and cultural practices and acceptance as a challenge. On the other hand, the results shows that 50% of the respondents between 50-59years had economic activities without protective measure as a challenge while 50% of the respondents between 40-49 years cited workplace without protective measure as a challenge. The analysis also shows that 50% of the respondents who were 60 and above had a challenge in public transport that had no protective measures while 50% of the respondents between 18-29years had a challenge with misinformation.

Table 3: Containment measures

		Age of the Respondent				
		18-29	30-39	40-49	50-59	60 and above
At an individual level what preventive measures do you take to reduce the risk of	wearing of face masks	13(28)	13(28)	14(33)	9(15)	11(18)
	washing hands	7(26)	4(15)	8(30)	4(15)	4(15)
	avoid crowd	3(38)	1(13)	2(25)	0	2(25)
	stop shaking hands and touching	1(33)	0	1(33)	0	1(33)

contracting covid-19	stay home	0	1(50)	1(50)	0	0
	maintain physical distance	0	0	0	1(100)	0
	disinfecting/cleaning objects and surfaces	0	0	0	1(100)	0
	Praying	0	1(33)	0	0	2(67)
	drinking some boiled herbs/eating certain foods	1(100)	0	0	0	0
What are some of the challenges you encounter in your efforts towards the prevention of covid-19	Poverty/lack of money to buy protective items	12(24)	12(24)	12(24)	7(14)	8(16)
	Social and cultural practices and acceptance	5(23)	4(18)	6(24)	1(5)	6(27)
	Economic activities without protective measures	1(17)	2(33)	0	3(50)	0
	Workplace without protective measures	0	1(25)	2(50)	1(25)	0
	Public transport without protective measures	1(20)	0	1(20)	1(20)	2(40)
	Misinformation/myths/rumours/misconceptions about covid-19	2(50)	1(25)	0	1(25)	0
	Overcrowding in the house	0	0	1(100)	0	0
	Uncomfortable wearing masks	2(33)	0	3(50)	0	1(17)

In Table 4, the p value is .032 and 0.012, the null hypotheses is that the population correlation coefficient has value zero. Since $p < .05$, we reject the null hypothesis and conclude that socio-demographic factors is related to community risk perception and community practices and containment measures.

Table 4: Correlation

		Community risk perception	Community practices and containment measures
Socio-demographic factors	Pearson Correlation	.032	.012
	Sig. (2-tailed)	.176	.901
	N	106	106

In Table 5, 6, and 7, linear regression was fitted to explain Sociodemographic Variables Predicting COVID-19 risk perception: Evidence from Ikolomani Subcounty Kenya. All of the assumptions were met except the autocorrelation assumption between residuals. The overall model explains 81.2% variation of risk perception, and it is significantly

useful in explaining risk perception and containment measure $F(2, 103) = .924, p < .05$. With one-unit increase in socio demographic, risk perception score increases by 0.042 and containment measurescore decreases by -0.005, which were not found to be a significant, $t(103) = 0.029$ and $t(103) = 0.031, p < .05$.

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.133 ^a	.812	-.001	2.000	1.801

a. Predictors: (Constant), community practices and containment measures, community risk perception
 b. Dependent Variable: socio demographic factors

Table 6: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	7.390	2	3.695	.924	.400 ^b
	Residual	412.044	103	4.000		
	Total	419.434	105			

a. Dependent Variable: socio demographic factors
 b. Predictors: (Constant), community practices and containment measures, community risk perception

Table 7: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.125	.894		7.970	.000
	community risk perception	.042	.031	.134	1.353	.029

	community practices and containment measures	-.005	.049	-.010	-.099	.031
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DISCUSSION

Individuals with lower socioeconomic or educational status are more likely to have COVID-19 misperceptions (Tagini et al., 2020). The current study shows that such individuals have a problem in distinguishing between falsehoods and reality about the condition. Previous studies indicate that it would seem logical that persons with less education would have less experience in the fields of medicine and science, leading them to believe COVID-19 lies more readily. COVID-19 speculations have surfaced on social media, which has become a widely available source of both facts and error (Presti, Mattavelli, Canessa, & Gianelli, 2022). Such rumors can gain hold and spread swiftly in the absence of a firm scientific underpinning and reputable communication routes (Flint, Brown, Sanders, & Tahrani, 2021). This puts pressure on the Ministry of Health to make COVID-19 announcements more accessible in terms of which platforms are used, as well as the language and presentation style used.

The current study shows that the low-income was linked to a higher personal risk perception in the Ikolomani subcounty. Comparable studies suggest that members of the highest income class were more likely than those in the lowest income group to perceive a personal risk from COVID-19 (Presti, Mattavelli, Canessa, & Gianelli, 2022). This finding underscores the COVID-19's global impact of socioeconomic disparities (Wang, Yu, Chen, & Yang, 2021). Lower-income populations have been demonstrated to be less able to socially distance themselves, according to studies. From the start of the COVID-19 pandemic, affluent areas saw a large reduction in mobility compared to poorer ones (Mazza, Marchetti, Ricci, Fontanesi, Giandomenico, Verrocchio, & Roma, 2021). Wealthy areas shifted from being the most mobile before to the pandemic to being the least mobile, whereas poorer areas went from being the least mobile to being the most mobile. Furthermore, data shows that lower-income groups are more likely to have pre-existing health concerns and have less access to healthcare. These data show that the COVID-19 pandemic will have a twofold impact on low-income persons.

CONCLUSION

Our findings reveal new and relevant information on sociodemographic characteristics as predictors of COVID-19 perception, which may aid in the identification of potential vulnerability groups. The respondents indicated insufficient understanding, a favorable attitude, and hidden habits with COVID-19, according to the study. Since risk perception is important in determining health-protective behavior, messages aimed at encouraging the adoption of

preventive behaviors should include enhancing the perception of severity, risk perception, self-efficacy to deal with the pandemic, and the success of the behavioral measures chosen for risk reduction. Health education programs customized to specific sociodemographic groups are critical for boosting the adoption of outbreak prevention measures by raising public awareness, perceptions, and attitudes.

RECOMMENDATIONS

Using the Health Belief Model, we propose that COVID-19 awareness efforts focus on creating more understanding of the infection's hazards in order to encourage people to engage in more precautionary behaviors. Furthermore, the study suggests that interventions and communication techniques be developed to encourage precautionary behavior.

REFERENCES

1. Badri S, Sardá V, Moncada JS, Merçon M, Rezaei K, Weinstein RA, Trick WE. Disparities and Temporal Trends in COVID-19 Exposures and Mitigating Behaviors Among Black and Hispanic Adults in an Urban Setting. *JAMA Netw Open*. 2021 Sep 1;4(9):e2125187. doi: 10.1001/jamanetworkopen.2021.25187. PMID: 34581798; PMCID: PMC8479580.
2. Bults, M., Beaujean, D., Wijkman, C., Richardus, J. H., & Voeten, H. (2014). Q fever in the Netherlands: public perceptions and behavioral responses in three different epidemiological regions: a follow-up study. *BMC public health*, 14, 263. <https://doi.org/10.1186/1471-2458-14-263>
3. Chan EYY, Huang Z, Lo ESK, Hung KKC, Wong ELY, Wong SYS. Sociodemographic Predictors of Health Risk Perception, Attitude and Behavior Practices Associated with Health-Emergency Disaster Risk Management for Biological Hazards: The Case of COVID-19 Pandemic in Hong Kong, SAR China. *Int J Environ Res Public Health*. 2020 May 29;17(11):3869. doi: 10.3390/ijerph17113869. PMID: 32485979; PMCID: PMC7312582.
4. Commodari E, La Rosa VL, Coniglio MA. Health risk perceptions in the era of the new coronavirus: are the Italian people ready for a novel virus? A cross-sectional study on perceived personal and comparative susceptibility for infectious diseases. *Public Health*. 2020 Oct;187:8-14. doi: 10.1016/j.puhe.2020.07.036. Epub 2020 Aug 3. PMID: 32866818; PMCID: PMC7396885.
5. Dkhar SA, Quansar R, Saleem SM, Khan SMS. Knowledge, attitude, and practices related to COVID-19 pandemic among social media users in J&K, India. *Indian J Public Health*. 2020 Jun;64(Supplement):S205-S210. doi: 10.4103/ijph.IJPH_469_20. PMID: 32496256.
6. Flint, S. W., Brown, A., Sanders, G., & Tahrani, A. A. (2021). Exploring the awareness, attitudes, and actions (AAA) of UK adults at high risk of severe illness from COVID-19. *PloS one*, 16(11), e0259376. <https://doi.org/10.1371/journal.pone.0259376>

7. Fylkesnes K, Jakobsen MD, Henriksen NO. The value of general health perception in health equity research: A community-based cohort study of long-term mortality risk (Finnmark cohort study 1987-2017). *SSM Popul Health*. 2021 Jun 18;15:100848. doi: 10.1016/j.ssmph.2021.100848. PMID: 34195347; PMCID: PMC8237603.
8. Lo Presti, S., Mattavelli, G., Canessa, N., & Gianelli, C. (2022). Risk perception and behaviour during the COVID-19 pandemic: Predicting variables of compliance with lockdown measures. *PLoS one*, 17(1), e0262319. <https://doi.org/10.1371/journal.pone.0262319>
9. Mazza, C., Marchetti, D., Ricci, E., Fontanesi, L., Di Giandomenico, S., Verrocchio, M. C., & Roma, P. (2021). The COVID-19 lockdown and psychological distress among Italian parents: Influence of parental role, parent personality, and child difficulties. *International journal of psychology : Journal internationale de psychologie*, 56(4), 577–584. <https://doi.org/10.1002/ijop.12755>
10. Musacchio A, Andrade L, O'Neill E, Re V, O'Dwyer J, Hynds PD. Planning for the health impacts of climate change: Flooding, private groundwater contamination and waterborne infection - A cross-sectional study of risk perception, experience and behaviours in the Republic of Ireland. *Environ Res*. 2021 Mar;194:110707. doi: 10.1016/j.envres.2021.110707. Epub 2021 Jan 9. PMID: 33428910.
11. Ong'ondo Ng'ambwa, T. ., Martin Okoth, P. L. C. (Rtd) J., & Psusma Sum, D. T. . (2021). FACTORS INFLUENCING CONTROL OF BLOOD PRESSURE LEVELS AMONG HYPERTENSIVE ADULT PATIENTS IN SELECTED HOSPITALS, KAKAMEGA COUNTY, KENYA . *Journal of Health, Medicine and Nursing*, 6(2), 42–71. <https://doi.org/10.47604/jhmn.1262>
12. Picó-Pérez M, Ferreira S, Couto B, Raposo-Lima C, Machado-Sousa M, Morgado P. Sociodemographic and lifestyle predictors of mental health adaptability during COVID-19 compulsory confinement: A longitudinal study in the Portuguese population. *J Affect Disord*. 2021 Dec 1;295:797-803. doi: 10.1016/j.jad.2021.08.150. Epub 2021 Sep 3. PMID: 34517254; PMCID: PMC8413096.
13. Pagnini F, Bonanomi A, Tagliabue S, Balconi M, Bertolotti M, Confalonieri E, Di Dio C, Gilli G, Graffigna G, Regalia C, Saita E, Villani D. Knowledge, Concerns, and Behaviors of Individuals During the First Week of the Coronavirus Disease 2019 Pandemic in Italy. *JAMA Netw Open*. 2020 Jul 1;3(7):e2015821. doi: 10.1001/jamanetworkopen.2020.15821. PMID: 32706385; PMCID: PMC7382000.
14. Rosi A, van Vugt FT, Lecce S, Ceccato I, Vallarino M, Rapisarda F, Vecchi T, Cavallini E. Risk Perception in a Real-World Situation (COVID-19): How It Changes From 18 to 87 Years Old. *Front Psychol*. 2021 Mar 2;12:646558. doi: 10.3389/fpsyg.2021.646558. PMID: 33737899; PMCID: PMC7961080.
15. Savadori L, Lauriola M. Risk Perception and Protective Behaviors During the Rise of the COVID-19 Outbreak in Italy. *Front Psychol*. 2021 Jan 13;11:577331. doi: 10.3389/fpsyg.2020.577331. PMID: 33519593; PMCID: PMC7838090.
16. Shahin, M.A.H., Hussien, R.M. Risk perception regarding the COVID-19 outbreak among the general population: a comparative Middle East survey. *Middle East Curr Psychiatry* 27, 71 (2020). <https://doi.org/10.1186/s43045-020-00080-7>
17. Shewale SP, Sane SS, Ujagare DD, Patel R, Roy S, Juvekar S, Kohli R, Bangar S, Jadhav A, Sahay S. Social Factors Associated With Adherence to Preventive Behaviors Related to COVID-19 Among Rural and Semi-urban Communities in Western Maharashtra, India. *Front Public Health*. 2021 Sep 8;9:722621. doi: 10.3389/fpubh.2021.722621. PMID: 34568263; PMCID: PMC8457380.
18. Tagini S, Brugnera A, Ferrucci R, Mazzocco K, Pievani L, Priori A, Ticozzi N, Compare A, Silani V, Pravettoni G, Poletti B. Attachment, Personality and Locus of Control: Psychological Determinants of Risk Perception and Preventive Behaviors for COVID-19. *Front Psychol*. 2021 Jul 9;12:634012. doi: 10.3389/fpsyg.2021.634012. PMID: 34305708; PMCID: PMC8299752.
19. Thomas Ngambwa, "Predictors and Prevalence of Premature Birth in Vihiga County", *International Journal of Science and Research (IJSR)*, https://www.ijsr.net/search_index_results_paperid.php?id=SR201117005700, Volume 9 Issue 11, November 2020, 965 - 971
20. Wang L, Yu J, Chen D, Yang L. Relationships among COVID-19 Prevention Practices, Risk Perception and Individual Characteristics: A Temporal Analysis. *Int J Environ Res Public Health*. 2021 Oct 17;18(20):10901. doi: 10.3390/ijerph182010901. PMID: 34682656; PMCID: PMC8535291.