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Preventive health behaviour; Perceived cultural belief; Fear of Covid-19

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Research Article

Preventive Health Behaviour: Any Possible Link with Perceived Cultural Belief and Fear of Covid-19?

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Abstract

Preventive health behavior is an important factor to be considered towards achieving and maintaining sound health especially during this corona pandemic period. However, there is paucity of empirical understanding on how cultural belief and fear of covid-19 influence preventive health behavior. This study sought to fill this gap in literature by examining the perceived cultural belief and fear of covid-19 as determinants of preventive health behavior of undergraduate students of Adekunle Ajasin University, Akungba-Akoko Ondo State. The study adopted correlational survey design method, using purposive sampling technique in sampling 399 students (male=198 and female=201), aged between 15 and 45 years (Mean=23.57; SD=3.75). The participants responded to measures on preventive health behavior, perceived cultural belief and fear of covid-19. Three hypotheses were formulated and tested with regression analysis. Results showed that perceived cultural believe had no significantly prediction on preventive health behavior (β =0.01,t=0.21,p>0.05), however, showed that fear of Covid-19 significantly predicted preventive health behavior (β =0.38, t=8.07 p<0.1). Also, the joint prediction of perceived cultural believe and fear of Covid-19 on preventive health behavior was found significant [F(2,396)=32.92 p<0.1]. The study therefore, recommends that sensitization and health preventive programs should regularly be carried out by the university management in order to improve the likelihood of students engaging in health preventive behavior.

Introduction

Good health is of critical importance for a better and quality life of every individual, and the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief or social background. This is because without sound health, individual's vision, ambition and set goals may likely results in frustration [1]. This validates with the popular saying that, health is wealth. Even though many people are generally aware of the importance of health in fulfilling their everyday pursuits, and while many people have good intentions for healthy behaviour, the vast majority report difficulties in consistently performing those behaviours (Ukeni 2013). Thus, preventive health behavior is an important factor to be considered towards achieving and maintaining sound health especially during this corona pandemic period.

Preventive health behavior is any activity undertaken by an individual who believes himself to be healthy, for the purpose of preventing or detecting illness in an asymptomatic state (Ukeni 2013). Accordingly, World Health Organization (2018) defined health behavior as any activity undertaken by an individual, regardless of actual or perceived health status, for the purpose of promoting, protecting or maintaining health, whether or not such behavior is objectively effective towards that end. In other words, health may be viewed as a resource for everyday living, not just the absence of disease. Diet or a pattern of regular exercise is another common health behavior young people find it difficult to maintain in the face of temptations of modern life. Changing a bad health habit seems even more difficult than maintaining a good one [2]. Understanding the nature of health and how people engage in several health behaviors, in a bid to keep healthy or respond to physical distress when ill, as the case may be requires, a consideration of individual's cultural belief which in this study is being considered as one of the possible causes of preventive health behavior.

Perceived cultural beliefs

Hatah E, et al. [3] defined cultural beliefs as a set of behavioral patterns related to thoughts, manners and actions, which members of society have shared and passed on to succeeding generations. The potential influence of health-related culture on health itself is vast. Hence, the effect of cultural beliefs on health outcomes is huge, within and across cultures, in multi-cultural settings, and even within the cultures of institutions established to advance health [4]. The cultural practices of people not only affect their health but also affect all aspects of life including social relationships, it contribute to societal functioning and health condition [5]. Thus, all people, no matter the race, have their beliefs and practices concerning health, and each society or community has its peculiar way of doing things and these practices go a long way in influencing the people's perception, attitudes and behavior in the maintenance of heath, and management of health related problems (WHO, 2017). Most of these cultural beliefs in Nigeria have existed long before the colonial days and advent of orthodox medicine and the practices of these beliefs may be related to greater health risks [6].

Some even believe that health-related issues are usually caused by angry gods and evil spirits. As such, the presence of an illness may be seen as a warning sign of an imbalance between the natural and the spiritual world [7]. All these cultural health-related beliefs have direct and indirect influence on individual's behavior in regard to health prevention [8]. Ikechukwu, et al. [9] examined the influence of cultural and traditional beliefs on maternal and child health practices among mothers with under-five children in rural and urban households in Cross River State, Nigeria. The results of their study revealed that cultural and traditional beliefs significantly influenced maternal and child health-care practices in Cross River State, Nigeria. Hamzah, et al. [10] on the association of personal factors of culture, attitude and motivation on health behavior among adolescents in Malaysia. Their findings showed that there was a strong linear relationship between culture and health behavior. Besides the culture of adolescents being the main predictor of health behavior, attitude and



motivation also had significant independent effects on health behavior. Similarly, Shahin, et al. [11] reviewed 2,646 articles in order to assess the impact of personal and cultural beliefs on medication adherence of patients with chronic illnesses. The findings identified some personal and cultural based factors associated with adherence to medication regimes, including perception of illness, health literacy, cultural beliefs self-efficacy, spiritual and religious beliefs, as well as illness knowledge. The findings showed a statistically significant associations between medication adherence and these personal and cultural factors.

Fear of Covid-19

Fear of Covid-19 is another possible factor being considered in this study as predictor of preventive health behavior. The deadly and rapid spreading of Corona virus known as Covid-19 has not only imposed a threat on human lives but also on social and economy activities globally especially in developing countries including Nigeria [12]. The virus originated from a Chinese city, Wuhan, in December 2019, and it belongs to the Coronavirus family of viruses and is responsible for causing severe acute respiratory syndrome in those infected as reported by World Health Organization [13]. As a results of the rapid spreading of this deadly virus globally, the World Health Organization have adopted some preventive measures globally to stop the further spread of the disease, and has also tasked the public and the leadership of various countries to enforce the measures necessary to limit the spread of the virus such as social distancing, regular hand washing, borders closure and even lockdown [12]. The case of COVID-19 in Nigeria was first discovered on 27th February 2020 in Lagos state (Nigeria Centre for Disease Control, 2020). However, the number of cases greatly increased within the first few weeks of the outbreak though with no death cases recorded earlier. Expectedly, surges of daily increase in the number of new cases began to occur from the 19th of March 2020 with the number of confirmed cases rising steadily to emergency level. On the 15th of April, 2021 the total number of confirmed cases rose to 163,911 with 2,061 deaths and 154,225 discharged cases (NCDC, 2021). One psychological aspect of the COVID-19 pandemic is fear. Fear is defined as an unpleasant emotional state that is triggered by the perception of threatening stimuli [14]. Extraordinary situations such as disease outbreaks and epidemics can induce fear among many people. However, despite the negative consequence of fear of COVID-19, this fear of the virus was also found to drive individual in practicing preventive behaviors to avoid the infection [15]. Though, extreme fear for individuals who cannot handle the fear they perceive may lead to irrational thinking and subsequently inhibit practicing preventive behaviors [16]. It has been observed that when individuals cannot control fear, they defensively resist preventive behaviors [17]. Therefore, individuals with mental disturbances may have difficulties in controlling fear and resist engaging in preventive COVID-19 infection behavior.

For instance, Kim, et al. [18] examined the impact of health beliefs and resource factors on preventive behaviors against the COVID-19 pandemic. The researcher sampled and analyzed data from 1525 Korea's general population between 6^{th} and 11th August 2020. The findings revealed that that gender (female), age, number of elderly people in one's family, perceived severity, perceived benefit, self-efficacy, poor family health, media exposure, knowledge, personal health status, and social support positively affected preventive actions, whereas perceived susceptibility negatively affected them. In explaining preventive actions, self-efficacy had the greatest explanatory power, followed by gender (female), knowledge, personal health status, perceived severity, and social support. In addition, the analysis of moderating effects showed that resource variables, such as education level, personal health status, and social support, play moderating roles in inducing preventive actions. Similarly, Shahnazi, et al. [19] examined the preventive behaviors from the disease based on constructs of the health belief model among 750 individuals in Golestan province of Iran. The outcome of their study revealed that female gender, perceived barriers, perceived self-efficacy, fatalistic beliefs, perceived interests, and living in city had the greatest preventive behaviors from COVID-19 respectively. Preventive interventions were necessary among men and villagers.

Stangier, et al. [20] investigated perceived vulnerability to disease, knowledge about COVID-19, and changes in preventive behavior during lockdown in a German convenience sample of 1358 participants. The findings showed that the knowledge about COVID-19 significantly predicted the increased in adaptive and preventive behavior. Also, perceived infectability predicted increased in preventive behavior, whereas the knowledge of germ predicted a self-reported increase in preventive and a decrease in risk behavior. Furthermore, patient health predicted a higher score in the perceived infectability and germ and a decrease in adaptive behavior. This study overall showed that perceived vulnerability to disease is closely linked to preventive behaviors and may enhance adaptation to COVID-19 pandemic.

Hypotheses

- Perceived cultural belief will significantly predict preventive health behavior among undergraduates.
- Fear of Covid-19 will significantly predict preventive health behavior among undergraduates.
- c. Perceived cultural belief and Fear of Covid-19 will have significant joint prediction on preventive health behavior among undergraduates.

Method

Research design and participants

The study adopted correlational survey design, since the researcher is interested in the strength of relationship between variables in this study. The researcher interest is in knowing the relationship and predictive effect of perceived cultural belief and fear of Covid-19 on preventive health behavior. The research study was conducted among undergraduates of Adekunle Ajasin University Akungba-Akoko, Ondo State. The study covered six faculties in Adekunle Ajasin University which include; Faculty of Social and Management Science, Faculty of Arts, Faculty of Science, Faculty of Law, Faculty of Education and Faculty of Agriculture. The choice for the school was primarily because the university environment is suitable for the achievement of the research objectives since students represent active members of the population in the society.

Measures

Four major instruments were used in gathering data from the participants. They include: Biographic Information Questionnaires: this contain the personal details of participants such as age, gender, religion, family type, faculty and level.

Preventive health behavior: Preventive health behavior was measured using Positive health behaviour scale developed by Woynarowska, et al. [21]. It consists of 9 items. The instrument is rated on 4-point Likert scale 3=Always, 2=Often, 1=Sometimes, 0=Never. Sample items on the scale include: "I have a dental check-up every 6 months," "If I get sick and have a doctor's appointment, I follow doctor's recommendations". High score indicates high preventive health behavior while low score implies low preventive health behavior. The Cronbach alpha obtained in the present study is 0.78

Perceived cultural belief: Perceived cultural belief was measured using cultural value and attitude scale developed by Choi, Papandrea and Bennett (2007). It consists of 19 item. The instrument is rated on 5-point Likert scale: 1=Strongly Agree, 2=Mildly Agree, 3=Unsure, 4=Mildly Disagree, 5=Strongly Disagree. Sample of items include: "The cultural values of our forefathers are important to me". "Cultural heritage must be a part of our life". High score obtained indicated indicates high cultural belief while low score implies low cultural belief. The Cronbach alpha obtained in the present study is 0.85

Fear of Covid-19: Fear of covid-19 was measured using Fear of COVID-19 Scale developed by Ahorsu, et al. (2020). It consists of 7 items. The instrument is rated on 5-point Likert scale: 1=strongly disagree, 2=disagree, 3=neutral, 4=agree 5=strongly agree. Sample items on the scale include: "It makes me uncomfortable to think about Corona." "I cannot sleep because I'm worrying about getting Corona". High score from the scale indicates high fear of Covid-19 while low score implies low fear of Covid-19. The Cronbach alpha obtained in the present study is 0.87.

Procedure

Before administering the questionnaire, permission was sought from class reps of the targeted students and from lecturers in their various lecture rooms. A concise explanation regarding the purpose of the study and the significance of targeted sample in participating in the study was briefly elucidated as well. After series of questions regarding the study and their participation was convincingly answered, the participants therefore consented to participate in the study. In addition, the respondents were informed that there is no right or wrong answers, and as such should try to be honest as possible in their responses as they were also given assurance of confidentiality and anonymity of their identities and responses. The questionnaires were distributed to the participants based on their willingness to participate in the study. Purposive sampling technique was used to select departments, while accidental sampling technique was used in selecting the participants. The process of administration and collection of data



took about three weeks. However out of the 400 copies of questionnaires that were administered, 399 were retrieved and found usable for the analysis. This yielded 99% response rate from the participants. Using purposive sampling techniques, a total of 399 (male=198 and female=201) were sampled from the study population in Adekunle Ajasin University, Akungba Akoko, Ondo State. The participants' age as at the time of data collection ranged between 15 to 45 years (Mean=23.57; SD=3.75). The academic level of the participants were; 100 level; 40 (10.0%), 200 level; 94 (23.6%), 300 level; 85 (21.3%), 400 level; 140 (35.1%), and 500 level; 33 (8.3%). Also, the participants' Faculty include, 41 (10.3%) were from Faculty of Agriculture, 41 (10.3%) from Faculty of Arts and Humanities, 50 (12.5%) from Faculty of Law, while 56 (14.0%) belongs to Faculty of Education, also 148 (37.1%) from Faulty of Social and Management Science, and 60 (15.0%) were from Faculty of Sciences. Also, the family type of the respondents showed that 280 (70.2%) of the respondents were from monogamous family, while 114 (28.6%) of the respondents came from polygamous family.

Data analysis

In order to determine the extent and direction of relationship among the study variables, correlation matrix was used, while multiple regression analysis was used to test the study hypotheses.

Results

Test of relationships

In order to determine the extent and direction of the relationships that exist among the study variables correlation analysis was used. The results are presented in the table below.

Table 1: Summary of correlation analysis showing the association among the study variables.

Variables	1	2	3	4	5	6	7
1. Age	1						
2. Gender	-0.05	1					
3. Family Type	-0.03	0.02	1				
4. Academic Level	0.27**	0.04	0.11*	1			
5. Perceived Cultural Believe	-0.03	-0.14**	-0.05	0.13*	1		
6. Fear of Covid 19	-0.1	0.26**	0.01	0.14**	-0.08	1	
7. Preventive Health Behavior	-0.05	0.22**	0.06	0.04	-0.04	0.38**	1
Mean	23.57	-	-	-	42.3	17.73	10.8
SD	3.76				15.29	7.1	5.64

Source: **p< 0.01, *p<0.05, N=399.

The result in Table 1 showed that age had no significant relationship with preventive health behaviour $[r(399){=}-0.05,\ p{>}0.05].$ This this implies that preventive health behaviour is not determined by age. Furthermore, there was a significant relationship between gender and preventive health behavior $[r\ (399){=}0.22,\ p{<}0.01].$ This implies that preventive health behavior is triggered by gender. Also, family type had no significant relationship with preventive health behavior $[r(399){=}0.06,\ p{>}0.05].$ Similarly, no significant relationship was found between academic level and preventive health behavior $[r(399){=}0.04,\ p{>}0.05].$ Likewise, no significant relationship was found between perceived cultural belief and preventive health behavior $[r(399){=}-0.04,\ p{>}0.05].$ This implies that cultural belief had no connection with preventive health behavior. However, there was a significant relationship between fear of Covid-19 and preventive health behavior $[r(399){=}0.38,\ p{<}0.01].$ This implies that fear of Covid-19 is a determining factor of preventive health behavior.

Test of hypotheses

Table 2: Multiple regressions showing the prediction of preventive health behaviour by perceived cultural believe and fear of Covid-19 predicting.

Variables	β	t	R	R ²	Df	F
Perceived Cultural Believe	-0.01	-0.21	0.39	0.14	2,396	32.92**
Fear of Covid 19	0.38	8.07**				
Source: **p< 0.01, *p<0.05.						

The result in Table 2 above revealed that perceived cultural believe had no significant prediction on preventive health behavior (β =-0.01, t=-0.21, p>0.05). This implies that preventive health behaviour among undergraduates cannot be attributed to cultural believe. This negate hypothesis 1 and it was rejected. From the table also, was revealed that fear of Covid-19 significantly predicted preventive health behavior (β =0.38, t=8.07 p<0.01). This implies that fear of Covid-19 contributes to preventive health behaviour among undergraduates. The result is in support of hypothesis 2 and it was accepted. Similarly, the joint prediction of perceived cultural believe and fear of Covid-19 on preventive health behavior was found significant [F (2,396)=32.92 p<0.01]. This implies that perceived cultural believe and fear of Covid-19 jointly accounted for 14% of the variance related to preventive health behavior. The R value of 0.39 shows a positive relationship between perceived cultural believe and fear of Covid-19 on preventive health behavior. This result confirmed hypothesis 3 and the hypothesis was therefore, accepted.

Discussion

This study examined the perceived cultural belief and fear of covid-19 as determinants of preventive health behavior of undergraduate students of Adekunle Ajasin University, Akungba-Akoko Ondo State. Hypothesis one which stated that perceived cultural belief will significantly predict preventive health behavior among undergraduates was not confirmed. This implies that preventive health behaviour among undergraduates cannot be attributed to cultural believe. The result negates the findings of Hamzah, et al. [10] whose findings showed that there was a strong linear relationship between culture and health behavior. Besides in their results, the culture of adolescents being the main predictor of health behavior, attitude and motivation $also\ had\ significant\ independent\ effects\ on\ health\ behavior.\ Similarly, the\ result\ negates$ the findings of Similarly, Shahin, et al. [11] who reviewed 2,646 articles in order to assess the impact of personal and cultural beliefs on medication adherence of patients with chronic illnesses. Their findings identified some personal and cultural based factors associated with adherence to medication regimes, including perception of illness, health literacy, cultural beliefs, self-efficacy, spiritual and religious beliefs, as well as illness knowledge. The findings showed a statistically significant associations between medication adherence and these personal and cultural factors.

Hypothesis two which stated that fear of Coviid-19 will significantly predict preventive health behavior among undergraduates was confirmed. This implies that $fear of Covid-19 \, contributes \, to \, preventive \, health \, behaviour \, among \, undergraduates. \, The \, in the contributes \, to \, preventive \, health \, behaviour \, among \, undergraduates. \, The \, in the contributes \, to \, preventive \, health \, behaviour \, among \, undergraduates. \, The \, in the contributes \, to \, preventive \, health \, behaviour \, among \, undergraduates. \, The \, in the contributes \, to \, preventive \, health \, behaviour \, among \, undergraduates. \, The \, in the contributes \, to \, preventive \, health \, behaviour \, among \, undergraduates. \, The \, in the contributes \, to \, preventive \, health \, behaviour \, among \, undergraduates. \, The \, in the contributes \, to \, preventive \, health \, in the contributes \, to \, preventive \, healt$ result is in support of Stangier, et al. [20] who investigated on perceived vulnerability to disease, knowledge about COVID-19, and changes in preventive behavior during lockdown in a German convenience sample of 1358 participants. Their findings showed that the knowledge about COVID-19 significantly predicted the increased in adaptive and preventive behavior. Likewise with the findings of Deressa, et al. [22] on the risk perceptions and preventive practices of COVID-19 among healthcare professionals in public hospitals in Ethiopia. The findings showed that majority of the healthcare professional strictly compliance with wearing facemask, hand washing for at least $20\,$ seconds, covering mouth and nose while coughing or sneezing, and avoiding touching eyes, nose, and mouth as a result of worried about the risk of becoming infected with coronavirus, and worried about the risk of infection to their family. Overall score of fear and worry of COVID-19 had significant relationships with positive preventive health behaviors among the healthcare professionals.



Hypothesis three which stated that perceived cultural belief and fear of Covid-19 will have significant joint prediction on preventive health behavior among undergraduates was confirmed. This implies preventive health behavior is attributed to joint force of perceived cultural belief and fear of Covid-19. The study is in support of Shaw, et al. [23] on cultural influences on health literacy, cancer screening and chronic disease outcomes. The outcome of their analysis revealed that cultural beliefs around health and illness contributed to an individual's ability to understand and act on a health care provider's instructions [24-30]. Similarly the results is agreement with the findings of Stangier, et al. [20] who investigated on perceived vulnerability to disease, knowledge about COVID-19, and changes in preventive behavior during lockdown in a German convenience sample of 1358 participants. The findings showed that the knowledge about COVID-19 significantly predicted the increased in adaptive and preventive behavior [31,32].

Conclusion

The findings of this study showed that perceived cultural belief did not predict health preventive behavior of undergraduates. However, fear of Covid-19 had a significant prediction on preventive health behavior. Also, the combination of perceived cultural belief and fear of Covid-19 predicted preventive health behavior of undergraduates [33-37].

Recommendations

Based on the findings from this study, it is recommended that:

- Orientation about Covid-19 should be constantly carried out among undergraduates, in order to improve the likelihood of students engaging in preventive health behavior.
- Also, improving students trust in Covid-19 information sources is an important medium to improve their preventive health behavior.
- Health programmes including living a healthy life style should be regularly organized among students at least once every month.

Limitations

One of the limitations of this study was the small sample size which may affect the generalization of the results. Despite the limitations listed above, this study has addressed the shortcomings in literature on perceived cultural belief and fear of Covid-19 on preventive health behavior.

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