Volume 5, No. 2
Agustus, 2022

e-ISSN : 2685-1997
p-ISSN : 2685-9068

REAL in Nursing Journal (RNJ)

Research of Education and Art Link in Nursing Journal

https://ojs.fdk.ac.id/index.php/Nursing/index

Risk Perception and Adherence to Precautionary Protocols: Experience at the Height of the COVID-19 Outbreak in Nigeria

*Abdullahi Haruna Ibrahim[1], Muhammad Awwal Ladan[1], Aisha Fatihu[3], Abubakar Faruk Umar[4] and Hussaini Muhammad Aikawa[*2]*

UNIVERSITAS FORT DE KOCK BUKITTINGGI

Program Studi Keperawatan dan Pendidikan Ners
Universitas Fort de Kock Bukittinggi, Indonesia

Risk Perception and Adherence to Precautionary Protocols: Experience at the Height of the COVID-19 Outbreak in Nigeria

REAL in Nursing Journal (RNJ)

https://ojs.fdk.ac.id/index.php/Nursing/index

Abdullahi Haruna Ibrahim[1], Muhammad Awwal Ladan[1], Aisha Fatihu[3], Abubakar Faruk Umar[4] & Hussaini Muhammad Aikawa*[2]

Keywords:
Risk perception, COVID-19, Adherence, Lockdown, Experience

Korespondensi:
Hussaini Muhammad Aikawa
hmaikawa.sce@buk.edu.ng

1. *Department of Nursing Sciences, Bayero University Kano, Nigeria.*
2. *Department of Science, School of Continuing Education, Bayero University Kano, Nigeria.*
3. *Department of Nursing Sciences, Ahmadu Bello University Zaria, Nigeria.*
4. *Nursing and Midwifery Council of Nigeria, Abuja-Nigeria.*

ABSTRACT

***Aim**: The study is aimed at examining COVID-19 personal risk perception and adherence to lockdown precautionary protocol during the peak of COVID-19 outbreak in Nigeria.*

***Methodology**: A descriptive cross-sectional study was adopted in which 4864 responses were retrieved between April to June 2020 through an online questionnaire to assess risk perception to COVID-19 in Nigeria. Information sought was on personal risk perception, frequency of lockdown protocol violations, general perception regarding COVID-19 lockdown in Nigeria, Pearson's chi square and frequencies were examined from the data with SPSS version 25.*

***Results**: 55.3% were between the ages of 26-35 years, 59.2% were males, 61.2% were singles, and 80.9% lived in urban areas. About half, (54.6%) had moderate risk perception, 41.4% had high personal COVID-19 risk perception. Though 40.1% strictly adhered to the lockdown protocols, 71.7% of the respondents had a positive perception regarding the lockdown. Pearson' chi-square revealed significant relationship between being 26-35 years old, being male, being married, having at least a bachelor's degree, being Hausa, being a public servant and having a moderate to high COVID-19 risk perception (p>0.05).*

***Conclusion**: There was a good level of COVID19 personal risk perception in the majority of the Nigerian populace and although majority had a positive perception regarding lockdown as a precautionary measure to curtail the spread of COVID-19, less than half of the respondents adhered strictly to the lockdown protocols.*

Background

The first known cases of the novel coronavirus disease (COVID- 19) were detected in China, Wuhan province around December 2019 where clusters of pneumonia cases of unidentified origin and cause were reported and presumed to be linked with exposure to seafood (Zhu et al., 2019; Chen et al., 2020; Li et al., 2020). It was later established that it is viral infection caused by a novel strain of severe acute respiratory syndrome coronavirus-2 (SARS- CoV- 2) and the World Health Organization (WHO) on January 30th, 2020 declared the epidemic as Public Health Emergency of Global Concern and, barely a

month later, it was declared a pandemic disease (WHO, 2020).

The disease triggered a global public health response that was never seen before due to its rapidly increasing and contagious nature and its devastating influence on critical care infrastructures and healthcare systems at large and, the possibility of transmission by even asymptomatic carriers in addition. Worldwide, governments sealed their borders, announced total or partial lockdowns with restriction of movement, mandatory use of facemasks, social distancing and handwashing as cautionary measures to limit the viral spread (Biscayart et al., 2020; Zaka et al., 2020; Zhao et al., 2020). As of August 10, 2020, the aggregate count of infected persons worldwide was 19,718,030 cases with 728,013 deaths, Nigeria at the same period recorded 46,867 cases and 950 deaths (John Hopkins University, 2020).

According to Peak (2017), risk perception denotes people's subjective judgments on likelihood of undesirable/negative occurrences like disease, illness, injury and death. It is central in health/risk communication as it defines which hazards people are concerned about and actions they take dealing with them. Risk perception has 2 main dimensions; cognitive dimension which deals with what people know and understand about risks, and emotional dimension, that deals with how they feel about them. It was established by studies during outbreaks, trajectory of infectious disease is determined often by behaviour of individuals at risk and the behaviour is an upshot of the individuals' risk perception (Abdelrahman, 2020; Vijayaraghavan & Singhal, 2020; Zhang et al., 2020) and individuals' beliefs concerning the disease (Janz & Becker, 1984).

Several health-related researches reported very little relationship between having knowledge of a given infectious disease and genuine engagement in precautionary behaviour (Philips et., 2015; Seimetz et al., 2016; De Buck et al., 2017) and factors like risk perceptions/worry (Brug et al., 2004; Taglioni et al., 2013), surveillance information, attention (Raza et al., 2020), self-efficacy(Rimal, 2000) mediate the path from knowledge to genuine engagement in precautionary behaviour. Another study linking awareness/knowledge and risk perception stated that people knowledgeable about the aetiology of a disease, worry more about contracting the particular infection (Vartti et al., 2009).

A study observed that, although comparatively high knowledge regarding COVID-19 exist worldwide and amongst Nigerians as well (Olapegba et al., 2020), competing myths and sacred narratives (Chukwuorji and Iorfa, 2020) among the Nigerian populace are undermining risk perception and uptake of precautionary behaviours. This study examined risk perception with regards to COVID-19 and adherence to Government imposed precautionary lockdown during the peak of the outbreak across the various regions in Nigeria.

Materials and Methods

Cross-sectional research design was used for the study where a structured questionnaire was used to collect data from the respondents during the peak period of theCOVID-19 imposed lockdown and restriction of movement in Nigeria between April to June 2020. Participants were purposively selected and the questionnaires were circulated through social media platforms/forums where Nigerians were invited to respond. 4864

questionnaires were successfully filled where data analysis was performed using frequency tables and Pearson' chi-square. SPSS V.25 was used to analyse the data. Risk perception andperception of lockdown data were scored and analysed based on guideline below:

Table 1: Criteria for Analysis of Risk Perception andPerception of COVID-19 Imposed Lockdown

Risk Perception Level	**Range**
1. No Risk	0-5
2. Low Risk Perception	6-19
3. Moderate Risk Perception	20-33
4. High Risk Perception	34-48
Perception on lockdown	**Range**
1. Negative Perception	1-26
2. Positive Perception	27-36

The questionnaire carries an explanatory note concerning need and requirements of the study, rights to voluntary participation, anonymity and confidentiality of all information given by the respondents, and only participants who read and understood the information and accept to participate were directed proceed and respond to the survey.

Results:

Table 1: Sociodemographic Distribution of Respondents
N= 4864

No,	**Variables**	**F**	**%**
1.	**Age (years)**		
	15-25	1537	31.6
	26-35	2690	55.3
	36-45	384	7.9
	46-55	156	3.2
	56 – Above	97	2
2.	**Gender**		
	Males	2879	59.2
	Females	1985	40.8
3.	**Marital status**		
	Single	2977	61.2
	Married	1887	38.8
4.	**Highest Educational Qualification**		
	Secondary/SSCE	223	4.6
	NCE/OD/ND	483	9.9
	HND	240	4.9
	Bachelor's Degree (BSc/BEd/BA etc.)	2902	59.7
	Master's Degree	919	18.9
	Doctorate	97	2

No,	Variables	F	%
5.	**Ethnicity**		
	Hausa	3455	71
	Yoruba	171	3.5
	Igbo	146	3
	Kanuri	363	7.5
	Others	729	15
6.	**Occupation**		
	Business	1343	27.6
	Public Service (active/retired)	2466	50.7
	Artisanship	63	1.3
	Others	992	20.4
7.	**Place of residence**		
	Rural	929	19.1
	Urban	3935	80.9

From Table 1 above, about half (55.3%) were between the ages of 26-35 years and were males (59.2%), 61.2% were singles, 59.7% hold bachelor's degree as highest educational qualification, majority (71%) were Hausa by ethnic extraction, 50.7 were public servants and 80.9% lived in urban areas.

Table 2: Distribution of Respondents Based on Personal Risk Perception
N= 4864

S/No		Frequency	Percentage (%)
2.	Low risk	195	4.0
3.	Moderate risk	2656	54.6
4.	High risk	2013	41.4

From Table 2 above, 54.6% had moderate risk perception, 41.4% had high risk perception while only 4% had low personal COVID-19 risk perception.

Table 3: Distribution of Respondents Based on Frequency of Violating Lockdown Protocols
N= 4864

S/No		Frequency	Percentage (%)
1.	Never	1950	40.1
2.	Once	545	11.2
3.	Sometimes	2145	44.1
4.	Several times	161	3.3
5.	Always	63	1.3

From Table 3 above, 40.1% of the respondents adhered to the lockdown protocols, 44.1% reported violating the protocols sometimes while 1.3% submitted that they never adhered to the lockdown protocols.

Table 4: Distribution of Respondents Based on their Perception Regarding COVID-19 Lockdown in Nigeria N= 4864

S/No		Frequency	Percentage (%)
1.	Negative Perception	1377	28.3
2.	Positive Perception	3487	71.7

Majority (71.7%) had a positive perception regarding the lockdown and its benefit in curtailing the spread of COVID-19 in the country. 28.3% had a negative perception about the lockdown.

Table 5: Relationship between Sociodemographic Variables and having moderate to high COVID-19 risk perception N= 4864

	Values	df	Asymp. Sig. (2-sided)
Being 26-35 years Old			
Pearson Chi-Square	204.293[a]	14	.000
Likelihood Ratio	164.738	14	.000
Fisher's Exact Test	143.608		.000
Being Male			
Pearson Chi-Square	136.442[a]	2	.000
Likelihood Ratio	175.350	2	.000
Fisher's Exact Test	166.935		
Being Married			
Pearson Chi-Square	125.651[a]	2	.000
Likelihood Ratio	158.404	2	.000
Fisher's Exact Test	150.533		
Having Bachelor's Degree and above Qualifications			
Pearson Chi-Square	191.740[a]	8	.000
Likelihood Ratio	126.524	8	.000
Fisher's Exact Test	109.003		
Being Hausa			
Pearson Chi-Square	59.249[a]	8	.000
Likelihood Ratio	72.784	8	.000
Fisher's Exact Test	64.152		
Being a Public Servant			
Pearson Chi-Square	84.686[a]	6	.000
Likelihood Ratio	111.982	6	.000
Fisher's Exact Test	99.949		
Being a business person			
Pearson Chi-Square	23.626[a]	6	.000
Likelihood Ratio	13.812	6	.000
Fisher's Exact Test	78.918		
Urban Residence			
Pearson Chi-Square	45.856[a]	2	.000
Likelihood Ratio	52.175	2	.000
Fisher's Exact Test	46.540		

Pearson' chi-square analysis revealed a statistically significant relationship between being 26-35 years old (X^2 = 204.293, Likelihood ratio = 164.738), being male (X^2 = 136.442, Likelihood ratio = 175.350),, being married (X^2 = 125.651, Likelihood ratio = 158.404), having bachelor's degree and above qualifications (X^2 = 191.740, Likelihood ratio = 126.524), being Hausa by ethnic extraction (X^2 = 59.249, Likelihood ratio = 72.784), being a public servant woman (X^2 = 84.686, Likelihood ratio = 111.982), being a business man/woman (X^2 = 23.626, Likelihood ratio = 13.812), residing in urban areas and having a moderate to high COVID-19 risk perception ($p>0.05$)at 0.05 level of significance.

Discussion

The study findings revealed that vast majority of respondents in this study had moderate to high level of COVID-19 risk perception and the findings agree with the report from another study that gauged level of risk perception across different portions of the universe (Dryhurst et al., 2020). However, the findings are not exclusively unexpected as exposure to the fatal outbreaks like Ebola VirusDisease, Lassa fever and monkey pox in the recent past in Nigeria could prove to be potent sensitizers to the populace prior to the COVID- 19outbreak thus, resulting in the high COVID- 19 risk perception. Furthermore, as people were home locked at the period of this study, they tend to be attached to every source of information (social media and the mass media most especially) to get informed about the disease and its Nigeria and other parts of the world which in essence will help in increasing their personal riskperception.

Bulk of respondents in this study had a positive perception regarding lockdown as a precautionary behaviour to prevent COVID-19 spread and the study also established that very few reported violating the lockdown protocols always. With the high risk perception found in the study as discussed above, it is expected that people will engage in precautionary behaviours as stated and this assertion was buttressed by Taglioni et al. (2013) in another study and Rimal (2000) who reported that risk perceptions/worry mediate the lane from knowledge/awareness to genuine engagement in precautionary behavior. However, the findings refute the claim, competing myths and sacred narratives among Nigerian populace are undermining risk perception and uptake of precautionary behaviors as described by Chukwuorji and Iorfa, (2020) which may not be unconnected the widespread mass media campaign embarked upon by the Nigerian government to create awareness regarding COVID-19 and need for the lockdown using the limited information about the novel virus available at that time.

The study exposed that being an adult aged 26-35 years old, being male and married, having bachelor's degree and above qualifications, being Hausa by ethnic extraction, being public servant, being a business man/woman and residing in urban areas had a significant relationship with having a moderate to high COVID-19 risk perception. These finds are not entirely unanticipated looking at the link between having moderate to high risk perception with having high educational status, being public servant which is a status mostly reserved for the educated and residing in urban areas which has higher concentration of the educated alongside public servants. Risk communications can easily be received by urban dwellers compared to those in rural expanses due to availability of the means

in the former. As with all other communications, ability to receive, understand information and change behavior is higher among the most literate groups. Age plays a key role as well since children and the elderly may have difficulties with cognition compared to adults which this study has highlighted. The findings reasonably agreed with what was reported by Dryhurst et al. (2020).

Conclusion & Recommendations:

From the study findings, it was established, there was a good level of COVID19 personal risk perception in the majority of the Nigerian populace. Although majority had a positive perception regarding lockdown as a precautionary measure to curtail the spread of COVID-19, below half of the respondents strictly observed the lockdown protocols. Factors like marital status age, educational level and gender play an important role in the risk perception regarding COVID-19in Nigeria. It is recommended that both healthcare professionals and related agencies further invest in risk communication whenever there is an impending health risk to ensure that good riskperception levels in the mind of the populace is achieved as well as high level of adherence to precautionary protocols.

Conflict of Interest: None to declare.

References

Iorfa, S.K., Ottu, I.F.A., Oguntayo, R., Ayandele, O., Kolawole, S.O., Gandi, J.C., Dangiwa, A.L., Olapegba, P.O. (2020). COVID-19 Knowledge, Risk Perception, and Precautionary Behavior Among Nigerians: A Moderated Mediation Approach. Front Psychol,20(11);566773. doi: 10.3389/fpsyg.2020.566773. PMID: 33329202; PMCID: PMC7714760.

Abdelrahman, M.K. (2020). Personality traits, risk perception and social distancing during COVID-19. PsyArXiv [Preprint]. 10.31234/osf.io/6g7kh

Allington, D., Duffy, B., Wessely, S., Dhavan, N., Rubin, J. (2020). Health-protective behaviour, social media usage and conspiracy belief during the COVID-19 public health emergency. Psychol. Med. [Epub ahead of print] 10.1017/S003329172000224X

Biscayart, C., Angeleri, P., Lloveras, S., Chaves, T., Schlagenhauf, P., Rodriguez-Morales A. J. (2020). The next big threat to global health? 2019 novel coronavirus (2019-nCoV): what advice can we give to travelers? — Interim recommendations January 2020, from the Latin-American Society for Travel Medicine (SLAMVI). Travel Med. Infect. Dis,33;101567. 10.1016/j.tmaid.2020.101567

Chen, S., Yang, J., Yang, W., Wang, C., Bärnighausen, T. (2020). COVID-19 control in China during mass population movements at New Year. Lancet Lond Engl,395(10226):764–6.

Chukwuorji, J.C. & Iorfa, S. K. (2020). Commentary on the coronavirus pandemic: Nigeria. Psychol. Trauma Theory Res. Pract. Policy,(12) S188–S190. DOI: 10.1037/tra0000786.

De Buck, E., Van Remoortel, H., Hannes, K., Govender, T., Naidoo, S., Avau, B., et al. (2017). Approaches to promote handwashing and sanitation behavior change in low-and middle-income countries: a mixed method systematic

review. Campbell Syst. Rev. 13, 1–447. doi: 10.1002/cl2.162

Dryhurst, S., Schneider, C.R., Kerr, J., Alexandra L. J., Recchia,F.G., Marthe van der Bles, A., Spiegelhalter, A. & Van der Linden, S. (2020). Risk perceptions of COVID-19 around the world, Journal of Risk Research, 23(7-8);994-1006, DOI: 10.1080/13669877.2020.1758193

Janz, N. K., Becker, M. H. (1984). The health belief model: "a decade later". Health Educ. Behav,11;1–47. 10.1177/109019818401100101

John Hopkins University. (2020). Coronavirus COVID-19 Global Cases by the Center for Systems Science and Engineering (CSSE). Available online at: https://coronavirus.jhu.edu/map.html (accessed August 11, 2020).

Li, Q., Guan, X., Wu, P., Wang, X., Zhou, L., Tong, Y., et al. (2020). Early transmission dynamics in Wuhan, China, of novel coronavirus–infected pneumonia. N Engl J Med,382(13);1199–207. https://doi.org/10.1056/NEJMoa2001316.4.

Olapegba, P. O., Iorfa, S. K., Kolawole, S. O., Oguntayo, R., Gandi, J. C., Ottu, I. F. A., et al. (2020b). Survey data of COVID-19-related Knowledge, Risk Perceptions and Precautionary Behavior among Nigerians. Data Brief 30:105685. doi: 10.1016/j.dib.2020.105685

Paek, H. (2017). Risk Perceptions and Risk Characteristics. Oxford Research Encyclopedias, Communication,1-14. https://doi.org/10.1093/acrefore/9780190228613.013.283

Phillips, R. M., Vujcic, J., Boscoe, A.,Handzel, T., Aninyasi, M., Cookson, S. T., et al. (2015). Soap is not enough: handwashing practices and knowledge in refugee camps, Maban County, South Sudan. Conflict Health 9:39.

Raza, S. H., Iftikhar, M., Mohamad, B., Pembecioglu, N., and Altaf, M. (2020). Precautionary behavior toward dengue virus through public service advertisement: mediation of the individual's attention, information surveillance, and elaboration. SAGE Open 10:2158244020929301.

Rimal, R. N. (2000). Closing the knowledge-behavior gap in health promotion: the mediating role of self-efficacy. Health Commun, 12;219–237. doi: 10.1207/s15327027hc1203_01

Seimetz, E., Kumar, S., and Mosler, H. J. (2016). Effects of an awareness raising campaign on intention and behavioural determinants for handwashing. Health Educ. Res,31;109–120. doi: 10.1093/her/cyw002

Vartti, A. M., Oenema, A., Schreck, M., Uutela, A., de Zwart, O., Brug, J., et al. (2009). SARS knowledge, perceptions, and behaviors: a comparison between Finns and the Dutch during the SARS outbreak in 2003. Int. J. Behav. Med,16;41–48. doi: 10.1007/s12529-008-9004-6

Vijayaraghavan, P., and Singhal, D. (2020). A descriptive study of Indian General Public's Psychological responses during COVID-19 pandemic lockdown period in India. PsyArXiv [Preprint]. doi: 10.31234/osf.io/jeksn

World Health Organization. (2020). Coronavirus (COVID-19) events as they happen.

Rolling Updates on coronavirus disease. Available from: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen

Zhang, X., Wang, F., Zhu, C., and Wang, Z. (2020). Willingness to self-Isolate when facing a pandemic risk: model, empirical test, and policy recommendations. Int. J. Environ. Res. Public Health,17;197. doi: 10.3390/ijerph17010197

Zhao, S., Lin, Q., Ran, J., Musa, S. S., Yang, G., Wang, W., et al. (2020). Preliminary estimation of the basic reproduction number of novel coronavirus (2019-nCoV) in China, from 2019 to 2020: a data-driven analysis in the early phase of the outbreak. Int. J. Infect. Dis. 92, 214–217. doi: 10.1016/j.ijid.2020.01.050

Zhu, N., Zhang, D., Wang, W., Li, X., Yang, B., Song, J., et al. (2020). A novel coronavirus from patients with pneumonia in China, 2019. N Engl J Med,382(8);727–33. https://doi.org/10.1056/NEJMoa2001017.2.