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Sources of Health Information on COVID-19 and Adherence to Measures to Prevent Community Spread among Rural Dwellers in Rivers State, Nigeria

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Abstract. This paper examines the source of health information on COVID-19 and the level of adherence to the necessary measures to prevent community spread in rural communities. The study was carried out in five rural communities in Rivers State, South-South Nigeria. Two research questions guided the study. The instrument for data collection was a structured questionnaire tagged "Instrument for Assessing Sources of Health Information on Covid-19 and Adherence to Measures to Prevent Community Spread in Rural Areas (ASHICAMPSRA)". The data generated were analyzed using descriptive statistics to answer the research questions. Mean and percentages were used to analyze the data. The study reveals that community education centre was the major source of health information on COVID-19, that rural dwellers acquire knowledge on basic health literacy on prevention of community spread of the virus, the symptoms when infected, management of infected persons, and information on vaccination from the community education centre. The study also reveals that rural dwellers adhere to three preventive measures out of seven to a high extent. The preventive measures adhered to highly are: staying home during the lockdown, hand washing and avoiding large gathering. Based on the finding, the conclusion is that there was inadequate use of the old and new media like community radio and community newspaper as well as relative poor adherence to the measures to prevent community spread of the corona virus. The study provides an insight on sources of health information in COVID-19 in rural communities and the extent of adherences to the preventive measures. These findings can inform tailored community intervention to promote health information on COVID-19.

Keywords: Health Information, Rural Dwellers, Community Education, COVID-19 Prevention

1. Introduction

Health illiteracy is a global problem with an estimated 776 million adults across the world majority of whom are in the rural communities lacking basic literacy. Health literacy largely focuses on reading and numeracy in the context of health care; the lack of this type of literacy constitutes health illiteracy. Health literacy is a set of life skills that people need to function effectively in the health care environment (Berkman, Terry, & McCormack cited in Sayah, Williams, & Johnson, 2012). These skills include the ability to read and understand written text, locate and interpret information in documents, and write or complete forms (functional); the ability to speak and listen effectively and communicate about health-related information (interactive); the ability to navigate the health care system and make appropriate health decision (critical); and the ability to use numeric information for tasks, such as interpreting information on prevention of spread of Covid-19, body temperature, and social distance of 2 meters as well as having appropriate behavour as required under the new normal fostered by the sudden outbreak of the COVID-19 pandemic. Health literacy has a profound impact on all aspects of health and is a contributing factor to health outcomes. There is relationship between Low health literacy, poor health outcomes and health disparities and inequities (Berkman, Sheridan, Donahue, Halpern, & Crotty cited in Barbel, 2022). Thus, those with low literacy are more likely to have poor health condition, and those with low income are as well likely to have poor health condition. It is important to promote and improve

health literacy on Covid-19, particularly among rural populations who are disproportionately low income earners and impacted by low health literacy and health disparities.

The COVID-19 pandemic was declared by the World Health Organization (WHO) in early 2020 as global health challenge. To address this challenge, WHO came up with some preventive measures such as hand sanitization, use of face masks in public places, and social distancing. This measure requires a behavioral change and people require health information. The rural dwellers had to acquire information about the new normal on the prevailing health challenge and to adapt their behaviors. Rural communities were considered a target group in COVID-19 transmission due to their form of socialization, poor personal hygiene, low level of literacy, rural economic activities as well as poor health facilities.

In addition, the literature shows how some rural dwellers will also present health risk behaviors, a fact that deserves attention because, according to Akoko, Akpeki and Uahomo (2022), this group of the population seeks health care services at lower frequencies. Akoko et al (2022) observed that some rural dwellers in Nigeria lack adequate knowledge on corona virus prevention. To address this lack of knowledge there is need for health literacy. Nonetheless, health literacy plays a vital role in health promotion and disease prevention as well as navigating the health care system (Neter & Brainin, 2019). Today health information is widely and readily available via the internet, so eHealth literacy has also become increasingly relevant. eHealth literacy includes media, computer, health, and scientific literacies. Having adequate eHealth literacy contributes to better communication with health care providers, improved self-management, and greater access to health care information (Neter & Brainin, 2019). This is relevant to create health awareness on the prevention of corona virus and in the treatment and management of those infected by the virus. Health Literacy is a field under construction, of a complex, multidimensional and interdisciplinary nature involving the government and non-governmental agencies.

Taking from the WHO as cited in Kickbusch, Pelikan, Apgel, & Tsouros, (2013:23), a person is considered to be health literate if they are able to:

- understand and carry out instructions for self-care, including administering complex daily medical regimens;
- plan and achieve the lifestyle adjustments required for improving their health;
- make informed, positive health-related decision;
- know how and when to access health care when necessary;
- share health-promoting activities with others and address health issues in the community and society.

On the basis of this parameter, one is considered health literate on COVID-19, if the person is able to trace the histories of the emergence of the corona virus, understand and carry out the instructions on personal hygiene for the prevention and spread of the virus, plan and achieve the lifestyle adjustment required for prevention of the spread of the virus, make informed and positive health-related decision on COVID-19 pandemic, know how and when to access health care when infected by the Covid-19 virus, share health promoting activities with others and address health issues on COVID-19 in the community.

A lot of public health campaigns on Covid-19 have been carried out by the government and by Non-government Organisations including individuals. The media and the public space have been awashed with the campaign materials on the prevention of the spread of corona virus. Patrick and Adekola observed that radio and television were the dominant source of information on health literacy among the older adults in urban communities. Similarly, Malengue and Abílio (2021) conducted a study on raising awareness about COVID-19 in rural communities in the province of Huambo-Angola. While Akwa, Ning and Maingi (2020) assessed the perception and awareness of Cameroonians on the spread of COVID-19 They employed the qualitative survey using online questionnaire that were sent to Cameroonian respondents through email and WhatsApp. The finding suggested that the awareness of COVID-19, transmission and preventive strategies was relatively high. While literatim exist on the level of awareness or health literacy on Covid-19 in urban areas in Nigeria, little is known on the sources of knowledge or information on COVID-19 and level of adherence to the known protocols in rural areas of Nigeria. To fill this gap is the crux of this study. This study aimed to investigate the sources of knowledge on COVID-19 pandemic among rural dwellers in Emohua Local government area of Rivers State; and to ascertain the extent of observation of the measures to avoid community spread among rural dwellers. To address this, two research questions is the problem of this study. Thus the research arising from this objectives are: what are the sources of knowledge on COVID-19 among rural dwellers in Emohua Local

Government Area? Secondly, to what extent rural dwellers observed the measures to avoid community spread of the corona virus in rural communities in Emohua Local Government Area?

2. Research Methodology

The study was carried out in Emohua Local government area, an area about 50 kilometers away from Port Harcourt city a hub for oil and gas in Nigeria, and a centre of international business with seaport and airport. Emohua Local government area is made up of typical rural communities in which the residents are predominantly farmers and artisans of diverse trade. Because of its proximity to the city centre, the villages witnessed the outbreak of pandemic. Consequently, this informed the choice of this study in Rivers State, Nigeria. This study is an exploratory and cross-sectional study. A cross-sectional survey study, a sample population in a single point in time. The choice of this research design is based on the fact that this design will aid the researchers to collect data in particular time to investigate the sources of information on COVID-19 pandemic among rural dwellers; and to ascertain the level of knowledge of rural dwellers on the prevention and management of COVID-19 virus in Emohua Local government area of Rivers State. Purposive and convenient sampling technique was used for this study. Consequently, the researchers relied on their own judgment when choosing members of the population to participate in the study. Therefore, the population of this study comprises members of five CBOs drawn from five rural communities in Emohua Local Government Area, Rivers State. 400 adult members of the CBOs were administered the instrument. They all consented to participating in the study voluntarily by signing the consent form before filling the questionnaire. The instrument was administered in November 2022 during the dry season when most of the rural peasant farmers are often at home due to reduction in the intensity of farm activities. The instrument for data collection in this study was a structured questionnaire titled- Instrument for Assessing Sources of Health Information on Covid-19 Adherence to Measures to Prevent Community Spread among Rural Dwellers (ASHICAMPSRD)". The instrument consists of three sections, section B deals with items sites for learning about Covid-19, while section C deals with the level of literacy on Covid-19. Section B is a semi structured questionnaire. Section C of the instrument is a four-point likert scale consisting of 23 items. The response options are Very High Extent (VHE) = 4, High Extent HE = 3, Low Extent = 2, Very Low Extent = 1

The face and content validity of the instrument (questionnaire) was established by three experts, one each from the Department of Adult and Non formal Education, Department of Measurement and Evaluation in Faculty of Education, and Department of Family Medicine College of Medicine all in University of Port Harcourt. To determine the reliability of the instrument, the test retest method was used. The instrument was administered to a pilot study group of ten person who were not part of the sample for the study. After two weeks the same instrument was administered to them. The two set of the administration of the instruments were correlated using pearson product moment correlation statistics and the calculated co-efficient was 0.79 which indicates a high degree of consistence of the response. The data generated were analyzed using descriptive statistics to answer the research questions. Thus, mean and percentages were used to analyze the data. In order to determine the acceptance and rejection levels of each research question item, a division was made based on the following; the criterion level of agree and disagree. Any mean from 2.5 and above is considered as agreed and any mean from 2.49 and below is considered as disagree.

3. Result

Research Question 1: what are the sources of information on Covid-19 among rural dwellers?

Table 1: Sources of Information about COVID-19 among Rural Dwellers

	Object of Learning	Newspaper	Radio	TV	Community Education Centre	Social Media
1	Sources of knowledge of outbreak of the virus	75 (18.75%)	96 (24%)	86 (21.5%)	113 (28.25)	30 (7.5)
2	Sources of the knowledge on how to prevent the transmission of the virus	25 (6.25%)	75 (18.75%)	47 (11.75%)	172 (43%)	81 (20.25)
3	Sources of knowledge on the symptom of Covid-19	19 (4.75%)	93 (23.25%)	34 (8.5%)	169 (42.25%)	85 (21.25%)
4	Sources of knowledge on management of infected persons	21 (5.25%)	89 (22.25%)	28 (7%)	189 (47.25%)	73 (18.25%)
5	Sources of the knowledge on means of transmission of the virus	42 (10.5%)	175 (43.75%)	39 (9.75%)	99 (24.75%)	45 (11.25%)
6	Sources of the knowledge on being vaccinated	32 (8%)	97 (24.25%)	55 (13.75%)	201 (50.25%)	15 (0.37%)

Table 1 shows the responses of the respondents on the sources of knowledge on Covid-19. The table shows that in item 1 which where the rural dwellers got information on the outbreak of the covid-19 pandemic, 75 respondents representing 18.75% got their information about the outbreak of the covid-19 pandemic from the newspaper, 96 respondents representing 24% from the radio, 86 respondents representing 21.5% of the population from TV, 113 respondents representing 28.25 from community education centre, and 30 respondents representing 7.5 from social media. In item 2 which is on the source from which the rural dwellers obtained knowledge about prevention of the spread of the virus, the table shows that 25 respondents representing 6.25% obtained their information on prevention of the spread of the virus from newspaper, 75 respondents representing 18.75% from radio, 47 respondents representing 11.75% from TV, 172 respondents representing 43% from community education centre, while 81 respondents representing 20.25 from social media. In item 3 which is on where the rural dwellers obtained information about the symptoms of Covid-19 infection, 19 respondents representing 4.75% obtained the knowledge about symptoms from the newspaper, 93 respondents representing 23.25% from radio, 34 respondents representing 8.5% from TV, 169 respondents representing 42.25% from community education centre, while 85 respondents representing 21.25% from social media. This indicates that community education was the major site for learning about the symptoms of the corona virus.

In item 4 which is on where the rural dwellers obtained knowledge about management of infected persons, 21 respondents representing 5.25% obtained information on management of infected person from newspaper, 89 respondents representing 22.25% from radio, 28 respondents representing 7% from TV, 189 respondents representing 47.25% from community education centre, while 73 respondents representing 18.25% from social media. This indicates that community education centre is the major source from where the rural dwellers obtained knowledge about management of infected person. In item 5 which is on where the rural dwellers obtained information on transmission of the virus, 42 respondents representing 10.5% obtained their knowledge on transmission of the virus from newspaper, 175 respondents representing 43.75% from radio, 39 respondents representing 9.75% from TV, 99 respondents representing 24.75% of the respondents obtained information on transmission of virus from community education centre, while 45 respondents representing 11.25% of the respondents obtained their knowledge of the transmission from social media. In item 6 which is on how on how to obtain

vaccination, 32 respondents representing 8% obtained their information on vaccination from newspaper, 97 respondents representing 24.25% from radio, 55 respondents representing13.75% from TV, 201 respondents representing 50.25% from community education centre, while 15 respondents representing 0.37% obtained their information on vaccination from social media. The table shows that community education centre was the predominant source of information on all basic literacies on Covid-19 pandemic.

Research Question 2: What extent rural dwellers observed the measures to avoid community spread of the corona virus in rural communities?

Table 2: Mean responses of respondents on extent rural dwellers observed the measures to avoid community spread of the corona virus in rural communities?

S/N	Items	VHE	HE	LE	VLE	Mean	Remark
1	Extent to which you stayed at home during the lockdown	178 712 (44.5%)	198 594 (49.5%)	16 32 (4%)	8 8 (2%)	3.36	HE
2	Extent to which you wear face mask in public places	48 192 (12%)	78 234 (19.5%)	159 318 (39.75%)	115 115 (28.75%)	2.14	LE
3	Extent to which you observe social distance of 2 meters	18 72 (4.5%)	59 177 (14.75	182 364 (45.5%)	141 141 (35.25%)	1.88	LE
4	Extent to which you observe the hand washing hygiene	138 552 (34.5%)	109 327 (27.25%)	121 242 (30.25%)	32 32 (8%)	2.88	HE
5	Extent to which you observe V shape elbow while coughing and sneezing	23 92 (5.75%)	57 171 (14.25%)	169 338 (42.25%)	151 151 (37.75%)	1.88	LE
6	Extent to which you avoided public places or large gathering during the pandemic	142 568 (35.5%)	119 357 (29.75%)	79 158 (19.75%)	60 60 (15%)	2.85	HE
7	Extent to which you avoided touching your mouth, eye, nose	30 120 (7.5%)	129 387 (32.25%)	173 346 (43.25%)	68 68 (17%)	2.30	LE

Table 2 shows the extent of the rural dwellers' observation of the COVID-19 protocols for prevention of community spread of the corona virus. In item 1 which is on the extent to which rural dwellers stayed at home in compliances to the lockdown, 178 respondents complied to a very high extent representing 44.5% of the respondent, 198 respondents complied to a high extent representing 49.5% of the respondents, 16 respondents had low compliance representing 4% of the respondents, while 8 respondents had very low compliance representing 2% of the respondents. The mean score of the respondents is 3.36 which is above the criterion mean of low extent of compliance and therefore there is indication that there was high compliance to the lockdown to prevent community spread. In item 2 which is on the extent of compliance to wearing of face mask in public places, 48 respondents complied to a very high extent representing 12%, 78 respondents complied to a high extent representing 19.5% of the respondents, 159 respondents complied to a low extent representing 39.75% of the respondents, while 115 had very low compliance representing 28.75% of the respondents. The mean score of the respondents is 2.14 which implies that there was low compliance of the rural dwellers in respect of wearing face mask in public places. In item 3 which is on observation of social distance of 2 meters, 18 respondents complied representing 4.5% of the respondents, 59 respondents complied representing 14.75% of the respondents, while 182 respondents representing 45.5% had low compliance in observing social distance of 2 meter, and 141 respondents representing 35.25% had very low compliance in observing social distance of 2 meter. The mean score of respondents is 1.88 which implies that there was low compliance in wearing face mask among the rural dwellers.

In item 4 which is on the extent to which the rural dwellers observed hand washing hygiene, 138 respondents representing 34.5% had very high compliance of hand washing hygiene, 109 respondents representing 27.25% had high compliance, 121 respondents representing 30.25% of the respondents had low compliance and 32 respondents representing 8% of the respondents had very low compliance. The mean score of the respondents is 2.88 which implies high compliance level. In item 5 which is on the extent of observing V shape elbow while coughing and sneezing, 23 respondents representing 5.75% of the respondents had very high compliance, 57 respondents representing 14.25% of the respondents had high compliance, while 169 respondents representing 42.25% respondents had low compliance and 151 respondents representing 37.75% respondents had very low compliance. The mean score of the respondents on compliance of V shape elbow while coughing and sneezing is 1.88 which implies that the level of observation of V shape elbow while coughing and sneezing is low. In item 6 which is on extent to which rural dwellers avoided public places or large gathering during the pandemic, 142 respondents representing 35.5% of the respondents had very high compliance, 119 respondents representing 29.75% had high compliance, while 79 respondents representing 19.75% had low compliance, and 60 respondents representing 15% of the respondents had very low compliance in avoiding public places or large gathering during the pandemic. The mean response of the respondents is 2.85 which implies that there was high level of compliance. In item 7 which is on extent to which rural dwellers avoid touching their mouth, eye, and nose, 30 respondents representing 7.5% of the respondents had very high extent of compliance, 129 respondents representing 32.25% of respondents had high extent of compliance, while 173% of the respondents representing 43.255 of the respondents had low compliance and 68 respondents representing 175 of the respondents had very low extent of compliance. The mean score of the respondents on the extent to which the rural dwellers observed avoid touching of mouth, eye and nose is 2.30 which implies low extent of compliance.

4. Discussion

Increased health literacy ensures improved compliance of preventative measure, adherence to prescribed medical and medication regimens, increased access to health information for health promotion and disease prevention, and empowerment to become involved in health decision-making leading to behavioral changes (Fleary & Ettienne, 2019; and Robinson, 2020). There are diverse ways in which one acquire the necessary health literacies. Some of these sites for acquiring these health literacies are radio, TV, community education centres, social media. These sites do not have equal capacity to reach people and to inform them. Some of these sites are effective in education people on specific issues and cannot be used in certain areas of the society. The study reveals that community education is the most common source through which the rural respondents acquiring knowledge on health education in diverse areas of COVID-19 The study reveals that the most of the rural dwellers became aware of the outbreak of the corona virus through community education centre. Majority of the rural people acquire other basic health literacy concerning the COVID-19 pandemic such as how the prevention of community spread of the virus, the symptoms when infected, management of infected persons, and information on vaccination from the community education. This is an evidence that community education centres are the plausible outfit for community mobilization in times of pandemic. Community education centres according to Leowarin (2010) provides equal access to education and serves as firm mechanism to provide lifelong learning in the rural communities, a focal point providing non-formal education activities for local people. Perhaps why it seems to be the most plausible means of learning on community health matters is because it belongs to the communities, provides a venue for conducting community meetings and social gathering where community members discuss common health concerns and share information. Other factors that may be adduced are the use of local language and the active involvement of the people because of its participatory and democratic approach.

The study reveals that intensive radio campaigns were done during the outbreak of the pandemic from where the rural dwellers acquire reasonable level of knowledge on Covid-19 pandemic. The study also reveals that majority of the rural dwellers had the knowledge on means of transmission of the virus through radio. Radio also played a significant level of awareness creation and developing the health literacy of the rural dwellers in the areas of prevent of the transmission of the virus, in management of the infected person, knowledge on the symptom of Covid-19, and on the importance of vaccination. Thus, it is evident that radio played an important role in community mobilization and enlightenment on the outbreak of COVID-19 pandemic. Darder (2012) had observed that radio enhance critical public pedagogy and sustain effort to speak to the people through the

critical lens of the society so as to inform and transform mainstream public discourses. The use of community radio creates an important pedagogical and political space where hegemonic belief systems can be challenged and alternative views can be mobilized for social action. The effectiveness of community radio in times of outbreak of pandemic has been pointed by Megwa (2007). Megwa asserts, in his writings about community radio in South Africa, Community radio gives listeners a sense of community and identity and creates action space for people to have both direct and indirect link with community power structures as well as to have access to resources. Community radio is an integral part of the community in which it is located. It is acceptable to the community as a tool for promoting good health and social change. Community radio can mobilize communities to act as change agents by engaging groups and organizations to direct their resources in order to actualize strategies at individual, group, and organizational levels.

The study shows that the social media is the third in the various sources of knowledge on the Covid-19 among the rural dwellers. 20.25% and 21.25% of the respondents had their knowledge on prevention of the transmission of the virus, and the symptom of Covid-19 from the social media respectively. Social media usage is ubiquitous in everyday life according to Gülbahar, Rapp, Kilis, and Sitnikova, (2017), it is applicable to health education and can be used to mobilize people in rural areas on health education in times of outbreak of any pandemic. The finding of this study suggests that social media opens wide opportunities for community of practice in health education through blogs and sites such as Facebook, WhatsApp, YouTube and Twitter. This is called the new media. However, the finding of this study in respect of the having social media as the source of knowledge on COVID-19 is contrary to the findings and assertion of Rine, Margaret, Dauda and Patricia (2020) that respondents had good knowledge of COVID-19 mainly through the internet/social media (55.7%) and Television (27.5%). The old media include the newspaper and the television. Health education can be disseminated through the newspaper editorial, Colum, and advertorial. Newspaper is a public pedagogy which is a print media and requires the ability to read. The highest response on the use of newspaper for accessing knowledge on Covid-19 is 18.75% and this is in area of knowledge of outbreak of the virus. The study reveals that newspaper is least among the various sources of health literacy in the rural communities. This perhaps is because the newspapers circulations are limited to urban communities and the absence of rural community newspapers. Television is a public pedagogy involving motion picture and audio presentation of information. It requires having a television set to receive broadcast signals. These sources of health literacy on COVID-19 seem not to be predominate. The highest number of respondents who used these sources of accessing health literacy on COVID-19 is 21.5% of the respondents and this is on the knowledge of outbreak of the corona virus; while only 7% of the respondents had knowledge on management of infected persons from TV. Perhaps the poor level of health literacy from TV broadcast is the limited signal of the TV broadcast in rural areas and the level of poverty in rural community which is responsible for the few numbers of families having a TV set in their home. The finding of this study on the use of TV as a source of knowledge does corroborate the study by Dauda, and Patricia (2020) that the level of knowledge obtained from TV is low

In respect of the extent rural dwellers observed the measures to avoid community spread of the corona virus in rural communities. These measures are the preventive practice. Preventive practice is talking about the degree to which the people are involved in practicing the preventive measures of managing the spread of COVID-19. The study reveals that out of the 7 protocols to be observed to prevent community spread, the rural dwellers observed only 3 in a high extent with a mean above 2.5. The study reveals that the rural dwellers observed the stay at home during the lockdown. Every country declared a state of emergence during the outbreak of the pandemic in which there was restriction of movement. This study corroborates the observation of Baig, Butt, Haroon and Rizvi (2020) that the prevailing situation is also driven by lockdown and restrictions to prevent community spread. The study also reveals that the rural dwellers observe the hand washing hygiene which is one of the measures for prevention of community spread of the corona virus. The study also reveals that rural dwellers adhere to the avoidance of public places or large gathering during the pandemic.

On the other hand, the study reveals that the extent to which 4 out of 7 measures were adhered to were low. The rural dwellers could not observe 4 measures strictly. The 4 measures are: wearing of face mask in public places, observing social distance of 2 meters, observing V shape elbow while coughing and sneezing, and avoiding touching the mouth, eye and nose. This is in in line with a study conducted in Delta State rural communities among traditional healers and religious clerics by Asmelash, Fasil, Tegegne, Akalu, Ferede, & Aynalem, (2020), where only 15.6% of the participants had good preventive

practice regarding the prevention and early detection of COVID-19.

5. Conclusion

The extent of health information an individual has or accesses will determine the level of health literacy; and the lower the level of health literacy, the likelihood of increase risk health behaviours and serve health outcomes. This is why proper health education is very important and in any event of outbreak of a pandemic such as the COVID-19, there ought to be serious and aggressive health education. Such education can be accessed through diverse ways such as the old and new media as well as community education centre. This study examines the sources of health literacy on COVID-19, and the extent of the adherence to the necessary protocols to prevent community spread in rural communities. The finding from this study suggests that community education centres are the major source of health information on COVID-19 pandemic. The study also reveals that out of 7 measures to be strictly observed to prevent community spread of the virus, only 3 measures were strictly observed to a high extent. Therefore, it can be concluded that there was relative poor adherence of the COVID-19 preventive measures among rural dwellers. This suggest that rural dwellers continue to perpetuate risky behaviour during the hit of the COVID-19 pandemic in rural communities.

Given the result of this exploratory study, which shows the source of information on COVID-19 and the relative poor level of adherence among rural dwellers to measures for preventing community, it is clear that health promotion and education in the rural communities are not adequate and consequently it is recommended that local languages be used in health education and promotion on COVID-19 and health education be disseminated through community radio and community newspaper in the rural communities. This study provides an insight on health literacy on COVID-19 in rural communities and how health literacy intervention should be tailored toward the needs of rural dwellers. This study is limited by its purposive and convenient sampling methodology, which may result in unexpected biases. This study is limited by the number of the study population and the rural communities used which makes it difficult to make generalization. Therefore, there is need to replicate this study in other rural communities and to ascertain the level of variation in the level of adherence on the basis of gender, education and income.

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