

Assessment of Secondary Schools' Readiness to New Normal and Health Literacy of Teachers in the Countryside Area of the Philippines

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Abstract: Health literacy affects a person's characteristics and exposure to various tools and mechanisms. However, there is insufficient research on the elements of school facilities and their impact on literacy. Hence, a descriptive-correlational study on health literacy and factors indicating schools' health readiness was conducted among senior high school teachers in Dolores National High School. This study's findings revealed that most senior high school teachers are female, young in the teaching profession, Master's degree holders, not exposed to medications, and have a high level of health literacy. Findings showed a significant moderate relationship between teachers monitoring practices and their communicative ($p = .016$) and critical health literacy ($p = .026$). Also, linear regression analyses revealed their length of service as the most significant predictor of health literacy level. Hence, it is recommended to develop a training design that will equip teachers in managing health issues among senior high school learners.

I. INTRODUCTION

In today's global scenario of deadly pandemics and the economic impact of Covid-19, there is an up roaring call among schools to pledge their commitment to a healthy worksite, including opportunities for physical activity, health education, and similar health-related service for personnel development. The American School Health Association pushed for integrating personnel' health improvement as part of professional development plans (Wooley, 2010). Health literacy has been a challenge for educators worldwide (Schwartz, 2020), but everything should begin and manifest among educators.

Health literacy draws increasing attention in contemporary practice, research, and policy. In fact, when it comes to allocating budget, people are struggling to finance for hospitalization and medicine (Once et al., 2019). According to Okan, Lopes, and Bollweg. (2008) as supported by Skykes, Wills, and Rowlands (2013), an individual's health level affects his/her health outcomes. Hence, supporting the well-being of

school personnel will promote a culture of health among all personnel in which healthy behavior is promoted and encouraged at school and home.

Unfortunately, there is no 'gold standard' measure of health literacy. Various studies found out discrepancies in health literacy levels of personnel, including difficulty understanding health information; insufficient knowledge of their condition; and lower utilization of preventive health services (Jordan, Buchbinder, Briggs, Elsworth, Busija, Batterham, & Osborne, 2013; Denuwara & Gunawardena, 2017). International surveys also revealed an alarming prevalence of health literacy inadequacy by 48% among adults (Ghofranipour & Ghaffari, 2013). Castro-Sánchez, Chang, Vila Candel, Escobedo, and Holms (2016) found limited literacy affecting protective behavior reduction. Okan et al. (2020) consented to this, stating that people with limited health literacy are more at risk of COVID-19 infection.

Schools around the globe were forced to stop face-to-face classes on the first wave of Covid-19. The global pandemic caused learners

to continue their education at home using online learning platforms. Simultaneously, teachers face significant challenges in developing appropriate learning material and using technology to provide education to their students (Toquero, 2020). Moreover, it provides an offshoot to distance learning modalities and the use of electronic classrooms via Google Classroom, Schoology, and the likes. A comparative study among private schools conducted by Camiling (2019) revealed a significant relationship between school type and perceived eHealth literacy levels. Hence, these situations showed the vulnerability of public and private schools in the basic and higher education sectors to combat deadly diseases due to a lack of resources and adequate literacy about the pandemic.

Therefore, this study examined the health literacy and perceived readiness of schools to the new normal. It specifically on the delivery of education amidst the COVID-19 pandemic as perceived by senior high school teachers from selected secondary schools in the division of Eastern Samar. This investigation's findings hope to contribute to the crafting of policies to improve teachers' health literacy and school readiness amidst the pandemic.

II. METHODOLOGY

Research Design

This study applied a descriptive-correlational research method in examining the relationship between respondents' health literacy and perceived readiness of schools to combat Covid-19 in three selected secondary schools in the Eastern Samar division. Moreover, the teachers' profile and factors affecting schools' health readiness served as test predictors of teachers' health literacy using the regression approach.

Research Samples

A total of 37 respondents consented to fill out the survey questionnaire. Among 52 invited Senior high schools teaches in the three selected secondary schools in the Eastern Samar division: Dolores National High School, Taft National High School, and Artech National High School.

The respondents are regularly employed licensed professional teachers handling senior high school subjects, available at the survey time. They are willing to be respondents to the study. Moreover, these schools were selected

based on their equal footing on School-based management levels and their comparative number of employed teachers.

Data Collection Method

A three-part survey questionnaire was utilized. The researcher generated the first two parts on the respondent profile and factors associated with school readiness. The validation of the said instrument was made among three experts; one is a research expert researcher, a senior high school teacher who holds a Master's degree in education, and a university instructor who graduated Bacalaureate degree in Physical Education via a five-point Likert scale for quality assurance.

An over-all Cronbach alpha of 0.71 signified that the instrument is acceptable and valid to use for the present study. While the researcher adopted the third part on teachers health literacy level from the tool developed by Ishikawa and his colleague in 2008

Data Analysis

In analyzing the data, descriptive and inferential analysis were utilized at a 0.05 level of significance.

For the first and second objectives, frequency and percentage were used to describe the respondents' profile in terms of sex, education attainment, years in teaching and exposure to medications, and factors affecting schools' health readiness in terms of available/practice and not available/not practice. For the third objective, the median was used in assessing teachers' level of health literacy in terms of (1) Functional, (2) Communicative, and (3) Critical health literacy due to the ordinal nature of the indicators. A point-biserial correlational analysis was employed to test the significant relationship between factors affecting schools' health readiness and health literacy due to the input variable's dichotomous characteristics. In interpreting the result, the researcher adopted Dancy and Reidy's (2004) categorization of correlation values. For the last objective, to test respondents' profiles as predictors of teachers' health literacy, a linear regression was chosen.

Ethical Consideration

All communications were sent to the division office personnel and selected secondary school heads for approval before the study's actual conduct. Likewise, consent forms were also distributed among scouted respondents that signify their agreement and willingness to participate in the research process. The researchers ensure that ethical standards are observed among the selected respondents.

Table 1

Profile of senior high school teachers

Profile	f	%
Sex		
Male	8	21.6
Female	29	78.4
Educational Attainment		
MA/S Graduate unit units in Ph/EdD	14	37.84
MA/S Graduate	13	35.14
BA/S/Ed Graduate with units in MA/S	6	16.22
BA/S/Ed Graduate	4	10.81
Length of service		
10-20 years	4	10.81
Less than 10 years	33	89.19
Taking medications		
Yes	3	8.11
No	34	91.89

III. RESULTS AND DISCUSSION

Profile of senior high school teachers

The researcher invited 52 fully enumerated senior high school teachers who fit the inclusion criteria in the data-gathering phase. However, only 37 responded positively and consented to record their responses, as summarized in Table 1 below. The respondents' profile considered in the study includes sex, age, length of service, and medication exposure.

The study population was found to be composed of 29 or 78.4% female, while 8 or 21.6% are male. These proportions indicate that the majority of senior high school teachers are women. A similar trend on female teachers' domination was found in Flores' (2019) study, as

one variable of senior high school teacher teaching competence in mathematics.

In terms of educational attainment, it was discovered that the percentage of teachers who graduated with Master's degree with continuing units leading to Ph.D./EdD (37.84%) outnumbered respondents who graduated with a baccalaureate degree (16.22%) and those who are earning units in Master's program (10.81%), combined. Acar (2017) pointed out that senior high school teachers are academically prepared to deliver instruction given their educational attainment. In terms of length of service as a senior high school teacher, results revealed that most of the respondents have been teaching for less than a decade (n = 33, 89.19%), while four or 10.81% of respondents have spent more than a decade in the profession. Findings of Acosta and Acosta (2016) showed that almost half of university instructors have been in the service for less than a decade.

It is noteworthy to discover that a more significant proportion (91.89%) of the respondents out of 37 are not taking any medication.

Senior high school teachers' perceived availability of safety/health facilities

In the opening of the school year 2020-2021, the Department of Education pushed for modular and online learning educational platforms. In most provinces in the country, the former prevailed. The modular delivery of learning requires teachers to deliver modules to the nearest drop-off points/ locations of the learners; personally, the risk of getting infected is a bit high. Thus analyzing the availability of safety facilities and equipment was investigated.

Analysis of frequency counts on the perceived available facilities among 37 respondents and the ranks of the ten indicators of safety/health facilities are both present in Table 2. The agreement set by the researcher is that the lower half of the total number of respondents (18)

Table 2

Senior high school teachers' perceived availability of safety/health facilities

On schools' availability of health/safety facilities	Frequency	Rank
Face Masks	31	4
Disinfection boxes	22	7
Gloves	36	2
Potable drinking water	14	8
Sanitation facilities	26	6
Thermal Scanner	37	1
Medicines	5	9
Surveillance camera	5	9
Facilities for handwashing and sanitation alcohols	36	2
Protective clothing	31	4

describes the inadequacy of the facility; otherwise, it is adequate and available. The top five available facilities include; thermal scanners, gloves, facilities for handwashing and sanitation alcohols, protective clothing, and facemasks made available to them by the schools as they visited their assigned barangays. On the other hand, the result reveals the inadequacy of school in potable drinking water, surveillance cameras, and medicine. A similar finding was observed in the study of Boudreaux, Martin, and McNeal (2016) on the sufficiency of a physical environment to teaching and learning, and school facilities being clean and well maintained.

It can be inferred from these results that the school has adequate safety and health facilities.

Senior high school teachers' practices in monitoring learners with health issues

Table 3 shows the result on frequency counts of respondents practicing the ten indicators in the monitoring made by senior high school teachers on learners' health issues. Then the frequencies were ranked to identify the most practiced items among the ten indicators.

The top five indicators that are perceived to be practiced by the respondents include; the promotion of positive health and safety behaviours, and identifying learners with health concerns, which both tied for the first spot, integration of health and wellness in lessons, constant reminding the learners to undertake proper medication and hygiene, and being comfortable to be with learners with health concerns. The lesser practiced items include:

providing aid in the prevention of specific diseases and injuries and helping in the prevention of high-risk social behaviors. Sibley, Theodorakakis, Walsh, Foley, Petrie, and Raczek (2017) mentioned that teachers' competence and perceptions in providing and receiving emotional support of the whole child impacts the entire classroom management strategies.

The findings imply that teachers highly adept in determining learners with health-related issues; however, they lack the necessary skills to provide aid in preventing illnesses and handling social behaviors. This opens a great opportunity for school leaders to lead the mass training development of specific and necessary skills required to handle special needs learners.

Assessment of teachers' level of health literacy

Table 4 presents the level of health literacy among senior high school teacher-respondents analyzed using median due to the ordinal nature of the indicators, which are grouped into; (1) Functional, (2) Communicative, and (3) Critical health literacy.

In terms of functional health literacy, an over-all median of 4 interprets a high level of functional health literacy. The result implies that senior high school teachers can easily find reading medical journals easy to understand without needing medical professionals' assistance. However, they pointed out that they have difficulty getting used to the printing styles and characters used.

In terms of communicative health literacy, an over-all median of 4 signifies a high level of

Table 3

Senior high school teachers' practices in monitoring learners with health issues

Teachers practices in monitoring learners' health status issues,	Frequency	Rank
Integrate health and wellness in lessons	35	3
Aid in the prevention of specific diseases and injuries	27	9
Help in the prevention of high-risk social behaviors.	25	10
Intervenes to assist children and youth who are in need or at risk.	28	7
Helps support those who are already exhibiting special health care needs.	29	6
Promotes positive health and safety behaviors.	37	1
Identify learners with health concerns	37	1
Constantly remind learners to undertake proper medication and hygiene.	34	4
Comfortable to be with learners with health concerns	32	5
Review learner's health status, regularly	28	7

Table 4

Assessment of teachers' level of health literacy

Statements	Median	Interpretation
Functional Health Literacy		
<i>When reading medical journals and leaflets, I</i>		
Find characters that I can read	2	Low
Feel that the print is enough for me to read	2	Low
Feel that the content is easy for me to understand	4	High
Feel that it takes enough time to read them	4	High
Need no one to help me read them	4	High
Over-all Median	4	High
Communicative Health Literacy		
<i>When one of my relatives will be diagnosed with a disease, I will</i>		
Collect information from various sources	4	High
Extract the information I want	4	High
Understand the obtained information	4	High
Communicate my opinion about an illness	4	High
Apply the obtained information to my daily life	4	High
Over-all Median	4	High
Critical health literacy		
<i>If by any chance, I will be diagnosed with the disease, I will</i>		
Consider whether the information applies to me	4	High
Consider whether the information is credible	4	High
Check whether the information is valid and reliable	4	High
Collect information to make my healthcare decisions	4	High
Over-all Median	4	High

communicative health literacy among the respondents. The result means that they are eager to collect and comprehend various information from varied sources to be reliable enough to share their knowledge about it and how it can be avoided or treated using proper medications. In terms of critical health literacy, an over-all median of 4 declares a high level of critical health literacy as perceived by the respondents. This median result shows that they are more than willing to learn a lot about diseases and illnesses via valid and reliable sources to come up with a sound decision. An over-all high level of health literacy was observed in the three indicators.

The result opposes Denuwara et al. (2017) 's findings on the teachers' limited health literacy in Sri Lanka. This implies teachers' high readiness to understand and share critical information about health and prevention from diseases.

Point-biserial correlation test of the significant relationship between teachers' health literacy and perceived factors affecting school health readiness

Given the dichotomous characteristics of the input variables (factors associated with school health readiness) with categories available/not available and practiced/not practice, a nonparametric point-biserial correlational analysis is deemed appropriate to establish a relationship with teachers' health literacy.

Table 5 shows the correlation made on school safety/ health facilities' perceived availability with the three health literacy indicators: functional, communicative, and critical levels of health literacy. Result on the analysis reveal negatively negligible correlation of perceived availability of school safety/health facilities with functional health literacy ($r = -.077$,

$p = .601$) and critical health literacy ($r = -.148$, $p = .311$), while a positively weak correlation was seen in respondents' communicative health literacy ($r = -.148$, $p = .311$). However, none of these three health literacy indicators established a significant relationship with the perceived availability of school safety/health facilities since their computed levels of significance were way greater than the set-threshold of 5%.

The table also depicts a correlational test of the relationship between respondents' perceived practices on monitoring learners' health issues and their levels of health literacy on the three indicators. Results show a moderate positive correlation of perceived practices on monitoring learners with health issues with functional health literacy ($r = .342$, $p = .016$) and critical health literacy ($r = .318$, $p = .026$). In contrast, a weak positive correlation was seen in communicative health literacy ($r = .016$, $p = .657$). Surprisingly, both functional and critical health literacy indicators showed a significant linear relationship with the respondents' perceived monitoring practices among learners with health issues. Their respective p-values are lesser than the level of significance.

This implies that an increase in exposure to managing learners' health issues improves a teachers' functional and critical literacy.

Predictors of senior high school teachers' health literacy according to profile.

Table 6 presents the regression analysis between each indicator of health literacy in terms of functional, communicative, and critical health literacy concerning the respondents' profile characteristics: sex, educational attainment, length of service, and exposure to the medication. There are significant regressions in placed between predictive variables and senior high school teachers health literacy in terms of, functional health literacy ($F(4, 32) = 3.809$, $p = .010$), communicative health literacy ($F(4, 32) = 3.320$, $p = .018$), and critical health literacy ($F(4, 32) = 5.177$, $p = .002$). The four predictors account for 25.7% for functional literacy, 23.2% for communicative health literacy, and 32% for critical health literacy.

In terms of functional health literacy, the predictive variables sex ($\beta = -2.70$, $p = .028$), educational attainment ($\beta = -1.42$, $p = .012$) and length of service ($\beta = 4.38$, $p = .008$) were found to be significant regressors of senior high school teachers functional literacy. This means that every increase in service length by a decade increases the respondents' functional health literacy. This could also be interpreted as an annual increase in functional health literacy among the respondents.

In terms of communicative health literacy, the predictive variables sex ($\beta = -.640$, $p = .028$), educational attainment ($\beta = .355$, $p = .012$) and length of service ($\beta = -5.12$, $p = .008$) were found to be significant regressors of senior high school teachers' functional literacy.

Table 5

Point-biserial correlation test of the significant relationship between teachers' health literacy and perceived factors affecting school health readiness

Factors affecting school health readiness	Functional health literacy		Communicative health literacy		Critical health literacy	
	Result	Interpretation	Result	Interpretation	Result	Interpretation
Perceived availability of safety/health facilities	$r = -.077$	Negligible	$r = .210$	Weak	$r = -.148$	Negligible
	$p = .601$	Not significant	$p = .418$	Not significant	$p = .311$	Not significant
Practices in monitoring learners with health issues	$r = .342$	Moderate	$r = .061$	Negligible	$r = .318$	Moderate
	$p = .016$	Significant	$p = .657$	Not significant	$p = .026$	Significant

Table 6

Predictors of teachers' health literacy in terms of profile characteristics

Predictive Variables	Functional health literacy		Communicative health literacy		Critical health literacy	
	Result	Interpretation	Result	Interpretation	Result	Interpretation
Sex	$\beta = -2.70$ $p = .028$	Significant	$\beta = -.640$ $p = .028$	Significant	$\beta = -.234$ $p = .767$	Not significant
Educational attainment	$\beta = -1.42$ $p = .012$	Significant	$\beta = .355$ $p = .012$	Significant	$\beta = .064$ $p = .858$	Not significant
Length of service	$\beta = 4.38$ $p = .008$	Significant	$\beta = -5.12$ $p = .008$	Significant	$\beta = -4.56$ $p = .000$	Significant
Exposure to medication	$\beta = -2.18$ $p = .304$	Not significant	$\beta = -.832$ $p = .304$	Not significant	$\beta = .038$ $p = .978$	Not significant
Regression result	$R^2 = .257$ $p = .010$	Significant	$R^2 = .232$ $p = .018$	Significant	$R^2 = .320$ $p = .002$	Significant

This means that every increase in a senior high school educational attainment increases the respondents' communicative health literacy. This shows that teachers, upon their enrolment, to post education programs (Master, Ph.D.) causes an upright increase in their communicative health literacy as they are exposed to topics relevant to the improvement of their health status.

In terms of critical health literacy, the only predictive variables found to be a significant regressor of senior high school teachers' functional literacy length of service ($\beta = -4.56, p = .000$). Surprisingly, the length of service negatively impacts the students' critical health literacy by 4.56 points. This can be attributed to the fact that as people grow older, they fear to know their health status. A similar result was observed in the study of Ghasem, Peyman, Tehrani, and Sany (2018).

The study also offers a significant impact on health literacy in education delivery, especially in the pandemic. It shows that teachers' knowledge and perception of their health status magnify his intent to provide assistance and monitoring to learners with health issues. Indeed, one cannot provide something that he has none. The more literate a person is, the better he can adapt to the learners' health conditions, thus can provide better service to them. This study is limited to the number of predictive variables examined, although they were able to provide a

significant regression to teachers' health literacy on an over-all scale. Also, it worth mentioning that the data collected were originated among teachers in the senior high school and not of the entire workforce of the chosen research locale. So further investigation and exploration on a large scale are necessary.

IV. CONCLUSION

Health literacy is a vital aspect of any organization. Findings of the present study revealed that most senior high school teachers in the research locale are female, graduated with a Master's degree, still young in the service, and are not taking any medications. They believed that there are available safety and health facilities in their respective schools, enabling them to constantly monitor learners with health issues. Likewise, the respondents have shown a high level of functional, communicative, and critical health literacy. Furthermore, the point-biserial correlational analysis proved a significant relationship between senior high school teachers' monitoring practices on learners with health issues and their functional and critical health literacy. The senior high school teachers profile significantly regresses their level of health literacy in which functional and communicative literacy indices were negatively affected by their sex

profile, while respondents' length of service positively predicted the respondents' functional health literacy. However, a negative result was observed in their critical health literacy. This underpinned the need for constant health literacy training among teachers, especially those who are new to the teaching profession, to minimize health problems and issues in the Philippines' countryside areas.

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