

# Nurses' Perception of Health Literacy

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## Abstract

**Background:** Health literacy is a new concept in health promotion services that has reflections on the outcomes of health education and communication activities. Health literacy provides skills that enable individuals to understand, share personal and health information with providers, navigate the healthcare system, engage in self-care, and adopt health-promoting behaviors. However, In Saudi Arabia, limited researches have been conducted in the nursing field to assess nurses' knowledge and perception of health literacy. This study aimed to assess the nurses' current knowledge and perception about the impact of health literacy on patients and their practice. **Methodology:** A descriptive survey design was used in this study. The sample consisted of 679 nurses who worked in a tertiary care setting. The data was collected using a self-reported questionnaire. **Result:** The study findings revealed that most of the nurses have moderate knowledge about health literacy, and the majority of participants perceived a limited impact of health literacy on patients care. **Recommendation:** It is important for health care organizations to have specialized tools that can effectively measure health literacy levels; there is an urgent need to design professional programs for healthcare professionals that enable them to improve their level of health literacy and organizations need to ensure the effective implementation of health literacy programs.

**Keywords:** Nurses; Health literacy; Knowledge; Perception

## Introduction

Health literacy is as important for health care providers as it is for patients. To bridge the gap between the medical information provided and its implementation, Health care providers can help improve patients' health literacy by understanding the health literacy requirements faced by their patients, ensure that their patients understand the instructions they have been given, build patients' health literacy over time, participate in the health literacy professional development programs, and encourage their organization to develop and implement a health literacy action plan. <sup>[1,2]</sup> The 2015 World Bank Assessment of Adult Literacy indicates that adult (15+) 11%, elderly (65+)12% of Saudi possess below basic or basic literacy skills <sup>[3]</sup> and, as such, lack adequate ability to read, comprehend act on medical information, and interact with the health care system. <sup>[4]</sup>

Health literacy provides the skills that enable individuals to understand, share personal and health information with providers, navigate the healthcare system, engage in self-care, and adopt health-promoting behaviors. Low health literacy is considered a worldwide health threat. It is associated with diminished management of chronic diseases (such as asthma, diabetes), increased hospitalization and re-hospitalization, less participation in health-promoting and disease detection activities, riskier healthy choices (such as higher smoking rate), poor adherence to medication, increased morbidity and premature death. <sup>[5]</sup>

That there are many challenges associated with activating health literacy frameworks in different parties around the world, such as having a low level of information and communication technology literacy, inability to evaluate the quality of

information from different sources, higher health care costs caused by lower use of preventive services and higher use of treatment services. These challenges are the reason many health literacy frameworks haven't been empirically tested yet. <sup>[4,6,7]</sup>

According to a study conducted by Alamari and a cross-sectional survey conducted by Al-Ribdi, there is an association between inadequate health literacy and the presence of chronic illness. The researcher found a relationship between health literacy and marital status, the frequency of hospital visits, and physical activity. <sup>[8]</sup> According to study that aimed to measure the health literacy and to determine the prevalence of inadequate health literacy among adult visitors and patients in the primary Health care setting of National Guard health affair in Jeddah and the associated factors, the study showed that around 83.9% (n=172) of the primary health care visitors were categorized as (adequate literacy) while around 10.2% (n=21) were categorized as (marginal literacy) and 5.9% (n=12) of them in (inadequate literacy). <sup>[9]</sup>

Low health literacy has two main reflections: The first is related to higher costs, and the second is related to worse overall health status. What makes the situation more complicated is the fact that some patients with low health literacy may not disclose their confusion to health care professionals because they think that asking for help is embarrassing. The results of such

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behaviors are taking incorrect medication, the inability to follow instructions, and lack of compliance with visit schedules.<sup>[10]</sup>

Nurses can play an effective role in overcoming the challenge of low health literacy by adopting certain strategies. Nurses can overcome this problem by assisting patients with low health literacy in an attempt to reduce their stays within the hospital and raise the levels of compliance with instructions.<sup>[11]</sup>

The scarcity of studies regarding health literacy accounts for the lack of profound knowledge that would enable nurses to play their role in improving health literacy and promote their services.<sup>[12,13]</sup> In Japan, Nakayama et al. confirmed that health literacy in the Japanese population was lower than in Europe. In Australia, low levels of health literacy are considered a significant problem as 59% of the Australian population aged between 15 to 74 years did not achieve an adequate health literacy skill level.<sup>[14,15]</sup>

Nesari examined Iranian registered nurses' knowledge and experience regarding health literacy by applying quantitative measures. The total sample of 190 Iranian registered nurses was included in the final analysis. The analysis showed that Iranian registered nurses have limited knowledge about health literacy, most noticeably in areas such as standards for written healthcare information, and common screening tools to measure health literacy. The participants also demonstrated limited experience in using health literacy screening tools, evaluating the written healthcare materials, and employing technologies in providing healthcare information.<sup>[16]</sup>

Despite the efforts to enhance awareness of patient health literacy in health professional education, the impact of literacy on the patient-health care provider relationship is still evident. Lack of knowledge and perception among health providers related to health literacy can substantially alter patient-healthcare providers' communication and hinder benefits expected from health care.<sup>[17]</sup> Harrington and Engelke surveyed 638 pediatric nephrology inter-professional team members (physicians, nurses, pharmacists, social workers, psychologists, and dieticians), regarding their perception and their experience of health literacy. Team members showed limited experience with health literacy. They also thought that knowing and addressing parent and guardian health literacy will contribute to the delivery of the highest quality of care.<sup>[18]</sup> Also Bilek-Sawhney et al. surveyed 100 physical therapists; only 43 Physical therapists responded to the survey regarding their knowledge and use of health literacy strategies. 25% of physical therapists reported that they clinically assess problems related to illiteracy. 7% of the respondents acknowledged the incidence of illiteracy, and 65% were aware of the relationship between illiteracy to bad health status.<sup>[19]</sup> Potratz also conducted personal interviews with nine health care providers; the number of years of experience as a health care practitioner ranged from 4 years to 38 years, with the average being 15.3 years regarding their perception of low health literacy among their patients. Some providers misunderstood the complete definition of health literacy, and a few stated that they had never heard the term of health literacy.<sup>[20]</sup>

Nurses play a key role in improving the patients' health and helping patients in reaching their health goals in a way that is consistent with their lifestyles, beliefs, and values.<sup>[21,22]</sup> An understanding of health literacy by nurses is central to improving patient health outcomes and the provision of safe health care.<sup>[23]</sup> The use of practical strategies by nurses is imperative to assess patient's health literacy.<sup>[14,24]</sup> When nurses use health education strategies based on the health literacy needs of patients, they can increase health literacy, promote self-efficacy, and help in patients' health care decisions.<sup>[25]</sup>

Drake conducted a study to determine the degree to which Advanced Practice Registered Nurses in Arizona are using effective interventions to alleviate the effects of limited health literacy during patient-nurse encounters. Nurses showed limited knowledge of these health literacy screening tools as 55.6% of nurses did not know that the response to the items on the Rapid Estimate of Adult Literacy.<sup>[26]</sup> Cafiero found that the knowledge of health literacy and health literacy strategies was low among the 456 nurse practitioners who worked in outpatient settings. Key findings included seventy-five percent of participants reporting that they did little to have health literacy emphasized in the nursing curriculum, and sixty-six percent of participants stated that they sometimes never evaluated literacy level of written material.<sup>[27]</sup> Knight investigated the gaps in health literacy knowledge and experience among registered nurses in Georgia. The researcher suggested that nurses may not be prepared enough to provide effective health literacy intervention and are less knowledgeable about basic facts on health literacy, guidelines for written healthcare materials, and health literacy screening as more than half of participants reported that they had never used a health literacy screening tool.<sup>[28]</sup> Macabasco-O'Connell&Fry-Bowers described nurses' knowledge and perceptions of low health literacy on patients, their practice, and the health system through a cross-sectional, descriptive study that used a web-based survey among registered nurses licensed by the State of California. The results of this study revealed that nursing professionals' knowledge of health literacy and their understanding of the role that health literacy played was limited.<sup>[29]</sup> Health literacy was also reported to be a low priority among providers and organizations. Accordingly, one can conclude that if the importance of health literacy is not understood by different health professionals, poor quality care will be provided.<sup>[14]</sup>

Health literacy got significant attention in the last decade, as there is a consensus that a relationship exists between health literacy and health outcomes. There is still a gap in research context regarding identifying the knowledge and experiences of those working within the medical field regarding health literacy and their roles in promoting it among patients to improve the quality of services being provided by the health sector.<sup>[30]</sup>

## Methods

### Aim of the study

To assess the nurses' current knowledge and perception about the impact of health literacy on patients and their practice

## Research design

A quantitative descriptive survey design was used in this study

### Study setting and sample

This study took place in a tertiary care hospital with an 800-bed facility with all general and subspecialty medical services. The hospital provides services for patients from the Riyadh area. The sampling plans for this study, two stages were implemented. The first stage aimed to determine the number of subjects from each unit (general units, specialized units), while the second stage aimed to determine the number of subjects to be involved from each unit. Non-probability quota sampling Technique was used to determine the number of participants from each unit and structure the sampling plan for this study. In the second stage, convenient sampling techniques were used to collect the questionnaire from the participants in all units. The sample size was estimated using a sample size calculator Retrieved from "http://www.surveysystem.com/sscalc.htm." With a population of 1290 nurses in all units/wards, a confidence level of 95% and a confidence interval of 3%, the sample size included 584 subjects and was increased to 800 to ensure the representativeness of the sample; a bigger sample size was found more convenient for the statistical analysis in the present study (n = 800) with response rate of 84.8%

### Method of data collection and ethical considerations

A self-administered questionnaire was considered as the data collection instrument. After reviewing the pertaining literature, "Health Literacy Perception and Experience Survey" (HLPES) will be adopted after obtaining the official permissions from Harrington & Engelke.<sup>[31]</sup>

Also, the selected personal and professional characteristics of the participants were added as a necessity to fulfill the study aim; the questionnaire included 30 questions. The estimated time to complete the survey was approximately ten minutes. The period of data collection was four months. Informed consent was implied by agreeing to participate in the survey and was clearly outlined in the survey introduction. Official written approval to conduct the study was taken from the administration and research / ethical committee in a selected setting (17/0446/IRB JULY 10, 2017).

### Statistical Methods

Data were revised, coded, entered, analyzed, and tabulated using SPSS version 23. Frequency, percentage, and Chi-Square test were used to figure out the variances and correlations among the study variables

## Results

### Frequency distribution of demographic characteristics of participants

Most of the nurses (87.1%) in the sample had their ages ranged between 20 to 40 years old, while only 12.9% of the nurses were 40 years and up. The majority of the sample was females (85.8%), while only 14.1% were males. About one third (33%)

of the sample were Saudi nurses and two thirds (67%) non-Saudi. About half (51.1%) of the nurses in the sample had bachelor's degrees, and 47.7% had a diploma degree while only 1.2% had master's degree. The majority (95.1%) of the sample was staff nurse. Only 1.5% was head nurse. About three quarters (76%) of the sample were working in general wards, and about one quarter (24%) of the sample were working in critical care units. About two thirds (66.8%) of the sample had less than ten years of experience. Only 4.6% of the sample had more than 20 years of experience.

### Nurses' knowledge and perception of impact limited health literacy on individual patients and their practice.

The results of the study revealed that more than one-third of the study sample indicated that health literacy was sometimes emphasized in the educational curriculum, and about half (45.5%) of the subjects indicated that they sometimes participate in health literacy continuing education activities. Regarding the main factors associated with health literacy, the study result reported that more than half (50.1%) of the sample reported that the main factors associated with health literacy are at the educational level.

Table 1 shows that about three quarters (73.2%) of the sample heard about the term health literacy. More than half of the subjects in the sample (50.4) did not believe that individuals with a high level of education are not at risk of low health literacy. More than half of the subjects in the sample (61.9%) believe that their colleagues are assessing health literacy with a health literacy assessment tool. Most of the sample believed that low health literacy greatly interfered with patients' ability to understand health information, patients with low health literacy lack the tendency to participate in preventative health care and make lifestyle changes necessary to improve health, knowing the level of health literacy will improve patient outcomes, knowing the healthcare literacy level will make you a better nurse, and it is their responsibility to assess health literacy (91.6%, 93.2%, 95.0, 91.6%, 90.1% respectively). Big percentage of the sample believed that health literacy interfered with patients' ability to obtain appropriate health services and follow through on recommended treatment. They also believed that patients with low health literacy have more hospitalization than those with adequate health literacy and that health literacy has a financial impact on the KSA economy. They also believe that health literacy can be assessed without a health literacy tool (87.3%, 88.1%, 79.4%, 89.4%, 89.5 and 89.5 respectively).

Table 2 describes the relationship between demographic characteristics and Health Literacy Perception among Nurses. There was a statistically significant relationship between age categories and five questions of the assessment question. Regarding gender, there was a statistically significant relationship in almost all questions of the assessment tool. Regarding the education level, there was a statistically significant relationship between education and several questions of the assessment question. Regarding years of experience, there was a statistically

**Table 1: Frequency distribution of health literacy perception among nurses (N = 679).**

No.	Question	Yes		No	
		F	%	F	%
[1]	Did you hear of the term health literacy?	497	73.2%	182	26.8%
[2]	Do you think individuals with a high level of education do not risk for low health literacy?	337	49.6%	342	50.4%
[3]	Do you believe that low health literacy greatly interfered with patients' ability to understand health information?	622	91.6%	57	8.4%
[4]	Do you believe health literacy interfered with patients' ability to obtain appropriate health services?	593	87.3%	86	12.7%
[5]	Do you believe health literacy interfered with patients' ability to follow through on recommended treatment?	598	88.1%	81	11.9%
[6]	Do you believe patients with low health literacy skills more hospitalization than those with adequate health literacy skills?	539	79.4%	140	20.6%
[7]	Do you believe patients with low health literacy lack of participation in preventative health care and unwillingness to make lifestyle changes necessary to improve health?	633	93.2%	46	6.8%
[8]	Do you believe knowing the level of health literacy will improve patient outcomes?	645	95.0%	34	5.0%
[9]	Do you believe knowing the healthcare literacy level will make you a better nurse?	622	91.6%	57	8.4%
[10]	Do you believe health literacy's financial impact on the KSA economy?	607	89.4%	72	10.6%
[11]	Do you believe it is your responsibility to assess health literacy?	612	90.1%	67	9.9%
[12]	Do you believe your colleagues are assessing health literacy with a health literacy assessment tool?	420	61.9%	259	38.1%
[13]	Do you believe health literacy can be assessed without a health literacy tool?	608	89.5%	71	10.5%

**Table 2: The relationship between demographic characteristics and health literacy perception among nurses.**

Questions	Gender		Educational level		Years of experience		Age	
	χ <sup>2</sup> Value	P-Value	χ <sup>2</sup> Value	P-Value	χ <sup>2</sup> Value	P-Value	χ <sup>2</sup> Value	P-Value
Did you hear of the term health literacy?	36.418	.000*	2.089	0.352	14.051	.003*	4.404	.221
Do you think individuals with high level of education do not risk for low health literacy?	6.583	.010*	2.606	0.272	2.642	.450	8.139	.043*
Do you believe that low health literacy greatly interfered with patients' ability to understand health information?	22.495	.000*	24.447	.000*	8.548	.036*	3.324	.344
Do you believe health literacy interfered with patients' ability to obtain appropriate health services?	7.301	.007*	21.636	.000*	18.612	.000*	10.136	.017*
Do you believe health literacy interfered with patients' ability to follow through on recommended treatment?	8.249	.004*	13.424	.001*	2.536	.469	8.783	.032*
Do you believe patients with low health literacy skills more hospitalization than those with adequate health literacy skills?	3.849	0.05	.944	.624	5.684	.128	.426	.935
Do you believe patients with low health literacy lack of participation in preventative health care and unwillingness to make lifestyle changes necessary to improve health?	1.204	0.273	1.431	.489	8.343	.039*	5.296	.151
Do you believe knowing the level of health literacy will improve patient outcomes?	0.166	.684	7.219	.027*	8.663	.034*	3.598	0.308
Do you believe knowing the healthcare literacy level will make you a better nurse?	30.662	.000*	7.876	.019*	6.36	.095	.306	0.959
Do you believe health literacy financial impact on the KSA economy?	14.984	.000*	13.667	.001*	7.262	.064	3.367	0.338
Do you believe it is your responsibility to assess health literacy?	15.117	.000*	14.522	.001*	5.821	.121	.489	0.921
Do you believe your colleagues are assessing health literacy with a health literacy assessment tool?	10.635	.001*	5.349	.069	13.165	.004*	4.759	.190
Do you believe health literacy can be assessed without a health literacy tool?	3.289	.070*	.039	.981	17.377	.001*	4.290	.232
How frequently was health literacy emphasized in your educational curriculum?	15.704	.001*	15.441	.017*	46.671	.000*	33.895	.000*
How often do you participate in health literacy continuing education activities (formal training in practice)?	10.057	.018*	18.419	.005*	19.374	.022*	95.144	.000*
What is the main factor associated with low health literacy?	24.496	.000*	15.073	.020*	23.691	.005*	13.833	.128

significant relationship between the years of experience and several questions of the assessment tool.

### Discussion

The study findings revealed that most nurses have a moderate knowledge of health literacy. These findings weren't compatible

with what was revealed by Nesari, who showed that Iranian registered nurses had limited knowledge about health literacy.<sup>[16]</sup> The result of this study showed that about three quarters of the sample heard about the term of health literacy which indicates that the study sample is knowledgeable about health literacy; this might be attributed to the existence of many sources that

can be used to obtain knowledge related to health literacy whether through surfing the web, attending training programs, or during education curriculum which was emphasized by two thirds of the study sample. This result also reflects the awareness of the Ministry of High Education and other concerned bodies of the importance of providing a curriculum that is closely related to the real needs and requirements of health care providers. A similar finding was reported by Minnesota Health Literacy Partnership, which found that Adult basic education and community programs should do their best to offer health literacy courses and integrate health literacy terms into curricula at all levels.<sup>[31]</sup> Moreover, Muscat et al. stated that incorporating health literacy in education could have positive effects and self-reported improvements in health knowledge, attitudes, and communication with healthcare professionals.<sup>[32]</sup>

As to participation in health literacy continuing education activities, the findings of the study have shown that the majority of the study subjects reported that they participate in health literacy's continuing education services, (formal training in practice), to improve their health literacy levels. Participation in these programs can improve the quality of healthcare services being provided by healthcare institutions. This result goes in parallel with research findings conducted by Mackert et al., Cafiero, Paasche-Orlow & Wolf, who revealed that health literacy training for all healthcare workers was very important in creating health literate care organizations.

Regarding the main factors associated with health literacy, the findings of the current study revealed that more than one half of the current study sample indicated an educational level, followed by socioeconomic status as the main factors associated with health literacy.<sup>[17,27,33]</sup> Moreover, more than one-half of the participants of the current study stated that individuals with high level of education do not risk low health literacy. This result shows that education plays an effective role in improving the health literacy of individuals, and those who have low levels of education will have low levels of health literacy. A similar finding was reported by Owens, who stressed the existence of a strong relationship between education and health literacy.<sup>[34]</sup> In the same line, Alribdi found an association between inadequate health literacy with the presence of chronic illness and low level of education.<sup>[8]</sup>

Although the level of education is a critical factor in determining levels of health literacy, it isn't the only factor that influences this process; the study findings also revealed socioeconomic status as a factor associated with health literacy. These findings are congruent with Berens et al., who found that limited perceived health literacy was associated with limited functional health literacy, low social status, and high frequency of doctor visits.<sup>[35]</sup>

The majority of participants perceived the limited impact of health literacy on patients and the country's economy. This result is consistent with what was shown by Harrington, which revealed that team members perceived that knowing and addressing parent and guardian's health literacy would allow team members to communicate more effectively and in turn

deliver the highest quality of care.<sup>[36]</sup> However, this study is not consistent with what was revealed by Macabasco-O'Connell & Fry-Bowers, who showed the lack of understanding and awareness of professional nurses to the role of health literacy on patient's health outcomes and the limited impact of health literacy on the country economy.<sup>[29]</sup>

Moreover, the findings of this study showed that the majority of the study sample believed that low health literacy greatly interfered with the patient's ability to understand health information. This finding could be attributed to the fact that health literacy provides patients with strategies and methods through which they can understand different instructions and information, which in turn can affect the communication process between patients and healthcare providers. A similar finding was reported by Potratz, who found that health literacy wasn't only related to a patient's ability to read or understanding health information but also the ability of health care providers to communicate in a way that the patient could understand.<sup>[20]</sup>

Additionally, the current study results revealed that more than eighty-seven percent of the sample believed that health literacy interfered with the patient's ability to obtain appropriate health services. The result of this study showed that there was a significant relationship between health literacy and the ability to obtain appropriate health services as health literacy helps patients to identify the types of services they need, how they can obtain these services, and encourage them to ask questions for more clarity. This finding is consistent with findings reported by Kyle & Shaw, who found that patients with low literacy showed less responsiveness to their concerns during communication, poorer explanation of their process of care during their interactions with a health care provider and experienced significantly fewer feelings of general clarity.<sup>[37]</sup>

Furthermore, the current study showed that the majority of the sample perceived that patients with low health literacy showed a lack of participation in preventative health care and were unwilling to make lifestyle changes necessary to improve health. Accordingly, patients who have low levels of health literacy will not pay great attention to participate in such activities. This result is consistent with what has been mentioned by The Ethnic Communities' Council of Victoria Inc., which revealed that limited health literacy is associated with improbability to access the needed services and inability to understand issues related to health care.<sup>[38]</sup>

The result of this study also showed that more than eighty-eight percent of the sample stated that health literacy interfered with patients' ability to follow through on recommended treatment. This finding could be attributed to the fact that patients of low health literacy can't adhere to physicians' instructions and can't correctly follow up physicians' recommendations regarding doses of drugs to be taken and the number of times these doses should be taken which in turn can have its adverse effects on patients' health level and their ability to cope with different diseases especially chronic ones. This result goes in parallel with the findings of the research that was conducted in Al-

Qassim province of Saudi Arabia by Rasheed et al., who found that a very high proportion of medication non-adherence among diabetic and hypertensive patients is related to patients' inability to achieve the desired therapeutic outcome.<sup>[39]</sup>

The current study findings showed that the majority of the sample affirmed that, knowing the level of health literacy will improve patients' outcomes. This result goes in parallel with research findings conducted by Mullan et al., who found that to provide excellent patient-centered care and to successfully look after their health, a high level of health literacy is required by future health professionals.<sup>[37]</sup>

In the same context, the findings of this study revealed that the majority of the sample perceived that knowing health care literacy level will make them better nurses, impacting on their work and the quality of healthcare system. Parker & Kreps stated that good nurses are those who can understand all issues surrounding the healthcare system. Health literacy enables nurses to become more knowledgeable and more attached to the different factors that can positively or negatively affect the healthcare sector.<sup>[40]</sup> This result is in the same line with what has been mentioned by Williamson who revealed that nurses could indeed play a significant role in overcoming low health literacy problem by assisting patients with low health literacy to reduce their stays within a hospital and raise the levels of compliance with instructions.<sup>[41]</sup>

Besides, the result of this study showed that about eighty percent of the sample said that patients with low health literacy skills were more hospitable than those with adequate health literacy skills. This result could be attributed to the fact that patients with adequate health literacy skills can get well soon as it is associated with their ability to understand the instructions of health care providers. On the other hand, patients with low levels of health literacy cannot understand instructions because of paying less attention to improve health literacy skills. Worthy of mentioning is that having low health literacy means additional costs added to the healthcare system. This result is consistent with what has been mentioned by Williamson, which revealed that low health literacy is associated with high costs incurred due to longer hospital stays.<sup>[41]</sup>

The study results showed that more than eighty-nine percent of the sample stated that low health literacy had a financial impact on the KSA economy. This result reflects the awareness of the study sample of the great effects of health literacy on the Saudi economic sector. High health literacy can economize costs, reduce patients' hospitalization periods, and improve the quality of the overall health system. This result goes in parallel with research findings conducted by Parker & Kreps, who found that limited health literacy can lead to many dangerous effects such as spending billions of dollars in avoidable costs.<sup>[40]</sup> Moreover, Kickbusch et al., in their study, revealed that weak health literacy was associated with poorer health outcomes, less self-management, and more costs.<sup>[5]</sup>

With health literacy assessment and implementation, the current study findings showed that the Majority of Nursing personnel

emphasized their responsibility to assess health literacy and they can use varied strategies through which they can evaluate the different aspects of health literacy and identify areas that need to be strengthened to improve health literacy skills. These results are consistent with what has been mentioned by Johnson, who confirmed that health literacy assessment tools used by all health professionals, especially nurses, are effective in improving patients' health literacy rates.<sup>[14]</sup>

Additionally, about ninety percent of participants believed that health literacy could be assessed without a health literacy tool; this reflects their abilities in using other techniques in assessing health literacy. A similar finding was reported by Lie et al. found that there were many techniques that can be used in the assessment of health literacy.<sup>[42]</sup>

## Conclusion

This study aimed to assess the nurses' current knowledge and perception about the impact of health literacy on patients and their practice. The study found out that the strongest advantage of conducting a health literacy assessment is helping nurses to be more effective when providing healthcare teaching. The study emphasizes the need to design professional programs for healthcare professionals that enable nurses to improve their level of health literacy as this improvement will have its positive effects on their professional levels. It is important to health care organizations to have a specialized tool that can effectively measure health literacy levels of both healthcare professionals and patients alike to improve the quality of services being provided in the healthcare sector.

## Competing Interest

The authors declare that they have no competing interests.

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