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The Development of a Practical Guidebook for Promoting Health Literate Health Care Organizations in Taiwan

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Abstract

Background To promote organizational health literacy in health services, a guidebook with practical guidelines is needed. However, very few guidebooks on health literate health care organizations exist at present. The objective of this study was to develop a Practical Guidebook for Health Literate Organizations to be used in healthcare services in Taiwan.

Methods The Vienna Model of Health Literate Healthcare Organization (V-HLO) was adopted as the framework for the guidebook. Three focus-group discussions with health care practitioners were conducted to understand their health literacy practices and to collect data for developing the practical examples in the guidebook. Both qualitative and quantitative methods were adopted to collect user opinions on the guidebook.

Results The Practical Guidebook for Health Literate Organizations contains 9 standards of V-HLO and 52 examples. All the examples are from health care organizations in Taiwan and are suitable for local medical environments and culture, which increases the applicability of this guidebook. The user evaluation results indicated that the usability of the guidebook is acceptable.

Conclusion We recommend this guidebook as a tool for self-assessment of organizational health literacy in health care services and as educational training material for medical personnel. In the future, the standards and items in this guidebook can serve as reference for the rating of organizational health literacy for hospital accreditation or certification.

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Introduction

Health literacy refers to an individual's motivation and ability to obtain, understand, appraise, and use health information to promote and maintain good health (1). A large amount of empirical research has shown that health literacy is a critical determinant of health (2;3). Inadequate health literacy can lead to poorer health behaviors and health outcomes, lower utilization of preventive health services but higher utilization of acute medical care (2;4;5), greater medical expenses (6), and less engagement and empowerment in health (7). Differences in health literacy create inequality in health opportunities, which might affect a society's sustainable development (3). From the point of health equality, limitations on personal health literacy should not become an obstacle to gaining health. At the 9th Global Conference on Health Promotion, the World Health Organization (WHO) declared health literacy to be a vital agenda in empowering and driving health equity for sustainable development (3).

Health literacy is not just a personal capacity and responsibility, but a relational concept relating personal abilities to situational complexity and demands, where health related decisions and actions have to be taken (8). Therefore, health literacy can be measured and improved at the personal as well at the organizational level. Thus, change must begin with the health care and service providers. This gave birth to the concept of health literate health care organizations, which emphasizes that health care organizations should be committed to helping people to easily obtain, understand, and use health information and services to take care of their health (9;10). The Agency for Healthcare Research and Quality (AHRQ) proposed the concept of health literacy universal pre-

cautions (11) to encourage health care organizations to provide services suitable to people of all health literacy levels, thereby allowing people to fully and effectively access and use health information and services regardless of their health literacy level.

Based on the Ten Attributes of a Health Literate Health Care Organization proposed by Institute of Medicine (IOM) (9), different tools to measure health literate organizations or organizational health literacy were offered, of which the Vienna Model of Health Literate Healthcare Organization (V-HLO) is the most comprehensive example, explicitly related to health promotion and its settings approach, as well as to quality philosophy and methodology and using a comprehensive definition of health literacy (12;13).

In 2017, the Health Promotion Administration under the Ministry of Health and Welfare in Taiwan began including health literacy items as part of the accreditation standards for health promoting hospitals, and officially added health literacy to the list of essential tasks of health promoting hospitals. To promote organizational health literacy effectively, a guidebook detailing practical guidelines is needed for medical personnel. However, very few guidebooks on health literate health care organizations exist at present, and the few that do exist were written in western countries (14). The examples within them may not be suitable for the health care environments or medical cultures of other regions. Thus, a health literate organization guidebook, suitable for the local culture, must be developed to assist personnel at health care organizations in practicing organizational health literacy.

Against this background, the objective of this study was to develop a Practical Guidebook for Health Literate Organizations with a solid theoretical basis and practical examples for reference. This paper describes the development process of the guidebook and presents the user evaluation results.

Methods

Phase 1: Setting the target audiences

The target audiences of this guidebook comprise of the management and medical personnel of health care organizations. Suitable health care organizations include, but are not limited to, community hospitals, regional hospitals and medical centers.

Phase 2: Determining the framework

The Vienna Model of Health Literate Healthcare Organization (V-HLO) proposed by Pelikan and Dietscher was adopted as the framework for the guidebook (12). The V-HLO self-assessment tool comprises 9 standards and 23 sub-standards (Table 1) and was first piloted in 9 Austrian hospitals. There were several reasons for adopting V-HLO for our framework. Firstly, it offers wide aspect coverage; it expands on the Ten Attributes of Health Literate Organizations (9) and considers the 18 core strategies and 5 standards proposed by WHO for health promoting hospitals (15;16). Secondly, it incorporates health literacy into the comprehensive strategies of health promoting hospitals. Thirdly, by being developed using the International Society for Quality in Healthcare (ISQua) standards (17), it is compatible with quality philosophy and methodology in health care. Lastly, the V-HLO self-assessment tool has concrete and detailed items that can offer principled provisions as well as practical methods for implementation.

Taiwan has been supporting health promoting hospitals for many years now, so the health care organizations in Taiwan are mostly familiar with the concepts and execution strategies of health promoting hospitals. The V-HLO self-assessment tool has been translated into Mandarin and has been already used in a pilot study of 68 hospitals in Taiwan (18). Furthermore, since 2017 Taiwan is also represented in an international working group on Health Promoting Hospitals and Health Literate Organizations of the International Network of Health Promoting Hospitals and Health Services (HPH) which will provide an international version of the V-HLO concept and tool.

Phase 3: Focus-group discussions with health providers

To collect data for developing the examples in the guidebook, three focus-group discussions were conducted with the aim to understand the health literacy practices used by health care organizations in Taiwan. The participants comprised 20 accomplished executives from accredited health promoting hospitals in Taiwan. They were divided according to the level of their organizations: medical center, regional hospital, or community hospital, and therefore formed three focus groups. The topics of the discussions included actual health literacy implementing measures and experiences at their hospitals, which included hospital policies, quality management, environments, documents, software/hardware design, and activities. The analysis of the discussions revealed 167 health literacy implementation measures.

Table 1 The Standards and sub-standards of V-HLO Included in the Guidebook

Standards	Sub-standards
1.Organizational health literacy is integrated into organizational structures, processes, culture and assessment of the health care organization.	1.1 The leadership / management of the organization is committed to monitoring and improving organizational health literacy.
	1.2 The organization accepts health literacy as an organizational responsibility.
	1.3. The organization ensures the quality of organizational health literacy interventions by quality management measurement.
2. The organization involves relevant patient and staff groups by active participation in development and evaluation of specific documents, materials and its services related to promoting organizational health literacy.	2.1. The organization involves patients in the development and evaluation of patient-oriented documents, materials and its services.
	2.2. The organization involves staff in the development and evaluation of staff oriented documents, materials and services.
3. Health literacy is part of staff development. The organization has curricula for basic and continuous staff training in patient communication following principles of health literacy.	3.1. Health literacy is understood as an essential professional competence for all the staff working in the organization. This is confirmed by documents such as job advertisements, staff development plans etc.
4. The organization is designed with features that help people find their way and uses language, symbols and signage that is easy to understand also by users with low levels of (health) literacy.	4.1. The organization enables first contact via website navigation and telephone.
	4.2. The organization provides the information necessary for arrival and hospital stay.
	4.3. Support is available at the main entrances to help patients and visitors.
	4.4. The navigation system of the organization is clear and easy-to-understand.
	4.5. Health information for patients and visitors is available for free.
5. Patient communication follows health literacy best practices.	5.1. Spoken communication with patients is easy-to-understand and act on.
	5.2. Design and distribution of written materials are easy-to-understand and act on.
	5.3. Design and distribution of computer applications and new media are easy-to-understand and act on.
	5.4. Information and communication in native language is offered by specific, trained personnel and material resources.
	5.5. Easy-to-understand and act on communication, also in high-risk situations, is seen as a necessary safety measure.
6. The organization promotes health literacy of patients and their relatives beyond stay in the hospital.	6.1. The organization supports patients in gaining and improving their health literacy with regard to their disease-specific self-management.
	6.2. The organization supports patients in gaining and improving their health literacy with regard to development of more healthy lifestyles.
7. The organization promotes health literacy of staff both with regard to the self-management of occupational health and safety risks and with regard to healthy lifestyles.	7.1. The organization supports staff in developing and improving their own health literacy for self-management of occupational health and safety risks.
	7.2. The organization supports staff in developing and improving their health literacy for healthy lifestyles.
8. When discharged, patients are well informed about their future treatment and recuperation process. The organization is publicly engaged, and collaborates with others to improve population health.	8.1. The organization promotes continuous and integrated care.
	8.2. The organization contributes to the improvement of health literacy of the local population within the realm of its possibilities.
9. The organization actively supports and promotes the implementation of organizational health literacy practices beyond its boundaries in the region.	9.1. The organization supports the dissemination and further development of health literacy in the region and beyond.

Note: The original V-HLO self-assessment tool contained 22 sub-standards (11). The one used in this paper is based on an unpublished manuscript provided by Pelikan JM, and includes an additional sub-standard 1.3, so it has 23 sub-standards in total.

Phase 4: Collecting materials for the examples

The above 167 health literacy measures were examined to assess how they corresponded with the V-HLO standards and concern their uniqueness and creativity. Similar measures were regarded as one single measure, therefore resulted in a total of 52 measures to serve as examples. We collected data from hospitals regarding these measures to serve as materials for examples to be included in the guidebook.

Phase 5: Drafting a prototype

The authors drafted a prototype using the V-HLO self-assessment tool as a frame and integrated the example materials.

Phase 6: Usability evaluation

Both qualitative and quantitative methods were adopted to collect user opinions on the prototype of the guidebook. The participants included 23 supervisors or personnel in charge of health promoting hospitals. They belonged to 8 medical centers, 7 regional hospitals, and 8 community hospitals.

The qualitative method involved mailing the guidebook prototype to the participants and having them read the prototype. Then, they gave their feedback and opinions on the wording, content, structure, figure/text configuration, and layout design in the form of revision notes made directly on the guidebook pages.

The quantitative method involved using a structured questionnaire to collect usability evaluations for the prototype. The System Usability Scale (19) was slightly revised to fit the context of this study. The questionnaire items included effectiveness, efficiency, and satisfaction responses with regard to the guidebook, and used a five-point scale ranging from "strongly agree" to "strongly disagree." The questionnaire contained 10 items and had a Cronbach's α of 0.86 for internal consistency reliability. The sum score ranged from 0 to 100, and scores less than 50, 50 to 70, and 70 or higher mean "not acceptable," "marginal," and "acceptable," respectively (20).

Phase 7: Completion

The authors revised the guidebook based on the usability feedback from the users, and then completed the final version.

Results

Guidebook description

The *Practical Guidebook for Health Literate Organizations* (21) contains 10 chapters in all. Chapter 1 introduces the background of health literacy and V-HLO. Chapters 2 to 10 explain the 9 standards of V-HLO. One sub-standard forms one unit, and each unit contains sessions of rationale, items, glossary, and examples (Table 2).

There are two appendices in this guidebook. Appendix 1 presents the V-HLO Self-Assessment Tool. When organizations create a health literacy improvement plan, they can firstly use the self-assessment tool to understand their actual performance in the various standards and then identify which goals are priorities. Appendix 2 presents the web addresses of health literacy resources that readers can use to find more resources on implementing health literacy improvement measures.

Usability evaluation

Table 3 displays the quantitative usability evaluation results. The average sum score of the usability scale was 79.02 (SD = 12.24), which indicates that the usability of the guidebook is acceptable (score ≥ 70) (19). The adjective ratings fall between good (score = 73) and excellent (score = 85) (20). The items that received higher scores involved usefulness, confident

Table 2. Brief description of each unit (sub-standard) in the guidebook

Sessions	Description
Rationale	Explains the objectives and connotations of the sub-standard, its relation to health literacy, and its importance.
Items	Introduces the items under the sub-standard, of which there are 141 in total in the guidebook.
Glossary	Explains important terms to give readers a more precise understanding of the meaning of the text.
Examples	Actual examples that can demonstrate the sub-standard. Aside from describing the methods, each example clearly indicates the items that are included to help readers understand why the example demonstrates health literacy practices and where it fits into the V-HLO framework. This guidebook contains a total of 52 examples, all of which were actual experiences of health care organizations in Taiwan. They are practical and feasible as well as creative; readers can find inspiration and develop more ideas from these examples for their own context.

recommendation to other medical personnel, be willing to use this guidebook in their work, and ease of use. The items that received lower scores involved cumbersomeness, complexity, and the necessity of learning other information before usage.

Discussion

This paper describes the development process of the Practical Guidebook for Health Literate Organizations and presents the user evaluation results. The V-HLO served as the theoretical foundation of this guidebook.

Table 3 The result of quantitative usability evaluation (n = 23)

Items	Mean[a]	SD
1. I think I would like to use this guidebook in my work.	4.48	0.59
2. I found this guidebook unnecessarily complex.[b]	3.91	0.79
3. I thought this guidebook was easy to use.	4.30	0.64
4. I think I would need assistance in using this guidebook.[b]	4.09	0.60
5. I found this guidebook to be useful.	4.57	0.59
6. I thought there were too many inconsistencies in this guidebook.[b]	4.00	0.60
7. I believe that other medical personnel will learn to use this guidebook very quickly.	4.13	0.92
8. I found the guidebook cumbersome to use.[b]	3.65	0.98
9. I felt very confident recommending this guidebook to other medical personnel.	4.52	0.59
10. I needed to learn some things before I could get going with this guidebook.[b]	3.96	0.88
Sum (0-100)[c]	79.02	12.24

[a] All items are scored 1 to 5.
[b] A negatively worded question; the scores for these items have already been converted.
[c] The sum scores were calculated as done by Brooke (1996) (19).

Abundant examples were included in the guidebook to make it more practical and inspirable. Moreover, the examples all come from health care organizations in Taiwan and are suitable for local medical environments and culture, which increases the applicability of this guidebook.

Participatory approaches are crucial for health literacy and can ensure that the information and services, which are developed, can meet the needs of the target audiences. The development process of this guidebook made full use of user participation. Focus-group discussions with health providers, actual examples from organizations, and user evaluation were all different participatory approaches. This is possibly the reason why users felt that this guidebook was beneficial and easy to use and why they would be confident in using it.

The user evaluation results also revealed that users found that the guidebook was a little unnecessarily complex and required prior knowledge to be understood. We speculate that this may be because health literacy is a relatively abstract concept. Furthermore, the V-HLO has a very comprehensive framework, which possibly makes it a little difficult for users to fully grasp it in a short amount of time. After hearing these opinions, the authors made some revisions. We replaced some of the more abstruse language with plain language, added necessary terms to the glossary to make them easier to understand, changed the layout, and added more figures to aid understanding.

Basically, the V-HLO is suitable for any type of health care organization from community hospitals to medical centers. However, the complexity of the environment and the situations that may be encountered may vary with the level and scale of the hospital. Medical centers and regional hospitals face greater scale, complexity, and involved aspects, so they are comprehensively suitable for the V-HLO. They also have more resources, which makes it easier for them to reach various standards. In contrast, community hospitals are smaller in scale. Some standards or items may not seem necessary to them or may be more difficult to meet (e.g., offering foreign language translation). Thus, multiple versions of the guidebook, tailored to hospitals on different scales, would meet hospitals' needs even more.

For future research, we suggest that researchers can follow medical personnel who have been using this guidebook in order to observe the actual influence of the guidebook on their implementation of organiza-

tional health literacy. We also suggest that different versions of the guidebook could be developed for hospitals on different scales, and that it should be expanded to primary health care clinics.

In practice, we recommend this guidebook for self-assessment of organizational health literacy in health care services and as educational training material for medical personnel. In fact, the Health Promotion Administration under the Ministry of Health and Welfare in Taiwan has already held two health literacy training courses for medical personnel using this guidebook as the primary learning material, and received trainee's positive responses and training effects. In the future, the standards and items used in this guidebook can serve as references for rating of organizational health literacy standards for hospital accreditation or certification.

Authorship Credit

MHW: Conception and design, data collection and analysis, drafting, revising and final approving of the article.
MCC: Assistance in data collection.
JGH: Assistance in data collection.
JMP: Advice on V-HLO framework andrevising the article.
YWW: Conception, team coordination and guidance.

Permissions

The institutional review board (IRB) approval was given for this project by the Research Ethics Committee of Hualien Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation (IRB107-82-B).

Conflicts of interests

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