RESEARCH ARTICLE

Application of the International Classification of Functioning, Disability, and Health in Clinical Speech-Language Pathology practice: A scoping review

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ABSTRACT
Background: The use of the International Classification of Functioning, Disability, and Health (ICF) framework is advocated in Speech-Language Pathology (SLP) clinical practice. As using the ICF leads to improved quality of life in relation to communication and swallowing compared to the medical model, SLP practitioners are encouraged to adopt the ICF framework in their practice. However, there is a lack of ICF-related literature in the Philippines that can serve as a guide for SLP practitioners.
Objectives: The study aimed to identify and describe available international literature and extract key ideas that can serve as a guide for SLP practitioners as they adopt ICF into their practice.
Methodology: The York Framework for scoping reviews was utilized. The review consisted of five stages: (1) identifying research questions, (2) identifying relevant literature, (3) identifying eligible literature, (4) data charting, and (5) summarizing and extracting themes.
Results: The majority of the articles collated were research studies from developed countries. The ICF was applied equally across all age groups and focused on activities and participation rather than health conditions. Thematic analysis showed that ICF was applied in assessment, intervention, and health care service delivery.
Conclusion: Gaps exist in using ICF-based tools in the SLP clinical practice and in the social understanding of the ICF. SLP practitioners are encouraged to learn and adapt the identified ICF-related themes in their practice as it facilitates a holistic understanding of their patient's functioning, disability, and evidence-based clinical decisions, thus, contributing to effective diagnostic and therapeutic processes.

Keywords: *clinical framework, scoping review, speech-language pathology, assessment, intervention, International Classification of Functioning, Disability, and Health*

Introduction

Various frameworks for viewing disability and health are used in the medical professions. The medical model of healthcare focuses on defining diseases and in identifying and treating organic malfunction [1]. In contrast, the social model views disability as a socially-created phenomenon due to the lack of awareness and concern from society [2]. A criticism to the medical model was a lack of consideration of the social, psychological, and behavioral aspects of an illness [3]. Whereas a limitation of the social model was that it minimized the biological component of disability [4]. As a result of these criticisms, the biopsychosocial model was developed. This model is more encompassing as it considers the cultural, social, psychological, and biological functioning in viewing disease and disability [5]. The World Health Organization (WHO) endorses this newer model of health by ratifying the International Classification of Functioning, Disability, and Health (ICF) in 2001 [5]. The ICF describes the interaction of functioning (i.e., body structures and function, activities, participation) and disability (i.e., impairments, limitations, restrictions) in the context of health conditions, personal factors, and environmental factors [2]. It also adds health-related quality of life as a vital aspect of a person's functioning [4]. Various healthcare professions such as occupational therapy and physical therapy have recommended the use of

ICF as a clinical framework [6,7]. Similarly, international speech-language pathology (SLP) organizations (e.g., American Speech-Language-Hearing Association (ASHA) and Royal College of Speech and Language Therapists) advocate the application of ICF in the assessment and intervention of communication and swallowing disorders [4,8]. The ICF helps SLP clinicians as the framework provides a holistic view of the biological, personal, and social aspects of the patient's functioning during an assessment of communication and swallowing skills [4]. Another important component of the framework involves considering contextual factors (*i.e.*, personal and environmental factors) [9], leading to an individualized intervention plan. The combination of obtaining a holistic understanding of the patient's needs and developing a specialized intervention plan can facilitate the improvement of health-related quality of life for SLP patients [10]. In the 2018 convention of the Philippine Association of Speech Pathologists (PASP), the ICF was discussed as an evidence-based framework for clinical practice. This is an evident step towards assisting Filipino SLP practitioners to incorporate ICF into their assessment and intervention protocols.

According to the former President of the PASP, there was no documented use of ICF among SLP practitioners [11]. She attributed this to the limited knowledge on the use of ICF in SLP practice. Cursory search on ICF-related literature in the Philippines revealed the dearth of documents that may guide Filipino SLP practitioners to adopt ICF. Bondoc, Mabag, Dacanay, and Macapagal described the local SLP research that was completed from 1978 to 2015 [12]. They reported that the majority of the research focused on language and disorders related to SLP. Articles that investigated the use of the ICF were not reported, implying a shortage of local literature on ICF. Although multiple studies on the clinical utility of ICF have been completed internationally, accessing these articles is costly and time-demanding for Filipino SLP practitioners. These barriers can prevent them from shifting their perspectives and integrating the ICF framework into their practice. A scoping review was conducted to compile a bibliographic list of relevant materials from May 2001 to February 2014, describe the nature of all identified relevant literature, and extract key ideas that can serve as a guide for SLP practitioners as they adopt ICF into their practice. It was during this critical period that the ICF was conceptualized and first introduced in the field of speech pathology.

Methodology

This study adapted the York Framework for scoping reviews by Arksey and O'Malley [13]. Since this study aimed to synthesize the available and relevant literature, scoping review was deemed as the most appropriate research design. This review consisted of five stages: (1) identifying the research questions, (2) identifying relevant literature, (3) identifying eligible literature, (4) charting of information and data from the included studies, and (5) summarizing and extracting themes.

Identifying the Research Questions

An initial scan of literature regarding the different models of disability for clinical practice and the development of the ICF was conducted by the research team. This led to the formulation of the following research questions:

1. What is the available literature regarding the use of ICF in the SLP clinical practice?
2. What is the extent of the ICF utilization in the areas of SLP clinical practice?

Identifying relevant literature

Search Strategy

The study searched through the ASHA, Scopus, ScienceDirect, and PubMed databases using keywords relevant to the research problem. These databases were chosen since their contents include topics on SLP research. Main keywords were combined with alternative entries (Appendix A) using Boolean operators for a more refined search. Various types of reference materials were included (*e.g.*, e-books, journal articles, conference papers, editorials, and other bibliographic records). The literature search is limited from May 2001 (*i.e.*, ratification of the ICF) to February 2014.

The initial literature search yielded 22,360 reference materials from the ASHA, PubMed, Scopus, and ScienceDirect databases. Duplicates were deleted, yielding 6,796 unique reference materials published between the years 2001-2014.

Identifying Eligible Literature

Guided by the research questions, the researchers conducted a trial screening with the intention of refining the basis for inclusion or exclusion. Each team member individually screened ten random articles from the pool of collected literature. After multiple trial screenings and group discussions, the team developed a screening form that

considered the following inclusion criteria: (1) materials did not qualify as a bibliographic record, (2) date of publication must be within May 2001 until February 2014, (3) references must be accessible in English, (4) references must refer to the ICF (2001) or its more recent versions, (5) reference materials should be directly applicable to areas of SLP clinical practice, and (6) references must be available in full text. As multiple team members rated the gathered reference materials, kappa values were obtained to determine the level of agreement among multiple raters. The free-marginal multi-rater kappa was used because the number of cases to be rated per criterion varied [14]. A free-marginal kappa value of 0.812 was achieved for each eligibility criterion across all team members, indicating adequate inter-rater reliability.

The actual screening of reference materials was conducted in pairs. Disagreements in screening results were settled through dyad discussions. Disagreements not resolved by the pair were discussed by the whole team to reach a consensus regarding the eligibility.

From the 6,796 unique reference materials, articles with a different meaning for the acronym ICF (*e.g.*, Informed Consent Form, Intracortical Facilitation, etc.) were excluded based on the fourth eligibility criteria (*i.e.*, referred to the ICF version 2001 or the more recent version). Reference materials that satisfied the first five criteria, but were unavailable in full text, were pooled to explore alternative means of accessing the materials. Authors of these literature were contacted to acquire full access. All accessible articles applicable to clinical SLP practice comprised the final data set of 537 reference materials (Figure 1). All reference materials that satisfied the inclusion criteria were compiled into a bibliography list (Appendix B). These eligible pieces of literature were used for data charting and thematic analysis.

Charting Information and Data

A data charting form (Appendix C) was created to extract pertinent information from the reference materials. The contents of the form were based on the guideline of Levac and colleagues [15]. They recommended vital information to be included in a thematic analysis. Data gathered included general information (*i.e.*, title, author, year of publication, study location, and type of reference material), specific information (*i.e.*, purpose or aims of the study, and summary or conclusion/s), key concepts (*i.e.*, age group, medical diagnosis, and SLP diagnosis of the target population/s; and domain of clinical SLP practice), and the reviewer's interpretation (*i.e.*, role, use, and change brought by ICF to SLP services; improvements in rehabilitation practice; and benefits of the patients from using ICF).

Data charting was conducted by two teams. Both teams performed trial charting to ensure adequate inter-rater reliability across all team members. Thirty reference materials were chosen randomly from the bibliographical

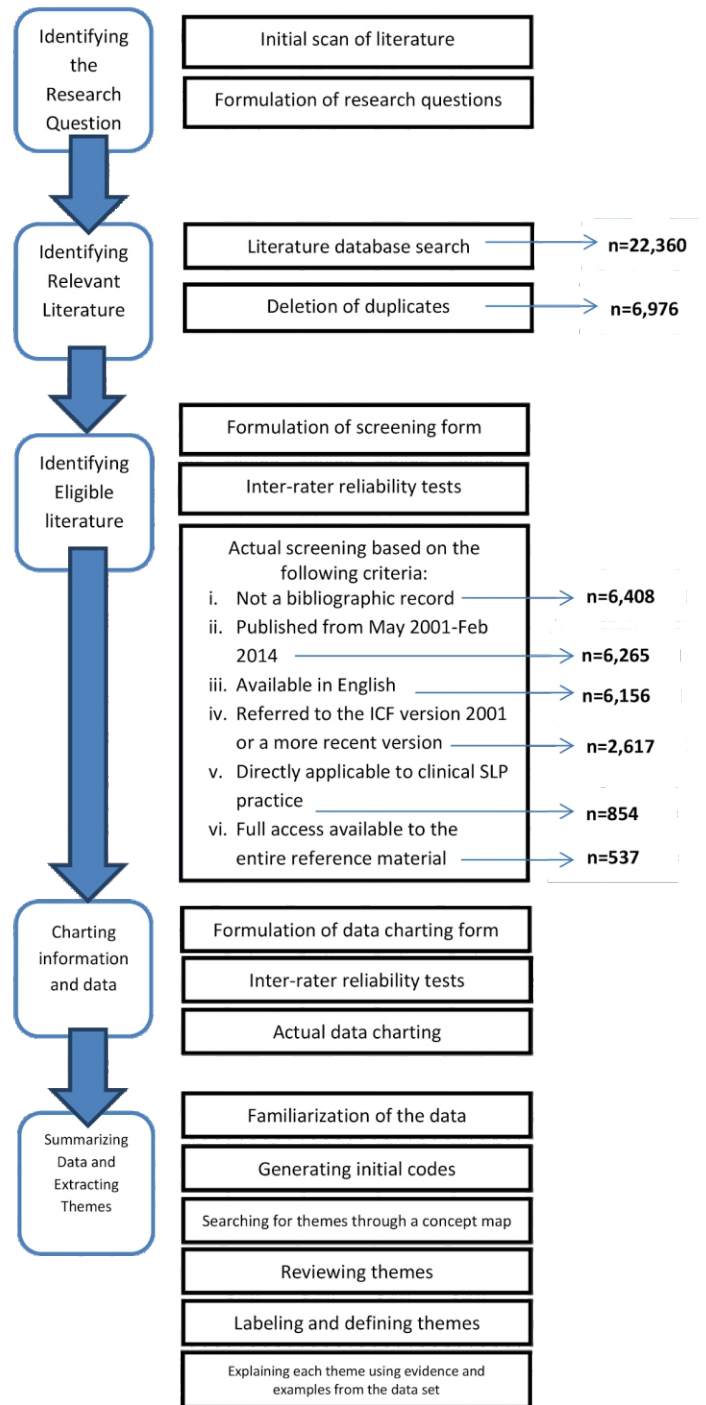

Figure 1. *Flowchart of the methodology*

list. Each member individually used the data charting form to collect data from the chosen reference materials. Trial charting continued until the kappa scores yielded substantial agreement (0.6 and above) for all raters.

The first team charted the reference materials from 2010-2014, while the second team charted the reference materials from 2001-2009. Random subgroupings in pairs and triads were established within the teams. Each subgroup was assigned to chart a specific number of articles from the bibliographic list.

Members of a subgroup individually charted a reference material. Subgroup discussions were subsequently conducted to consolidate data from individual charting and discuss disagreements for each reference material. For disagreements not resolved within subgroups, the whole team gathered to discuss and reach consensus on the final charted data.

Summarizing Data and Extracting Themes

The charted data were analyzed through descriptive statistics and thematic analysis. Quantitative data were reviewed and tabulated using a spreadsheet. For the creation of themes, Braun and Clarke's framework on thematic analysis was utilized as it presents a systematic way of organizing descriptive thematic data [16]. Each member of the team read the information gathered from charting. Through multiple group meetings, the team established codes based on the most recurring statements that described the use of ICF in clinical SLP practice in the gathered data. These codes were extracted by comparing charted data and identifying the most relevant concepts in answering the research questions. Related codes and common trends were summarized into themes using concept mapping. Themes were labeled, defined, and tagged using evidence and examples from the coded data set. The code set and themes were iteratively reviewed and discussed by the team to develop the final codes and themes.

Results

An increase in published reference materials on the ICF was observed per year since its conception in 2001 (around 19% per year). This upward trend continued until the greatest number of reference materials was observed in 2011 (n=80). A slight decline was observed in 2012 (n=79) and 2013 (n=67). The data set for 2014 had 14 reference materials as it only included the first 2 months of the year.

Research articles were the most common type of reference (n = 344), followed by convention presentations (n = 100) and expert's opinion (n = 41). Other types of reference materials gathered were practice guidelines (n=20), others (n=20), newsletters (n = 11), and e-books/books (n = 1).

Most reference materials did not explicitly state a target country (n=260, 37%). The countries with the greatest number of publications were United States of America (n=99, 14.1%), Australia (n=34, 4.8%), Canada (n=27, 3.8%), Sweden (n=25, 3.6%), and Netherlands (n=19, 2.7%). Only 4 reference materials were gathered from Southeast Asia, two each from Singapore and Thailand. No reference material was obtained from the Philippines.

Thirty-three percent of the reference materials utilized ICF on geriatric population (i.e., 19 years old and older). Reference materials that did not explicitly state the age

Table 1. *Number of Reference Materials per Country*

Country	Number of Reference Materials (n)	Percentage
Not explicitly stated/reported	260	37.0%
United States of America	99	14.1%
Australia	34	4.8%
Canada	27	3.8%
Sweden	25	3.6%
The Netherlands	19	2.7%
United Kingdom	17	2.4%
Germany	16	2.3%
Italy	13	1.8%
Spain	12	1.7%
Taiwan	11	1.6%
France	8	1.1%
South Africa	7	1.0%
Israel	6	0.9%
Finland	6	0.9%
Switzerland	6	0.7%
Republic of Ireland	5	0.7%
Portugal	5	0.7%
Brazil	5	0.7%
Belgium	5	0.6%
Austria	4	0.6%

group totaled 31.8% of all reviewed literature. Meanwhile, 27.6% of the articles focused on the use of ICF on pediatric population (i.e., 0 to 18 years old). The least number of reference materials (7.6%) applied ICF across the life span, encompassing both pediatric and geriatric populations.

Majority of the reference materials did not specify an SLP diagnosis. For literature that specified a diagnosis, Multiple Health Conditions was the most studied, followed by Language Disorder. SLP diagnoses such as Auditory Processing Disorder, Phonological Disorder, and Swallowing Disorder were the least studied in relation to ICF use.

Majority of the reference materials either did not explicitly state a medical diagnosis or were focused on Multiple Health Conditions. Reference materials were categorized under "Other" if the reference material focused on a medical diagnosis that was not included in the data charting form. Specific medical diagnoses with the most number of literature regarding the use of ICF were Cerebral Palsy, Stroke, Hearing Impairment, and Degenerative Disease. A few of the reference materials focused on medical diagnoses such as Learning Disability, Intellectual Disability, and Craniofacial Condition.

Majority of the reference materials utilized ICF in "Multiple Areas" of the SLP domains; that is, one or more of the domains were mentioned. The other trend was that SLP domains were "not explicitly stated" as authors focused on communication, in general, as a function. Of all the SLP domains, Fluency was the most studied in relation to ICF. The least number of reference materials that applied ICF to specific SLP domains were Ethics, Swallowing, and Motor Speech. Ethics was included as a category as it was viewed as an integral component of clinical practice in SLP.

Thematic Analysis

Four themes were derived from the data code set, namely: (1) impacts of applying ICF in SLP patient care, (2) changes in perspectives of SLP clinicians and policies, (3) gaps in SLP assessment in relation to ICF use, and (4) gaps in social environment to support ICF use. The data code set (Appendix D) included the extracted codes, definitions of these codes, assigned reference material number, and the section from which the descriptions were gathered. The numeric codes are placed in parentheses as a reference for further information. Appendix E showed the finalized themes.

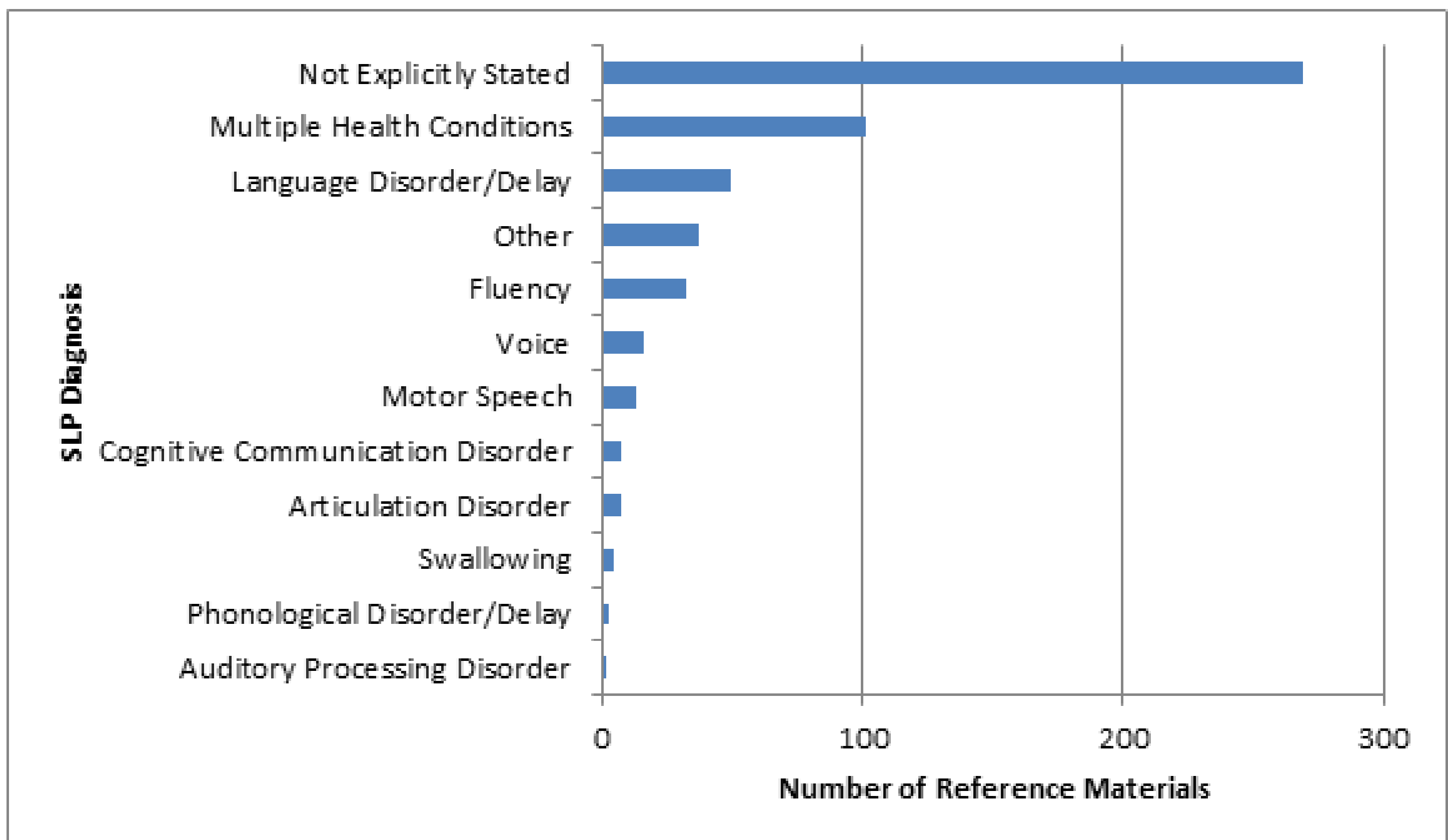

Figure 2. *SLP Diagnoses Utilizing ICF*

Figure 3 . *Relevant Medical Diagnosis Utilizing ICF*

Figure 4 . *SLP Domain Utilizing ICF*

A. Impacts of Applying ICF in SLP Patient Care

The ICF highlighted the importance of its domains (i.e., body structures and function, activities, participation, and contextual factors) in describing one's functioning and disability (1, 7, 17, 66). In SLP practice, body structures (7) are anatomical parts (e.g., ear, oral-peripheral mechanism, etc.) responsible for communication and swallowing. Body functions (7) pertain to physiological processes such as speech production and swallowing. Activities (1) refer to the individual's execution of a task and include communication, eating and drinking, and leisure. Participation (66) denotes involvement in life situations. It refers to a level of social engagement or functioning, which includes communicative participation (16), communicative access (15), occupation (63), and mealtime (56). Contextual factors (17) pertain to the underpinnings of communication and behavioral activities. It consists of personal factors (72) and environmental factors (17) that could either serve as barriers (2) or facilitators (32) to successful functioning.

All of these domains of ICF were taken into consideration in conducting SLP assessment through the interdisciplinary approach (48) as it provides a holistic view of the person (43). Focusing on the person required integration of assessment data with daily life experiences, personal goals for home and community participation, and various personal (72) and environmental factors (28) that influence progress and recovery. Through these processes, individualized and meaningful SLP treatment goals were formulated.

The interdisciplinary (48), holistic (43), and patient-centered (68) assessment for participation-focused intervention facilitated the use of outcome measures (64), effectively providing a sense of constancy and predictability to the person's improvement of functional performance. Moreover, these measures allowed comparison of data using a common language (12) and reporting of statistics on functional outcomes (38) brought about by intervention.

Various reference materials recommended the use of communicative participation (16), patient (68) and family-centered approach (34), evidence-based practice (31), outcome measures (64), and interprofessional collaboration (48) in intervention.

The treatment goals obtained from the assessment were then applied in intervention (67) by targeting the domains of ICF in order to achieve functional and participation-focused outcomes (70). The domain of communicative participation (16) was highlighted. This domain underscored taking part in life situations, in which knowledge, information, ideas, or feelings are exchanged between communication partners. Focusing on communicative participation led to functional outcomes (70) and improvement in the target populations' overall quality of life (77). These positive changes enhanced the individual's perception of their position in life in relation to their personal goals (72), expectations, standards, concerns, and socio-cultural environment.

The patient and family-centered approach entailed informed decision-making (20), parent education (26), and involvement and training of family members (34) in therapy. Patient-centered practice considered individual needs and rights, health conditions, and personal experiences. Moreover, it utilized a supportive environment (35) which enabled the patients to participate in clinical decision-making (10). The family-centered approach (34) involved significant others in intervention and highlights the importance of addressing issues of participation restriction. Evidence-based treatment approach was also recommended in order to address treatment goals directed at improving the domains of ICF in order to meet patients' personal aims (71) and enhance their quality of life (77).

To monitor the changes of intervention, functional outcome measures (64) were used in documenting (24) and assessing the effectiveness of treatment. Ethnic, cultural, linguistic, and educational factors were considered when making prognoses (76). The ICF was therefore used in providing a framework and classification system for patient-reported outcome (PRO) measures (70). Through ICF, a standard vocabulary (12) in discussing outcomes can be provided to benefit patients and their family, SLP practitioners, policy makers, and researchers.

B. Changes in Perspectives of SLP Clinicians and Policies

The shift in perspective (85) from the traditional method of healthcare delivery to the biopsychosocial model (8) proposed by ICF advocated the holistic view of the patient (43). This shifting perspective defined the intervention process as a product of a joint decision (20) made by the patient and the clinician. The incorporation of ICF in SLP healthcare delivery shaped assessment planning (3), guided intervention (50), and provision of counseling (18) contributed to policy-making (74) and improved healthcare services (41).

Integral to these changes in the perspective of healthcare delivery involved the use of ICF as a framework (37) for

structuring assessment and intervention protocols for SLP clinicians and other professionals. Recommendations did not only consider the patient's inherent disability (22), but also the relevant contextual factors (17) which impact activity and participation in the family, community, and the patient's occupation (45). The importance of counseling (18), particularly for the geriatric population and their family members, was highlighted in communicating, educating, and increasing awareness of the community regarding the impact of disability (45). In order to reduce the impact of disability and maximize functioning, tools for outcome measures (64) during the intervention process were used to observe treatment effects. Changes in terms of functioning and impact of disability brought about by intervention were constantly monitored.

The policies governing the provision of healthcare (57) and social services (87) also shifted. Policies were developed to address the needs of the patient (71) holistically, not only in assessment and intervention but also in terms of social-environmental aspects. Healthcare systems adjusted the coverage of support for medical services (57) because of the shift in perspective brought about by the application of ICF in policy-making (74). Social services (87) that cater to the needs of the patients and their community were provided.

C. Gaps in SLP assessment in relation to ICF Use

While ICF was considered in assessment, ICF-based tools and procedures for assessing communication and swallowing disorders (4) were still limited. Various literature mentioned the importance of developing such tools. For instance, the creation and use of ICF-based tools (e.g., ICF core sets) in interdisciplinary assessment can aid in gaining a holistic perspective (43) of the patient, as SLP practitioners consider all domains of ICF during assessment through collaboration with other members of the rehabilitation team (48). Moreover, these ICF-based tools should apply a clear classification system (9) for the ICF domains and use participation-focused (67) and evidence-based approaches (31).

D. Gaps in the Social Environment to Support ICF Use

SLP clinicians and other rehabilitation professionals appeared to have an understanding of the ICF as a framework for healthcare delivery. However, the importance of social (e.g., family and peers) and societal (e.g., healthcare services, government policies, and social services) factors affecting a patient's overall functioning was often disregarded.

Persons with disabilities (PWDs) required support from family and peers to enhance social participation (86) and communication. Clinicians likewise played a role by serving as their primary advocates through education (26). SLP clinicians were therefore encouraged to educate PWDs, families, and government workers regarding disability (65) and quality of life (77) through workshops/seminars. They also needed to be involved in facilitating changes in societal attitudes toward communication and swallowing disorders, and their consequent effects on quality of life. However, SLP clinicians themselves have difficulty applying the framework due to the arbitrary nature of the language used by the ICF and lack of one-to-one correspondence in its domains. Thus, terminologies in the ICF were recommended to be adapted into a more user-friendly common language (12) that can be understood by the public.

Addressing this gap was linked to multiple benefits. For example, using the proposed common language of the framework can contribute to increased understanding and awareness of ICF and result in improved policy-making (74). New policies that adopt a holistic perspective (43) facilitate the integration of the dimensions of healthcare and social service delivery (84) in analyzing communication (14) and swallowing disorders (89); thus, promoting research focusing on relating activity and participation-focused outcome measures to functional performance profiles (38). Moreover, population-based studies of these functional profiles are useful for planning programs designed for long-term outcomes on public health status and community participation.

Discussion

Ma, Threats, and Worrall [4,10,16] stated that many SLP organizations around the world were endorsing the use of the ICF for guiding standards of practice, which explains the rising trend in the publication of reference materials per year. When the SLP organizations in Australia [17], United States of America [18], and the United Kingdom [19] incorporated the ICF in their scope of SLP practice, reference materials about the utilization of the ICF from these countries increased. These countries produced more than 20% of the total reference materials gathered. Concurrently, several SLP practitioners around the world have been advocating for the implementation of the framework in the practice [20]. Other countries such as Japan [21], Greece [22], South Africa [23], and Canada [24, 25] have also made advancements in the use of ICF. No reference materials came from the Philippines. This finding supports the statement of the former PASP President regarding the state of the ICF use

among Filipino SLP and implies the limited use of ICF in the country. Possible factors affecting its utility are lack of local policies, limited advocacy from local organizations, need for information dissemination in ICF among Filipino SLP clinicians, and paucity of the ICF in the academic curricula.

Majority of the reference materials included in this review prioritized communication for attaining functional outcomes across the lifespan. The close percentages of reference materials for pediatric and adult populations, and the materials that applied ICF in both populations, indicated that the ICF was being applied across the lifespan. The establishment of the ICF-CY 2007 aided the development of a framework useful for the pediatric population by allowing more developmental aspects of functioning to be coded [26], further strengthening the scope of using the ICF as a framework. The increased focus on communication as a function of activity and participation rather than impairment epitomizes the ICF framework. Yaruss and Quesal [27] highlighted communication as a facilitator of activity and participation. Furthermore, Threats and Worrall emphasized in their paper the importance of ICF as it "links communication to broader life skills" [28]. Using ICF, SLP clinicians were guided to focus on activity and participation in relation to their patients' conditions [27,28,29,30]. Furthermore, a majority of the reference materials collated were about multiple health conditions or did not explicitly specify a health condition as their focus. These findings suggest that ICF attempted to be more encompassing on a wider range of health conditions. Furthermore, the ICF highlighted the importance of equal consideration to multiple factors involved in a person's life [31]. Similarly, a majority of research articles either targeted multiple health conditions or did not have any condition explicitly stated for SLP domains and SLP diagnosis which further supports the ICF's wider scope for SLP diagnoses and health conditions in general. This perspective starkly differs from the medical model. Filipino SLP clinicians who are more familiar with the medical model may need support and training to adopt ICF in their practice.

The use of ICF in the SLP patient care entailed comparable application and obstacles as with other healthcare professions. For instance, ICF as a framework was applied in both SLP assessment and intervention, promoting patient-centered and interdisciplinary approaches. Similarly, ICF was used as a conceptual framework in audiological assessment [32]. In physical therapy (PT), the use of the ICF as a common framework for outcome evaluation was recommended, consequently reiterating the application of a common language for healthcare professionals, particularly for those working in collaborative care teams [33,34]. Moreover, ICF-based tools, patient-centered approach, and interdisciplinary assessment were often used in PT practice [33]. Another commonality is the shift to a holistic perspective of healthcare. The nursing community has been advocating the holistic perspective of disability by considering multiple dimensions (e.g., social, political, cultural) affecting the current state of life of a patient [35]. The lack of ICF-based assessment tools, interprofessional collaboration, and professional training [36] were also reported in special education (SpEd), while limited recognition of personal factors and subjective dimensions in health and disability were encountered in occupational therapy (OT) [7,37]. To bridge these challenges, developing ICF-based tools and training for rehabilitation professionals were recommended [7,37]. The American Psychology Association has collaborated with the WHO to create a manual for healthcare providers to aid them in training [38]. Training professionals on how to use the ICF in their respective professions increases their awareness [39]. This training may also involve enhancing the uptake of the ICF in practice through further research. These recommendations are useful for Filipino SLP practitioners. On a bigger scale, the similarities across healthcare professions further underscore the importance of interprofessional collaboration. Different healthcare sectors in the country are encouraged to work together to promote the use of ICF and deliver quality services. As interprofessional collaboration facilitates team communication, its incorporation into the healthcare system advances services as it reflects the goals and desired outcomes of the entire team. The introduction of the ICF core sets, which aims to facilitate the mapping of existing outcome measures to the components of the ICF, was suggested to further guide multidisciplinary teams and individual practitioners in service delivery [40].

In conclusion, stronger collaborations among Filipino SLP practitioners across settings are needed to increase the knowledge base regarding ICF, develop validated assessment and intervention approaches, and advocate for policy changes that will improve the overall quality of service delivery. The PASP started advocating for ICF in SLP practice in the recent national convention. The association may further this endeavor by integrating ICF into the Filipino SLP scope of practice and educating its constituents (i.e., policy makers, professionals, and patients) on ICF. Academic institutions may support this transition by incorporating ICF into the academic curricula [41] and developing training programs. The themes identified through the review can be used as a guide for these endeavors.

Limitations

Although specific steps were taken to ensure the rigor of the review, this study has a few limitations. For instance, the scope of the review only included literature from 2001 to February 2014. Expanding the scope to include more recent published materials is recommended for future studies. This will supplement the currently available bibliography list of reference materials. Another identified limitation was that an optional consultation exercise recommended by the York Framework was not incorporated in the methodology. This step may have furthered the applicability of the identified themes. Despite these limitations, this scoping review identified themes that are relevant for aiding Filipino SLP as they adopt the ICF into their practice. Moreover, the data code set (Appendix D) and the compiled bibliography list (Appendix B) addressed the lack of reference materials for Filipino SLP clinicians.

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