

ORIGINAL ARTICLE

Common use of standardized assessments by occupational therapists in the government setting in Malaysia

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Abstract:

Use of standardized assessment (SA) tools reflects the Occupational Therapy (OT) domain of practice. The purpose of this study was to identify the common use, purposes and the perceptions of standardized assessments by Occupational Therapists in Malaysia. Online survey was conducted and the survey questionnaire consists of Part A (Demographic Questions) and Part B (Occupational Therapy Clinicians' Use of Standardized Assessment Measures). With response rate of 22.6%, 64 respondents were analyzed. The Modified Barthel Index (MBI) was the most popular outcome measure. Most of the respondents reported they used the SA as the screening tools. As for the perceptions of SA, mostly the respondents have higher knowledge in selecting the appropriate measure and psychometric properties (validity and reliability). The respondents also agree that the most important factor in using the SA was the availability of the measures in their workplace. The usage of the SA by OTs in Malaysia needs to be improved to ensure the credibility in OT practice.

Keywords: Occupational Therapy, Standardized assessment (SA),

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1. INTRODUCTION

Standardized assessment (SA) is the instruments with well-established validity and reliability [1]. Use of SA tools is a central component of evidence-based assessment (EBA) and more reflect Occupational Therapy (OT) domain of practice [2 - 4]. Given there is a relation between the use of SA in OT practice, it is important to explore the use of the SA measures and the Occupational Therapists' perceptions towards SA.

According to the studies had been done about the use of SA measures in OT practice outside Malaysia, it concluded that the use of SA among Occupational Therapists (OTs) had increased, but there were barriers to use the SA measures in clinical practice. It is because of lack of time, knowledge about SA, availability of the instruments in the clinical setting, lack authority in using the SA measures and rely on those with certification, costly process, lack of cross-cultural sensitivity, clients' limited literacy and others [5- 9].

The study in Malaysia is more on validity, reliability, or translation of the SA measures but did not do for OTs point of views about the use of SA measures. Therefore, further investigation needs to be conducted to explore the use of SA by OTs in Malaysia becomes relevant. The aims of this study were to describe the common use of SA, its purposes, and perceptions of using SA measures by Occupational Therapists.

2. METHODOLOGY

2.1 Participants

Participants in this study included Occupational Therapists (OTs) who work in the government setting in Malaysia, full time worker and expert in English. The OT educator was excluded from the study. The survey was conducted by postal the questionnaire online.

2.2 Study Design and Instrument

A cross-sectional design was used for conducting this study. Data for this study were collected using a survey instrument with permission [9]. The questionnaire consists of Part A (Demographic Questions) and Part B (Occupational Therapy Clinicians' Use of Standardized Assessment Measures). The survey instrument addresses the professional experience, use of SA measures and also the perceptions of SA measures.

2.3 Data Analysis

The survey results were analyzed using the Statistical Program for Social Sciences version 21 (SPSS-21). Descriptive statistics were used to analyze the characteristics of the sample. Frequency distributions were used to identify the standardized assessment measures used most frequently and the purpose of SA measures. As for the perception of

standardized assessments, the means rating and standard deviation would use.

3. RESULT AND DISCUSSION

3.1 Demographics

Table 1, had shown the demographics attained from the study included information about the survey respondents. The respondents in this study consist of female 44(68.8%) and male 20(31.3%) with age range between 25 years old to 46 years old and years of experience ranging from 7 months to 18 years. More than half of the respondents had a Bachelor (56.3%), followed by a Diploma (29.7%) and Master in Occupational Therapy (14.1%). None of the respondent having doctoral in Occupational Therapy, then data has been excluded from the analysis.

The respondents practice in a variety of settings, the highest percentages of participants being in the rehabilitation hospital or unit (59.4%), acute care hospital (12.5%), followed by both community-based program and outpatient clinic (10.9%) and school setting (6.3%). The lowest percentages were in the home health, mental health setting, subacute or long-term acute care facility (LTAC), skilled nursing facility or long-term care facility and work or industry setting (0%). Due to the no participants work in these setting, the data for this setting were excluded from the analysis.

A respondent working with a variety of client population in their practice, as for the client population, the highest percentages was children (51.6%), followed by adults (32.8%), senior adult or elderly (10.9%) and adolescents (4.7%). The lowest percentage of client population was birth to three (0%) and it was excluded from the analysis. Most of the respondents 61(95.3%) responded that they did not have any specialty or board certifications. .

Table 1. Characteristics of respondents (n = 64)

Characteristic		n	%
Gender	Female	44	68.8
	Male	20	31.3
Education	Diploma	19	29.7
	Bachelor	36	56.3
	Master	9	14.1
Practice setting	Acute care hospital	8	12.5
	Community-based program	7	10.9
	Home health	0	0
	Mental health setting	0	0
	Outpatient clinic	7	10.9
	Rehabilitation hospital/unit	38	59.4
	School setting	4	6.3
	Subacute/Long-term acute care facility (LTAC)	0	0
	Skilled nursing facility/Long-term care facility	0	0
	Work/Industry setting	0	0
	Client population	Birth to three	0
Children		33	51.6
Adolescents		3	4.7
Adults		21	32.8
Senior adult/elderly		7	10.9
Specialty board certification	Yes	3	4.7
	No	61	95.3

3.2 Use of Standardized Assessment Measures

3.2.1 Commonly Use Standardized Assessment Measure

Figure 3.1, provides an overview of the measures that the respondents use most often in their practice setting. The most frequently used was Modified Barthel Index (34.4%) and the least frequently or equal used were Minnesota Handwriting Assessment (1.6%), Model of Human Occupation Screening Tool (1.6%), ROM assessment (1.6%) and WeeFIM (1.6%).

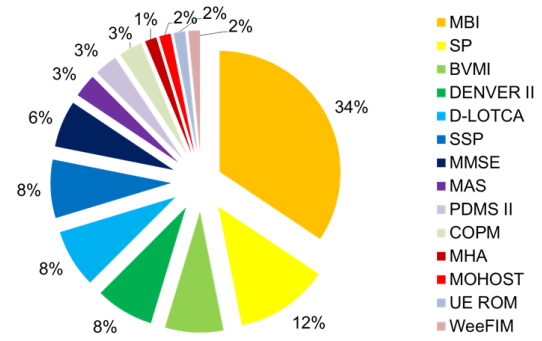


Figure 1. Standardized Assessment Measures Used Most Frequently (N= 64)

3.3.2 Purpose for Using the Standardized Measures

The purposes of using the standardized assessment measures by the respondents were summarized in Figure 1. The most purpose of use of SA by the respondents was for initial evaluation 57(89.1%). Screening and evaluation of progress 44(68.8%) were the next more and equal purpose for SA were used, followed by eligibility for services 13(20.3%) and satisfy administrative reporting requirements 12(18.8%). None of the respondents use the SA measures for the purpose to satisfy insurance or funding agency requirements (0%) and the data was excluded from the analysis.

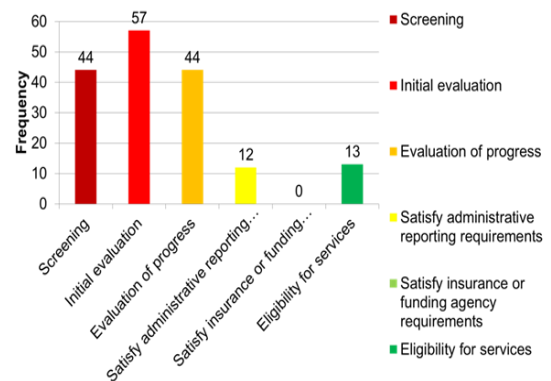


Figure 3.2. Purpose of Use of Standardized Assessment Measures (n = 64)

3.3.3 Perceptions of Standardized Measures Use

Respondents were asked to rate their perception of SA measures used using a 7-point Likert scale. These items were analyzed using descriptive statistics to find the means and standard deviations. The respondents rate knowledge or skills (1 = no knowledge/skills, 7 = Advanced knowledge/skills) regarding the following issues related to SA measures. Means and standard deviation rating of knowledge or skills was shown in table 3.2. Overall, the respondents rated that they have highest knowledge or skills about selecting the appropriate measure ($M = 5.72, SD = 1.27$) and knowing what to measure ($M = 5.69, SD = 1.30$). However, the respondents reported that they have least knowledge or skills about knowing the difference between types of standardized measures (criterion or norm-referenced) ($M = 5.25, SD = 1.31$).

Table 3.2. The Mean Rating and Standard Deviation for Perceived Knowledge or Skills by the Respondents Regarding the Following Issues Related to Standardized Measures.

	Mean (M)	Standard deviation (SD)
Selecting the appropriate measure	5.72	1.27
Knowing what to measure	5.69	1.30
Communicating results to clients	5.56	1.18
Administering measures	5.45	1.21
Interpreting the results of measures	5.42	1.19
Reporting the results of the measures	5.42	1.18
Communicating results to administrators	5.42	1.17
Communicating results to other health care professionals	5.36	1.16
Knowing the difference between types of standardized measures (criterion or norm-referenced)	5.25	1.31

As for the perceived knowledge (1 = no knowledge, 7 = Advanced knowledge) regarding the following score-types and measurement concepts related to standardized measures (Table 3.3), the most respondents rate their knowledge or skills about validity (i.e., Does the measure assess what you want it to?) ($M = 5.13, SD = 1.35$) and reliability (i.e., Does the measure assess the same thing across time, users, situations?) ($M = 5.09, SD = 1.31$) followed by the norm-referenced scores ($M = 5.06, SD = 1.30$). However, the respondents stated that they have least knowledge about confidence intervals ($M = 4.41, SD = 1.29$), Z-scores ($M = 4.36, SD = 1.43$) and growth scores ($M = 4.31, SD = 1.42$).

Table 3.3. The Mean Rating and Standard Deviation for Perceived Knowledge or Skills by the Respondents Regarding the Following Score-Types and Measurement Concepts Related to Standardized Measures.

	Mean	Standard deviation
Validity (i.e., Does the measure assess what you want it to?)	5.13	1.35
Reliability (i.e., Does the measure assess the same thing across time, users, situations?)	5.09	1.31
Norm-referenced scores	5.06	1.30
Age-equivalent scores	4.72	1.41
Percentile scores	4.59	1.15
Standard error of measurement	4.44	1.32
Confidence intervals	4.41	1.29
Z-scores	4.36	1.43
Growth scores	4.31	1.42

Next, the respondents were asked to rate the important factors in determining the use of SA measures (1 = Not important, 7 = Very important) (Table 3.4). Respondents indicated that the most important factors were the availability of measures in their workplace ($M = 5.94, SD = 1.30$), their knowledge about the measures ($M = 5.78, SD = 1.27$), the client’s ability to complete the test ($M = 5.75, SD = 1.26$) and how straightforward it is to communicate or report the test results ($M = 5.70, SD = 1.29$). The next high importance were, the time required to score and interpret findings ($M = 5.66, SD = 1.20$), the time required to administer a measure ($M = 5.63, SD = 1.24$), being able to find measures that meet the needs of the clients ($M = 5.63, SD = 1.20$), administrative or program evaluation requirements ($M = 5.56, SD = 1.28$), their beliefs about the quality of the available measures ($M = 5.53, SD = 1.36$), the wishes of the clients and their families ($M = 5.44, SD = 1.27$) and also knowing someone who uses a specific measure ($M = 5.41, SD = 1.29$). The respondents indicated the factors that least important influent their use of SA measures were, the attitudes toward testing of the therapists where they work ($M = 5.08, SD = 1.50$), their involvement in research ($M = 5.05, SD = 1.47$), the attitudes toward testing of the managers where they work ($M = 4.91, SD = 1.47$), and also for insurance or funding agency requirements ($M = 4.81, SD = 1.32$).

Table 3.4. The Factors to Determine Used of SA Measures.

	Mean	Standard deviation
The availability of measures in my workplace	5.94	1.30
My knowledge about standardized assessment	5.78	1.27
The client’s ability to complete the test	5.75	1.26
How straightforward it is to communicate or report the test results	5.70	1.29
Time required to score and interpret findings	5.66	1.20
Time required to administer a measure	5.63	1.24
Being able to find measures that meet the needs of my clients	5.63	1.20
Administrative or program evaluation requirements	5.56	1.28
My beliefs about the quality of the available measures	5.53	1.36
The wishes of my clients and their families	5.44	1.27
Knowing someone who uses a specific measure	5.41	1.29
Collecting data for evidence in my practice	5.27	1.26
Whether I think it is possible to measure what I’m interested in measuring	5.17	1.30
The attitudes toward testing of the therapists where I work	5.08	1.50
My involvement in research	5.05	1.47
The attitudes toward testing of the managers where I work	4.91	1.47
Insurance or funding agency requirements	4.81	1.32

The respondents rated their beliefs of 11 possible considerations about their use of SA measures. These perceived beliefs, rated on a 7-point scale (1 = Strongly Disagree, 7 = Strongly Agree), are listed in table 3.5 in the order of their mean perceived beliefs about SA. Respondents agreed with the belief that using the SA measures were improve services to the clients ($M = 5.78, SD = 1.28$), they would benefit from additional resources or assistance in learning more about the use of standardized measures ($M = 5.52, SD = 1.13$) and their competency to use standardized measures ($M = 5.42, SD = 1.02$). The respondents disagreed with the belief that using standardized tests can be harmful to

their clients ($M = 4.38$, $SD = 1.84$), SA were not useful for the information that they were seeking ($M = 3.56$, $SD = 1.59$) and they were unable to find measures to meet their clients' needs ($M = 3.42$, $SD = 1.53$).

Table 3.5. The Mean Rating and Standard Deviation for Respondents' perceived Belief about the SA Measures.

	Mean	Standard deviation
Using standardized measures can improve services to my clients	5.78	1.28
I would benefit from additional resources or assistance in learning more about the use of standardized measures.	5.52	1.13
I am competent to use standardized measures.	5.42	1.02
The use of standardized measures is compatible with my approach to assessing clients.	5.36	1.12
The use of standardized measures is valued in my practice setting.	5.34	1.16
Standardized measures accurately reflect my clients' abilities.	5.33	1.14
I am qualified to use most standardized measures.	5.11	1.18
I am aware of new and revised standardized measures	5.09	1.09
The use of standardized measures can be harmful to my clients.	4.38	1.84
There are many situations in which standardized measurements are not useful for the information I am seeking.	3.56	1.59
I can't find measures that meet the needs of my clients.	3.42	1.53

The aims of this study were to identify the most commonly used, its purpose and the perceptions of the standardized assessment measures used by Occupational Therapists in the government setting in Malaysia. Results indicated that almost 50% of the therapists in this study use SA measures "Less often than daily, but typically at least once a week". The other study reported that 59% of the respondents in Ontario, Canada used the measures daily to weekly [8]. The differences occur due to the factors involving the use of SA measures in clinical practice. The SA measures mostly are available in the countries outside Malaysia and it is expensive. The U.S spends 14% of the Gross National Product (GNP) on health care compared to Malaysia (2.2%) [10]. Therefore; the government needs to spend more on health care financing in order to provide better services.

Next, the present finding of this study indicated that the most commonly used of SA measures was MBI and it was supported by the other studies conducted in United Kingdom and Australia [11][12]. OTs in Malaysia used the MBI because it was easy to administer and also does not require a lot of time to complete the SA.

The purpose used of SA measures in this study included OT in all practice setting. Almost 90% of the respondents reported that they typically used the measures for initial evaluation followed by screening; evaluate the progress and eligibility of services. It was supported by the study conducted in the U.S [9]. The SA measures being commonly used were for screening, prediction or prognosis, planning for the intervention and for the intervention effects and progress by speech-language, occupational and physical therapists that work in a pediatric setting in Ontario [8].

The use of SA measures was very important in OT practice

[1]. The potential users of SA measures were to make sure that the intervention given was effective, to give the client satisfaction about their improvement, to provide evidence of practice and others. From this finding, respondents reported that they used the results of SA measures mostly to developed treatment plans, developed goals, identify the need for services, discuss with client or client's family and measure changes pre/post-intervention.

Considering the perceived knowledge or skills by the respondents regarding the standardized measures, all the respondents stated that they know to select the appropriate measure for the client and also knowing what to measure. As for the perceived knowledge regarding the following score-types and measurement concepts related to standardized measures, all the respondents have the highest knowledge or skills about the psychometric properties such as validity and reliability of the SA measures. The OTs in the United States reported a higher level of perceived knowledge or skills in selecting the appropriate measures, reporting the results of the measures and also about communicating the result of the SA measures to the clients and families. The perceived knowledge about the specific measurements concepts, respondents stated that they have a higher knowledge of percentile and age-equivalent scores. The same study was conducted in Ontario in 2007 reported that the OTs in pediatric rehabilitation have confidence in knowing what to measure, knowing on how to administer the SA measures and also communicating the results to other health care professionals. As for the perceived knowledge about the concepts they have confidence in interpreting the percentile scores, age-equivalent scores, and norm-referenced scores. The respondents reported that they had used the test manual to learn more about the measures in the last year.

Although the therapists reported that they have higher knowledge or skills about the SA measure, the other factors to determine used of SA measures also need to be taken into account. Most of the previous studies stated that the factors that influent the use of SA were being able to find the measures that meet the needs of their clients, client's ability to complete the measures and also the availability of the SA measures in their practice setting. Finding from this study reported the availability of the measures and their knowledge about standardized assessment was the important factors. As for the perceived belief reported by the respondents, the used of SA measures can improve services to the clients and also they would benefit from additional resources or assistance in learning more about the use of standardized measures. Most of the therapists in Malaysia prefer to have a workshop or continuing education programs in learning more about SA measures. The training on the use of SA measures can improve the OTs skills and booster their confidence level in handling the clients [13]. The clinicians' understanding of the SA measures would be very important to encourage their use in the practice setting and promote better services [3].

The complete SA measures were necessary to establish the level of the client's occupational performance and also as a method of documenting the change in the clinical status of the client. When asked about how the respondents do when administering the measures, almost 50% of the respondents in this study indicated that they modified the instructions and administering only portions, sections, or specific items of the measure. It is because most of the respondents agree that SA

in English and not sensitive to the culture or ethnic concerns [8].

4 CONCLUSIONS

In summary, the finding from this study shows that most of the respondents listed MBI as the most frequently use in their practice. As a result, they do not use a variety of SA that available in their workplace.

Most of the OTs in Malaysia have knowledge in selecting the appropriate measures but has superficial knowledge about the measurement concepts. Choosing the right measures would enhance the occupational-based evaluation and guiding the intervention for the client [14]. The therapists' limited understanding of the measures will limit their utilization of SA in OT practice [15].

Even though the OTs in Malaysia was aware of the importance of the use of SA measures but there were barriers and limitation. The result shows that the therapists mostly modified the measures in order to meet the clients' need. This will lead to invalid evaluation and probably the treatments given for the clients were not effective. These were very similar to the studies conducted outside Malaysia regarding the usage of the SA measures by OTs.

4.1 Limitation of Study

This study has several limitations. First, the method of administering questionnaires was using the online survey. The response rate of this method tends to be lower than the others. This study shows that only 22.6% of the OTs in the government setting in Malaysia takes part in this study. Any confusion and problems with the questions from the respondents cannot be clarified. Most of the respondents only listed the SA measures abbreviations rather than full measuring names and also did not include the version of the SA measures.

4.2 Recommendations

Suggestion on conducting further research about the differences in the use of SA measures across OT practice and also to find out the relationship between the demographic variables with the perceptions of OTs about the SA. It is most welcome to do the study about the translation of SA measures. More workshops or training on SA measures need to be encouraged in Malaysia not only for the therapists but also for the occupational therapy students.

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