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ORIGINAL RESEARCH ARTICLE

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Functional scales used by the Egyptian physiotherapist in the assessment of low back pain: a cross-sectional study

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Abstract

Background The use of functional scales is crucial for the management of low back pain. Numerous pertinent outcome measures are available; however, it is unknown how much use Egyptian physiotherapists make of these scales and measurements when diagnosing and treating patients with low back pain.

Aim The purpose of this study was to investigate how Egyptian physical therapists working in Egypt used functional outcome measures and scales when treating low back pain.

Design and methods A cross-section study used an online web-based survey which was accessible to all Egyptian physiotherapists practicing in Egypt.

Results 334 Egyptian physical therapists participated in this study. The use of the pain disability index and back pain functional scale represents the highest frequency of (always/often) of 56.3% and 53.6% respectively, whereas the use of the Quebec Back Pain Disability Scale or the Roland-Morris Disability Questionnaire represents the highest frequency of (rarely/never) 45.8% and 53%, respectively. There was no significant association between gender, years of experience, educational level, and work setting with the use of functional outcome measures ($p > 0.05$).

Conclusion Egyptian physiotherapists more usually utilize the pain disability index and back pain functional scale (PDI and BPFS), when evaluating their patients with low back pain, although they did not commonly use the Roland-Morris Disability Questionnaire or the Quebec Back Pain Disability Scale

Keywords Low back pain, Outcome measures, Functional outcome scale, Egyptian physiotherapist

Introduction

Low back pain is a common global problem. The point prevalence of low back pain (LBP) in 2017 was estimated to be about 7.5% of the global population. LBP has been the leading cause of years lived with disability since 1990[1]. Disability associated with LBP increased in all age groups and was greatest in the 50–54 age groups in 2019. Approximately, 70% of years lost through disability were in working-aged people (20–65 years) [2].

The main goal in the rehabilitation of patients with low back pain is the restoration of normal function as well as improving patient activity levels and participation [3]. Therefore, physiotherapists need assessment and measurement tools that accurately assess function and detect change over time [4]. There are a variety of assessment methods have been described for assessing low back pain outcomes, and a variety of outcome measures have been used and described in the literature [5]. Some outcome measures focus on function, some focus on pain, while others focus on health-related quality of life [6]. These

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outcome measures have become necessary for the evaluation of back pain problems [4].

Many outcome measures and scales focusing on function have been developed in patients with low back pain, [7] and according to the literature, the Modified Oswestry Low Back Disability Questionnaire, the Quebec Back Pain Disability Scale, the Roland-Morris Disability Questionnaire, the Patient-Specific Functional Scale, the back pain functional scale, the Pain Disability Index, and the quality of life [Short Form 36 (SF-36) are the most common functional outcome measures and scales used to assess function and disability impairment and improvement within the patient with low back pain [6–9].

Outcome measures are tools utilized to establish the presence of a condition and accurately measure its severity. Moreover, these instruments can monitor and quantify the changes in the construct of interest, over time, during and after rehabilitation [10]. Using outcome measures has a wide number of purposes: Before the intervention, as a diagnostic tool, which allows categorization of patients and setting of treatment aims. During the intervention, to detect the changes during treatment, as well as facilitate communication with patients and other healthcare providers. After the intervention determine the results, efficiency, and cost-effectiveness of the given treatment [11].

However, clinical guidelines recommended the regular implantation and use of outcome measures in physiotherapy practice [12], poor implantation, and utilization of the outcome measure was the commonly reported pattern in most of the clinical settings [9, 11, 13–15]. There are a few numbers of studies that investigate the utilization pattern of outcome measures among Egyptian physiotherapist [16, 17]. Therefore, the aim of this study was to explore the utilization of functional outcome measures and scales in the setting of low back pain treatment among Egyptian physical therapists practicing in Egypt

Methodology

Selection of subjects

Three hundred thirty-four physiotherapists of both genders participated in the study, all of the participants were physiotherapists working in Egypt, and the study was limited to those physiotherapists who have previous experience in dealing with and treating patients with LBP.

Inclusive criteria

Subjects were selected according to the following criteria:

- Male and female physical therapists participated in the study.
- Egyptian physical therapists practiced physical therapy in Egypt.
- All physical therapists had previous experience in assessing and treating patients with low back pain.
- All physical therapists who participated in the study had given their informed consent by choosing to participate in the online survey.

Exclusion criteria

- Non-Egyptian physical therapists practicing in Egypt were excluded from participation.
- Egyptian physical therapists practicing in other countries were not eligible to participate.
- Physical therapists working in areas such as critical care, mental health, respiratory care, pediatrics, stroke care, geriatric care, or inpatient facilities were not eligible to participate.

Questionnaire development

The researchers conducted an extensive literature review followed by a group discussion to develop the questionnaire. Two expert physiotherapists with experience of more than 25 years reviewed the first draft of the questionnaire, which was tested in a pilot study on 10 post-graduated physiotherapists. Based on their feedback, revision and minor changes were made on the format, language, clarity, and completion time to develop the final form of the questionnaire. Pilot responses were excluded from the result and the final statistical analysis. The questionnaire was administrated in English, the formal education language for Egyptian physiotherapist. The questionnaire included questions arranged in two parts:

A-the first section included the aim of the study and the consent followed by six questions asking about the therapists' demographics (nationality, practicing in Egypt or abroad, gender, academic degree, kind of full-time practice and years of experience).

B-Then, the participants were directed to the next section, where there was a question (How do you assess function and disability impairment and improvement in patients with low back pain using the following functional outcomes measure?) for seven scales and the participant was required to choose an answer from (always, often, sometimes, rarely, never) for each scale.

1- Modified Oswestry Low Back Disability Questionnaire (ODQ)
2- The Quebec Back Pain Disability Scale (QBPDS)
3- The Roland-Morris Disability Questionnaire (RMDQ)
4- Patient-Specific Functional Scale (PSFS)
5- Back pain functional scale (BPFS)

6- Pain Disability Index (PDI)
7- Quality of life [Short Form 36 (SF-36)

Recruitment and administration

Since it was challenging to distribute paper copies of the survey to all physiotherapists in Egypt's various regions, and accessing physiotherapists through Egypt is time-consuming, it is not considered feasible for a national survey. Using the Internet and social media as a recruitment method in medical research and research survey was considered as a flexible and dynamic approach for recruitment as well as an effective way for sharing information as it offer easy access to a wide number over a wide geographical area, instant distribution, and continuous data gathering. An online link and invitation to participate in the survey was announced on relevant the Facebook pages, WhatsApp groups, and telegram as well as the messenger.

Data collection

The database (Google form) was designed and programmed for the survey administration, and it was connected to an Excel sheet for data collection. Data were collected at the end of the survey period and transferred into an Excel sheet (MS-2016) for checking and cleaning the data from any errors. After that, the data were transferred into a Statistical Package for the Social Science (SPSS) (IBM SPSS Statistical Software, version 25) for statistical analysis.

Statistical analysis

Data were summarized using descriptive statistics of mean, standard deviation, frequencies, and percentages. Quantitative variables were summarized using mean and standard deviation, while categorical variables were summarized using frequencies and percentages. The five-point scale of assessment was reduced to three categories (always/often, sometimes, and rarely/never). Chi-squared test was used to investigate the association between subject characteristics (sex, years of experience, educational level, and work setting) and the use of functional measures. The strength of the association was determined using Cramer's V-test. The level of significance for all statistical tests was set at $p < 0.05$. All statistical measures were performed through the statistical package for social studies (SPSS) version 25 for Windows.

Results

Subjects' characteristics

Three hundred thirty-four Egyptian physical therapists participated in this study. The mean age of the study group was 35.88 ± 3.77 years respectively with a minimum of 25 and a maximum of 50 years. 223 (66.8%) of the subjects were females and 111 (32.2%) were males. 77 (23.1%) of the participants were consultants, 171 (51.2%) were seniors, and 86 (25.7%) were juniors. Regarding the education level of the study group, 26 (7.8%) subjects had a doctoral degree, 105 (31.4%) had a master's degree, 19 (5.7%) had a doctorate of physical therapy (DPT), 16 (4.8%) had a diploma, and 168 (50.3%) had a bachelor's degree. Most of the professionals of the study group were working in general/insurance hospitals (198, 54.4%), and the lower percentage is working in a university/college (academic institution) (27, 7.4%) and in private health sector (23, 6.32%) (Table 1).

Use of functional outcome measure to assess function and disability impairment and improvement within a patient with low back pain

One hundred two (30.5%) participants always or often assessed patients using ODQ, 72 (21.6%) participants always or often assessed patients using QBPDS, 67 (20.1%) participants always or often assessed patients using RMDQ, 164 (49.1%) participants always or often assessed patients using PSFS, 179 (53.6%) participants always or often assessed patients using BPFS, 188 (56.3%) participants always or often assessed patients using PDI, and 130 (38.9%) participants always or often assessed patients using SF-36.

Table 1 Participants' characteristics

Age (years)	**Mean**	**SD, %**
	35.88 ± 3.77	
	N	
Sex distribution		
Females	223	66.8
Males	111	33.2
Years of experience		
Consultant >10 years	77	23.1
Senior (4–10) years	171	51.2
Junior (1–3) years	86	25.7
Educational level		
Doctoral degree	26	7.8
Master's degree	105	31.4
DPT	19	5.7
Diploma	16	4.8
Bachelor's degree	168	50.3
Work setting		
General/insurance hospital	198	54.4
University/educational hospitals	27	7.4
Private practice	23	6.32

SD standard deviation

The use of PDI and BPFS represents the highest frequency (always/often) of 56.3% and 53.6% respectively, whereas the use of RMDQ and QBPDS represents the lowest frequency. (Table 2).

Association of use of functional outcome measure with the physical therapist subject characteristics

There was no significant association between physical therapist gender and the functional outcomes measure ($p > 0.05$) (Fig. 1).

There was no significant association between years of experience with the use ODQ, RMDQ, PSFS, BPFS, PDI, and SF-36 ($p > 0.05$), whereas the juniors had a higher frequency of always/often used QBPDS compared with the consultant and senior ($p = 0.01$, Cramer's $V = 0.14$). (Table 3, Fig. 2).

A physical therapist with doctoral and master's degrees had a lower frequency of always/often used QBPDS ($p = 0.02$, Cramer's $V = 0.16$) and RMDQ ($p = 0.02$, Cramer's $V = 0.16$) compared with a physical therapist with DPT, diploma, and bachelor's degree. A physical therapist with a doctoral degree had a higher frequency of rarely/never used BPFS compared with a physical therapist with a master, DPT, diploma, and bachelor's degree ($p < 0.03$, Cramer's V = 0.16) (Table 5, Fig. 8). There was no significant association between educational level with the use ODQ, PSFS, PDI, and SF-36 ($p > 0.05$) (Table 4, Fig. 3).

A physical therapist in general/insurance hospital had a higher frequency of always/often used PSFS ($p < 0.006$, Cramer's $V = 0.14$) and BPFS ($p = 0.01$, Cramer's $V = 0.14$) compared with a physical therapist in university/educational hospitals and in private practice. There was no significant association between work setting with the use of ODQ, QBPDS, RMDQ, PDI, and SF-36 ($p > 0.05$) (Table 5, Fig. 4).

Table 2 Frequency of the use of functional outcome measure to assess function and disability impairment and improvement within the patient with low back pain

Functional outcomes measure	Always/often *N* (%)	Sometimes *N* (%)	Rarely/never *N* (%)
ODQ	102 (30.5%)	117 (35%)	115 (34.4%)
QBPDS	72 (21.6%)	109 (32.6%)	153 (45.8%)
RMDQ	67 (20.1%)	90 (26.9%)	117 (53%)
PSFS	164 (49.1%)	90 (26.9%)	80 (24%)
BPFS	179 (53.6%)	75 (22.5%)	80 (24%)
PDI	188 (56.3%)	71 (21.3%)	75 (22.5%)
SF-36	130 (38.9%)	89 (26.6%)	115 (34.4%)

Discussion

Physical therapists are the most commonly involved health care professionals and are the first line of care in the multidisciplinary treatment of low back pain. Exploring and describing the use of functional outcome scales and measures is essential to improving the quality of care for this population. Given the current shift toward a biopsychosocial perspective in health care practice, it is important to gain insight into physiotherapists' use, awareness, and attitudes regarding outcome measures for people with low back pain. While there are numerous functional outcome measures and scales, the extent to which they are used clinically in the assessment and management of patients with low back pain in Egypt is unknown.

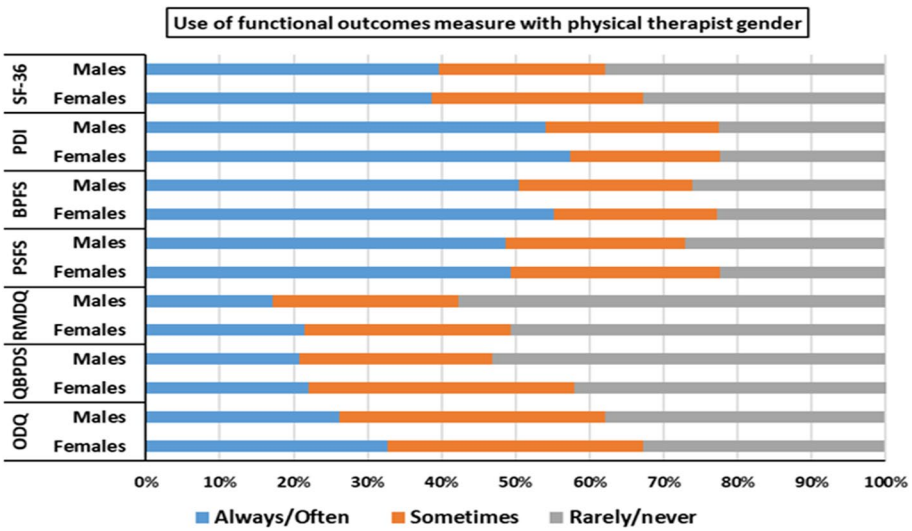

Fig. 1 The use of functional outcome measure with physical therapist gender

Table 3 Association of use of functional outcome measure with years of experience

Functional outcomes measure	Years of experience	Always/often	Sometimes	Rarely/never	χ^2 value	*p* value	Cramer's *V*
ODQ	**Consultant**	32.5%	37.7%	29.9%	4.66	**0.32**	0.08
	Senior	26.3%	37.4%	36.3%			
	Junior	37.2%	27.9%	34.9%			
QBPDS	**Consultant**	16.9%	39.0%	44.2%	13.29	**0.01***	0.14
	Senior	17.0%	33.9%	49.1%			
	Junior	34.9%	24.4%	40.7%			
RMDQ	**Consultant**	15.6%	27.3%	57.1%	7.84	**0.09**	0.11
	Senior	17.0%	29.2%	53.8%			
	Junior	30.2%	22.1%	47.7%			
PSFS	**Consultant**	41.6%	37.7%	20.8%	6.1	**0.19**	0.09
	Senior	50.3%	24.6%	25.1%			
	Junior	53.5%	22.1%	24.4%			
BPFS	**Consultant**	46.8%	32.5%	20.8%	7.04	**0.13**	0.1
	Senior	56.1%	17.5%	26.3%			
	Junior	54.7%	23.3%	22.1%			
PDI	**Consultant**	58.4%	22.1%	19.5%	0.64	**0.95**	0.03
	Senior	55.0%	21.1%	24.0%			
	Junior	57.0%	20.9%	22.1%			
SF-36	**Consultant**	37.7%	28.6%	33.8%	1.42	**0.84**	0.04
	Senior	38.6%	24.6%	36.8%			
	Junior	40.7%	29.1%	30.2%			

χ^2 chi-squared value; *p value*, probability value; *significant

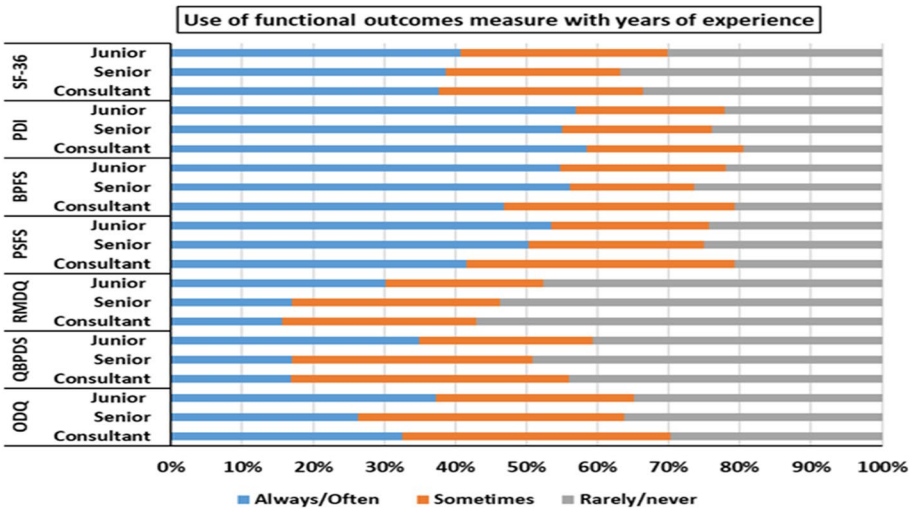

Fig. 2 The use of functional outcome measure with physical therapist years of experience

This study aims to investigate the use of functional outcome measures and scales in the context of treating low back pain among Egyptian physiotherapists working in Egypt as well as the relationship between employing functional outcome measures and the demographics of Egyptian physiotherapists (sex, academic degree, and years of experience) as well as practice type. The main finding of our study showed 30.5% of participants always or often assessed patients using ODQ, 21.6% of participants always or often assessed

Table 4 Association of the use of functional outcome measure with educational level

Measure	Educational level	Always/often	Sometimes	Rarely/never	χ^2 value	*p* value	Cramer's *V*
ODQ	Doctoral degree	30.8%	38.5%	30.8%	12.47	**0.13**	0.13
	Master's degree	24.8%	36.2%	39.0%			
	DPT	47.4%	47.4%	5.3%			
	Diploma	50.0%	25.0%	25.0%			
	Bachelor's degree	30.4%	33.3%	36.3%			
QBPDS	Doctoral degree	11.5%	34.6%	53.8%	17.46	**0.02***	0.16
	Master's degree	16.2%	36.2%	47.6%			
	DPT	26.3%	63.2%	10.5%			
	Diploma	25.0%	25.0%	50.0%			
	Bachelor's degree	25.6%	27.4%	47.0%			
RMDQ	Doctoral degree	7.7%	7.7%	84.6%	18.24	**0.02***	0.16
	Master's degree	14.3%	30.5%	55.2%			
	DPT	21.1%	42.1%	36.8%			
	Diploma	25.0%	25.0%	50.0%			
	Bachelor's degree	25.0%	26.2%	48.8%			
PSFS	Doctoral degree	34.6%	19.2%	46.2%	12.79	**0.11**	0.13
	Master's degree	51.4%	28.6%	20.0%			
	DPT	47.4%	42.1%	10.5%			
	Diploma	62.5%	25.0%	12.5%			
	Bachelor's degree	48.8%	25.6%	25.6%			
BPFS	Doctoral degree	42.3%	15.4%	42.3%	17.05	**0.03***	0.16
	Master's degree	53.3%	29.5%	17.1%			
	DPT	57.9%	36.8%	5.3%			
	Diploma	62.5%	18.8%	18.8%			
	Bachelor's degree	54.2%	17.9%	28.0%			
PDI	Doctoral degree	57.7%	19.2%	23.1%	2.64	**0.95**	0.06
	Master's degree	56.2%	22.9%	21.0%			
	DPT	63.2%	26.3%	10.5%			
	Diploma	50.0%	25.0%	25.0%			
	Bachelor's degree	56.0%	19.6%	24.4%			
SF-36	Doctoral degree	26.9%	38.5%	34.6%	9.05	**0.33**	0.11
	Master's degree	36.2%	24.8%	39.0%			
	DPT	42.1%	36.8%	21.1%			
	Diploma	62.5%	12.5%	25.0%			
	Bachelor's degree	39.9%	26.2%	33.9%			

χ^2 chi-squared value; *p value*, probability value; *significant

patients using QBPDS, 20.1% of participants always or often assessed patients using RMDQ, 49.1% of participants always or often assessed patients using PSFS, 53.6% of participants always or often assessed patients using BPFS, 56.3% of participants always or often assessed patients using PDI, and 38.9% of participants always or often assessed patients using SF-36. The use of PDI and BPFS represents the highest frequency (always/often) of 56.3% and 53.6% respectively, whereas the use of RMDQ and QBPDS represents the lowest frequency.

Our research revealed that the Egyptian physiotherapists who took part in this study used functional outcome scales and assessments to some extent. According to a previous study, the majority of Egyptian physiotherapists uses evidence-based practice and standardized outcome measures. They also frequently incorporate these practices into their clinical work, particularly when treating patients with musculoskeletal conditions and making decisions about treatment plans and patient progress [17]. The majority of Egyptian physical therapists reported that they always assess their patients before

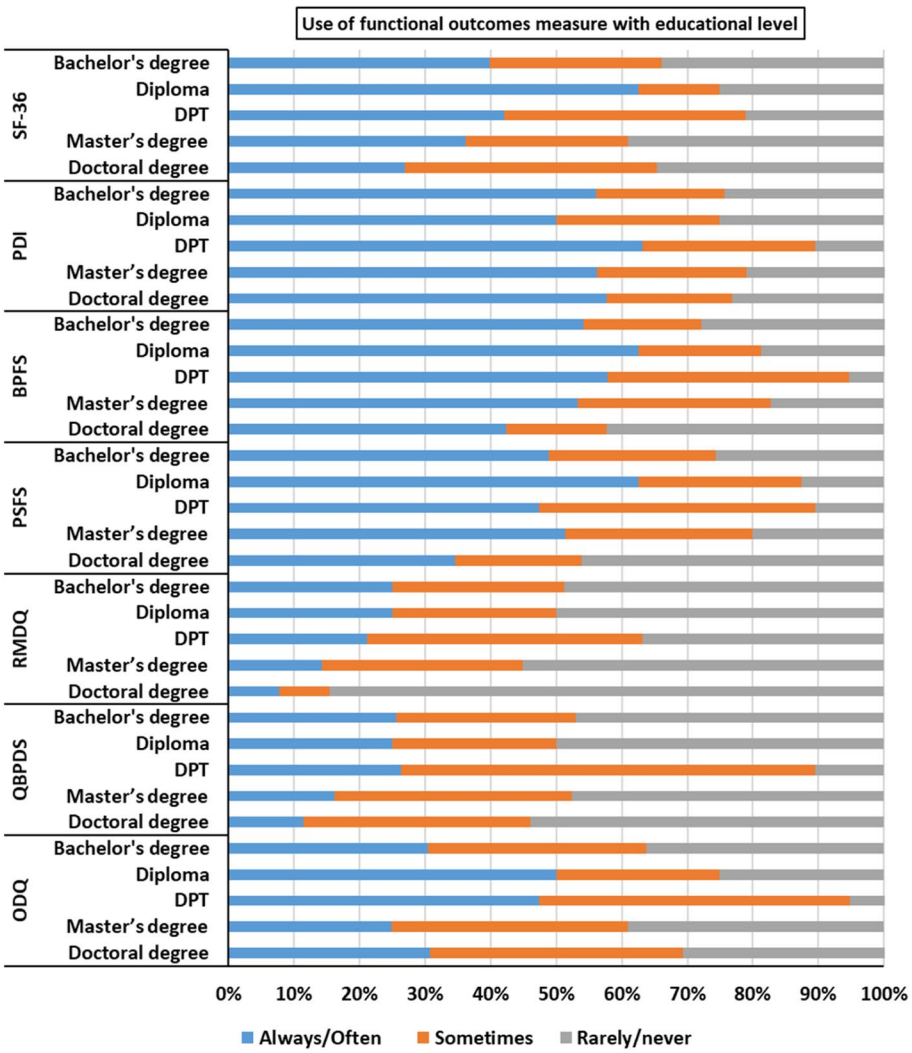

Fig. 3 The use of functional outcome measure with physical therapist educational level

treatment; however, the majority of them reported that they do it without using standard tools [16]. Another study showed that physiotherapists in Saudi Arabia frequently use outcome measures in their clinical management of patients with low back pain [18]. Another study showed that various outcome measures are used to a low-to-very-low extent when dealing with patients with low back pain [9].

According to the results of our study, the three most used functional outcome measures were the pain disability index, back pain functional scale, and patient-specific functional scale. While the utilization of the Roland-Morris Disability Questionnaire (RMDQ) and Quebec Back Pain Disability Scale (QBPDS) represented the lowest frequency. However, the most common functional outcome measures reported in the literature for evaluating the effectiveness of treatment for low back pain patients are the modified Oswestry Low Back Disability Questionnaire, Roland-Morris Disability Questionnaire (RMDQ), and Pain Disability Index [19]. The patient-specific functional scale was more responsive than the other scales in measuring the changes in patients with chronic low back pain [20].

The results of our study showed that there was no significant association between Egyptian physical therapist gender and the utilization pattern of functional outcome measures and scales. The results of our study also showed that physiotherapists with doctoral and master's degrees had a lower frequency of (always/often) using QBPDS and RMDQ, as well as they had a higher frequency of (rarely/never) using BPFS compared with physiotherapists with a master, DPT, diploma, and bachelor's degree also, there was no significant association between educational level with the use of ODQ, PSFS, PDI, and SF-36,

Table 5 Association of use of functional outcomes measure with work setting

Measure	Work setting	Always/often	Sometimes	Rarely/never	χ^2 value	*p* value	Cramer's *V*
ODQ	General/insurance hospital	35.1%	39.0%	26.0%	9.13	**0.06**	0.11
	University/educational hospitals	27.3%	30.9%	41.8%			
	Private practice	26.4%	32.0%	41.6%			
QBPDS	General/insurance hospital	23.4%	37.7%	39.0%	7.15	**0.12**	0.1
	University/educational hospitals	14.5%	32.7%	52.7%			
	Private practice	22.4%	26.4%	51.2%			
RMDQ	General/insurance hospital	21.4%	29.9%	48.7%	5.02	**0.28**	0.08
	University/educational hospitals	12.7%	21.8%	65.5%			
	Private practice	21.6%	25.6%	52.8%			
PSFS	General/insurance hospital	54.5%	30.5%	14.9%	14.48	**0.006***	0.14
	University/educational hospitals	45.5%	18.2%	36.4%			
	Private practice	44.0%	26.4%	29.6%			
BPFS	General/insurance hospital	58.4%	26.6%	14.9%	13.22	**0.01***	0.14
	University/educational hospitals	49.1%	18.2%	32.7%			
	Private practice	49.6%	19.2%	31.2%			
PDI	General/insurance hospital	58.4%	22.7%	18.8%	4.93	**0.29**	0.08
	University/educational hospitals	61.8%	12.7%	25.5%			
	Private practice	51.2%	23.2%	25.6%			
SF-36	General/insurance hospital	41.6%	27.9%	30.5%	3.39	**0.49**	0.07
	University/educational hospitals	36.4%	30.9%	32.7%			
	Private practice	36.8%	23.2%	40.0%			

χ^2, chi-squared value; *p* value, probability value; *significant

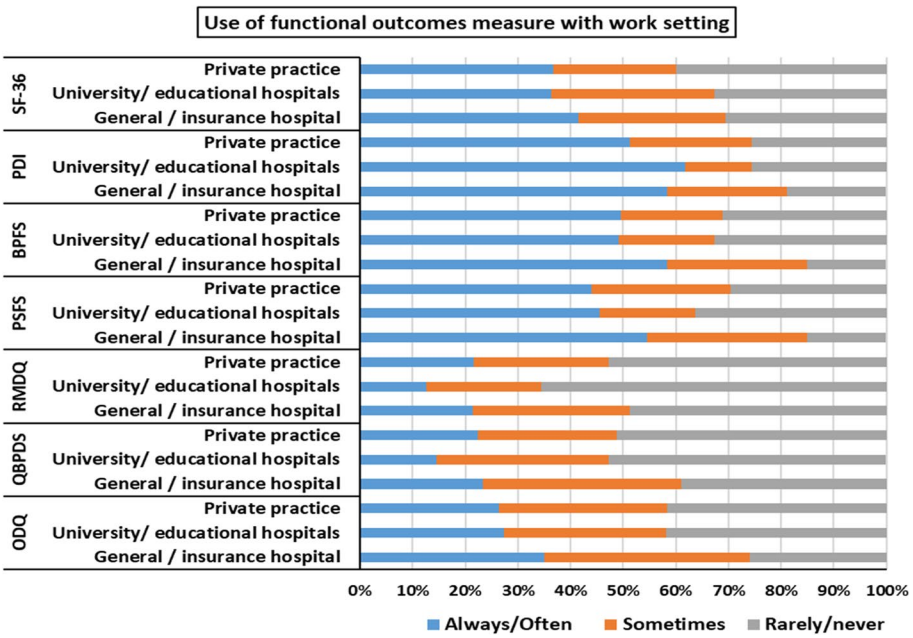

Fig. 4 The use of functional outcome measure with work setting

which is consistent with other studies which did not observe any pattern between educational degree and using outcome measures in dealing with low back pain [21]. Other studies reported that the respondents with the highest professional degree had no significant effect on whether outcome measures were adopted or not in

their practice in Egypt [17]. However, some studies have associated the use of outcome measures with physiotherapists having higher educational qualifications [8, 10, 22].

This study's findings showed that there was no significant association between work setting with the use of ODQ, QBPDS, RMDQ, PDI, and SF-36; however, physiotherapists working in general or insurance hospitals showed a higher frequency of (always/often) using PSFS and BPFS compared with others working in other work settings. It was reported that the work setting had no significant impact on whether outcome measures were adopted or not in physiotherapists' practice in Egypt, [17] while others reported that setting also affected the utilization pattern of outcome measures. In general, salaried therapists used outcome measures more than fee-for-service therapists, [23] as well as therapists who work in the private sector, were less adherent to the use of clinical guidelines or implanting outcome measures in their practice, [14] and they related it to time constraints [22].

Our result showed that there was no significant association between years of experience and the utilization of functional outcome measures whereas juniors had a higher frequency of (always/often) using QBPDS compared with consultants and seniors. It was found that physiotherapists with experiences of more than 20 years were less likely to use outcome measures than younger physiotherapists [22]. Further, Swinkel et al. found that younger physiotherapists were more likely to use outcome measures, [14] while conversely, Jette et al. found participants who had been practicing for more than 20 years were much more likely to use outcome measures than younger colleagues [24] as well as the experience level have to some degree an effect on the routine assessment of the patients [16].

Routine utilization of outcome measures is an integral part of physiotherapy rehabilitation and is widely recommended by clinical guidelines and professional bodies in the management and clinical reasoning process to guide and assess the improvement of interventions and benchmark treatment goals, as well as to facilitate evidence-based practice [9, 12, 25]. In low back pain, specific or core sets of outcome measures and scales are suggested for measuring factors like pain, disability, quality of life, and psychosocial aspects [26]. However, the evidence from the literature review for studies conducted around the world reveals poor implantation and utilization of the outcome measures in physiotherapy practice [9, 11, 13–15].

Physiotherapists have already identified some of the barriers to adopting outcome measures. For example, language and cultural barriers, the degree of organizational support received in their practice, [15] the patient's difficulty in understanding the outcome measures, [22] lack of clear guidance about the suitability of available outcome measures, lack of appropriate outcome measure, [11] lack of time and knowledge, [14] and lack of a routine for using outcome measures also was an identified barrier [21]. This highlights a need for professional training on the use of standardized outcome measures related to LBP [18].

Limitation

It is important to emphasize that this study has a number of limitations. First, the stratification of therapists by different demographic groups may not have been fair and may not have reflected the natural distribution of the community. Second, the assessment of enablers and barriers to the use of outcome measures was not included in this study. Third, the data used in this study were self-reported or the perceptions of participants, which may not be accurate. Fourth, as only Egyptian physiotherapists practicing in Egypt were included in this study, the results of our study cannot be generalized to Egyptian physical therapists not practicing in Egypt or to non-Egyptian physical therapists. Fifth, for this survey, responses were not obtained from physical therapists who do not have access to or do not use the Internet and/or social networks. Future studies are recommended to address these limitations

Clinical implication

Improving the quality of health care requires adherence to evidence-based clinical guidelines that recommend the routine use of functional outcomes scales in physiotherapy practice [11, 12]. Previous studies have reported some barriers to the use of functional outcome measures, including the lack of training in various measures, lack of agreement on which measures to use, and lack of access to measures. So conducting training, interactive educational events, and offering continuous professional development at a reasonable cost about functional outcome measures should be encouraged as well as an initiative to validate the translation and cross-cultural adaptation of commonly used functional outcome measures is recommended also. Further studies are needed to detect the facilitators and barriers for the utilization of functional outcomes scales.

Conclusion

The result of our study showed that the Egyptian physiotherapists practicing in Egypt in the management of the patient with low back pain use the back pain functional scale and pain disability index (BPFS and PDI) more frequently to assess their patients with low back pain. While they did not frequently use the Quebec Back Pain Disability Scale or the Roland-Morris Disability Questionnaire. Physiotherapist demographics seem to have no association with the utilization of functional outcome measures.

Abbreviations

BPFS	Back pain functional scale
ODQ	Modified Oswestry Low Back Disability Questionnaire
PDI	Pain Disability Index
PSFS	Patient-Specific Functional Scale
QBPDS	The Quebec Back Pain Disability Scale
RMDQ	The Roland-Morris Disability Questionnaire (RMDQ)
SF-36	Quality of life [Short Form 36

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Authors' contributions
Haytham Mohamed Elhafez, Maha Mabrouk Sweed, and Mohamed Ibrahim Abd El-hay conceived of the presented idea and developed the theory. Mohamed Ibrahim Abd El-hay performed the statistics. Maha Mabrouk Sweed wrote the original draft, while Haytham Mohamed Elhafez reviewed the final version of the article. The authors reviewed the results and approved the final version of the manuscript.

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Availability of data and materials
Available.

Declarations

Ethics approval and consent to participate
Ethical approval is in accordance with the guidelines of the ethical committee for human research at the Faculty of Physical Therapy, Cairo University, Egypt (Reference number P.T.REC/012/003513).
The first part of the survey includes the study aims, consent, and participants' personal information.

Competing interests
The authors declare that they have no cmpeting interests.

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