

Original article

Quality Assessment of Physiotherapy Departments in Tripoli, Libya: A Pilot Study

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Abstract

This pilot study aims to assess the extent to which the physiotherapy departments at public hospitals adhere to quality standards. This pilot study was carried out during the period from Jun to August 2021. The assessment form consists of 40 items organized to cover three aspects: Qualifications of the team (10 items), Facility and environmental status (18 items), and Data collection (12 items). The participants' choices in the assessment form were limited to answering within three options only: yes, to some extent, no. The questionnaire was directly distributed to the head of the physiotherapy department in six hospitals located within the city of Tripoli. The findings of this study showed that the physical therapy departments within Tripoli city fulfilled the criteria of quality standards. The facility and environmental status standard, as well as the data collection and analysis, obtained a performance rate of 2.40 on the Likert scale, while the qualifications of the team achieved a 2.19. This findings may provide significant indicators that clarify the future risks that physical therapy departments may encounter, such as, there is no job description for employees in the departments, do not receive annual training, and there is no evidence that they have received annual recertification in cardiopulmonary resuscitation/basic cardiac life support cardiac recovery, lack of concern for conducting a patient/client satisfaction survey and a lack of interest in following up on post-discharge recommendations communicated and documented. The findings also revealed that, while toilets are available in certain physical therapy departments, they are not suitably designed for patients with disabilities. The current study sheds light on evaluating the performance of physiotherapy services, as the physiotherapy departments targeted by the study demonstrated the application of quality standards. Further studies are needed to gain a better insight into the current situation of physiotherapy centers in Libya. The research team recommends providing national accreditation standards for evaluating the quality of performance in physiotherapy centers. In addition, organizing training to improve staff ability to implement quality standards.

Keywords. Quality Assessment, Physiotherapy Departments, Standards.

Introduction

Health institutions seek to improve the quality of health services they deliver to patients. To accomplish this, health institutions employ a variety of strategies, including a focus on quality as a system of improvement and development that places the institutions in a state of continuous evaluation of the level of their health services, as well as the development of action plans and effective mechanisms to overcome performance weaknesses and reach the level that meets the desires of those in need. According to the concept of quality in health services, according to Hinson et al. (2019) and Alhassan et al (2015), it is divided into clinical quality and service quality. Clinical quality is the quality of technology, while service quality refers to functional or intangible quality. On the other hand, the global health expert, Belston and Carols, stated that quality is the patients' satisfaction with the health services provided to them, which depends on the extent of compatibility between the level of this service on the one hand and the patient's expectations and needs on the other hand [1]. In general, quality in health services depends on three main aspects: the quality of technology, customers, and service. The need for physiotherapy services is constantly increasing as a better transition from the prevailing medical model to a more holistic approach that takes into account the biological, social, and psychological aspects of the patient [2].

The profession of Physiotherapy has been defined by the "World Confederation for Physical Therapy" (WCPT) as "the services provided to individuals and populations to develop, maintain or restore an optimal functioning throughout life [3]. It is a profession that is very concerned with human health, so physical therapy centers must adopt the concept of quality to ensure that the patient receives the desired service and that the physical therapist has the appropriate environment to work in comfortable conditions with smooth and positive management.

Therefore, several institutions have moved towards establishing performance criteria for physiotherapy departments, ensuring the provision of high-quality treatments, and as a step towards the accreditation [3]. International organizations and associations have been interested in setting standards for the practice of physical therapy, which have been reviewed and developed in various meetings, such as, Quality Assurance Standards of Physiotherapy Practice and Delivery at General Meeting of the European Region of the WCPT

2018[4], Quality Standards for physiotherapy service delivery in UK 2017 [5] and the Egyptian established the Accreditation Standards handbook for Physiotherapy Centers in 2021 [6].

In Libya, physical therapy services are available in all places, including clinics, hospitals, centers, schools, sports facilities, homes, and recreational facilities. However, despite the widespread practice of the profession, we did not find local standards or specifications documented by the Libyan Ministry of Health, governmental or private sectors, or local community organizations for the physical therapy services. In addition, to the best of our knowledge, we do not find published studies concerned with the quality assessment of professional physical therapy in Libya. Therefore, there was a need to research the actual level of performance within physical therapy departments. The research aims to assess the extent to which the physiotherapy departments at public hospitals adhere to quality standards.

Methods

This pilot study was carried out from Jun to August 2021, on a sample of 6 public hospitals located in different areas within the city of Tripoli, as following; Al- Khadra Hospital, Abu Salim Accident Hospital, Tripoli Central Hospital, Tripoli University Hospital, Maitika Military Hospital, and Clinics Complex Airport Road.

The Quality Assessment in Physiotherapy Centers form was adopted from a study published in previous years [3]. To assess the applicability and clarity of the evaluation indicators, the research team decided to present them to a group of clinical and academic colleagues who were invited to complete the assessment form and offer feedback on the questionnaire. Their criticism was taken into account.

The assessment form consists of 40 items organized to cover three aspects: "Qualifications of the team" (10 items), "Facility and environmental status" (18 items), and "Data collection (12 items). The participants' choices in the assessment form were limited to answering within three options only: yes, to some extent, no. Before starting to distribute the questionnaire to the participants and collect the required data, the research team obtained the approval of the physiotherapy department at the University of Tripoli from the concerned hospitals. Participation was voluntary, and participants agreed to participate in the study. The questionnaire was directly distributed to the head of the physiotherapy department in hospitals in relation to the study. The questionnaire was usually completed within about an hour.

To achieve the study objectives and analyze the primary data collected from the study sample, various descriptive statistical methods were employed using the Statistical Package for the Social Sciences (SPSS). These methods included the arithmetic mean based on a three-point Likert scale, standard deviation, frequency distribution, and percentage calculations. Following the collection of questionnaire responses, the data were digitally coded for statistical processing. Given that each main section of the questionnaire corresponded to responses on a three-point Likert scale (Yes – Somewhat – No), numerical values were assigned to each response: "Yes" was given a score of 3, "Somewhat" a score of 2, and "No" a score of 1. The arithmetic mean was set at 2, calculated as $(1+2+3)/3 = 2$. Based on this, mean values below 2 indicated a low level of agreement, a mean value of 2 represented a moderate level of agreement, and mean values above 2 indicated a high level of agreement. To further assess response trends, the three-point Likert scale was categorized into specific intervals. Responses within the range of 1.00 to 1.66 were classified as "No," representing disagreement or the absence of the measured attribute. Scores from 1.67 to 2.33 were labeled as "Somewhat," indicating a neutral or moderate stance. Finally, values from 2.34 to 3.00 were designated as "Yes," signifying agreement or the presence of the evaluated characteristic. This classification provided a structured and systematic approach to data interpretation, ensuring clarity in the analysis.

Results

Table 1 shows that the sample members had the highest response (yes) towards: "Is there an evident updated organizational chart with clear reporting lines?", which reached its arithmetic mean (2.83). with a standard deviation of (0.408). Next in significance. "Do the personal files contain educational proof for each employee", "Does the physical therapy center conduct an official performance evaluation for employees", "Is there an updated list of employees containing their contact information with the job description" and "Is there a job schedule for workers in the center" with arithmetic mean (2.67), and standard deviation (0.816)

While the highest response to (No) category were to indicators (Is there evidence that employees at the physiotherapy center receive annual training), and (Is there evidence that all employees at the physiotherapy center receive annual re-certification in cardiopulmonary resuscitation and first aid) with mean (1.33), and standard deviation (0.516). The total average of the answers of the study sample items on the stander (team qualifications) equaled (2.192), with a standard deviation of (0.3254), and since the total arithmetic mean is greater than the default average of the three-point scale (2), which means that the study sample items agree that workers in the physiotherapy departments in government hospitals in the city of Tripoli have qualifications.

Table 1. Arithmetic mean, description, standard deviation, frequency, and percentages for “Qualifications of the team”

Qualifications of the team		No		Somewhat		Yes		Mean	Std. Deviation	Description
		Fre.	%	Fre.	%	Fre.	%			
A1	Does an appropriately qualified individual manage the physiotherapy center?	1	16.67	1	16.67	4	66.67	2.50	0.837	Yes
A2	Are the authorizations of work from the Ministry of Public Health and the Order of Physiotherapists in Libya displayed in a clear place in the facility?	3	50	1	16.7	2	33.3	1.83	0.983	Somewhat
A3	Do the personnel files contain evidence of educational qualifications of each employee?	1	16.7	0	0	5	83.3	2.67	0.816	Yes
A4	Does the physiotherapy center conduct formal performance appraisals of staff?	1	16.67	0	0.00	5	83.30	2.67	0.816	Yes
A5	Are the job descriptions reviewed on a regular basis? Please define frequency.	4	66.7	2	33.3	0	0	1.33	0.516	No
A6	Is there any evidence that all physiotherapy center staff receive annual education?	4	66.7	2	33.3	0	0	1.33	0.516	No
A7	Is there any evidence that all physiotherapy center staff receive annual recertification in cardiopulmonary resuscitation/basic cardiac life support (CPR/BCLS)?	4	66.7	2	33.3	0	0	1.33	0.516	No
A8	Is there an updated list of staff with their respective contact details and job descriptions?	1	16.67	0	0	5	33.3	2.67	0.816	Yes
A9	Is there any working schedule for the staff working in this center?	1	16.7	0	0	5	83.3	2.67	0.816	Yes
A10	Is there an evident updated organizational chart with clear reporting lines?	0	0	1	16.7	5	83.3	2.83	0.408	Yes
A11	Is there any orientation manual/checklist for staff who join the center?	2	33.3	1	16.7	3	50	2.17	0.983	Somewhat
A12	Is there any evidence in the orientation manual that the physiotherapy center provides manual handling education to existing employees?	2	33.3	0	0	4	66.7	2.33	1.033	Somewhat
A13	Is there any checklist to verify that all sections of the orientation programmer have been completed?	2	33.3	1	16.7	3	50	2.17	0.983	Somewhat

Regarding “environmental condition and institution”. It is clear from the data in table 2 that the indicators (Is the width of the entrance for all doors above 75 cm), (Is the distance between the floor and the ceiling 2.75 meters), recorded the highest response in (yes) category with arithmetic mean (3.00) and standard deviation (0.00). As for the indicators (Are the walls and floor finished with materials that can be cleaned continuously?), (Is the entrance defined and the location of the center fully secured?), the arithmetic mean is 2.83, and the standard deviation of 0.408. The indicator (Are there low beds for treating young and elderly patients) ranked in third with a response rate of (yes), with an arithmetic mean of 2.67 and a standard deviation (0.816).

While the indicators (Are the toilets suitable for patients with special needs), the response rate was high in the (no) category on average (1.67), and a standard deviation of 1.033. The total average of the study sample's responses on the standard (environmental condition and institution) was (2.407), with a standard deviation (0.3746), and since the arithmetic average is greater than the default average of the three-point scale (2), which means that the study sample's members deviation (0.3746), and since the arithmetic average is greater than the default average of the three-point scale (2), which means that the study sample's members agree that the level of environmental condition and institution is high in the physiotherapy departments of government hospitals in the city of Tripoli.

Table 2. Arithmetic mean, description, standard deviation, frequency, and percentages for the “facility and environmental status “indicator.

Facility and environmental status		No		Somewhat		Yes		Mean	Std. Deviation	Description
		Fre	%	Fre	%	Fre	%			
B1	Please indicate the surface area of the facility and its different divisions.*	2	33.30	0	0.00	4	66.67	2.33	1.033	Somewhat
B2	Are there adequate facilities and equipment available in the centre?	1	16.7	3	50	2	33.3	2.17	0.753	Somewhat
B3	Is there in place a stretcher table for treatments? If yes, how many?	1	16.7	2	33.3	3	50	2.33	0.816	Somewhat
B4	Is there any low table for treatments pertaining to young/old people?	1	16.7	0	0.00	5	83.33	2.67	0.816	Yes
B5	Are there changing and toilet facilities available within the centre? If yes, how many?	1	16.7	4	66.7	1	16.67	2.00	0.632	Somewhat
B6	Is the width of the entrance for all doors over 75 cm?*	0	0	0	0	6	100	3.00	0.000	Yes
B7	Are the room(s) for group treatment equipped with a full size mirror?	2	33.33	1	16.7	3	50	2.17	0.983	Somewhat
B8	Are the toilet facilities suitable for disabled patients?	4	66.67	0	0	2	33.33	1.67	1.033	Somewhat
B9	Are all toilet facilities equipped with liquid soap, paper towels and a foot pedal bin?	1	16.67	2	33.33	3	50	2.33	0.816	Somewhat
B10	Are the temperature and humidity levels of the center controlled in all rooms?	1	16.67	1	16.7	4	66.67	2.50	0.837	Yes
B11	Is the distance between the floor and the ceiling ≥ 2.75 meters?	0	0	0	0	6	100	3.00	0.000	Yes
B12	Are all the walls/floors finished with a material that can be subject to continuous cleaning?	0	0	1	16.7	5	83.33	2.83	0.408	Yes
B13	Is there any procedure for defining frequency and requirements in regard to cleaning and changing mats?	1	16.67	1	16.7	4	66.67	2.50	0.837	Yes
B14	Does the center provide any specific clothing in order to minimize contamination? *	2	33.33	1	16.7	3	50	2.17	0.983	Somewhat
B15	Is the center equipped with extinguishers for fire incidents?	2	33.33	0	0	4	66.67	2.33	1.033	Somewhat
B16	Is there any schedule for equipment validation and checking?	1	16.67	1	16.7	4	66.67	2.50	0.837	Yes
B17	Are there any direction signs for specific areas in the center?	3	50	0	0	3	50	2.00	1.095	Somewhat
B18	Is access fully restricted and the location of the centre totally secured?	0	0	1	16.7	3	83.33	2.83	0.408	Yes

The data extracted from table 3 shows that the indicators (Is there a policy and procedures to update both administrative and clinical activities), and (Is patient data documented and collected (name, treatment, date, etc.)) have highest responses rate (yes) category with arithmetic mean (2.83), and standard deviation (0.408). Followed by (Is there a list available for the center's policy and procedures), (Are there any procedures, guidelines, or protocols to clarify the details of all types of treatments within the center), and (Is any internal auditing conducted) came in second place, and the response rate was high in the (Yes) category with arithmetic mean (2.67), and standard deviation of (0.516).

While the response rate for the indicator (Is there a questionnaire to determine the extent of patient, customer satisfaction) was high in (NO) category, with an arithmetic mean (1.67), and a standard deviation (1.033).

The total average of the responses on the axis (collecting data and information) is (2.402), with a standard deviation of (0.3629), and since the arithmetic average is greater than the default average of the three-point scale (2), which indicates that the study sample members agree that the physical therapy departments in government hospitals in the city of Tripoli collect data and information.

Table 3. Arithmetic mean, description, standard deviation, frequency, and percentages for the “data collection and analysis” indicator.

Data collection and analysis		No		Somewhat		Yes		Mean	Std. Deviation	Description
		Fre	%	Fre	%	Fre	%			
C1	Is there a policy/procedure for identification of both management and clinical activities?	0	0	1	16.67	5	83.3	2.83	0.408	Yes
C2	Is a list of policies/procedures available within the center?	0	0	2	33.33	4	66.67	2.67	0.516	Yes
C3	Are there any guidelines for infection control in the physiotherapy center?	2	33.30	0	0	4	66.7	2.33	1.033	Somewhat
C4	Is there any procedure for maintenance of equipment, methods followed and frequency?	1	16.7	2	33.33	3	50	2.33	0.816	Somewhat
C5	Are there any procedures/guidelines for patient/client safety/privacy?	0	0	3	50	3	50	2.50	0.548	Yes
C6	Is there any document listing all types of treatments followed in the center?	1	16.667	2	33.33	3	50	2.33	0.816	Somewhat
C7	Are there any procedures/guidelines/protocols detailing all type of treatments followed in the center?	0	0	2	33.33	4	66.7	2.67	0.516	Yes
C8	Are patient data collected and documented?* (name, treatment, dates, continuous feedback, etc.)	0	0	1	16.67	5	83.3	2.83	0.408	Yes
C9	When applicable, are data collected used for research purposes?*	1	16.67	3	50	2	33.3	2.17	0.753	Somewhat
C10	Is there a patient/client satisfaction survey?*	4	66.67	0	0	2	33.3	1.67	1.033	Somewhat
C11	Are post-discharge recommendations communicated and documented?*	2	33.33	3	50	1	16.7	1.83	0.753	Somewhat
C12	Is any internal audit performed?	0	0	2	33.33	4	66.7	2.67	0.516	Yes

Discussion

The findings of this study, based on the responses of the head of physical therapy departments in the targeted hospitals to three standards: “team qualifications”, “facility and environmental status”, and “data collection and analysis”, revealed that the physical therapy departments under study fulfill the application of quality standards. The “facility and environmental status” standard, as well as “the data collection and analysis”, obtained a performance rate of 2.40 on the Likert scale, while the qualifications of the team achieved a 2.19. The findings of this pilot study may provide significant indicators that clarify the future risks that physical therapy departments may encounter, such as there is no job description for employees in the departments. A job description is a detailed statement that outlines the duties, responsibilities, and authority of clinical and nonclinical staff in the departments. It assists the department head in assigning employees by matching their qualifications and experiences with the job requirements, ensuring that tasks do not overlap between administrative levels within the department, and, conversely, it helps employees understand their responsibilities. (6) furthermore Physical therapists in the departments do not receive annual training, and there is no evidence that they have received annual recertification in cardiopulmonary resuscitation/basic cardiac life support cardiac recovery. The physical therapy centre must provide training and continual education by the workers' levels and needs, as well as the services supplied. In addition to the foregoing, indicators that are considered a threat to physiotherapy departments include a lack of concern for conducting a patient/client satisfaction survey and a lack of interest in following up on post-discharge recommendations communicated and documented. The findings also revealed that, while toilets are available in certain physical therapy departments, they are insufficiently accessible to patients with disabilities.

This study's findings were consistent with the study by Haida et.al, 2018 (3) in several indicators such as; the physiotherapy center managed by appropriately qualified individual, there is low table for treatments about young/old people, the width of the entrance for all doors over 75 cm, and the center partially provide any specific clothing to minimize contamination.

However, the results disagree on other indicators with a study by Haida Met. al, 2018 (3) There are directional signs for specific areas in the centre. Partially, there's evidence of educational qualifications to all physiotherapy centre staff, Availability of a schedule for equipment validation and checking, and patient data collected and documented?* (name, treatment, dates, continuous feedback, etc). There is no orientation manual/checklist for staff who join the center and the data collected is not used for research purposes.

The results of this study describe the actual performance level of the application of quality standards for the physiotherapy departments under study and during the period of the study. This pilot study is considered one of the few studies that focus on the application of quality standards in physiotherapy departments in Libya. When the research team conducted the study, there was great cooperation and response from the heads of departments, and ease of obtaining information with complete credibility.

This study highlighted the urgent need to provide physical therapy departments with an effective and practical tool to identify areas for improvement in professional practice and service delivery. It also ensures the provision of a safe working environment.

The current study has many limitations, including the number of hospitals included in the study, which was limited to hospitals located in the city of Tripoli, preventing us from generalising the results, as well as limited accreditation standards included in the study. In addition to the performance evaluation method followed based on a Likert scale. Further studies are needed to gain a better insight into the current situation of physiotherapy centers in Libya.

CONCLUSION

The current study sheds light on the possibility of evaluating the performance of physiotherapy services, as the physiotherapy departments targeted by the study demonstrated the application of quality standards. The research team recommends providing national accreditation standards for evaluating the quality of performance in physiotherapy centers. In addition, organizing training to improve staff ability to implement quality standards, as well as the quality management program enables the head of physical therapy centers to document, interpret, and benefit from data and information.

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المستخلص

تهدف هذه الدراسة الاستطلاعية إلى تقييم مدى التزام أقسام العلاج الطبيعي في المستشفيات العامة بمعايير الجودة. وقد أجريت هذه الدراسة خلال الفترة من يونيو إلى أغسطس 2021. يتكون نموذج التقييم من 40 بنداً تغطي ثلاثة محاور رئيسية: مؤهلات الفريق (10 بنود)، حالة المرافق والبيئة (18 بنداً)، وجمع البيانات (12 بنداً). اقتصر اختيار المشاركين في نموذج التقييم على ثلاث خيارات فقط: نعم، إلى حد ما، لا. تم توزيع الاستبيان مباشرة على رؤساء أقسام العلاج الطبيعي في ستة مستشفيات تقع داخل مدينة طرابلس. أظهرت نتائج هذه الدراسة أن أقسام العلاج الطبيعي في مدينة طرابلس استوفت معايير الجودة. حيث حقق معيار حالة المرافق والبيئة، بالإضافة إلى جمع البيانات وتحليلها، معدل أداء بلغ 2.40 على مقياس ليكرت، بينما حقق معيار مؤهلات الفريق معدل أداء بلغ 2.19. قد توفر هذه النتائج مؤشرات مهمة توضح المخاطر المستقبلية التي قد تواجهها أقسام العلاج الطبيعي، مثل عدم وجود وصف وظيفي للموظفين، وعدم تلقيهم تدريباً سنوياً، بالإضافة إلى عدم وجود دليل على حصولهم على تجديد سنوي لشهادة الإنعاش القلبي الرئوي/دعم الحياة القلبي الأساسي. كما كشفت الدراسة عن نقص الاهتمام بإجراء استبيانات لقياس رضا المرضى، وعدم الاهتمام بمتابعة التوصيات المقدمة بعد خروج المرضى من المستشفى وتوثيقها. كما أظهرت النتائج أنه وعلى الرغم من توفر دورات المياه في بعض أقسام العلاج الطبيعي، إلا أنها غير مصممة بشكل مناسب للمرضى ذوي الإعاقة. تسلط هذه الدراسة الضوء على تقييم أداء خدمات العلاج الطبيعي، حيث أظهرت أقسام العلاج الطبيعي التي استهدفتها الدراسة التزاماً بمعايير الجودة. ومع ذلك، هناك حاجة إلى مزيد من الدراسات لاكتساب رؤية أعمق حول الوضع الحالي لمراكز العلاج الطبيعي في ليبيا. ويوصي فريق البحث بوضع معايير اعتماد وطنية لتقييم جودة الأداء في مراكز العلاج الطبيعي، بالإضافة إلى تنظيم برامج تدريبية لتحسين قدرة الكوادر على تنفيذ معايير الجودة.