

# National quality assessment questionnaire for physiotherapy centres: a pilot study in Lebanon

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## Abstract

**Background:** Lebanon still lacks a unified platform upon which private physiotherapy practitioners can base and apply their knowledge and practice. Accreditation of physiotherapy centres would promote collaboration, boost consistency and enhance quality of services. The Order of Physiotherapists in Lebanon is called on to provide a high quality of service by focusing on standards.

**Aims:** The aim of this study was to assess the feasibility and applicability of a standard for the quality assessment of physiotherapy centres, and to assess the current status of a sample of centres in Lebanon.

**Methods:** A questionnaire was developed by a panel of experts based on a review of international and national requirements in physiotherapy centres. A set of 14 items was generated covering 3 categories: qualifications of the team, facility and environmental status, and data collection and analysis. A pilot study was conducted from December 2013 to February 2014 in 6 Lebanese physiotherapy centres. Descriptive statistics are reported.

**Results:** The highest median score and compliance score for the 6 centres were reported for the “Facility and environmental status” category (median = 8.0) and the lowest were reported in the “Data collection and analysis” category (median = 5.0).

**Conclusions:** Further studies are needed to validate the quality assessment in physiotherapy centres questionnaire, and to implement it as a primary tool for assessing quality standards and for accreditation of physiotherapy centres.

Keywords: quality assurance; physiotherapy; Lebanon; questionnaire, accreditation

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## Introduction

Physiotherapists operate as independent practitioners as well as members of health care service provider teams and are subject to the ethical principles of the World Confederation for Physical Therapy and the code of ethics of the country in which they practice. The World Confederation for Physical Therapy encourages its member organizations to support and work towards unified education and practice guidelines (1). Physiotherapists should implement quality monitoring tools such as clinical indicators that would enable individual practitioners to evaluate their performance against that of their peers (2). While international bodies have common programmes or policies such as in the European, American and Australian regions of the World Confederation for Physical Therapy, Lebanon still lacks a unified platform upon which private physiotherapy practitioners can base and apply their knowledge and practice.

Evaluation of health care is scrutinized by both the government and consumers, more precisely the patients (3). Consequently, plans to tackle health quality have gained momentum over the past few years, and the

need for accreditation has become more prominent to match the high standards of performance and to avoid inconsistencies between different private centres. Hence, accreditation of physiotherapy centres would promote collaboration, boost consistency for more standardized practice and enhance quality of services.

According to data from the Order of Physiotherapists in Lebanon (OPTL), Lebanon has more than 100 private physiotherapy centres, but unlike academic institutions (e.g. hospitals or medical centres), they are not under the control of any international or local assessment body. Consequently, a collaboration was initiated between the OPTL and Quality Systems International to prepare a standardized platform for quality in physiotherapy.

Quality Systems International is a consultancy company working on the development and improvement of the quality infrastructure of health care companies, institutions and organizations. It was assigned by the OPTL to work with its research and quality committee, the Research Center for Quality in Physiotherapy. The committee included 5 expert physiotherapists and members of the OPTL having extensive experience in quality of physiotherapy centres or postgraduate degrees

in quality management.

The rationale behind this standardized platform was to build a quality management system (part of an accreditation plan) for private sector physiotherapy centres in Lebanon based on the primary requirements promulgated by OPTL experts and the Lebanese Ministry of Public Health as well as on available international guidelines. This programme will enable the private centres to upgrade their systems and secure safe and professional treatment to patients/clients. In this setting, a tool for the quality assessment of physiotherapy centres was developed.

The aim of this study was to pilot and test the assessment tool in a sample of 6 private physiotherapy centres to evaluate its feasibility and applicability for auditing the quality of services audit setting. The study also aimed at assessing the current situation of physiotherapy centres in Lebanon.

## Methods

### *Development of the quality assessment in physiotherapy centres questionnaire*

A set of 47 items were originally generated by Quality Systems International based on the requirements of the Ministry of Public Health and the Order of Physical Therapy in Lebanon. The items covered “Qualifications of the team” (15 items), “Facility and environmental status” (19 items) and “Data collection and analysis” (13 items). The 47 items were answered on a 3-point Likert scale based on criteria fulfilment (0 = no/not fulfilled, 1 = partially/partially fulfilled, and 2 = yes/completely fulfilled).

The questionnaire was translated and adapted into Arabic by 3 independent professional translators. Backward translation was applied to all items. Translation inconsistencies were resolved by consensus in collaboration with Quality Systems International. The content validity of the resulting version was assessed by members of the Research Center for Quality in Physiotherapy who were not involved in the initial development.

Lebanese physical therapist experts were asked to rate the relevance of each item on a 4-point Likert scale from 1 (not relevant) to 4 (very relevant). The content validity index for each item was calculated as the proportion of experts giving a rating of 3 or 4 (quite relevant and very relevant) divided by the total number of experts. All items with a content validity index of 0.8 or above were retained (4). Consequently, 33 items were discarded and the final questionnaire used for the assessment of the physiotherapy centres consisted of 14 items (Table 1).

### *Pilot testing of the assessment tool*

The pilot study was conducted from December 2013 to February 2014 to assess the feasibility and applicability of the 14-item questionnaire for the audit of quality of services at physiotherapy centres. Out of the 100 physiotherapy centres in Lebanon, Quality Systems International agreed with the OPTL to select 6 centres from different

Lebanese districts based on the following criteria: average number of employees, ranging from 1 (owner of the centre) to 10, and the centre's extent of experience, ranging from a few months to more than 2 years. The centres were selected from 4 of the 5 districts in Lebanon: 2 from Beirut, 2 from South, 1 from North and 1 from Bekaa (i.e. the regions where the majority of centres are located). Two independent, trained investigators from Quality Systems International audited the 6 centres and completed the questionnaire.

## Statistical analysis

Statistical analyses were descriptive in nature and generated by SPSS, version 22.0. The median score was calculated for each item, for each category and for the total. The category score was calculated by summing all individual item scores in the category, while the total score was calculated by summing all 3 category scores.

## Results

The questionnaire was usually completed within approximately 2 hours, including inspection of the premises. The investigators did not report any difficulties or ambiguity in responding to the items. Data were complete for all 6 centres.

The median score for the “Qualifications of the team” category for the 6 selected centres was 4.0 (Table 2). None of the physiotherapy centres was compliant with the “Availability of an orientation manual/checklist for new staff” standard (median score = 0.0). The highest score was for the “Management of the physiotherapy centre by a qualified individual” standard (median score = 2.0).

Regarding the “Facility and environmental status” category, the median score was 8.0 (Table 2). The physiotherapy centres were compliant with most of the requirements in this category, with a median score of 1–2 on the different items.

For the “Data collection and analysis” category, the median score was 5 for the 6 centres (Table 2). The median score for each item ranged between 0 and 1 reflecting average compliance. The majority of the physiotherapy centres were not compliant with the “Data collected used for research purposes” standard (median = 0.0).

## Discussion

Accreditation is a system through which an institution is evaluated based on a set of predetermined standards (5). It aims at advocating progress in quality and it is usually authorized by either independent specialized agencies or by governmental bodies. It is increasingly being used as an assessment tool by governments to regulate the quality of health care services. Accreditation programmes appear to enhance patient care and improve clinical outcomes. Unfortunately, a study performed by the World Health Organization in 2000 highlighted the lack of accreditation in the Middle East (6).

This pilot study verified the feasibility of the quality assessment questionnaire based on the ease of its completion and the relevance of the items included in

**Table 1 The 47-item quality assessment questionnaire for quality in physiotherapy centres, showing the final 14-item questionnaire piloted in Lebanon, 2014**

Category	Question
<b>1 Qualifications of the team</b>	
1.1	Does an appropriately qualified individual manage the physiotherapy centre?* (List the qualifications, education, years of experience.)
1.2	Please define the number of staff available in the centre as well as the responsibility of each one.
1.3	Are the authorizations of work from the Ministry of Public Health and the Order of Physiotherapists in Lebanon displayed in a clear place in the facility?*
1.4	Do the personnel files contain evidence of educational qualifications of each employee?* (Please provide copies.)
1.5	Does the physiotherapy centre conduct formal performance appraisals of staff? If yes, please define frequency (if applicable).
1.6	Are the job descriptions reviewed on a regular basis? Please define frequency.
1.7	Is there any evidence that all physiotherapy centre staff receive annual education?
1.8	Is there any evidence that all physiotherapy centre staff receive annual recertification in cardiopulmonary resuscitation/basic cardiac life support (CPR/BCLS)?
1.9	Is there an updated list of staff with their respective contact details and job descriptions?
1.10	Is there any working schedule for the staff working in this centre?
1.11	Is there an evident updated organizational chart with clear reporting lines?
1.12	Is there any orientation manual/checklist for staff who join the centre?*
1.13	Does the orientation manual/checklist contain general physiotherapy centre issues-related sections?
1.14	Is there any evidence in the orientation manual that the physiotherapy centre provides manual handling education to existing employees?
1.15	Is there any checklist to verify that all sections of the orientation programme have been completed?
<b>2 Facility and environmental status</b>	
2.1	Please indicate the surface area of the facility and its different divisions.*
2.2	Are there adequate facilities and equipment available in the centre?
2.3	Is there in place a stretcher table for treatments? If yes, how many?
2.4	Is there any low table for treatments pertaining to young/old people?*
2.5	Are there changing and toilet facilities available within the centre? If yes, how many?
2.6	Is the width of the entrance for all doors over 75 cm?*
2.7	Are the room(s) for group treatment equipped with a full size mirror?
2.8	Are the toilet facilities suitable for disabled patients?
2.9	Are all toilet facilities equipped with liquid soap, paper towels and a foot pedal bin?
2.9	Are the temperature and humidity levels of the centre controlled in all rooms?
2.10	Is the distance between the floor and the ceiling $\geq 2.75$ metres?
2.11	Are all the walls/floors finished with a material that can be subject to continuous cleaning?
2.12	Is there any procedure for defining frequency and requirements in regard to cleaning and changing mats?
2.13	Does the centre provide any specific clothing in order to minimize contamination?*
2.14	Is the centre equipped with extinguishers for fire incidents?
2.15	Is there any schedule for equipment validation and checking?*
2.16	Is the facility equipped with a first aid box as well as other required items?
2.17	If yes, what is the frequency of checking and validation
2.18	Are there any direction signs for specific areas in the centre?
2.19	Is access fully restricted and the location of the centre totally secured?
<b>3 Data collection and analysis</b>	
3.1	Is there a policy/procedure for identification of both management and clinical activities?
3.2	Is a list of policies/procedures available within the centre?
3.3	If yes, is there a schedule for updating procedures?
3.4	Are there any guidelines for infection control in the physiotherapy centre?
3.5	Is there any procedure for maintenance of equipment, methods followed and frequency?
3.6	Are there any procedures/guidelines for patient/client safety/privacy?
3.7	Is there any document listing all types of treatments followed in the centre?
3.8	Are there any procedures/guidelines/protocols detailing all type of treatments followed in the centre?*
3.9	Are patient data collected and documented?* (name, treatment, dates, continuous feedback, etc.)
3.10	When applicable, are data collected used for research purposes?*
3.11	Is there a patient/client satisfaction survey?*
3.12	Are post-discharge recommendations communicated and documented?*
3.13	Is any internal audit performed?

\*Items retained in the final 14-item questionnaire

**Table 2 The quality assessment questionnaire: scoring for the six physiotherapy centres, Lebanon, 2014**

Item	Score						Median
	Physiotherapy centre						
	1	2	3	4	5	6	
<b>Qualifications of the team</b>							
Management of the physiotherapy centre by a qualified individual	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Display of the authorization of work from Ministry of Public Health and the Order of Physiotherapists in Lebanon in the facility	1.0	2.0	0.0	1.0	1.0	1.0	1.0
Evidence of educational qualifications to all physiotherapy centre staff	1.0	1.0	1.0	1.0	2.0	1.0	1.0
Availability of an orientation manual/checklist for new staff	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total category score	4.0	5.0	3.0	4.0	5.0	4.0	4.0
<b>Facility and environmental status</b>							
Surface area and divisions of the facility	1.0	2.0	2.0	2.0	2.0	2.0	2.0
Availability of a low table for treatments pertaining to young/old people	2.0	2.0	2.0	0.0	2.0	2.0	2.0
Width for the entrance of all doors is over 75 cm	2.0	2.0	1.0	2.0	2.0	2.0	2.0
Availability of specific clothing/changing facilities to limit contamination	2.0	1.0	2.0	1.0	2.0	1.0	1.50
Availability of a schedule for equipment validation and checking	0.0	2.0	1.0	1.0	1.0	1.0	1.0
Total category score	7.0	9.0	8.0	6.0	9.0	8.0	8.0
<b>Data collection and analysis</b>							
Availability of procedures/guidelines/protocols detailing all types of treatments followed in the centre	0.0	2.0	0.0	1.0	2.0	1.0	1.0
Collection and documentation of patient data	1.0	1.0	2.0	1.0	2.0	1.0	1.0
The data collected used for research purposes	0.0	0.0	2.0	0.0	2.0	0.0	0.0
Availability of a patient/client satisfaction survey	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Communication and documentation of post-discharge recommendation	1.0	1.0	1.0	1.0	2.0	2.0	1.0
Total category score	3.0	5.0	6.0	4.0	9.0	5.0	5.0
Total score	14.0	19.0	17.0	14.0	23.0	17.0	17.0

assessing the centres' conformity with quality standards. The ease of completion was not dependent on the region or area where the centre was located; thus, the tool is likely to be applicable on a national level. In addition, the questionnaire was based on national and international requirements, which ensured the exhaustiveness of the functional areas it covers.

Compliance was highest in the second category "Facility and environmental status" with a median score of 8.0. However, we identified a lower score on the "Availability of a schedule for equipment validation and checking" standard, which reflects the lack of maintenance and calibration of the equipment and machines in most of the centres in this pilot study.

Regarding the "Qualification of the team" category, a relatively low compliance was observed, mainly driven by the low score on the "Availability of an orientation manual/checklist" standard in the majority of the centres.

"Data collection and analysis" was the lowest scoring category. Centres were only partly engaged in using the collected data for research purposes. Moreover, there was a lack of information on patient satisfaction; this

could help the centres to improve their performance by enhancing the patients' experience.

In this setting, clinical physiotherapy research can play an important role in ensuring continuing growth of the profession. Indeed, previous research has advocated the need to base the physiotherapy practice on scientific evidence (7). Physiotherapists are expected to evaluate published studies, to assess data related to new and established techniques and technology, relate the results to patient or consumer care and engage in scholarly activities.

One of the limitations of this study was related to the scoring method owing to the presence of dichotomous items (e.g. the "Availability of a patient/client satisfaction survey" standard can only be scored with 0 or 2). In addition, the results reported above cannot be generalized to all Lebanese physiotherapy centres because we used a small sample size of only 6 centres. Further studies should be conducted in order to validate the quality assessment tool and to involve a greater number of physiotherapy centres throughout Lebanon.

## Conclusion

The quality assessment questionnaire we developed was easy to use and is relevant in terms of the functional areas it covers when assessing the quality of services in phys-

iotherapy centres in Lebanon. Further studies are needed to validate the tool and to get a better insight into the current situation of physiotherapy centres in Lebanon in order to tailor plans for improving the quality of services.

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**Competing interests:** None declared.

## Questionnaire d'une évaluation nationale de la qualité des centres de physiothérapie : étude pilote au Liban

### Résumé

**Contexte :** Le Liban n'a toujours pas de plateforme unifiée permettant aux physiothérapeutes privés de baser et d'appliquer leurs connaissances et leurs pratiques. L'accréditation des centres de physiothérapie permettrait de promouvoir la collaboration, d'améliorer la cohérence et de renforcer la qualité des services. Il est demandé à l'ordre des physiothérapeutes libanais de fournir un service de haute qualité en se concentrant sur les normes.

**Objectifs :** La présente étude vise à évaluer la faisabilité et l'applicabilité d'une norme pour l'évaluation de la qualité des centres de physiothérapie, et d'évaluer la situation actuelle d'un échantillon de centres au Liban.

**Méthodes :** Un questionnaire a été mis au point par un groupe d'experts sur la base d'une analyse des exigences nationales et internationales pour les centres de physiothérapie. Un ensemble de 14 items a été établi pour couvrir trois catégories : les qualifications des équipes, l'établissement et son milieu, et la collecte et l'analyse des données. Une étude pilote a été réalisée de décembre 2013 à février 2014 dans six centres de physiothérapie libanais. Des statistiques descriptives ont été notifiées.

**Résultats :** Les notes médianes et les scores de conformité les plus élevés (en fonction du respect des critères d'exigence) pour les six centres ont été signalés pour la catégorie « Établissement et son milieu » (médiane = 8,0) et les plus faibles pour la catégorie « Collecte et analyse des données » (médiane = 5,0).

**Conclusions :** Des études complémentaires sont requises pour valider le questionnaire sur l'évaluation de la qualité des centres de physiothérapie, et l'appliquer en tant qu'outil principal dans l'évaluation des normes de qualité et l'accréditation des centres de physiothérapie.

## الاستبيان الوطني لتقييم جودة مراكز العلاج الطبيعي في لبنان: دراسة أولية

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### الخلاصة

الخلفية: لا يزال لبنان يفتقر إلى منصة موحدة يمكن أن يعتمد عليها ممارسي العلاج الطبيعي في القطاع الخاص في تأسيس معرفتهم وتطبيق ممارساتهم. وسيساعد اعتماد مراكز العلاج الطبيعي في تعزيز التعاون والتوافق ويحسن من جودة الخدمات. ويُدعى إلى إصدار مرسوم أخصائيي العلاج الطبيعي في لبنان لتقديم خدمة عالية الجودة من خلال التركيز على المعايير.

الأهداف: هدفت هذه الدراسة إلى تقييم جدوى وضع معيار لتقييم الجودة في مراكز العلاج الطبيعي وإمكانية تطبيق هذا المعيار، وتقييم الحالة الحالية لعينة من المراكز في لبنان.

طرق البحث: وضعت لجنة من الخبراء استبياناً قائماً على استعراض للشروط الدولية والوطنية المطلوب توافرها في مراكز العلاج الطبيعي. ونتج عن ذلك مجموعة من ١٤ بنداً تغطي ثلاث مجموعات هي: مؤهلات الفريق، وحالة المنشأة والبيئة، وجمع البيانات وتحليلها. وأجريت دراسة أولية في الفترة ما بين ديسمبر/ كانون الأول ٢٠١٣ وحتى فبراير/ شباط ٢٠١٤ في ٦ مراكز لبنانية للعلاج الطبيعي. وبلغ ها هنا عن الإحصائيات الوصفية

النتائج: لقد كانت أعلى نقاط الوسيط ونقاط الامتثال بالنسبة للمراكز الستة في فئة "حالة المنشأة والبيئة" (الوسيط = ٨,٠) وأقلها في فئة "جمع البيانات وتحليلها" (الوسيط = ٥,٠).

الاستنتاجات: من الضروري إجراء المزيد من الدراسات لتقييم صلاحية استبيان تقييم الجودة في مراكز العلاج الطبيعي، ولتطبيقه كأداة أساسية في تقييم معايير الجودة واعتماد مراكز العلاج الطبيعي.



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