

# PHYSICAL THERAPIST PERFORMANCE IN INTENSIVE CARE UNIT VERSUS OUTPATIENT CLINIC

By

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## Abstract

**Introduction:** Physiotherapy (PT) is an important allied health profession whereby physiotherapists contribute an essential part to the care of individuals. **Aim of work:** To compare between the performance of physical therapist in ICU and outpatient clinic. **Materials and methods:** One hundred physical therapists were recruited from ICU and outpatient clinics from both gender of graduation year ranged from 2000 to 2009. Group (A) consists of fifty physical therapists recruited from ICU departments. Group (B) consists of fifty physical therapists recruited from outpatient clinic departments. Both groups were assessed for their performance by their supervisors using the Assessment of Physical therapy Practice tool (APP tool) (form C – Supervision report) then comparison was done between both groups. **Results:** The total means and standard deviations for group (A) was  $(3.249 \pm 0.113)$  and (B) was  $(3.146 \pm 0.217)$ . There was no statistically significant difference between groups (A) and (B) as a total and for all dimensions ( $p$ -value  $> 0.05$ ), except for evidence based practice (EBP) dimension ( $p$ -value = 0.0001) as it's mean and standard deviation for group (A) was  $(2.54 \pm 0.88)$  and group (B) was  $(3.32 \pm 0.76)$  and for the demographic characteristics (experience year) ( $p$ -value = 0.01). **Conclusion:** There was no significant difference between physical therapist's performance in ICU and outpatient clinic in all dimensions except in EBP dimension and experience level as a demographic characteristics.

**Keywords:** Physical therapist performance, Performance assessment, Intensive care unit, Outpatient clinic and Assessment of Physical therapy Practice tool.

## **Introduction**

Physiotherapy (PT) is an important allied health profession whereby physiotherapists contribute an essential part to the care of individuals. The profession addresses a broad range of conditions in the young to the aged and from the severely debilitated to the elite athlete. Depending on the country, the legally protected title varies and includes physiotherapist, physical therapist, and chartered physiotherapist. Physiotherapy is an established, independent profession with an excellent reputation for evidence-based practice (McGowan et al., 2016).

The Assessment of Physical therapy Practice (APP) was developed collaboratively, tested within the constraints of a dynamic and unpredictable clinical environment, and has been taken up almost universally as the assessment instrument in entry-level PT programs in Australia and New Zealand. The Assessment of Physical therapy Practice project began each program used a unique clinical assessment instrument/s and assessment procedures (Dalton et al., 2011).

Strategies to boost worker performance are critical for reasons such as that they would be likely to show results sooner than strategies to increase numbers, the possibility of increasing the supply of health workers would always be limited, also a motivated and productive workforce would encourage recruitment and retention. Finally the governments have an obligation to society to ensure that limited human financial resources are used as fairly and as efficiently as possible (Chen et al., 2006).

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The evidence of construct validity provided by Rasch analysis supports the interpretation that a student's

score on the APP is an indication of their underlying level of professional competence as demonstrated during workplace-based placements (Dalton et al., 2011). The Assessment of Physical therapy Practice tool performs well in all areas; it is practical and satisfactory, requiring a mean time of 23 minutes to complete (Murphy et al., 2014).

Practicing clinicians incorporate professional core values into clinical practice shed light on the relationship between core values mastery and its impact on patient care. Findings may help shape educators' decisions for entry level, post professional and continuing education (McGinnis et al., 2016).

### Aim of work

To compare between performance of physical therapist in ICU and outpatient clinic in Cairo, Egypt.

### Materials and methods

- **Study design:** A cross sectional study among physical therapists.
- **Place and duration of study:** At General Organization of Teaching Hospitals and Institutes in Egypt (El kasr El Ainy Teaching Hospital, El Sahel Teaching Hospital,

El Mataria Teaching Hospital, Ahmed Maher Teaching Hospital, Outpatient Clinic at Faculty of Physical Therapy- Cairo University, National Institute of Neuro-Motor System, National Nutrition Institute and National Heart Institute). This study was conducted from October 2015 to January 2016.

- **Study sample:** Sample size: guided by the following confidence level of 95%, accepted margin of error of 5%. The total therapists surveyed accordingly total sample = 100 physical therapists would be evaluated for their performance by their supervisors.

### - Study methods

- **Questionnaire:** Supervisors answered the APP questionnaire which is a 20-item instrument covering professional behavior, communication, assessment, analysis and planning, intervention, evidence-based practice, and risk management. Each item is assessed on a 5-level scale from 0 (infrequently/rarely demonstrates performance indicators) to 4 (demonstrates most performance

indicators to an excellent standard). A rating of 2 (demonstrates most performance indicators to an adequate standard) indicates that the minimum standard for an entry-level physiotherapist has been met. The APP tool was found to be a valid measure. Person ability and the raw APP scores had a linear relationship ( $r^2=0.99$ ), validity is tested by Dalton et al. (2011). The APP tool is a reliable measure tested by Dalton et al. (2012). APP tool was also used by Murphy et al. (2014).

### **Consent**

Confidentiality was assured by signing the consent form and respect to all supervisors and physical therapists was ascertained through explaining the objectives of the study and its benefits.

### **Ethical approval**

The study was conducted after obtaining the approval of the ethical committee of the Faculty of Physical Therapy, Cairo University

### **Data Management**

The statistical analysis was performed using SPSS18. Firstly computing mean and standard deviation per group and by demographic characteristics were done. Secondly the statistical analysis, we used unpaired t-test for testing the difference between two groups and for the three characteristics (education level and experience level) we used ANOVA one way analysis of variance either between groups or within the same group and when ANOVA is significant we used LSD (Post Hoc) test to indicate which two means are significant difference using letters notation.

## Results

**Table (1) : Test for the difference based on the demographic characteristics for the total sample:**

Demographic characteristics	Demographics subdivisions (number of physical therapists)	t- value	P-value
<b>Gender</b>	Male (42)	0.949	>0.05
	Female (58)		
<b>Education level</b>	Bachelor (32)	0653	>0.05
	Master (46)		
	Doctoral (22)		
<b>Experience years</b>	Less than 10 years (34)	4.593	<0.01*
	From 10-14 years (56)		
	More than 15 years (10)		

\*Significant difference at the (0.01) level

Table (1): showed that there was no significant difference among all participating physical therapists in gender and education level (p-value >0.05), but there was significant difference in experience years (p-value = 0.01).

**Table (2) : Comparative analysis between group (A) and group (B) according to APP tool:-**

Dimensions according to The APP tool	Group (A) (total means)	Group (B) (total means)	t-value	P-value
Professional Behavior	3.24 ±0.74	3.28 ±0.67	-0.299	>0.05
Communication	3.19 ±0.75	3.30 ±0.62	-0.647	>0.05
Assessment	3.24 ±0.66	3.13 ±0.59	1.233	>0.05
Analysis and planning	3.14 ±0.78	3.29 ±0.50	-1.756	>0.05
Intervention	3.08 ±0.75	3.24 ±0.56	-1.989	>0.05
Evidence-based practice	2.54 ±0.88	3.32 ±0.76	4.706	<0.001*
Risk management	3.42 ±0.81	3.24 ±0.77	1.409	>0.05

\*: Significant difference

Table (2) showed that there was no significant difference between both groups (A) and (B) in the following dimensions (professional behavior, communication, assessment, analysis and planning, intervention and risk management) (p-value >0.05) except in evidence based practice there was a highly significant difference (p-value =0.0001).

**Table (3): Cumulative mean for all questionnaire between groups (A) and (B) :**

Items	Cumulative mean
Group (A)	3.249±0.113
Group (B)	3.146 ±0.217
t-value	1.879
P-value	0.068
P>0.05	NS

NS: Non significant difference

Table (3) represents the cumulative mean for the APP tool for groups (A) and (B). The statistical analysis by unpaired t-test revealed that there was no statistical significant difference (P>0.05) in means of total score between groups (A) and (B).

## Discussion

One hundred physical therapists participated in this study, they were divided equally into two groups (A) and (B), group (A) were the physical therapists who worked in ICU and group (B) who worked in outpatient clinic and both groups worked in General Organization of Teaching Hospitals and Institutes, recruitment was from both gender (42 male and 58 female as a total) of graduated year from 2000 to 2009. Their experience years for less than 10 years were 34 physical therapists, from 10 to 14 years were 56 physical therapists and more than 15 years were 10 physical therapists. Regarding their education level, 32 physical therapists were having bachelor degree, 46 were having master degree and 22 doctoral degree.

In this study, there was no significant difference according to gender and education level ( $p$ -value  $>0.05$ ). Our results were supported by Dalton et al. (2011) as APP item ratings were not systematically affected by the gender; their results showed that there was no significant difference in levels of performance as regard to physical

therapists gender. In regard to the education level, Morris et al. (1999) stated that non-academic factors such as motivation, personality, learning style, and approach to learning, may be better affecting the clinical performance than the academic studies. Our results disagree with McGinnis et al. (2016) that confirmed that education level was the foundation of professional values.

There was significant difference in experience level among the whole study sample ( $p$ -value  $=0.01$ ). This was supported by O'Neil et al. (2007) who deduced that improvement in performance was a result of increasing years of experience and continuous long life learning of therapist, years of experience helped to improve their performance.

In this study, there was no significant difference between both groups (A) and (B) in the following dimensions (professional behavior, communication, assessment, analysis and planning, intervention and risk management) ( $p$ -value  $>0.05$ ). Our results were supported by Dalton et al. (2011) and Watson et al. (2012).

There was highly significant difference between both groups (A) and (B) in dimension of Evidence Based Practice (EBP) (p-value= 0.0001). In agreement with Andermann et al. (2016) even the highest quality evidence would have little impact unless it is incorporated into decision-making for health. It is therefore critical to overcome the many barriers to using evidence in decision-making, including (1) missing the window of opportunity, (2) knowledge gaps and uncertainty, (3) controversy, irrelevant and conflicting evidence, as well as (4) vested interests and conflicts of interest. The lack of protected time to search and appraise the research literature was the largest organizational barrier for EBP (Jette et al., 2003).

The result of the total means for all questionnaire revealed that there was no statistical significant difference ( $P>0.05$ ) in means of total score between group (A) ( $3.249\pm 0.113$ ) and (B) ( $3.146 \pm 0.217$ ). As score = (3): demonstrates most performance indicators to a good standard this score reflects that the therapist is comfortable and performing above the minimum

passing standard with respect to a given item. In agreement with Potter et al. (2004) good performance by staff is enabled via a supportive working environment. This encompasses more than just having sufficient equipment and supplies. It also includes systems issues, such as decision-making and information-exchange processes, and capacity issues such as workload, support services and infrastructure.

### **Conclusion**

There was no significant difference between physical therapists performance in ICU and outpatient clinic in all dimensions except in evidence based practice dimension, the physical therapists should had continuous training courses to develop their practice. In regard to the demographic characteristics, the experience level was the most significant factor indicating the importance of accumulated knowledge and experience, teaching hospitals and institutes should nominate more specialists and experts in order to increase the efficiency and performance of physical therapists in ICU and outpatient department.



### Conflict of interest

Authors have declared that no conflict of interests exists

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