

Knowledge on Safer Patient Lifting Techniques among Physiotherapists

M.Vijayakumar¹, Prachi Badlal²

¹Professor, Dr D Y Patil College of Physiotherapy, Dr.D.Y.Patil Vidyapeeth, Pimpri, Pune.

²Dr D Y Patil College of Physiotherapy, Dr.D.Y.Patil Vidyapeeth, Pimpri, Pune

Corresponding Author: M.Vijayakumar

ABSTRACT

The concept of “Patient Safety” being the number one priority at Hospitals can reduce the emphasis on overall physiotherapist’s safety and health. Physiotherapists need to lift patients at various places in their practice and should have a good knowledge about musculoskeletal injuries, its prevention, but still there is incidence of injuries in them during lifting. The objective of this study was to relate and evaluate the perceptual and actual knowledge of the physiotherapists on patient lifting techniques. Method: A non –experimental study design with cross -sectional survey was adopted with a sample size of 100 physiotherapists who have completed their Bachelor of Physiotherapy were included in this study over a period of 4 months. A validated questionnaire having 3 sections: demographic data, experience of lifting and its consequence and lastly questions assessing the knowledge of lifting technique was given to the physiotherapists in their free time which was to be completed in 15 minutes. Results: The study revealed that the knowledge was less but the perception rate was high. Most of the physiotherapists were aware of proper lifting technique but very less of them were properly practicing the technique in their professional practice. 96% of physiotherapists said that they are aware of safer patient lifting techniques the analysis showed it was less. Conclusion: Physiotherapists are at risk for developing work-related musculoskeletal disorders (WMSDs) due to improper patient lifting techniques. Safe patient handling techniques will try to reduce the injury and will improve the quality of rehabilitation.

Key Words- Patient lifting techniques, lifting strategies, safety transfer, physiotherapist, Patient, WMSDs,

INTRODUCTION

The concept of “Patient Safety” being the number one priority at Hospitals can reduce the emphasis on overall physiotherapists’ safety and health. The adult human form is an awkward burden to lift or carry. Weighing up to 100 kg or more, it has no handles, it is not rigid, and it is liable to severe damage if mishandled or dropped.

Physiotherapists need to lift patients at various places in their practice including OPD, bed side assistance, home care

management, intensive care unit. Physiotherapist have a good knowledge about musculoskeletal injuries, its prevention but still there is incidence of injuries in them during lifting. ⁽¹⁾

During the course of most severe illnesses, afflicted individuals lose the ability to move on their own and require assistance for repositioning and movement. This responsibility falls to physiotherapist, who reposition patients to prevent pressure ulcers and promote comfort, put weakened limbs through range of motion to prevent

contractures and promote circulation, ambulate patients to prevent blood clots and pneumonia, transfer patients to wheelchairs and stretchers so that they can travel to centralized services, and reposition bedridden patients.

The task of assisting patients with mobility deficits is inseparable from physiotherapist care, it is essential to determine how physiotherapist can perform these tasks safely. The work of physiotherapist is quite physical demanding which involves a very high force pressure on their joints during application of different techniques on patient e.g joint mobilization, prolonged postures, ambulating patient which leads to musculoskeletal disorders in physiotherapist. Many a times physiotherapists may face musculoskeletal disorders like back pain, knee pain, etc during handling of patient. If anything wrong happens it may cause problem to patient as well as for physiotherapists.

A research has indicated that junior physiotherapists have high chances of injuries than the senior therapist. As the clinical postings of junior therapist keeps on changing, they are likely to have higher risk of injuries. ⁽²⁾

An appropriate transfer/lift is safe for the therapist and patient, enables the patient to be as independent as possible, is comfortable for the patient and provides the least wear and tear on the back and shoulders of the therapist and patient. At many times patient may have pain, attached to different leads and lines which needs safe mobility of patient by physiotherapists. This will need great care of patient by physiotherapists. Unexpected incidences or lack of patient cooperation are also often contributing factors in injuries to the therapist. When the lifting technique is consistent the patient is more likely to cooperate and be less anxious.

Now-a-days many new technologies have developed to lift a patient. We can also use slings to lift. These newly formed ideas should be used and applied during the

practice. So instead of having information its better to use it and this depends on us.

BACKGROUND

Physiotherapists play a vital role in ambulating a patient. While ambulating a patient, it's risky as patient is connected to different leads and iv lines, catheter etc. During ambulating a physiotherapist or patient may get injured due to various reasons. Many studies have shown that the prevalence of work-related injuries among physiotherapists is now-a-days increasing and adequate preventive and appropriate management strategies should be recommended to minimize work-related injuries in the physiotherapy practice.

Apart from the nature of the job of therapists, working in certain specific clinical specialties in physiotherapy is also reported to contribute to injuries during work. A recent study concluded that musculoskeletal outpatients (31%), neurological rehabilitation (14%), elderly care (12%) are the areas where therapists face major musculoskeletal injuries. Therapists who work in medicine, psychiatry, pediatrics had 46% chances of injuries. ⁽¹⁾

According to study conducted on Malaysian physiotherapists, lower back region was most common site of injury and 41.3% of physiotherapist were involved in lifting and transferring activities. Work related injuries prevalence was more in female therapists than male therapist. ⁽¹⁾ Due to this all physiotherapist may be in distress and to keep going on he/she may have to take medications, avoid lifting of patients.

NEED FOR STUDY

Skill is not acquired by watching a film or demonstration. Programmes on training to a high degree of competence for all health professionals could reduce daily stress on spine of each lifter and greatly increase the comfort of the lift for patient. Practical training instills good lifting habits so that safer technique becomes a most important tool for every lifter.

To move a patient a physiotherapist must have a good knowledge about various safer patient lifting techniques. At times physiotherapist alone cannot shift a patient and may require help of others at various instances. In day to day practice patient lifting strategies are learnt and skills are acquired only by seeing others doing it or by trial and error method. Their skill based knowledge is not provided in the curriculum of physiotherapy and there proper techniques is not being practiced, hence there is a need to be analyzed that how many physiotherapist have knowledge about safer lifting technique so as to avoid problem for physiotherapist while handling a patient.

There are injuries to physiotherapist due to which there will be inability to treat patient. Physiotherapists may be injured due to various reasons such as

1. Inability to judge the load of patient.
2. Wrong techniques, procedure.
3. Individual lifting instead of taking help of other physiotherapist.
4. Surrounding obstruction.
5. Failure of co-operation between patient and physiotherapist.

This indicates there is a need to improve lifting techniques so as to not only gain skill but also for patient treatment. The physical performance of physiotherapists can be improved by giving proper awareness and training on ergonomics, safety measures and patient lifting and transferring techniques. Important is that if a therapist is trying to lift a patient, and is unable to do he/she must not try instead call for an help.

AIM:

To evaluate the knowledge on safer patient lifting techniques among physiotherapist.

OBJECTIVES:

1. To evaluate their knowledge based on perception.
2. To relate their perceptual knowledge and their actual knowledge on lifting techniques.

METHODOLOGY

A non-experimental study design with cross-sectional survey was done with a sample size of 100 in 4 months. The study was done in PCMC area with cluster type sampling⁽³⁾ technique. The inclusion criteria were the qualified physiotherapists.

A self designed questionnaire underwent content validation processes by 7 experts which later were given to qualified physiotherapist and who were asked to complete the questionnaire which was in an objective form, focused on assessing the knowledge of the physiotherapist on safe lifting technique.⁽⁴⁾ The questionnaire had 3 sections mainly:

Section A: Demographic data: Section A had questions assessing the knowledge according to the therapists' professional placement and the years of practice as according to study area of practice for physiotherapist which is an important factor for understanding the occurrence of the injuries as the injuries were highest within first 5yrs of practice.⁽¹⁾

Section B: Experience of lifting and its consequence. To conclude that whether a therapists has the knowledge of lifting techniques or not and if no, what were the results during the lift, were there any injuries to therapist.

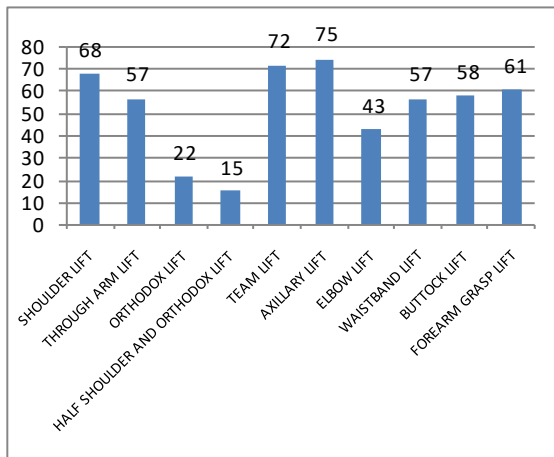
Section C: Questions assessing the knowledge of lifting technique among physiotherapist in objective form. Section C assesses the knowledge. The questions were framed according to the different lifting techniques⁽⁵⁾ so as to conclude how many therapists have the knowledge and are able to lift the patient correctly.

The questionnaire was given to physiotherapist during their relaxed time and was collected back immediately after completing in 15 min in order to avoid bias and elicit the actual knowledge.

The questions were framed and then same question were repeatedly asked in different form to identify their consistency of answers to avoid false-positive (fluke) answers.

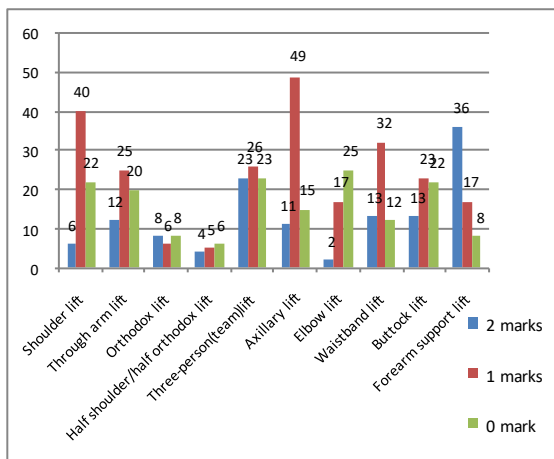
The answer sheet was collected and the questionnaire was analysed using likert scoring scale (6) and then presented in the graphical & tabular form, and accordingly the required implication (if any) was to be suggested.

DATA ANALYSIS AND INTERPRTATION



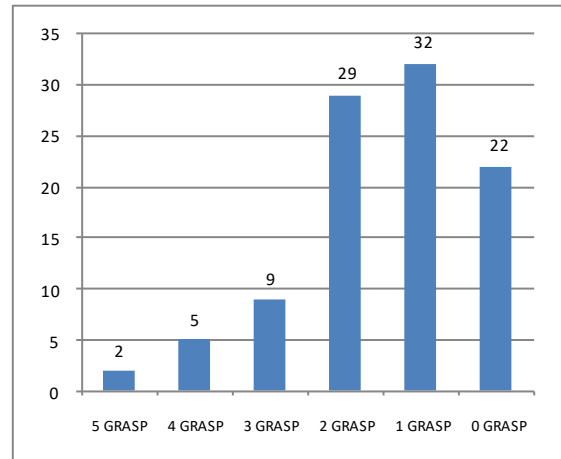
Graph 1: - Perception of knowledge about lifting techniques

Inference: The perception of knowledge on different patient lifting technique was high in axillary lift, followed by team lift and then shoulders lift.



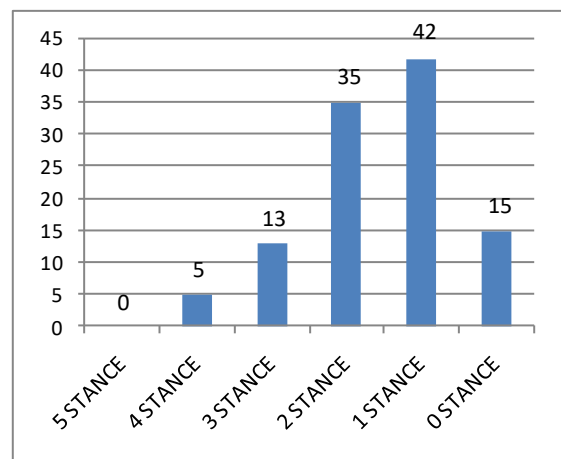
Graph 2:- Perception of knowledge about lifting techniques

Inference: When the actual knowledge was evaluated by asking questions, very less physiotherapist had the complete knowledge. The graph shows that majority physiotherapists were not able to score full marks in the lifts except in forearm support lifting technique.



Graph 3:- Knowledge on Grasp

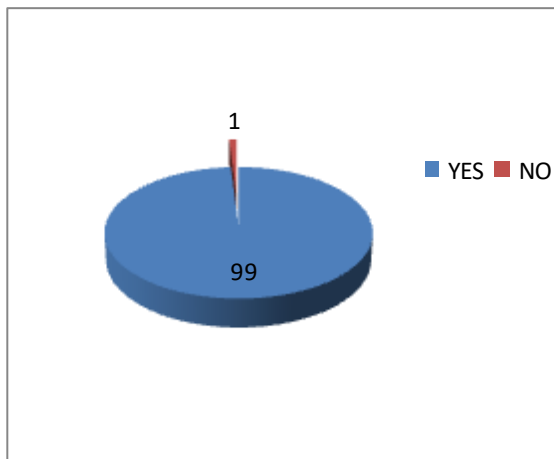
Inference: When analyzing the knowledge on grasp, the results showed that only 2% therapist had knowledge about all 5 grasps, while majority i.e 32 % had knowledge on 1 grasp. 22% therapists had poor knowledge on the grasp. The result showed that majority of therapist were lifting the patient by wrong grasp due to which 45% of therapist had injury and this led to cause injury in 6% of patient. The injury led 6% of physiotherapist to take treatment for their injury, so 31% of physiotherapist had to avoid the patient lifting during the treatment. 25% therapist had an impact on their daily activities.



Graph 4:-Knowledge on stance

Inference: No therapist had knowledge on all the five stance, while majority i.e. 42% had knowledge on 1 stance only. So while analyzing the knowledge on grasp and stance the results indicated that majority had

poor knowledge on the grasp and stance which led to injuries to patient as well as to therapists and had an impact on the therapists' daily activities.



Graph 5:- General question

Inference: After the completion of the questionnaire the therapist were asked that do they think that the patient lifting techniques must be included in their syllabus in which 99% said yes.

DISCUSSION

The nature of the work in a physiotherapy practice is physically demanding, and it involves repetitive tasks, techniques that exert direct pressure on certain joints during treatment, awkward positioning of joints during certain maneuvers and prolonged constrained postures. These physical factors expose physiotherapists to various work-related musculoskeletal injuries. ⁽¹⁾

The study on knowledge of safer patient lifting technique revealed that the knowledge was less but the perception rate was high. The first objective of study was to evaluate the knowledge based on perception through a validated questionnaire. The questionnaire consisted of 3 sections mainly.

Section A was based on demographic data, professional placement and years of practice. Most of the therapists were PG students or were involved in clinical practice while there years of

practice was less than 5 years. Previous studies suggested that musculoskeletal outpatients (31%), neurological rehabilitation (14%) and elderly care (12%) are the three major clinical areas producing serious work-related injuries among therapists. The therapists who work in general medicine, pediatrics, elderly care, psychiatry and outpatient burns had a 46% greater likelihood of getting work-related injuries during the course of their work. ⁽¹⁾ Previous studies have cited that the incidence of work injuries is the highest within the first 5 years of practice. ⁽²⁾ So it's important to know the years of practice and professional placement of the therapist.

In section B questions regarding on the experience and the consequences of patient lifting during practice among therapists were asked. Most of the physiotherapists were aware of proper lifting technique but very less of them were properly practicing the technique in their professional practice. 45% of physiotherapists said that they were injured during lifting and 16% of the therapist's patient had injury, which suggests that though physiotherapist are aware and practicing the lifting technique there is lack of the actual knowledge and its practical implementation. The injury was not serious to hospitalize therapist but they needed to take medications. This suggests that either the therapist did not take help of colleague / patient or they did not have the practical knowledge of lifting the patient.

Due to injury 31% of physiotherapists said that they had to avoid the lifting patient so this might also had an effect on the rehabilitation process of patient. The severity of injury was such that 25% of patient had an impact on their daily activities. So though the physiotherapists were aware of lifting techniques, chances of injury to physiotherapists and patient were high which had an impact on physiotherapist's daily activities and the rehab of patient.

The section C was based on the perception and assesses the knowledge

based on perception on lifting patient techniques. The questions were based on lifting techniques like Shoulderlift, through arm lift, Orthodox lift, Half shoulder/half orthodox lift, team lift, Axillary lift, Elbow lift, Waistband lift, Buttock lift, Forearm support lift. (3)

75% of physiotherapist had knowledge on axillary lift followed by 72% on team lift then 68% on shoulder lift. Only 5% physiotherapists had knowledge on all 10 lifts while 27% physiotherapists had on 5 lifts and 2% had zero knowledge on all of lift.

Later the perception was analyzed by asking the physiotherapists 20 questions based on lifts. The result showed that the rate of perception was high but the actual knowledge was poor.

The knowledge of techniques was interpreted using Likert-type scale response. (6) Axillary lift in which 75% of physiotherapists perceived it, only 11% of physiotherapists had excellent knowledge while 49% had good knowledge. In team lift where 72% said yes only 23% were having actual knowledge. The rate of poor knowledge was mostly observed in ½ shoulder and ½ orthodox lift and elbow lift. Forearm grasp lift was the only lift where 36% of physiotherapists had excellent knowledge and only 17% had good.

By observing the analysis done on actual knowledge of perception, very less physiotherapists were able to score full marks except in forearm grasp lift. So though 96% of physiotherapists said that they are aware of safer patient lifting techniques the analysis showed it was less.

Furthermore the therapists were questioned about grasp and stance, used during the patient lifting techniques. The result on knowledge of grasp showed that only 2% of physiotherapists had knowledge on all grasp while 32% had on one grasp. 22% physiotherapists were unknown about all grasp. So this means the physiotherapists grasping techniques were not correct so the occurrence of injury was present which had impact on treatment, daily life of therapist.

Somewhat same condition was about stance. None of the physiotherapists had knowledge on all stance but 42% physiotherapists had knowledge on one stance.

So though aware of lifting technique the stance used while lifting were not correct which led to injury.

This suggests that there is a need of preventive and appropriate management strategies to decrease work related musculoskeletal injuries among therapist as well as patient during rehabilitation.

Limitation:

The limitation of this study needs to be acknowledged. This study only involved physiotherapists who were readily available and no other places outside PCMC area.

CONCLUSION

So the overall interpretation of the study was that though majority of physiotherapists said that they are aware of lifting techniques but their perception analysis showed it was poor.

So 99% PT suggested that the knowledge of safer patient lifting technique must be included in their physiotherapy curriculum to prevent injury among physiotherapists and patient.

Key findings:

The study addresses the actual knowledge on safer patient lifting technique, grasp, stance among physiotherapist.

The previously published articles showed that the work related musculoskeletal injuries among physiotherapist were high and 41.3% were indulged in lifting and transferring activities.

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How to cite this article: Vijayakumar M, Badlal P. Knowledge on safer patient lifting techniques among physiotherapists. *Int J Health Sci Res*. 2017; 7(5):127-133.
