Dropout Rates and Factors Associated with Dropouts from the Treatment Among Patients Attending the Outpatient Rehabilitation Services

By

Akshata Math

Dissertation submitted in partial fulfillment of the requirements of the degree

MBA Hospital and Health Management

Academic year, 2017-2019

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INSTITUTE OF HEALTH MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

TO WHOMSOEVER MAY CONCERN

This is to certify that Akshata Math, student of MBA Hospital and Health Management from The IIHMR University, Jaipur has undergone internship training at Thumbay Physical Therapy and Rehabilitation Hospital, Ajman U.A.E. from 24th February 2019 to 20th May 2019.

The Candidate has successfully carried out the study assigned to her during internship training and her approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish her all success in all her future endeavors.

29/5/19

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ثومبي
THUMBAY
Growth Through Innovation

May 20, 2019

To Whom It May Concern

This is to certify that Dr. Akshata Math holder of Indian Passport Number P2896203 has undergone internship in our organization from 24th February 2019 till 20th May 2019, as a part of dissertation of her MBA in Hospital and Health Management program. She has completed the assigned project.

We wish all the best for her future endeavor.

For **Thumbay Physical Therapy and Rehabilitation Hospital**

مجمع مستشفى جامعة ثومبي - ذ.م.م
THUMBAY UNIVERSITY HOSPITAL COMPLEX - L.L.C.

THUMBAY MOIDEEN
President

THE IIHMR UNIVERSITY, JAIPUR

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled "A study on dropout rates and factors associated with dropouts from the treatment among patients attending the outpatient rehabilitation services" and submitted by Akshata Math Enrollment No IIHMR-U/01/2017-19/0532 under the supervision of Dr.Mohan Bairwa for award of MBA in Hospital and Health of the University carried out during the period from 24th February 2019 to 20th May 2019 embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other institute or other similar institution of higher learning.

Signature

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Akshata math

MBA HM 22

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List of abbreviations

TPRH	Thumbay Physical Therapy and Rehabilitation Hospital
ADL	Activities of daily life
VR	Virtual Reality
AR	Agumented Reality
NEU-R	Neurological Rehabilitation

Appendix

Telephonic interview questionnaire:

1.Are you satisfied with the services at our hospitals ?

2. Is child care commitment a barrier to continue therapy sessions ?

3. Do you need any transportation assistance to reach hospital for treatment ?

4. Did you find equipment used for training were user friendly ,if any ?

5. Any other specific reason for drop out. Please specify

Abstract:

The study was to conducted to assess drop-out rates and associated causes for drop outs among patients undergoing physical therapy at Thumbay Physical Therapy and Rehabilitation Hospital, Ajman. In a six months period (July 2018 to December 2018), all patients who have completed one session of advised physical therapy who had been referred for treatment and failed to complete all the session advised by doctor and physical therapist were included in this study (N=50).Analysis showed that drop out rates was less in initial months later it increased gradually (July-18%, August-17%, September-20% , October-25%, November-24%, December-30%).Analysis of characteristics of drop out population showed that majority of drop outs were expats and 54% were females. Majority of drop out patients were suffering from neurological disorders and orthopaedic disorders. Study shows that early drops were many i.e 30% patients dropped out after five sessions and 32% patients dropped out after ten sessions in comparison with advised session. Study shows that high cost of services as one of major reason for drop outs. The findings of this study helps the hospital a better grasp of drop-out rates and the associated reasons and method to improve them.

Introduction:

Rehabilitation is the action of restoring someone to health or normal life through training and therapy after illness, injury or surgery. The purpose of rehabilitation services is to restore some or all of the patient's physical, sensory, and mental capabilities that were lost due to injury, illness, or disease. Rehabilitation includes assisting the patients to compensate for deficits that cannot be reversed medically. Dropout of treatment means total disengagement from the treatment ,without either clinical resolution of symptoms or a agreed upon treatment termination. As rehabilitation services require long duration to restore to normal life, dropout from treatment is generally seen as a major operational issues in rehabilitation hospitals. This study focuses on identifying the reasons for the dropouts and providing suggestions to minimize the dropout rates.

Neurorehabilitation aims to assist recovery from all range of nervous system injury, and to minimize any functional alterations resulting from it. Neurorehabilitation works with skills and attitudes of the disabled person and their family and friends. It focuses on all aspects of person's wellbeing by providing series of therapies from psychological to occupational ,training patients on mobility skills, communication processes ,and aspects of the person's daily routine. It also focuses on creative parts of a person's recovery

Stroke has become one of the leading cause of death due to increasing number of patients with lifestyle disorders such as diabetes ,hypertension and obesity etc .Stroke rehabilitation plays a major role in stroke recovery process. The programme aims to help the survivor understand and adapt to difficulties ,prevent secondary complications and educate family members to play a supporting role.

For majority of stroke patients, physical therapy, occupational therapy and speech therapy are foundation of rehabilitation process. Assistive technologies based on robotics and virtual technologies(VR) can also be beneficial.

Occupational technology involves training to help and relearn activities of daily living (ADL) such as eating, drinking, dressing, bathing, brushing, toileting, reading and writing.

Speech therapist are specialized in the evaluation, diagnosis, and treatment of speech and language disorders ,cognitive-communication disorders, voice disorders and swallowing

disorders. They also provide sensory awareness related to communication and swallowing .Speech therapies play an important role in treatment of autism spectrum diseases .

Neuropsychological services provide behavioural modification training caused by neurological trauma .It aims to understand how behaviour and cognition are influenced by brain functioning and provide diagnosis and treatment for behavioural and cognitive neurological disorders. Rehabilitation of sensory and cognitive function involves retraining neural pathways to improve functioning that has been diminished by disease .

Orthopaedic rehabilitation is concerned with the correction of functional impairment of the musculoskeletal system which includes bones, muscles, cartilage, tendons, ligaments and joints. Physical therapy uses a variety of treatments and physical exercises to begin the rehabilitation process at the onset of injury. Therapies helps to strengthen the body, reduce pain and prevent future injury. Evaluation is done to determine range of motion ,muscle strength, postural alignment and abnormalities in movement patterns ,body mechanism and quality of movement with daily activities. Personalizes care is designed to help individual to meet specific recovery needs. Post -Surgery rehabilitation plays a pivotal role in restoring joint movements after surgeries which involves locomotory system such as knee, hip, shoulder and ankle replacement procedures

Rationale:

Rehabilitation is considered to be the long term care ,therefore patient retention in the treatment and completion of its course is one the most prominent challenge faced by rehabilitation hospitals. Drop outs in rehabilitation services are a very common cause of inefficiency due to waste of time and resources, health services, patient suffering and so on. Therefore, with proper detection and removal of such obstacles, hospital may be able to provide the required services and fulfil treatment protocols and decrease the cost to the health care system.

Research Question:

What are the factors associated with dropouts from treatment among patients attending the outpatient rehabilitation services?

Research Objectives:

1. To asses dropout rates and characteristics of dropout population
2. To assess the reasons for dropouts from treatment among the patients undergoing rehabilitation services
3. To provide suggestions to reduce the patient dropouts from rehabilitation services.

Methodology:

- **Study Setting:**

  Thumbay Physical Therapy and Rehabilitation Hospital(TPRH), Ajman

  It is the outpatient rehabilitation hospitals which provides rehabilitation services through physical therapies and equipment associated training to bring back the patients to normalcy. Hospital provides services for various types of disorders which can be categorized as neurological rehabilitation, neuropsychology, orthopaedic rehabilitation, speech therapy and sports medicine. Rehabilitation equipments posses high end technology like applied virtual reality, zero-gravity treadmill, advanced robotics, driving simulators, high-performance training gym ,therapeutic garden, full body cryotherapy chamber and wearable technologies.

  The facility can accommodate up to 400 outpatients. It has five consultation rooms and ten treatment rooms with three functional training gyms. Hydrotherapy pool can accommodate four patients per session

- **Sampling method**- Total number of drop outs were included in the study from the month of July 2018 to December 2018 i.e n= 50
- **Study design**- Descriptive cross-sectional study. Profiling of drop out patients were done by retrospective approach in which demographic data related to dropouts was collected from hospital management information system and to obtain the reasons for dropouts semi-structured interview was conducted via telephone.
- **Duration of the study**- 3rd March to 29th April
- **Inclusion criteria**-

Patients who have attended at least one session of treatment plan were included in the study

- **Exclusion criteria**-
- The patients who discontinued the therapy due to medical reasons were not included in the study

Operational definition :

Drop out- It is defined as failure to show up for the physical therapy sessions to complete the course of treatment planned after attending at least one session.

Rehabilitation - Rehabilitation is the action of restoring someone to health or normal life through training and therapy after illness, injury or surgery

Data collection tool:

All the demographic information related to drop outs like age ,gender, nationality, occupation, marital status, diagnosis and therapy session details was collected from hospital database. Open ended telephonic interview with patients was conducted to gather reasons related to drop out from treatment.

Data analysis plan: The study results is collected and analysed using MS Excel software and findings were tabulated in MS word graphically

Drop out percentage formula = (Number of drop outs /Total number of converted patients)* 100

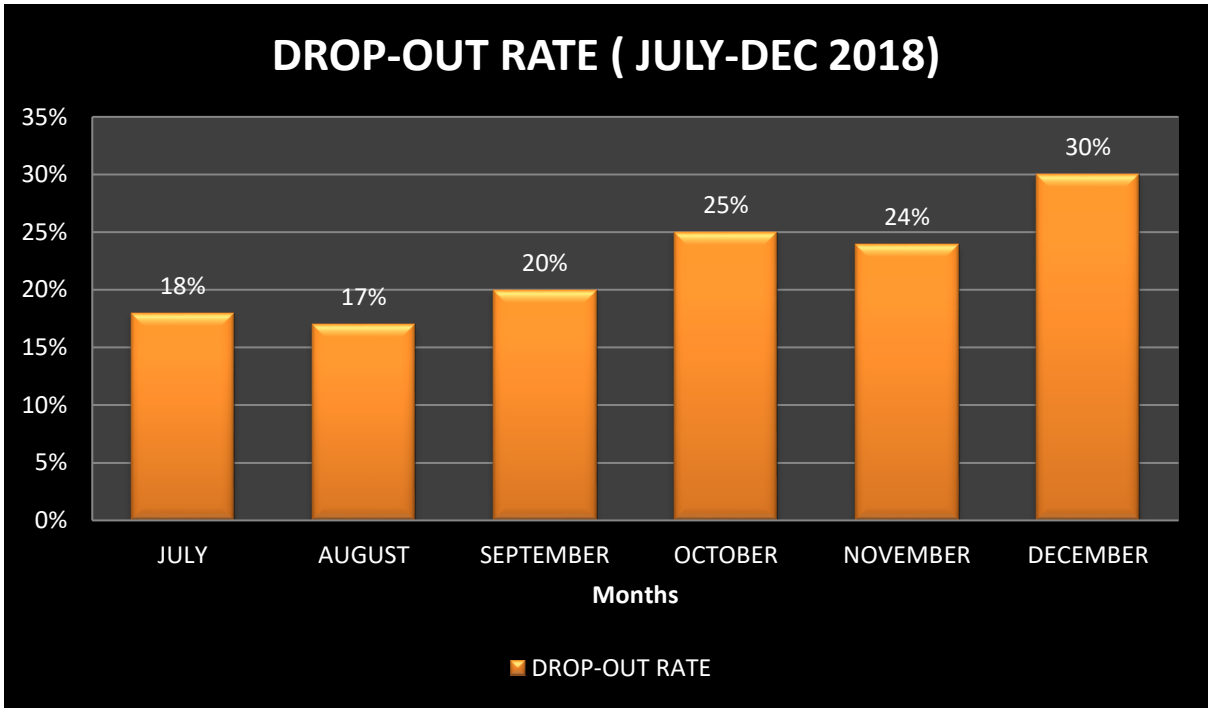
Independent variable = Gender, Nationality, Age and Marital status

Dependent variable = Number of drop outs

Data Analysis:

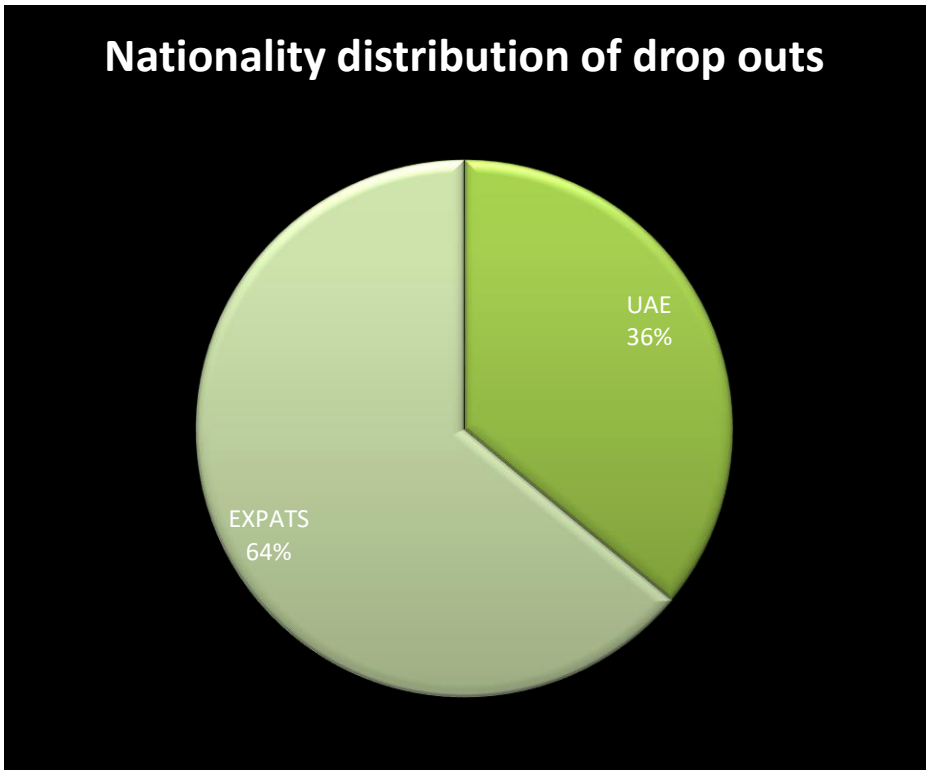
Characteristics related to dropped out population from the month of July 2018 to December 2018 was collected which includes **– Hospital number, Age, Gender, Marital status, Nationality, Type of service, Sessions completed, Session advised by doctor and Reason for drop out**. Drop out rate is calculated by taking total number of converted patients (patients who has taken doctor and therapist consultation and done with one therapy session) in the denominator. Hospital benchmark of drop out was set to be 10%.

Figure- 1 Shows the dropout rate of patients from the month of July to December 2018.Total number of drop outs were 50 in number. Hospital benchmark for dropout rate is considered to be 10%.Overall dropout rate was 22%



Drop out rate for the month of July, August, September, October, November and December is 18%, 17%, 20%, 25%, 24%, and 30% respectively.

Figure- 2 Shows nationality distribution of the drop outs population.



Among 50 drop out patients , 64% were expats belongs to countries like India, Morocco, Brazil, Egypt, Iran, Kenya, Pakistan, Yemen and Russia and 36% were locals.

Figure-3 Shows the Gender distribution of drop out population. Out of total drop out population 54% were found to be females and 46% were males.

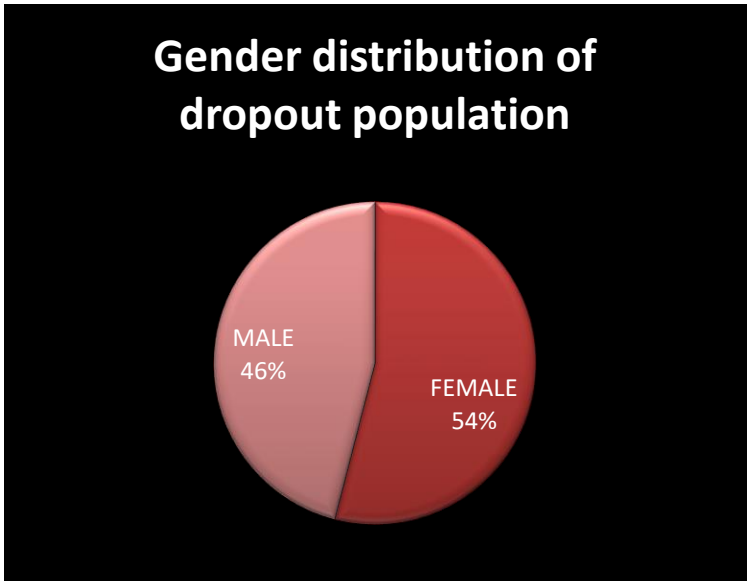


Figure- 4 Shows the service distribution of drop outs population. Out of 50 drop outs, 60% patients were suffering from neurological disorder,34% from orthopaedic disorders and 7% were found to be suffering from other disorders like injury and post surgery trauma.

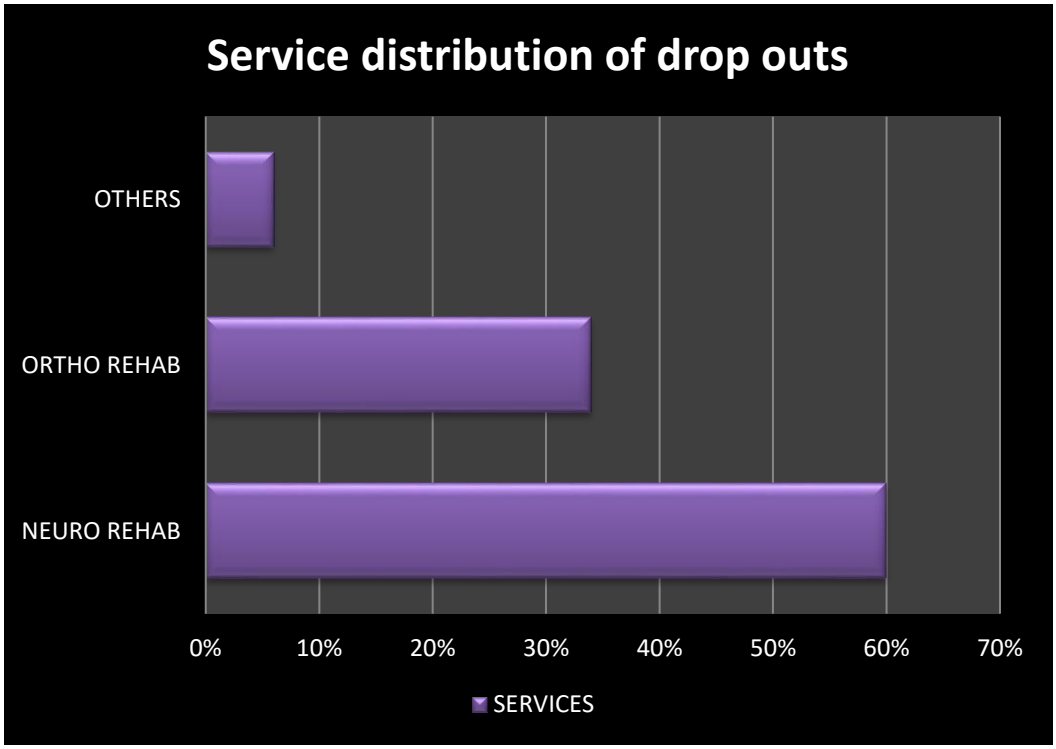
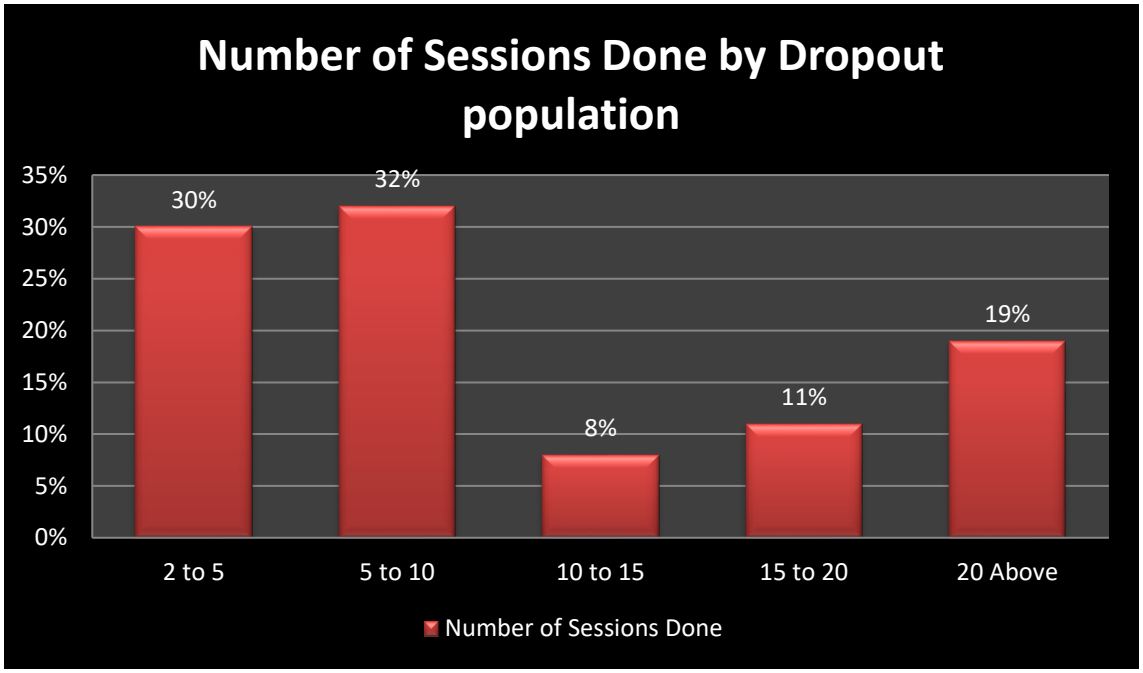
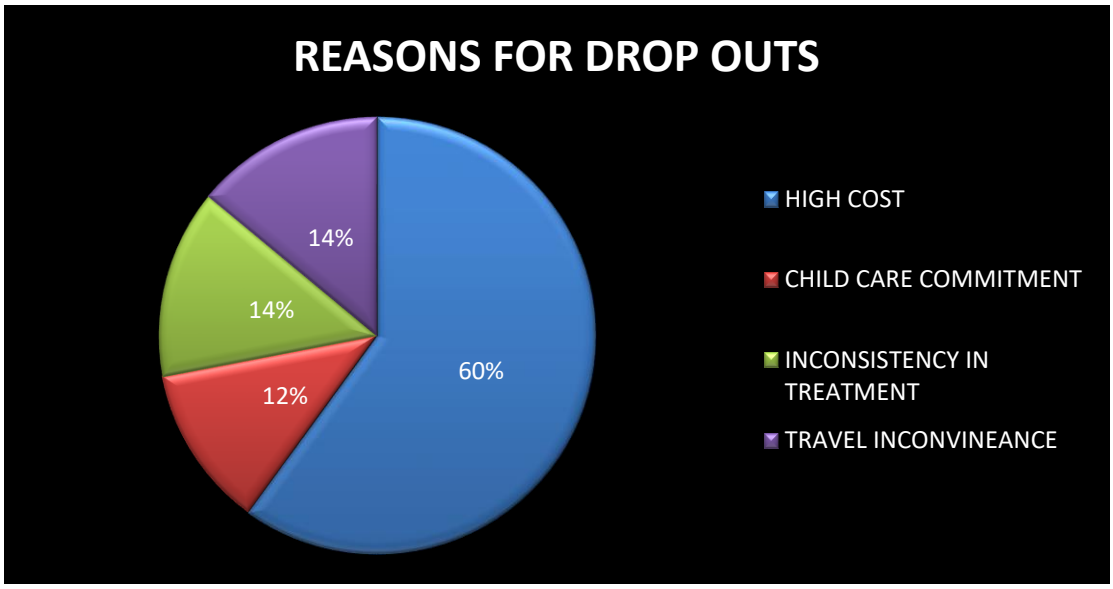


Figure- 5 Shows the number of physical therapy sessions completed by dropout population.



Out of 50 drop outs, 30% of patients completed two to five therapy session ,32% of patients completed five to ten therapy session,8% of patients done with ten to fifteen sessions,11% patients done with fifteen to twenty sessions and 19% of total drop out patients completed above twenty therapies

Figure 6 Shows the reasons for drop outs of patients from physical therapy



Reasons for drop out of patients from physical therapy sessions obtained from telephonic interview were due to high cost of services offered, child care commitment, inconsistency in treatment provided by therapist and travel inconvenience .The major cause is high cost

Discussion:

Treatment drop out is very common in physical therapy and rehabilitation treatment because it requires long term care for recovery .The study aimed to evaluate the drop out rates and reasons for drop outs among the patients attending the outpatient rehabilitation services. The study followed a retrospective study design for profiling of drop out patients and reasons were obtained by conducting semi-structured interview via telephone. Total number of converted patients from the month of July to December 2018 were 220 in number. Among 220 patients 50 patients(22%) dropped out from the treatment. Drop out rates for the month of July, August, September, October, November and December were 18%, 17%, 20%, 25%, 24%, 30% respectively. Gender analysis of drop out population showed that 54% were females and nationality analysis showed that 64% population belong to foreign countries. Service distribution of drop out patients were found to be 60% from neurological diseases, 35% from orthopaedic diseases and 5% from other cases like injury and post –surgery trauma. Analysis of number of sessions completed by drop out patients showed that early drop outs were many when compared to late drop outs. The present study showed that 60% of drop outs were due to high cost of services,14% drop outs were due to inconsistency in treatment and travel inconvenience and 12% of drop outs were due to child care commitment Hospital benchmark for drop out was10% .

Many studies across the countries have evaluated drop out rates ,their characteristics and reasons for drop outs. Study conducted in Netherlands also stated that majority of drop outs were non-native patients. Previous study conducted on drop outs from cardiovascular rehabilitation in women also stated that caregiver role interfered with the programme . Studies from India, which have evaluated dropout rates , also suggest that 21.3%–57.8% of patient's dropout of treatment and on an average 29.6%–39% do not turn up after the first visit. Findings of the present study are within this reported range. Few findings were contrary to the previous studies conducted such as gender distribution, few studies stated that percentage of male was more among dropouts when compared to females . Association of high “dropout” rates with being the head of the family possibly reflect that having the responsibility of the family may have precluded these patients to come for the re evaluation.

The clinical factors associated with dropout included neurological disorders which found to have higher dropout rates in present study. Previous studies have come with varied findings with studies stating no relationship of dropout rates with various disorders .

The study had few limitations. Time constraints to conduct the telephonic interview and building the trust of the interviewees through phone was challenging. Even after adopting measures to engage the participants by obtaining consent, few participants were found to be disinterested to answer .Recall bias was one of the limitation , because it had been long since the patients had dropped out of the treatment and faced difficulty in recalling the reason for dropout. Due to poor data recording, certain clinical data was obtained through discussion with doctor and physical therapist.

The strength of this study is that the study participants were total number of dropouts from past six months. The study of entire drop out population eliminates any potential bias occurring through sampling technique. As it was semi-structured interview, open ended questions gave freedom to the participants to answer without any predesigned answers.

Suggestions:

- To reduce the cost ,firstly market survey should be conducted to know the competitive price of the industry and service charges should be reviewed.
- Insurance coverage of therapies will help hospital to reduce drop out rates due to high cost.
- Utilization of paediatric space to provide child care for the patients undergoing physical therapy
- Assigning same physical therapist to single patients can reduce inconsistency in treatment
- Making patients aware about the home services provided by hospitals can reduce drop outs due to travel inconvenience

Ethical consideration:

- Complete oral consent was obtained from the participants prior to the study.
- Respect for dignity of research participants was prioritised .
- Participants were not be subjected to harm in any ways whatsoever

Implication of study:

Research findings helped to identify the reasons for drop out of patients from rehabilitation services in Thumbay Physical Therapy and Rehabilitation Hospital and steps to be taken to reduce the drop -out rate by addressing the various factors obtained from the study to provide complete clinical benefits of the therapies offered to the patients .

Bibliography:

1 .Maurits Sloots et al. Reason for drop-out from rehabilitation in patients of Turkish and Moroccan origin with chronic low back pain in the Netherlands :A qualitative study. Journal rehabilitation medicine. March 2010:42:566-573

2. Davinia Maria Resurrececcion et al. Reason for dropout from cardiac rehabilitation programs in women: A qualitative study.AHA journals. November 2013:128:128

3. Maarten J et al.Drop-out and attendance in pulmonary rehabilitation: The role of clinical and psychosocial variables. Respiratory medicine journal. October 2009:1034:1564-1571

4. Sandeep Grover et al. Dropout rates and factors associated with dropouts from treatment among elderly patients attending the outpatients services of the tertiary care hospital.Indian journal of psychiatry. 2018:60:49-55

5. Virginia Almadana Pacheco et al.Patient profile of drop-out from a pulmonary rehabilitation program. ARCH bronconeumology journals.2017:53:229-290

6. Habibolah Khazaie et al. Exploration of the reasons for dropping out of psychotherapy: A qualitative study. Evaluation and programme planning journal. June 2016:56:23-30