



**Impact of Physiotherapy Rehabilitation Education on the
Health Care in Iraq, Al-Muthanna**

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Background: The importance of the physiotherapy rehabilitation disciplines in assessment and management in health care was recognized. There is just a little knowledge concerning the physiotherapy rehabilitation education and training. Physiotherapy rehabilitation is a health care profession deals with the remediation of impairments and disabilities and the promotion of mobility, functional ability, and enhancement of quality of life.

Aim of Study: The purpose of this study not only determining the knowledge levels in the field of physiotherapy rehabilitation within the health care professionals and nurses in addition to the patients and their families in Al - Muthanna Governorate but also to develop and validate learning strategies in physical therapy interventions.

Methodology: The proposed research uses a blinded experimental design to explore the need for the physiotherapy rehabilitation education and training in the health care in Al- Muthanna Governorate. The research involves almost all individuals dealing with health care. Participants were the physicians, the nurses, the patients, the patient`s families in addition to the directory of the health in the governorate. A questionnaire form was designed with informations specified for each of the targeted groups which asked to fill, the data at baseline and follow-up were collected by authors and their assistants, transcribed verbatim into computer-readable files, and analyzed using framework analysis.

Findings:

The results were appointed as to which protocols of education and training should be followed. Thematic categories identified were; including the physiotherapy rehabilitation the schedules of the nursing colleges in the country, training courses for nurses and health care professionals to enhance their general practice, the courses also included scripts for a set of nurse and patient education programs developed by a multidisciplinary team of health care professionals to provide informations to both the physiotherapy treatment nurses and the patients families and the.

Conclusion:

Physiotherapy rehabilitation is very important to be included in the schedules of nursing colleges in Iraq and hold many training courses for both the nurses and the patients and their families to enhance the knowledges regarding their treatment programs, their side effects, and strategies to manage those side effects.

Introduction:

Physical therapy is a medical specialty for the treatment of musculoskeletal, nervous, cardiopulmonary and other disorders. Physical therapists use a verity of treatments including ; heat, cold , water, exercise , massage and traction, Some physical therapy regimens combine two or more treatments, exercising in a pool , for example, combine the use of water with the exercise, In addition; physical therapists promotes the patients education and rehabilitation program, ⁽¹⁾.

Modern physical therapy, based on a biopsychosocial approach, has shifted from that position to place much more emphasis on helping people to understand their condition and developing strategies and tactics to minimize the effect of the pain overall on their lives. This involves education and advice, promotion of general exercises and activities, in addition to working with people as active participants in the management of their conditions, ⁽²⁾.

Physiotherapy is aimed toward both reducing the patient`s symptoms and allowing increased ease in performing activities of daily living , to achieve this goal a variety of treatment techniques can be used, ⁽³⁾.

Physical Therapy is among the oldest interventions in medicine with records of it`s use dating back over 4000 years, ⁽⁴⁾. Now a day professional education prepare the physical therapist to be autonomous practitioner in collaboration with other members of health care team, physical therapist entry – level educational program integrate theory, evidence and practice along a continuum of learning which begins with admission for the program of physical therapy and ends at retirement, this program is based on university or university level studies of minimum of four years independently validated and accredited as being at a standard that accords the graduates full statuary and professional recognition, ⁽⁵⁾.

The study aimed to not only determining the knowledge levels in the field of physiotherapy rehabilitation within the health care professionals and nurses in addition to the patients and their families in Al - Muthanna Governorate but also to develop and validate learning strategies in physical therapy interventions.

The present study aimed to recognize the number of the nurses specialized in physiotherapy and rehabilitation comparing with the total population of the province as required to provide the best medical care in addition to the expertise they have in covering all the medical fields that need this specialty as well as the experience of patients and their families, reaching to develop a national strategy to support and expand this service in our country up to the best health and medical care.

Methodology:

The study included a survey on Al- Muthanna Health Directory, including the physicians of different jurisdictions, the nurses in particular the specialists in physiotherapy and rehabilitation, the patients and their relatives.

A questionnaire is designed for each of these categories with specific questions. Thirty doctors included in this survey, they were of different subspecialties, General Surgery, Cardiovascular & Pulmonary Surgery, Orthopedic Surgery, Obstetric & Gynecology Neurosurgery, Maxillofacial Surgery, Integumentary, Neurological, Ear, Nose and Throat- ENT. The questionnaire of this category held the following questions:

- Do you need within your jurisdiction to the physiotherapist and rehabilitation services?
- Has the Directory of Health in the province such professions? Are their this field enough to cover the population?
- How do you deal with a medical condition requiring physical therapy and rehabilitation?

One Hundred fifty nurses are involved in the study; their questionnaire is designed with the following questions:

- Have you studied physical therapy and rehabilitation during your graduation?
- Have you a course, a workshop or a seminar on these terms?
- How do you deal with a case requiring physical treatment and rehabilitation?
- Would you like to learn this and depth or theme?
- Do you want to get courses, workshops or seminars in this jurisdiction?
- Do you feel embarrassed from a case need for special physical therapy or rehabilitation?

Sixty five patients of variable types of illnesses, were randomly choose and asked to full the questionnaire which was designed specifically to determine their opinion, the questions were:

- What is the nature of your illness and you require to the physical therapy and rehabilitation?
- Have the health directory such professions?
- How do you deal with your illnesses and your need for treatment?
- Surly you are suffering from the requirements of the treatment?

Also the first class relatives of the patients were asked to full the questioner which was designed specifically for them with the following questions:

- By virtue of being a first class relative of the patient do you feel suffering from shortage or even absence of such specialty in the province?
- What did you do to provide this service to your patient?
- Are you ready to enroll in courses, workshops or seminars for physical therapy and rehabilitation?
- Do you prefer the hospital or the rehabilitation center for receiving the treatment?

All the categories which were involved in the study answered the questions of their questionnaires which were then collected and the data were examined and recognized.

Results:

The informations received from the questionnaires revealed that the total number of the professions in physical therapy is just 17, and only 15 of them are really work in his field, the data also showed that just 3 of the total number are graduated from Faculty of Health Techniques while the rest were graduated from Institutes of Health and medical care, the number is too small when compared with the needs of a province like Al- Muthanna which has a space dimension estimated with 51.29 Km^2 and population of about 850000. The ratio is 1 / 70833.33 (profession of physical therapist / population) and 1 / 4252, 416 Km^2 (profession of physical therapist / Km^2).

The abilities of the professions in this field are limited to the musculoskeletal systems problems including fractures, backache tendons and ligaments tears, arthritis and other connective tissue, also there are limit information about dealing with the victims of struck. All the workers in the field of physical therapy and rehabilitation are male and there is no female work in this field, so the female patients who need such a

service feel embarrassment of dealing with them , especially that the province has community conservative tribal islamic wallets .

There is a lack in the different types of physical therapy, in case of Cardiovascular and pulmonary rehabilitation, cardiopulmonary disorders like cabg, heart attacks, coronary bypass surgery and how to drain the chest and the lung from secretions in case of cystic fibrosis , chronic obstructive pulmonary disease. There is a lack in practice of dealing with cases which many people suffered from as they grow older like arthritis, osteoporosis, hip and knee joint replacement, disorders in balance.

Also there is a lack in dealing with skin and related structures, lavage, debridement of necrotic tissues to accelerate regeneration and healing processes, how to deal with edema. Many individuals suffered from neurological disease like stroke, back pain, brain injury, cerebral palsy and facial palsy and spinal cord injury, such patients experienced impairments of neurologic conditions including vision, incontinence , balance, ambulation and other life activities there is a no profession in this field.

All the professions in the province have knowledges about orthopedic physical therapists; they experienced fractures, amputations, back and neck pain, acute sports injuries, arthritis, sprains, strains, spinal conditions in addition to installing the prosthesis.

Unfortunately that there is no specialist in pediatric physical therapy, this field is very important and deal with the pediatric (infants, children, and adolescents) health problems concerning their congenital, developmental disorders in the neuromuscular, skeletal or the special senses. Children with developmental delays, autism, deaf and dumb found no specialist to treat them.

And as mentioned before there is no female among the professions of physical therapy so the women`s health disorders include pelvic pain, prenatal and post partum periods, may pass without any care or treatment in the province.

The number of the oncologist patients both malignant and non malignant evolve and develop by time in Iraq , such patient need rehabilitation in a drawing plan of early diagnoses , new treatments are enabling them to live longer decrees their dependency and enhance their life quality , no specialist in the province in such field.

Most of the medical and health care disorders which need physical treatment rehabilitation put the physicians of different jurisdictions in embarrassment because their patients must look for professionals in such specialty else where out side the province.

The province has more than 1100 nurses, 17 of them graduated from colleges of nursing, 153 are gradated from institutes of nursing while the rest are graduated from intermediate preparing schools of nursing, however all this number has just little and limited informations about physical therapy, all them (males and female) has a great wish to get courses, seminars, workshops concerning this clinical area. They are looking for initiating schools, faculties or even colleges providing them with experts and certificates,

- Achieve their scientific ambition.
- Enhancing the scientific expertise in our health directories and hospitals just like that presented in the well developed countries.
- Increase their income and improve their standard of living and community presence.
- Getting rid of the awkwardness in handling with cases with no sufficient experience to deal with.

Patients with medical disorders require physical therapy and rehabilitation are suffering a lot as reflected from the lack of the specialists in this area and their ebbing in the province center while some small cities belonging to it lie about 300 kilometers away from the center, the hospital and the physiotherapy and rehabilitation centre might not provide the requested necessitating specialization, so the patient must go the neighboring provinces like Diwaniya, Nasiriyah, Basra or even Baghdad for the this purpose. The condition becomes more worst if it is intractable and difficult to transmit to those provinces which require financial costs, efforts and time.

The patients and their relatives of first class wish eagerly to receive courses, seminars, workshops or even trainings provide them with skills about the dealing with their clinical case, so they can depend upon them selves in providing the service to their patients.

Comments:

Physical therapists became registered as a professional organization in Britain in 1894 and the United States in 1921 with physical therapy schools established in New Zealand, Australia and the United States

prior to World War 1 ,⁽⁶⁾ To address this vocabulary is not for historical narrative as it is to illustrate a the importance of this field of medicine, therapeutic and nursing interference, if any health care or medical profession in these countries asked about the number of the individuals which work in this field of medicine and nursing , the proportions will be found to be acceptable and sufficient in order to provide the best health and medical services and without any burdens for patients subjected to cases require physiotherapy and rehabilitation.

Yet the number of the clinicians work in Iraq generally and Al- Muthanna Province specifically is not sufficient and not acceptable, the proportion is as the data stated was 1 / 70833.33 (profession of physical therapist / population) and 1 / 4252, 416 Km² (profession of physical therapist / Km²), taking in mind that Al- Muthanna Province is the second larger on in Iraq regarding the space dimension, clarifying the major request for more and more work in this field. The number of the physiotherapists per head of population varies enormously ranging from 1: 1.750 in Australia to 1: 212.000 in India with the average ratio being 1: 16.000 people,⁽⁷⁾.

Through data of the questionnaires which specified for to patients in need of physiotherapy and rehabilitation and their relatives of the first degree caregivers during treatment , the question was about the possibility of engaging them in courses or workshops or even seminars about the training methods of physical treatment, there was a great desire and acceptance of the idea of those targeting categories .This response is interpreted from a view that they suffered great burdens to provide the treatment and benefits from it.

As stated in the results was monitoring a large proportion of cases that require treatment, but their qualifications are not available in the province, imposing them to travel to neighboring provinces with the financial burden, the time and effort threat they pose, with all these terms may be exhausted if the patient is unable to move, the problem is of greater dimensions,

This case has been monitored by a research team worked in this view of point. Many researchers and clinicians believe the effectiveness of existing physical therapy interventions can be improved by targeting the provision of specific interventions at patients who respond best to that treatment. Although this approach has the potential to improve outcomes for some patients, it needs to be implemented carefully because some methods used to identify subgroups can produce biased or misleading results. They assessed the validity and generalizability of the studies designed to identify subgroups of responders to physical therapy interventions. The key messages are that subgroups should be identified using high-quality randomized controlled trials, the investigation should be limited to a relatively small number of potential subgroups for which there is a plausible rationale, subgroup effects should be investigated by formally analyzing statistical interactions, and findings of subgroups should be subject to external validation,⁽⁸⁾ .

With the emergence of patient – centered care, consumers become effective managers of their care, in other word, effective consumers, to support patients to become effective consumers, a number of strategies to translate knowledge to action KTA with varying success, the use of this strategies can be helpful when framing , planning and evaluating knowledges translation activities,⁽⁹⁾ .

The results revealed that the professions in physical therapy in the province in generalizability have a good practice in musculoskeletal disorders, accident`s victims including installing the prosthetics and this result can be understood through two points , the first one is that the physiotherapy and rehabilitation is introduced to the medical specialties in the country recently i.e. the last 10 or 20 years and that not all the precise activities are covered during and within the curriculum of the academic institutions , the second point is that there is a lack in the training courses and workshops which deal with the rest subspecialties of physiotherapy and rehabilitation .

The American Physical Therapy Association defined the physical therapy techniques as skilled hand movements that applied at varying speed and amplitudes to increase tissue extensibility, increase range of motion, induce relaxation, modulate pain and reduce soft tissue swelling elsewhere in the body, that mean physiotherapists may cover the whole cases and requirements of the patients,⁽¹⁰⁾ . In other countries of the world physical therapy is a term used to describe a thrust technique performed in pathological endrange of a joint whereas mobilization means non thrust sustained or oscillatory low velocity movement at the end of the range of joint motion,⁽¹¹⁾ .

Physiotherapy involves the interaction between the physiotherapist, patients or clients , families and care givers in a process of assessing movement potential and establishing agreed upon goals and

objectives using knowledge and skills ,⁽¹²⁾ , the necessarily means attention to the experiences and skills and scientific potential for workers in this field as well as patients and first - degree relatives to provide the best service, at the same time building the expertise and skills within the community to address any future need . The lack of courses, workshops and symposiums has negative effects in this field of medicine.

In Iraq there is no independent specialized institution from which the physical therapists and their assistants graduated, in reality there is a very modest potential and abilities department in the college of the Medical and Health technology and the institute of technical medicine, both are in Baghdad the capital and the students from the both institutions graduated annually are too small and does not meet the needs of the country, the Physical therapy degree is B.Sc. has a 4 year period graduate program after high school with summer training courses in many hospitals (graduation requirement). The only college in Iraq is located in the medical city in Baghdad, Bab Al- Muadam, when this situation is compared with the experiences of the advanced countries in the world; the conclusion is that there is desperately need for more work to reach the access got by those countries.

Now a day, on of the most acclaimed curricula in the world based on problem – solving practice,⁽¹³⁾ . The near future will witness curricular development and applications based on integrated models like Client oriented research and evaluation CORxE and clinical decision making paradigm,⁽¹⁴⁾ . **There is a need to review the methods and forms of physical therapy education of the world.** The World Confederation of Physical Therapy (WCPT) recognizes a considerable diversity in the social, economic, cultural, and political environments in physical therapist education throughout the world. It recommends physical therapist entry-level educational programs be based on university or university-level studies, of a minimum of four years. There is innovation and variation in program delivery and in entry-level qualifications, providing that any program deliver a curriculum enabling the physical therapists to attain knowledges, skills, and attributes to be autonomous practitioners, that can work in collaboration with other members of the health care team,⁽¹⁵⁾ .

Curricula in the United States are accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE) , the commission reported that there are 25,660 students enrolled in 210 accredited PT programs in the United States in 2012. The physical therapist professional curriculum is as rigorous as the traditional medical curricula and includes content and learning experiences in the clinical sciences (e.g., content about the cardiovascular, pulmonary, endocrine, metabolic, gastrointestinal, genitourinary, integumentary, musculoskeletal, and neuromuscular systems and the medical and surgical conditions frequently seen by physical therapists).

Physical therapist assistants must be able to deliver treatment and physical interventions for patients and clients under the supervision of a physical therapist. Physical therapist assistants in the United States are trained under associate of applied sciences curricula specific to the profession, CAPTE reported that there are 10,598 students enrolled in 280 accredited PTA programs in the United States in the same year,⁽¹⁶⁾ .

Curricula for the physical therapist assistant associate degree include: anatomy & physiology, exercise physiology, human biology, physics, biomechanics, kinesiology, neuroscience, clinical pathology, behavioral sciences, communication, ethics, research and some other coursework as required by individual programs,⁽¹⁷⁾ .

In Nigeria, Physiotherapy training is a 5 year Bachelor of Physiotherapy or Bachelor of Medical Rehabilitation degree programs. A 1-year clinical internship program under the supervision of senior and experienced clinician physiotherapists is required upon graduation from an accredited University before the new graduate can be licensed to practice as a physiotherapist,⁽¹⁸⁾ .

Conclusions:

The following data were extracted:

1. The number of the professions in physical therapy and rehabilitation is small despite the fact that the figures in the study indicates that the number less than that in Australia and more than that in India but still it is not enough to cover the need of the province which has a very large conservative space being the second one in the country. The workers from health care qualifications make them able to handle all the cases and only within their knowledge on structural machine-muscle.
2. The clinical experience and theoretical informations of the professions in physical therapy and rehabilitation are limited to deal just with the musculoskeletal injuries and lacking to wide experiences of all areas that need such interventions.

3. Absence of females within the working staff of this specialty.
4. Lack of training courses, workshops, symposiums for training and increasing the skills of the workers as well as patients and their relatives of the first degree.
5. The lack of a long-range strategy for supporting this field of health care in the province while the professions in physical therapy and rehabilitation aren't considered within a title, are they nurses, associate physicians, clinicians, which require a closer look and categorizing.

Recommendations:

- 1- First step include initiating colleges for educating physical therapy and rehabilitation with an entry – level of four years, these colleges evenly first located in Baghdad, Mosul, Basra's and Kurdistan region, they start with wide acceptance rate to increase the number of specialists in the field of health care throughout the forward years, this step is then followed with the second step which includes spanning the number of the colleges to be one in every Iraqi University.
- 2- Enriching the curricula of the colleges of nursing with intensive courses of physical therapy and rehabilitation in the third and fourth years to provide them with the theoretical bases and practical skills to deal with any case need such intervention.
- 3- Encouraging female students to join the Physical Therapy and Rehabilitation College as well as the interest in the intensive courses which will added to the curricula of colleges of nursing in order to find enough of them to work within their provinces, districts and areas.
- 4- Expanding the perceptions of nurses working in health care by involving them in training courses inside the country and abroad in the most advanced hospitals in the world, as well as workshops and seminars related to this profession to find out nurses who can deal with all the cases that need this kind of treatment and care.
- 5- Training courses and workshops for the patients who are in need of a long period of treatment as well as their relatives of the first degree to enable them relying on themselves in the performance of many therapeutic services as well as to the level of health awareness up to deal with cases that need such experts.

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