

REFLECTION OF YOUNG FELLOWS IN CLINICAL PRACTICE OF PHYSICAL MEDICINE AND REHABILITATION RESIDENCY PROGRAM

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ABSTRACT

Objective: To identify various difficulties in clinical practice faced by young physical medicine and rehabilitation (PMR) fellows.

Study Design: Qualitative study.

Place and Duration of Study: The study was carried out at Armed Forces Institute of Rehabilitation Medicine (AFIRM) from Aug 2017 to Sep 2017.

Material and Methods: The study was carried out on ten physical medicine and rehabilitation fellows, who have cleared their fellowship exams in last 5 years. The study utilized online questionnaire followed by in-depth; telephonic interviews until the point of data saturation. The data was analyzed through thematic analysis. The data was transcribed in six stages to observe defining meaningful patterns. It was analyzed manually to draw conclusions.

Results: The most common problems observed by young fellows were difficulty in performing specialized electrodiagnostic procedures, interpretation of urodynamics results and performing certain pain procedures including supra-scapular nerve block, platelet-rich plasma (PRP) and meralgiaparesthetica block. It was followed by managing specialized population including geriatrics, cerebral palsy and amputees and counseling skills.

Conclusion: The skills component and specialized population management were deficient, though, sufficiently covered in the curriculum. So training institutes must consider certain changes in the teaching and learning environment to improve the identified areas.

Keywords: Clinical practice, Physical medicine and rehabilitation, Residency program, Young fellows.

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INTRODUCTION

Physical medicine and rehabilitation (PMR) is an emerging speciality in Pakistan. The speciality is based upon the concept of optimal restoration of loss of function through accurate diagnosis, development of realistic goals and development and execution of management plan. The management usually requires a team of allied health services. There have been continued developments in the field worldwide. Due to the unique nature of the speciality, it depends a lot on technology. Therefore, a lot of up-to-date knowledge of the technology trends and advances is needed. The ever changing treatment options and guidelines in the field need a lot of

latest knowledge. Moreover, the demands of the patients also increased tremendously with the introduction of the internet era^{1,2}. The speciality started as fellowship program in 1997 by College of Physicians and Surgeons Pakistan (CPSP)³. While a rigorous residency program is in place since the introduction of the speciality in Pakistan by CPSP, there has been enormous changes taking place in the last decade. In general, the residents after qualifying fellowship examination are doing well in Pakistan and abroad as acknowledged by their colleagues and hospital administration. However; few fellows find it difficult to work independently following their fellowship. With this background, a study was planned to get feedback from the young fellows to assess their early clinical practice difficulties, with the aim to improve training at the institutes for delivery of better fellows in the

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subject, hence improving the quality of healthcare system delivery in the field of PMR.

MATERIAL AND METHODS

The study was carried out at Armed Forces Institute of Rehabilitation Medicine (AFIRM) from August 2107 to September 2017, after formal approval of hospital ethical committee. PMR fellowship program is only run by CPSP in Pakistan. Therefore, the study was carried out on PMR fellows of CPSP who have cleared their fellowship exams in last 5 years. All those PMR fellows, who are working in Pakistan, but received their degree from abroad were excluded from the study. As PMR is a new emerging but minor speciality in terms of number of candidates appearing in fellowship exam each year, the number of candidates qualifying in each fellowship exam is usually 1 or 2. So 10 participants, who have cleared the exam in last five years and given informed consent were included in the study. Clinical practice was the performance by young fellows in outdoors and indoor in preparedness, patient satisfaction, skills (both hands on & communication/interpersonal or teamwork). The residency program was meant to be CPSP residency program of 4 years duration including rotations in different specialities. Young fellows were the CPSP fellows in PMR who has passed fellowship exam in last five years.

Data Collection

The data were collected in two phases⁴ using the Driscoll reflection model⁵. A questionnaire was prepared based upon the expected competencies of PMR residency program. In the first phase, the questionnaire was sent through email and data were gathered. After collecting the data through a questionnaire, in the second phase, structured in-depth interviews were carried out on telephone, to obtain further data, until the level of data saturation, i.e. no new information was being provided. The questionnaire was asked to identify the problems regarding practice/delivery of health care in the field of PMR. The anonymity of the participant was

ensured. The process of utilization of the information in research was explained. The interview questions were developed based on the information gathered through the questionnaire. Every effort was made to limit the interview time to 5-6 minutes. The interviews were recorded with permission and later on, the transcript was prepared through the recording.

Data analysis

The data were analyzed through thematic analysis. The data were analyzed in six stages to observe defining meaningful patterns⁶. In stage one, the data initial analysis and familiarization was carried out. In stage two, coding was done. In stage three, themes were identified. In stage four; review of the themes was carried out. In stage five, themes were given names and in final, i.e. stage six, conclusions were made.

RESULTS

The most common problem observed by young fellows was difficulty in performing certain skills and managing specialized populations including geriatric, cerebral palsy and amputees. It was followed by counseling skills. The identified themes and conclusions are summarized in the table.

Procedural Skills

It was one of the common difficulties explained by the fellows. Although, fellows were quite confident in performing routine procedures, yet they explained certain difficulties in performing specialized procedures including RNS, H-Reflex, etc. When asked for reflection on these issues, the fellows gave different reasons including lack of expertise of faculty, out of order machines and even few described the lack of interest as the main reason for the deficiency.

Managing Specialized Population

The second common problem identified by young fellows was difficulty in preparing a comprehensive rehabilitation plan for the specialized patient population including geriatrics and cerebral palsy. When asked for the possible reasons for the issue, the answer was lack of

proper training by the faculty, difficulty in communication with the patients and families and performing a clinical examination. Most of the residents also expressed their concern about amputee rehabilitation. The managing patients with upper and lower limb amputations, especially myoelectric hand and the modular prosthesis was the main problem area. They described gait analysis of the lower limb amputee of either poor quality or they were not confident with the findings. When they were asked about their reflection about the issue, the residents gave varied responses. Few described the lack of interest, other gave lack of technical knowledge and few described rapid advancements in the field as the source of their problem.

impairments resulting from various inherited and acquired neuromuscular disorders³. Though, various studies have been carried out on the clinical preparedness of residents program through reflections of residents and young fellows⁷⁻⁹, no such study has ever been carried out in PMR. PMR has many aspects unique from general medical fields. One is the multidisciplinary team management involving many allied health professionals including physiotherapists, psychologists, speech therapists, occupational therapists, rehabilitation nurses and prosthetics and orthotics etc¹⁰. Secondly, the chronic or permanent disabilities with pain management are one of the prime concerns. Thirdly, the diagnostic side with ever advancing electrodiagnostic

Table: Themes and conclusions.

S No	Themes	Conclusions
1	Procedural skills	Performing repetitive nerve stimulation (RNS), blink reflex, H- reflex, interpretation of urodynamics, performing supra-scapular nerve block, platelet-rich plasma (PRP), meralgia paresthetica block
2	Managing specialized population	Geriatric, cerebral palsy and amputees in both indoor and outdoor
3	Counseling skills	Counseling skills in indoor and outdoor to patients and families

Counseling Skills

The young fellows described poor counseling skills as one of the major deficiency when they started their clinical practice. The deficiency was in indoor and outdoor patients and families. They found special difficulty in ailments with a poor prognosis like cerebral palsy, muscular dystrophy, spinal cord injury and amyotrophic lateral sclerosis. When they were asked about the possible reason for the issue, most of them responded the lack of supervised training as the sole cause. When they were asked that if they were ever given any chance to learn or any role-playing by faculty, the response was negative, with only chance they got was during the CPSP mandatory workshops as described by the residents.

DISCUSSION

The PMR physicians deal with the prevention, diagnosis, and treatment of functional

medicine. The fourth is the prosthetics and orthotics with a lot of engineering involved. There is no undergraduate training in the subject of PMR in Pakistan at present¹, therefore, the residents lack background knowledge in the subject on the start of the residency program. This, in turn, keep the resident's focus on getting the factual medical knowledge of PMR basics, instead of patient-oriented, problem-solving conceptual knowledge. Although there is literature available about the individual allied health services workplace assessment^{11,12} no such studies are available about the rehabilitation team work, with PMR fellow as a team manager. Kamei *et al*¹³ carried a study about the reflection on pediatric fellows but no such study is available in the literature about PMR. The knowledge gained through the textbooks, journals etc lack one important component of the experience. This issue was especially highlighted in training

in PMR in initial batches of fellowship, as limited mentorship was there in the field. The speciality started in the late 1990s, with the first batch did a fellowship in 2001-2002¹. The initial batches faced the problem of limited work experience, as not all that was experienced by them was part of the curriculum or textbooks¹⁴. With residents having a lot of theoretical knowledge when coming to practical application, they still faced dilemmas of application due to lack of the experience component as expressed by great educational theorist Dewy *et al*¹⁵. The idea which was later explored by Donald Schon¹⁶. The idea to settle the difficulty in healthcare professionals, who would face fewer problems when they would start their practical life was evaluated by Clandinin¹⁷. His main concern was to settle the problems of individuals, through self-reflection. Through this effort, the professionals can assess their own shortcomings. Therefore, initial reflection can result in an expression of his own preparedness following residency. The main theme of our research was the same as narrated by Clandinin and Clonnelly¹⁷ but through a different angle. Their effort was to self-assess for the purpose of improvement of professionalism, whereas in 2006, at the University of Alberta, Clandinin, and Cave¹⁸ started researching about the reflection of life experience in residents of family medicine. Their idea was to assess their reflection about assessing knowledge during the program. It was reflection "in action". Though, the theme was to assess their knowledge for improvement, while our study was to reflect the young fellow's problematic areas to review or analyze the effort of medical educators of the program. During the study, we identified certain areas which are the backbone of the rehabilitation medicine speciality. Communication skill is the prime skill in the speciality. As the speciality deals with disability, the empathy and knowledge are two important factors which are required in this specialty due to unique nature of the conditions and diseases managed by the fellows. The other utmost skill is procedural skill including certain electrophysiological procedures

and urodynamics. Both of them are required for managing certain populations including spinal cord injury, traumatic brain injury, stroke, neurodegenerative, neuromuscular and autoimmune disorders. These important diagnostic modalities provide useful information for diagnosis, prognosis and most importantly, for the quality of life. In the absence of the ability to use these procedures like pain procedures, RNS, evoked potentials, urodynamics etc, the delivery of rehabilitation medicine will be grossly hampered. The extremes of ages i.e. children and senior citizens, in the society, are most vulnerable to the diseases. Early life is prone to congenital, malformation, infectious diseases or conditions. Whereas, later stages of life are more prone to degenerative, infectious, or malignancy related conditions. The both age groups have also another common thing, which is the chronicity of the diseases. So having difficulty in managing these population strata in PM & R will definitely affect the clinical utility of the speciality. Similarly, amputee rehabilitation is another unique competency. The unique population has very different set of issues, including social, medical and technological. As there is no other speciality, who can manage all these aspects, lack of ability or poor performance in managing these patients will severely affect the effective delivery of services. Due to very sensitive nature of the study, there is a possibility that some fellows may not have given the right information. As the data collection was online/ distant through emails and telephone, the data may be less rich¹⁹. The small sample was due to a limited number of available fellows in the subject of PMR. Rehabilitation medicine is in the initial phase of evolution in Pakistan. There is very less number of qualified professionals in the field i.e. around 50, in the 6th largest country in the world. It is the need of the hour to put the best effort on the quality of training for the optimal delivery of rehabilitation medicine services in the country with the given limited number of professionals in the field, available at present.

CONCLUSION

The skill component and specialized population management were described as the most deficient areas, though, covered well in the curriculum. The identified areas are quite important in the delivery of effective rehabilitation services to the patients and society

RECOMMENDATION

Training institutes must consider revision of mode of information transfer, teaching strategies, and use of modern technology to improve the identified deficient areas.

CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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