

PREVALENCE OF NON COMMUNICABLE DISEASES AND THE ROLE OF PHYSIOTHERAPY AS ITS TREATMENT, RELATED TO GENDER AND SOCIOECONOMIC STATUS

Mahboob ur Rahman¹, Rameen Habib², Amin Ul Haq, Farkhanda Rahman⁴

ABSTRACT

Objective: To access the prevalence of non communicable diseases and the role of physiotherapy as its treatment, related to gender and socioeconomic status.

Material and Methods: This is cross sectional study, conducted in Habib Physiotherapy complex Hayatabad Peshawar from November 2013 to April 2014. In this study one hundred and fifty three patients aged 19 to 80 years were enrolled. The mean age among the study participants was 50 years. On gender basis, participants were subdivided into two groups. The percentages of different non communicable diseases were calculated. Socio economic status of these patients was also recorded.

Results: Among the study participants, peak patients seeking physiotherapy were hypertensive, males being (32.60%) compared to females (29.51%). The socio economic status of majority patients was observed to be poor (45.8%) with regard to medium (30.7%) and upper class (23.5%) This study demonstrates that the burden of the major categories of ill-health and disability is greater among lower socio-economic groups.

Conclusion: Physiotherapy has important role in cure of non communicable diseases. Non-communicable diseases are increasingly being reported by lower socio-economic groups. It will be critical for government policies to tackle the underlying social determinants of ill health, including explicit attempts to address the conditions that predispose those who currently bear the greatest burden of ill-health to the risks of disease and disability.

INTRODUCTION

Non communicable diseases are the biggest global killers today.¹ Sixty-three percent of all deaths in 2008 – 36 million people – were caused by NCDs.² Nearly 80% of these deaths occurred in low- and middle-income countries, where the highest proportion of deaths under the age of 70 from NCDs occur.³ Physiotherapists specialize in human movement and physical activity, promoting health, fitness, and wellness.

The profession of physiotherapy helps millions of people every year to prevent non-communicable diseases and their risk factors.⁴ They also manage their effects, along with the effects of aging, illness, accidents, and the stresses and strains of life.⁵

The World Health Organization points out that physical inactivity is one of the leading risk factors for

global mortality, causing 3.2 deaths annually, and that physical activity can reduce non-communicable diseases, it is clear that the profession has a major part to play.⁶ Non communicable diseases (NCDs) namely cancers, cardiovascular disease, chronic respiratory diseases and diabetes are chronic costly but largely preventable diseases.⁷ People with chronic health problems can improve their health by learning how to exercise safely under the guidance and instruction of physiotherapists.⁶⁻⁷ Physiotherapy doesn't just mean more healthy people, but more productive people who can contribute to countries' economies.⁸ Their services are provided in an atmosphere of trust and respect for human dignity and underpinned by sound clinical reasoning and scientific evidence. The message is clear: physiotherapists are the movement, physical activity, and exercise experts and a resource in the battle against non-communicable disease that should never be overlooked.⁹ There is clear evidence that preventive interventions work and that improved access to health care can reduce the burden of mortality, disability and premature mortality.¹⁰ Physiotherapy can play an important role in preventing and managing problems.¹¹ The objectives of the present study were to find the prevalence of non communicable disease and the role of physiotherapy as a treatment related to gender and socioeconomic status. The study demonstrates that the burden of the major categories of ill-health and disability among socio-economic groups. This study is expected to help the less privileged disabled people in the society to attain the basic physiotherapy health

Chairman, Mahboob School of Physiotherapy, Gandhara University Peshawar

2nd Year Student, Rehman Medical College, Peshawar
Associate Professor Biochemistry KGMC Peshawar
Physiotherapist, Habib Physiotherapy Complex, Peshawar

Address for correspondence

Dr. Mahboob ur Rehman
Mahboob School of Physiotherapy,
Sector B – 4, Phase 5, Hayatabad
PESHAWAR – Pakistan
Cell: 0300-8593184

needs and services.

MATERIAL AND METHODS

This is cross sectional study, conducted in Habib Physiotherapy complex Hayatabad Peshawar from November 2013 to April 2014. In this study one hundred and fifty three patients aged 19 to 80 years were enrolled. The patients were selected from outdoor patient department. All the patients were previously diagnosed and had taken treatments from their concerned physicians. On gender basis, participants were subdivided into two groups. Males were ninety two compared to females which were fifty one. The mean age among the study participants was 50 years. The percentages of different non communicable diseases were calculated. Socio economic status of these patients was also recorded.

The blood pressure was measured for every patient. The patients were marked hypertensive that has systolic blood pressure of ≥ 140 mmHg and/or diastolic blood pressure of ≥ 90 mmHg, or using medication to lower blood pressure.

Socioeconomic status depending upon monthly income Pakistani rupee (PKR) was categorized into three classes: low (Rs<5,000), middle (Rs<5,000-20,000), and high (Rs<20,000). Those patients with professional jobs are likely to have a monthly income of Rs<20,000 owing or having a house rented in costly

Age Mean+sd in both group:

Minimum	Maximum	Mean	Std. Deviation
10	90	50.18	19.321

Gender Wise Distribution:

Sex	Male	Females
Male	92	60.1
Female	61	39.9
Total	153	100.0

Age Mean+Sd in Gender

Gender	Minimum	Maximum	Mean	Std. Deviation	t.test	p.value
Male	10	90	49.24	19.964	-0.735	0.463
Female	11	80	51.59	18.381		

Economic Status wise distribution:

Economic Status	Male(92)	Female(61)	Frequency	Percent	PValue
Poor	47	23	70	45.8	0.005
Middle	29	18	47	30.7	Referent
High	16	20	36	23.5	0.02256
Total	92	61	153	100.0	

areas, and having cars were considered to be part of the high-income group, regardless of reported income.¹²

STATISTICAL ANALYSIS

The collected data will be analyzed by frequency, percentage and by Chi- Square test.

RESULTS

Among the study participants, peak patients seeking physiotherapy were hypertensive males being (32.60%) compared to females (29.51%). This study demonstrates that the burden of the major categories of ill-health and disability is greater among lower socio-economic groups. The socio economic status of majority patients was observed to be poor (45.8%) with regard to middle (30.7%) and upper class (23.5%). The results from these studies are crucial for informing patients, clinicians and decision/policy-makers about the best treatments to be implemented to improve patient outcomes and the efficiency of the health care system.

DISCUSSION

Some decades earlier when the physiotherapy was growing and thriving the doctors, healthcare professionals and patients used to distrust or be indecisive regarding the use of physiotherapeutic techniques but now-a-days physiotherapy has been recognized well practiced, well accepted and physiotherapy deserves to be so.¹³ Healthcare professionals actually admit the importance of physiotherapy. Non communicable diseases are increasing in the populations which require long-term care.¹⁴ In this study the prevalence of non communicable diseases and the role of physiotherapy related to gender and socioeconomic status was found out. In our study the leading NCD risk factor for which patients seek physiotherapy is raised blood pressure in males being (32.60%) compared to females (29.51%). World health organization has also demarcated raised blood pressure as the major risk factor of non communicable disease group is estimated to cause 7.5 million deaths, about 12.8% of the total of all annual deaths.¹⁵ Most NCDs are strongly associated and linked with:

History of Disease distribution in gender:

History	Male (%)	Female (%)
Neurological conditions	2(2.17)	4 (6.55)
Cancer	2 (2.17)	3(4.91)
Guillain Barre syndrome	1(1.08)	1(1.63)
Hypertension	30(32.60)	18(29.51)
Muscular dystrophy	3(3.2)	3(4.91)
Type 2 diabetes	4(4.3)	3(4.91)
Diabetes/Hypertension	28(30.43)	18(29.51)
Postnatal	0	4(6.66)
Pyrexia of unknown origin	11(11.9)	4(6.56)
Sciatica	2(2.17)	0
Spinal surgery	9(9.7)	3(4.92)
Total	92	61

physical inactivity, unhealthy diet. Physical inactivity is a key independent modifiable risk factor for chronic diseases and all-cause mortality.¹⁵ Participation in 150 minutes of moderate physical activity each week (or equivalent) is estimated to reduce the risk of non communicable diseases as ischemic heart disease by approximately 30%, the risk of diabetes by 27%, and the risk of breast and colon cancer by 21–25%.¹⁶ Additionally, physical activity lowers the risk of stroke, hypertension and depression. It is a key determinant of energy expenditure and thus fundamental to energy balance and weight control. Physiotherapists apply different intervention which includes counseling about risk factors, patient education to prevent future recurrence and behavior modification. The second risk factor for which the patient seeks physiotherapy in our study was male patients who are diagnosed as diabetic and they were hypertensive too. The male patients were 28(30.43%) compared to females which were 18 (29.51%). The study done in India¹⁷ also highlighted 31% of the patients with non communicable diseases to be of cardiovascular origin.

In general, differences in socioeconomic status are associated with differences in lifestyle and health conditions, where low socioeconomic status is related with an adverse health outcome.¹⁸ Non-communicable diseases, which are frequently seen as diseases of affluence, are increasingly being reported in our study by lower socio-economic groups that is (45.8%) with regard to middle (30.7%) and upper class (23.5%). The study was performed in private institution but the patients seeking physiotherapy in spite of being poor is interesting. It shows the cooperation fate and work hard of the physiotherapists and organization as a non-profit, facilitate low income group.

Life style related diseases are all the impact of the rapidly growing urbanization, where human beings are

more treated as machines and they are less concerned with their individual wellness. The non communicable diseases put a lot of burden (financial, mental, and social) on patients which could be prevented. Studies shows that if proper care was taken with diet, back care and exercises these diseases could be prevented. In our study the age group selected was 19 to 80 years. As the physiotherapy is not the related to any specific age it is helpful in all aspects of life. In our study the female seeking physiotherapy was compared with male group. Women and men have different levels of exposure and vulnerability to NCD risk factors. Females are more at risk from these silent killers. Every year 35 millions people die every year from non communicable diseases, of which 18 millions are women.¹⁹ Non communicable diseases represent the biggest threat to women's health worldwide increasing impacting on women in developing countries in their most productive years.

REFERENCES

1. World Health Organization (2008) 2008-2013 Action Plan for the Global Strategy for the Prevention and Control of Non communicable Diseases Geneva
2. Lord SR, Castell S, Corcoran J, Dayhew J, Matters B, Shan A, Williams P (2003). The effect of group exercise on physical functioning and falls in frail older people living in retirement villages: a randomized, controlled trial. Journal of the American Geriatrics Society, 51:1685-1692.
3. Hill-Westmoreland, E. E., Soeken, K. and Spellbring, A. (2002). A meta-analysis of fall prevention programs for the elderly: How effective are they? Nursing Research 51: 1–8
4. Folman, Y., Gepstein, R., Assaraf, A. and Liberty, S. (1994). Functional recovery after operative treatment of femoral neck fractures in an institutionalised elderly population. Archives of Physical Medicine and Rehabilitation 75: 454–456.

5. Jensen, J., Nyberg, L. et al. (2003). Fall and injury prevention in residential care--effects in residents with higher and lower levels of cognition. *Journal of the American Geriatrics Society*. 51(5): 627-35.
6. Roddy, E., Zhang, W., Doherty, M., Arden, N.K., Barlow, J., Birrell, F., et al, Evidence-based Recommendations for the Role of Exercise in the Management of Osteoarthritis of the Hip or Knee – The Move Consensus, *Rheumatology*, 2005, 44(1), 67-73.
7. Colle F, Rannou F, Revel M, Fermanian J, Poiraudieu S: Impact of quality scales on levels of evidence inferred from a systematic review of exercise therapy and low back pain. *Arch Phys Med Rehabil* 2002, 83(12):1745-1752.
8. George SZ, Fritz JM, Bialosky JE, Donald DA. The effect of a fear-avoidance-based physical therapy intervention for patients with acute low back pain: results of a randomized clinical trial. *Spine*.2003;28:2551-2560
9. Lautenschlager N, Almeida OP, Flicker L, Janca A. 'Can physical activity improve the health of older adults?' *Annals of General Hospital Psychiatry* 2004; 3:12.
10. Armijo S, Macedo LG, Gadotti IC, Fuentes J, Stanton T, Magee DJ. 'Scales to assess the quality of randomized controlled trials: a systematic review.' *Phys Ther*. 2008; 88:156-175.
11. Weuve J, Kang JH, Manson JE, Breteler MBM, Ware JH, Grodstein F. 'Physical Activity, Including Walking, and Cognitive Function in Older Women'. *AMA* 2004; 292: 1454-1461.
12. Iqbal Z, Basit A, Badruddin N, Yaqoob M; Diabetes Risk factors in Middle income Pakistani school children" *Pakistan journal of Nutrition* 2004, vol 3(1), pp 43-49.
13. Canadian Physiotherapy Association: The Value of Physiotherapy in Specific Patient Populations (Information sheets that include Stroke, Cardiovascular, Low Back Pain, Paediatric Care): <http://www.physiotherapy.ca/Advocacy/Legislation/The-Value-of-Physiotherapy>
14. Fricke, M., for Manitoba Branch of the Canadian Physiotherapy Association and the College of Physiotherapist of Manitoba, *Physiotherapy and Primary Health Care: Evolving Opportunities*, 2005.
15. Global health risks: mortality and burden of disease attributable to selected major risks. Geneva, World Health Organization, 2009.
16. Whitworth JA. World Health Organization/International Society of Hypertension statement on management of hypertension. *Journal of Hypertension*, 2003, 21:1983-1992.
17. Cardiovascular Disease Trends in India 11/16/06 Neresh Tehran, Escorts Heart Institute and Research Centre, New Delhi, India.
18. Blaxter M. Whose fault is it? People own conceptions of the reasons for health inequalities. *Soc Sci Med*. 1997; 44:747-756.
19. World Health Organization (2005) Preventing Chronic Disease: A Vital Investment: WHO Global Report Geneva

ONLINE SUBMISSION OF MANUSCRIPT

It is mandatory to submit the manuscripts at the following website of KJMS. It is quick, convenient, cheap, requirement of HEC and Paperless.

Website: www.kjms.com.pk

The intending writers are expected to first register themselves on the website and follow the instructions on the website. Author agreement can be easily downloaded from our website. A duly signed author agreement must accompany initial submission of the manuscript.