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Research Article

Prevalence of Backache Patients Presented to Surgery OPD at Al-Nafees Medical College and Hospital

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Abstract

Objective: To identify the frequency of backache patients at Al-Nafees Medical College and Hospital, Islamabad with respect to age and gender.

Study Design: A Retrospective Observational study.

Place and Duration: Department of surgery at Al-Nafees Medical College and Hospital, Isra University Islamabad Campus from 1st January 2014 to 31st December 2014.

Methodology: Retrospective analysis of all the backache patients that visited surgery OPD in 2014 was done for which the data was collected from the written records of surgery out-patient department of Al-Nafees Medical College and Hospital. For evaluation, SPSS v23 was used to know the ratio among backache and non-backache patients; Gender and patients from different age groups. Then we also compared our data with various previously done literature.

Results: In 2014, total number of patients that visited Surgery OPD of Al-Nafees Medical College and Hospital, Islamabad were 4575 in which 89% were non-Backache Patients while 11% were backache patients. In that 485 patients 78% were females while 22% were males. The age group in which most of the patients presented with backache is 31-40 years i.e. 31%. Our results also shows that backache is more common in working age group i.e. from 21-50 years 76.3% which is more than 3/4th of backache patients.

Conclusion: Prevalence of backache in increasing over passing decades and now has become global burden and now it should be controlled. Backache is the most common condition especially among working population and females as it has high impact on one's daily life and disability.

Keywords: Backache; Prevalence; Out-Patient Department

Introduction

Backache is one of the most common and disabling health problem that affects individuals at some point in their lives [1,2], around 80% of total population experience at least an episode of backache [3]. Previous studies estimated that 5-10% of backache individuals develop Chronic condition which may result in burden on individual in terms of financial burden, activity limitations, sick leaves and psychological stresses [2,4-6] and may also affect families and societies, industries and governments, due to which individuals may seek help from health care professionals [2,6-8] either physicians or physio-Therapist or chiropractors [9] in chronic condition than acute condition [10].

Literature shows that majority of population is suffering from backache in acute condition that may have limited disability [11] while those who develop chronic backache have more burden than acute backache [12]. The most common type of backache that has usually been reported is low back pain (LBP) [13].

About 95% individuals recover from the condition in few months of onset without going in chronic condition [10]. However, few individuals that could not recover may land into chronic backache, it may be defined as backache that lasts for 3 months or longer [10]. Recurrent backache is also a common complain especially in working population around 20 - 44% individuals experience it within 1 year while 85% of individuals' experience recurrent backache episode in lifetime [10].

Studies from England shows substantially increased prevalence of backache over the past decades [14]. while studies done in united states, Germany, and Finland shows little change over the past decades [10,15,16]. In japan backache is the 5th most common reason among population that leads them to seek help from health care professionals [17]. previously reported prevalence of backache has varied across studies and geographical differences [17]. Studies from England, Canada, Germany, Australia, Denmark and Hong Kong has reported 19-37% and 40-86%-point prevalence and lifetime prevalence, respectively [11].

Previous studies show subsequently increase in medication prescription in which they treated either with spinal injections [18,19] or surgery [20,21], or opioid medications [22] and this has been subsequently increased within past 2 decades [23].

Previous epidemiological studies show the positive association between backache and old age [24]. It is really important to know the prevalence of backache in low and middle class population countries. Determining the prevalence of backache and study the disability and factors that leads to chronic backache may help health care professionals in deciding the treatment strategies [17]. The objective of this study was to identify the frequency of backache patients at Al-Nafees Medical College and Hospital, Islamabad with respect to age and gender.

Methodology

This Retrospective Observational study was done at Surgery Out-patient Department at Al-Nafees Medical College and Hospital, Isra University Islamabad Campus of 1 year of period from 1st January 2014 to 31st December 2014. All backache patients that visited surgery OPD at ANMCH in the year of 2014 was included in the study. Simple Purposive sampling was used to filter all backache patients that visited Surgery Out-patient department in 2014 from surgery OPD records in context to age and gender.

Filtered Data was then entered in SPSS v23 and the data was then evaluated and was reviewed and compared in terms of backache and non-backache patients; Gender; and different age groups. Then the literature has been reviewed and our results has been compared with the results of previously done studies.

Results

Figure 1: Ratio of backache and non-backache patients with Gender wise ratio.

The ratio between backache and non-backache patient and in backache patients gender distribution was observed in this chart. The total number of patients that had visited Surgery OPD of ANMCH in the year of 2014 was 4575 in which 89% (n = 4090) were non-Backache Patients while 11% (n = 485) were backache patients. In that 485 patients 78% (n = 377) were females while 22% (n = 108) were males.

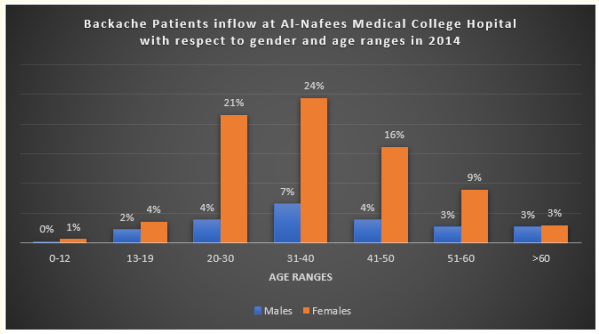

Figure 2: Ratio of Backache patients with respect to Gender and Different Age groups.

When the backache patients were distributed gender wise among age groups it has been observed that the age group in which most of the patients presented with backache is 31 - 40 years i.e. 31% (n = 150). While the age group in which least patients presented to us is 0-12 years in which only 4 patients, 1 male and 3 female patient presented to the Surgery OPD with the complain of backache. It could easily be observe that in every age group females presented more than with complain of backache. These results also shows that backache is more common in working age group i.e. from 21 - 50 years 76.3% (n = 370) which is more than $3/4^{th}$ of backache patients.

Our study strongly shows significant association between age and gender i.e. P = 0.004 among the backache patients presented to surgery outpatient department at ANMCH.

Discussion

In a systemic review done in 2010 shows that globally back pain was 9.4% (95% CI 9.0 to 9.8) prevalent. It shows that the mean prevalence according to gender in Asia was in males 9.08% and in females 7.78; in Europe in males 13.4% while in females 11.7%, in America 8.76% in males and 7.58% in females, in Australia 12.9% in males while 11.5% in females, in Caribbean 7% in males and 6% in females, in Oceania 8.6% in males and 7.6% in females and in Africa 10.86% in males an 9.06% in females. This review also shows the age-standardized prevalence was highest in western Europe population (mean: 15.0%; 95% CI 14.1 to 16.0) than north Africa/middle east population (mean: 14.8%; 95% CI 13.8 to 15.9), and lowest in the Caribbean population (mean: 6.5%; 95% CI 5.6 to 7.4) than central Latin America (mean: 6.6%; 95% CI 5.8 to 7.4). These statistics does not show significant change in prevalence from 1990 to 2010. Back pain is more among males (mean: 10.1%; 95% CI 9.4 to 10.7) than females (mean: 8.7%; 95% CI 8.2 to 9.3) which is contrary to our study in which back pain is more common in females than males [2].

A study done in japan shows lifetime age-standardized prevalence of back pain was 83.4% in Japanese population where 82.4% were males and 84.5% were females and 4-week age-standardized prevalence of back pain was 35.7% in Japanese population where 34.2% were males and 36.7% were females. This shows that in Japanese population females have more back pain than males which is similar to our study that females (77.7%) have more back pain than males (22.3%). Japanese study also shows that 10.1% males and 9.1% females had much high intensity back pain which leads them to absence from work ≥ 4 days. The prevalence noted in this Japanese studies have similar results as in Canada, Germany and Australia [11,25], as lifestyle in japan is westernized [17].

In a meta-analysis of 59 articles shows point prevalence of back pain was 12%, 12 months mean period prevalence was 33.6%; and mean lifetime prevalence was 39.9%. In this meta-analysis the mean prevalence according to region shows 39% in Europe, 45.5% in north America, 40.3% in Oceania, 27.7% in Africa, 49% in Asia. The hypothesis of this meta-analysis was that the lifetime prevalence is more than period prevalence and point prevalence which has been confirmed. This meta-analysis also shows that Balague., *et al*. reported the prevalence increases with increase in age i.e. 16% in children and 58% in adolescents, similarly jones at el reported lifetime prevalence among children was 18.2% and 65.6% in adolescents. Both of above reported prevalences were in favor of our study where we also observe that the prevalence of back pain increases with increase in age. According to gender meta-analysis has also proved that lifetime prevalence among females (Shebad., *et al*. reported 64.7% and Kovacs., *et al*. reported 69.3%) is more than males (Shebad., *et al*. reported 50.8% and Kovacs., *et al*. reported 50.9%). Which is also in favor of our study where females (77.7%) has higher prevalence than males (22.3%). But in contrary newcomer., *et al*. reported that males (57%) have higher prevalence than females (44%) wile Olsen., *et al*. reported no gender difference in lifetime prevalence [26].

In a study conducted by world health organization (who) on global ageing and adult health, the overall prevalence of back pain was 29.7% while according to the regions 22% in china, 40.5% in Ghana, 39.1% in India, 35.5% in Mexica, 55.7% in Russian federation and 38.5% in south Africa. Highest prevalence was noted in Russian federation i.e. 76.8% especially in Moscow and St Petersburg [27]. According to age groups the prevalence of back pain was 26.3% among participants from 50 - 59 years, 31.8% among participants from 60-69 years, 35.1% among participants from 70 - 79 years and 34.9% among participants that were 80 and plus. According to gender the prevalence was 24.2% in males and 34.9% in females which is also in favor of our study that females have higher prevalence than males. This study also states that higher the physical activity (except exercise) higher the chances to get back pain which is also in favor of our study which shows that the working age group has higher prevalence of backache than non-working age group [24].

In a global review done in 2012 showed that point prevalence was 11.9% ± 2.0% and 1-month period prevalence was 23.2% ± 2.9%, 1-year period prevalence was 38% ± 19.4% and mean prevalence was 31% ± 0.6% and lifetime prevalence was 39.9% ± 24.3%. It also showed that back pain is more prevalent among females than males and is more between 40 - 80 years of age both of these finding are in favor of our study [28]. Annual prevalence of chronic back pain was 15% - 45% with point prevalence of 30%. According to age groups chronic back pain is 15% in adults and 27% in elderly is prevalent, which is in contrary to our study where the prevalence of back pain was decreasing with increasing age with the transition from adult to elderly [29].

In a study done in brazil it has been reported that chronic back pain has been increased from 4.2% to 9.6% in last 8 years. The study stated that in 2002 the overall prevalence was 4.2% while 2.9% were males and 5.2% were females and according to age groups 1%, 3.1%, 5.3%, 7.7%, 4.9% and 5.3% prevalent among 20 - 29 years, 30 - 39 years, 40 - 49 years, 50 - 59 years, 60 - 69 years and ≥ 70 years, respectively. While in 2010 the prevalence increases drastically as overall back pain prevalence was increased up to 9.6% while 6.6% in males and 11.7% in females and according to age groups 3.9%, 7.6%, 10.8%, 12.5%, 13% and 12.9% prevalent among 20 - 29 years, 30 - 39 years, 40 - 49 years, 50 - 59 years, 60 - 69 years and ≥ 70 years, respectively. This study also shows that females are more prevalent than males in both the time periods and it also shows that chances of having back pain increases with increase in age but at certain point it reached its peak than with increasing age the chances of having back pain decreases, it might be due to less population cross that peak due to poor follow-ups, morbidities and mortalities. These results were approximately similar to our study where as in our study conducted in 2014 shows that now the overall prevalence is 10.6% and females have higher prevalence than males but the difference in our study and Brazilian study is their highest prevalent age group was 50 - 59 years while in our study the highest prevalent age group was 31 - 40 years, after 40 years of age prevalence of back pain decreases in our population [30].

Conclusion

Prevalence of backache in increasing over passing decades and now has become global burden and now it should be controlled. Backache is the most common condition especially among working population and females as it has high impact on one's daily life and disability.

Recommendation

Health services and research providers need to pay attention for better understanding the causes and associated factors (psychosocial, occupational and lifestyle), clinical course of backache, its prevention and its better management across different settings.

Bibliography

1. Meucci RD., *et al*. "Prevalence of chronic low back pain: systematic review". *Revista De Saude Publica* (2015): 49.

2. Hoy D., *et al*. "The global burden of low back pain: estimates from the Global Burden of Disease 2010 study". *Annals of the Rheumatic Diseases* (2014).

3. Rubin DI. "Epidemiology and risk factors for spine pain". *Neurologic Clinics* 25.2 (2007): 353-371.

4. Ricci JA., *et al*. "Back pain exacerbations and lost productive time costs in United States workers". *Spine* 31.26 (2003): 3052-3060.

5. Liao ZT., *et al*. "An epidemiological survey of low back pain and axial spondyloarthritis in a Chinese Han population". *Scandinavian Journal of Rheumatology* 38.6 (2009): 455-459.

6. Melloh M., *et al*. "Differences across health care systems in outcome and cost-utility of surgical and conservative treatment of chronic low back pain: a study protocol". *BMC Musculoskeletal Disorders* 9.1 (2008): 81.

7. Thelin A., *et al*. "Functioning in neck and low back pain from a 12-year perspective: a prospective population-based study". *Journal of Rehabilitation Medicine* 40.7 (2008): 555-561.

8. Esteban-Vasallo MD., *et al*. "Prevalencia de enfermedades crónicas diagnosticadas en población inmigrante y autóctona". *Gaceta Sanitaria* 23.6 (2009): 548-552.

9. Martin BI., *et al*. "Expenditures and health status among adults with back and neck problems". *JAMA* 299.6 (2008): 656-664.

10. Freburger JK., *et al*. "The rising prevalence of chronic low back pain". *Archives of Internal Medicine* 169.3 (2009): 251-258.

11. Schmidt CO., *et al*. "Back pain in the German adult population: prevalence, severity, and sociodemographic correlates in a multiregional survey". *Spine* 32.18 (2007): 2005-2011.

12. Becker A., *et al*. "Low back pain in primary care: costs of care and prediction of future health care utilization". *Spine* 35.18 (2010): 1714-1720.

13. Kordi R and Rostami M. "Low back pain in children and adolescents: an algorithmic clinical approach". *Iranian Journal of Pediatrics* 21.3 (2011): 259.

14. Harkness EF., *et al*. "Is musculoskeletal pain more common now than 40 years ago?: Two population-based cross-sectional studies". *Rheumatology* 44.7 (2005): 890-895.

15. Deyo RA., *et al*. "Back pain prevalence and visit rates: estimates from US national surveys, 2002". *Spine* 31.23 (2006): 2724-2727.

16. Hüppe A., *et al*. "Is the occurrence of back pain in Germany decreasing? Two regional postal surveys a decade apart". *The European Journal of Public Health* 17.3 (2006): 318-322.

17. Fujii T and Matsudaira K. "Prevalence of low back pain and factors associated with chronic disabling back pain in Japan". *European Spine Journal* 22.2 (2013): 432-438.

18. Weiner DK., *et al*. "Low back pain in older adults: are we utilizing healthcare resources wisely?". *Pain Medicine* 7.2 (2006): 143-150.

19. Friedly J., *et al*. "Increases in lumbosacral injections in the Medicare population: 1994 to 2001". *Spine* 32.16 (2007): 1754-1760.

20. Deyo RA and Mirza SK. "Trends and variations in the use of spine surgery". *Clinical Orthopaedics and Related Research* 443 (2006): 139-146.

21. Gray DT., *et al*. "Population-based trends in volumes and rates of ambulatory lumbar spine surgery". *Spine* 31.17 (2006): 1957-1963.

22. Luo X., *et al*. "Patterns and trends in opioid use among individuals with back pain in the United States". *Spine* 29.8 (2004): 884-890.

23. Von Korff M., *et al*. "Frequency and priority of pain patients' health care use". *The Clinical Journal of Pain* 23.5 (2007): 400-408.

24. Williams JS., *et al*. "Risk factors and disability associated with low back pain in older adults in low-and middle-income countries. Results from the WHO study on global AGEing and adult health (SAGE)". *PLoS One* 10.6 (2015): e0127880.

25. Walker BF., *et al*. "Low back pain in Australian adults. Prevalence and associated disability". *Journal of Manipulative and Physiological Therapeutics* 27.4 (2004): 238-244.

26. Calvo-Muñoz I., *et al*. "Prevalence of low back pain in children and adolescents: a meta-analysis". *BMC Pediatrics* 13.1 (2013): 14.

27. Maximova TM., *et al*. "Health and medical care problems of people 60 years and over". *European Congress Advances in Gerontology* 20.3 (2007): 273.

28. Hoy D., *et al*. "A systematic review of the global prevalence of low back pain". *Arthritis and Rheumatology* 64.6 (2012): 2028-2037.

29. Manchikanti L., *et al*. "Epidemiology of low back pain in adults". *Neuromodulation: Technology at the Neural Interface* 17 (2014): 3-10.

30. Meucci RD., *et al*. "Increase of chronic low back pain prevalence in a medium-sized city of southern Brazil". *BMC Musculoskeletal Disorders* 14.1 (2013): 155.