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Original Article

Prevalence of Low Back Pain Among Specialist Medical Consultants at the University of Port Harcourt Teaching Hospital, Port Harcourt, Rivers State

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Abstract

Background: Low back pain (LBP) is the 5th leading cause of physician consultation and is a significant cause of lost workforce hours with tremendous economic implications in every society. These findings suggest that medical practice in Nigeria is a potential risk factor for developing low back pain. Few studies have attempted to evaluate the medical specialties as risk factors for LBP. This study evaluates the prevalence of low back pain among various Specialist Medical Consultants in a typical Teaching Hospital.

Methodology: This is a descriptive cross-sectional study performed using self-administered questionnaires. The study population comprised Specialist Medical Consultants working at the University of Port Harcourt Teaching Hospital, Port Harcourt, Rivers State. The questionnaires were distributed among consultant physicians regardless of their departments. Information about their age, sex, medical specialties, presence frequency and severity of LBP; interventions received, and outcome were obtained.

Result: There were 98 respondents, 56 (57%) males and 42 (43%) females who participated in the study. The modal age of the respondents is the 41-50 years age group (45%). 44%, were from the surgical specialties (surgery, anaesthesia, oral and maxillofacial surgery, ophthalmology); 33% from the internal and family medicine specialties; (11) 11% pediatricians and (12) 12.2 % were pathologists. The prevalence of low back pain was 60.2%, slightly more prevalent in males (62%) than females (58%). Of those who have experienced low back pain, 35.6% suffered mild pain (VAS 1-4), 49% suffered moderate pain (VAS 5-7) while 17% suffered severe pain (VAS 8-10). The majority (57.6%) had suffered more than 3 episodes of LBP while 84.8% sought treatment for their symptom mostly using NSAIDS.

Conclusion: LBP has a high prevalence among Specialist Medical Consultants in UPTH potentially affecting patient treatment and student education. Most consultants take NSAIDS as treatment for low back pain.

Keywords: Low Back Pain Medical Consultants; Medical Doctors; NSAID.

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Quick Response Code:

Introduction

Pain is an unpleasant emotional and sensory experience associated with actual or potential tissue damage or described in terms of such.[1] Low back pain (LBP) is a disorder that affects many people throughout their lifetime. It has been estimated that low back pain afflicts up to 80% of the world's population at one time or another[1]. It is the 5th leading cause of physician consultation and is a significant cause of lost workforce hours with tremendous economic implications in every society.[2]In the Global Burden of Disease 2010, LBP was listed among the top ten high-burden diseases and injuries. Low back pain has been shown to account for an average number of disability-adjusted life years (DALYs) higher than HIV, road injuries, tuberculosis, lung cancer, chronic obstructive pulmonary disease, and preterm birth complications.[3] The point, annual and lifetime prevalence from several studies have been put at 12-33%, 22-65% and 18-84%, respectively [4,5]

The risk factors for developing low back pain could be psychosocial, personal, or occupational. In a study conducted among all hospital workers in South-South Nigeria, LBP was observed among the33.3% each among doctors, pharmacists and nurses respectively, while none of the administrative staff complained of back pain.[6]Another study in Northern Nigeria among hospital workers showed a LBP prevalence of 56.2%. In the same study,61% of the medical doctors had LBP.[7]These findings suggest that medical practice in Nigeria is a potential risk factor for developing low back pain. Few studies have attempted to evaluate the medical specialties as risk factors for LBP.

This study evaluated the prevalence and pattern of low back pain among various Specialist Medical Consultants in a teaching hospital in southern Nigeria.

Methodology

This is a descriptive cross-sectional study performed using self-administered questionnaires. The study population comprised Specialist Medical Consultants working at the University of Port Harcourt Teaching Hospital, Port Harcourt, Rivers State. All participants have been practicing in their various specialties and sub-specialties for at least a year. The questionnaires were distributed among consultant physicians regardless of their departments. Information about their age, sex, medical specialties, presence frequency and severity of LBP; interventions received, and outcome were obtained. The data provided was analyzed using SPSS, and the results were displayed as charts, tables, and bars.

Results

Demographic characteristics

One hundred and twenty Specialist Medical Consultants at University of Port Harcourt Teaching Hospital were given the questionnaire. Of these respondents, ninety-eight filled out and submitted the filled questionnaire forms to the investigators.

Table 1 shows the demographic characteristics of the study population highlighting the modal age to be 41-50years and the male to female ratio of 3:2. It also demonstrates the different subspecialists included in the study.

Table 1: Demographic characteristics Specialist Medical Consultant respondents

Sociodemographic variables	Frequency	Percentage
Age group		
<40	10	10.2%
41-50	45	45.9%
51-60	32	32.7%
61-70	11	11.2%
Sex		
Female	40	40.8%

Male	58	59.2%
Specialty		
Anaesthesia	8	8.1%
Community medicine	8	8.1%
Family medicine	6	6.1%
Internal medicine	8	8.1%
Psychiatry	4	4.1%
Obstetric&Gynaecology	9	9.2%
Oral and maxillofacial	9	9.2%
Ophthalmology	1	1.0%
Others	1	1.0%
Paediatrics	11	11.2%
Pathology	12	12.2%
Radiology	6	6.1%
Surgery	16	16.3%
Total	**98**	**100.0**

Prevalence of low back pain

Figure 1 shows the prevalence of low back pain among consultant medical specialists in UPTH. The overall prevalence is 62% in the study population, while it is 66% and 57% respectively in the male and female subpopulation.

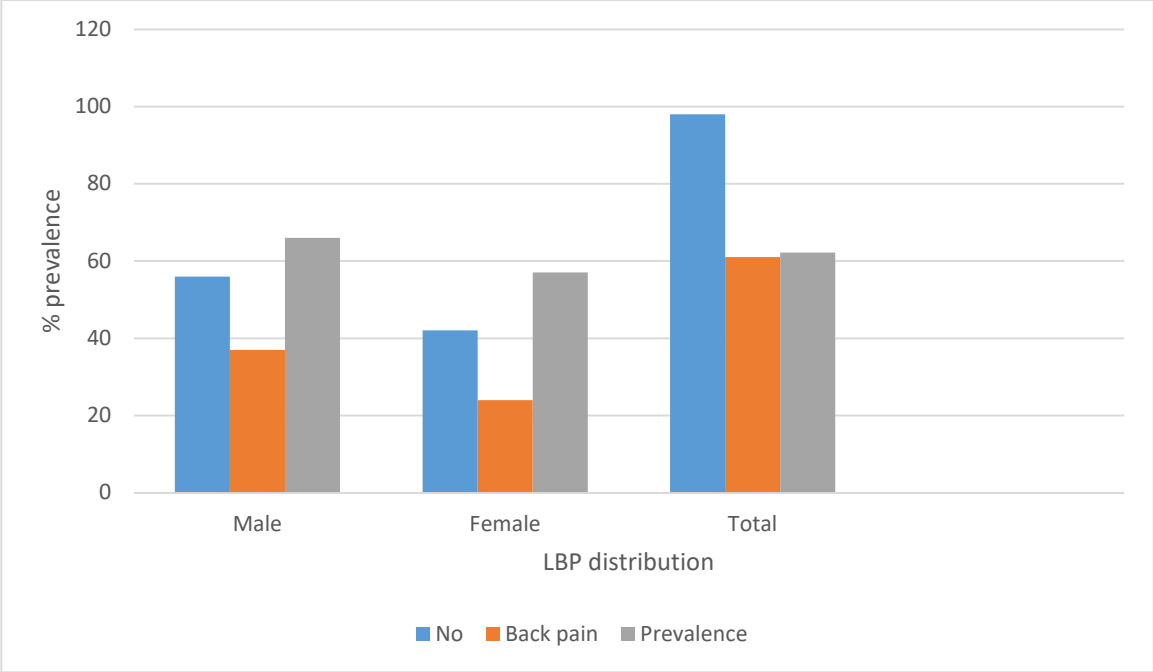

Figure1: Prevalence of low back pain in consultant medical specialists in UPTH

Table 2 is a cross tabulation of age, sex and low back pain showing the prevalence of low back pain in the different age groups. It is highest (83%) in those between 61 and 70 years and lowest (40.6%) in those in the 51-60 years age range. It is 72.7% in those aged 41-50years.

Table 2: Age, sex, and low back pain cross tabulation

Age	Total No	Males	Females	Back Pain Present		No back pain		Percentage with back pain
				Males	Females	Males	Females	%
<40	10	4	6	2	4	2	2	60.0
41-50	44	25	19	20	12	5	7	72.7
51-60	32	20	12	10	3	10	9	40.6
61-70	12	7	5	5	5	2	-	83.0
Total	98	56	42	37	24	19	18	62.2

Episodes and severity of low back pain:
34 respondents (58%) of those with low back pain had more than 3 episodes while 18(30%) had 2 or 3 episodes. Only 7(12%) had a single episode. Figure 2 demonstrates the severity of pain experienced using the visual analogue scale (VAS). It shows that 49% had VAS scores of 5-7(moderate pain), while 17% had severe pain.

1.

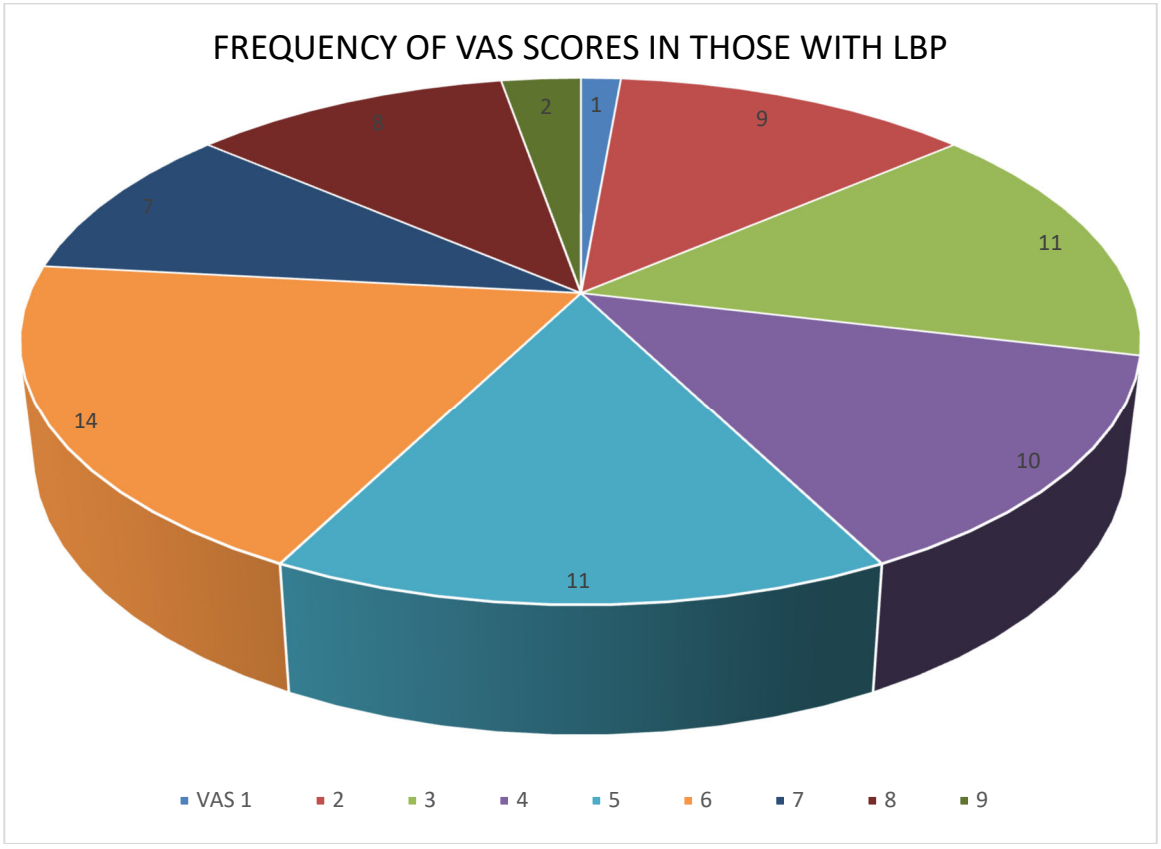

Figure 2: Severity of low back pain using VAS score

Health seeking behavior towards low back pain:
50(84.8%) sought and received some form of treatment for low back pain. The various interventions sought is displayed in figure 3. The use of NSAIDS is the commonest intervention (45%) followed by use of simple analgesics (28%).

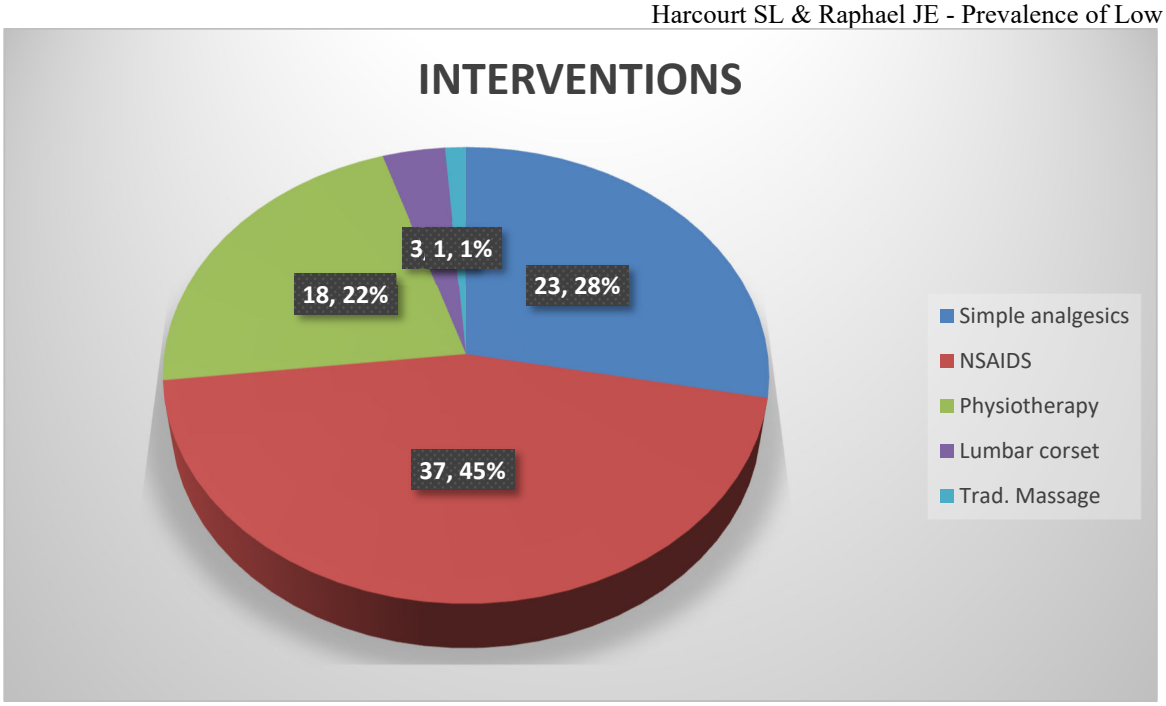

Figure 3: Interventions received for low back pain amongst consultant medical specialists.

The response to the various interventions sought is displayed in figure 4. It was excellent in 7%, very good in 20% and good in 60% of cases.

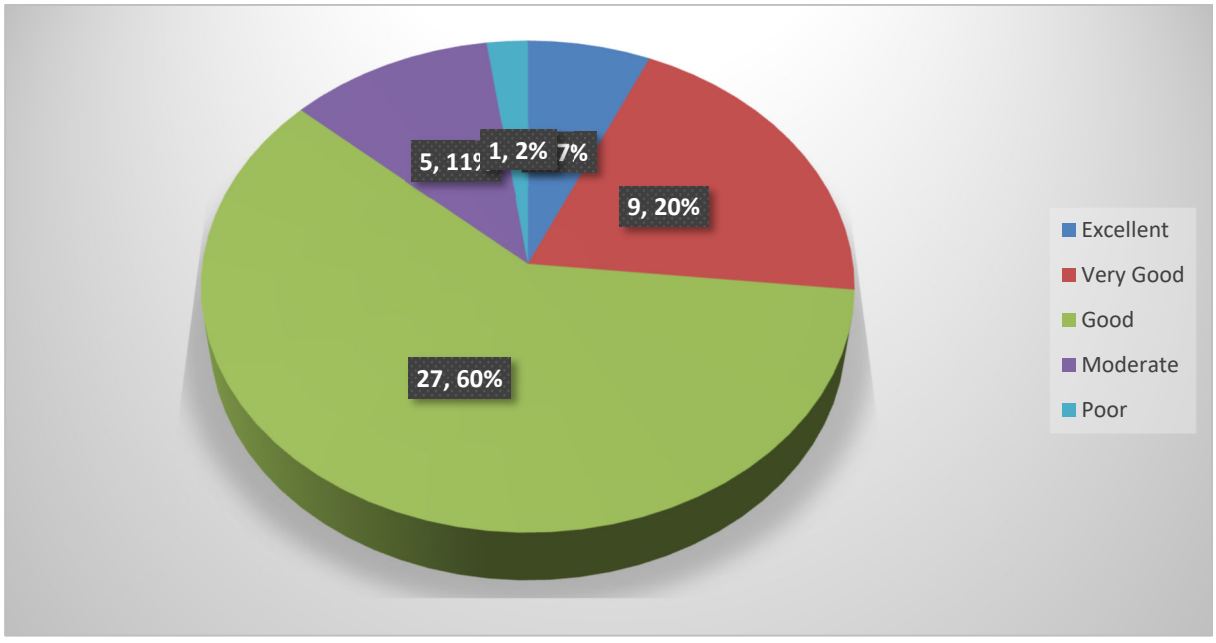

Figure 4: Outcome of intervention for low back pain among specialist Medical Consultants

Discussion

Low back pain is one of the commonest afflictions in adult and health care workers worldwide.[1,8] In a study in Turkey the prevalence of low back pain among a population of hospital workers (both medical and non-medical workers) was found to be 53%.[8.] Another study in India showed a prevalence rate of 36.3% among doctors with a much higher occurrence in the female subpopulation.[9] In Pakistan the prevalence was as high as 70% among doctors in a Teaching hospital.[10]

There are various causes of low back pain but by far the commonest is muscle strains. The work of the consultant surgeons and physician involves both sitting and standing, sometimes for long hours in the course of clinical work or student/resident teaching.[11,12]

The prevalence of LBP (60.2%) found in this study is comparable to major LBP prevalence rates reported in the literature, which varies from 32% to 74%.[11,12]In this study there was no significant difference in prevalence between men and women. This is in keeping with the study by Wong et al,[13] but at variance with a study by Shar et al which showed a 2: 1 ratio in prevalence between women and men.[9]This variability in LBP prevalence may be due to the different methods used for the assessment of LBP as well as by differences in the gender, profession, and age group of the other study populations. It is expected that LBP with such a high prevalence among, consultants in a Teaching hospital, will have both medical and professional consequences. The rates of treatment (84.5%) though high is comparable to the health care seeking behavior observed in other studies [14,15](42.1% –79%). This is not surprising considering that health care professionals should expectedly seek treatment early. An interesting case of traditional massage was reported. Traditional treatments are often preferred by the nonmedical personnel for most musculoskeletal disorders in our environment.[16.]

Another interesting finding giving the high rate of active health seeking behavior of the participants, is that the duration of pain in the majority (67.8%) was less than 10 days. This is important bearing in mind that according to Gatchel *et al*[17], access to health services in the acute phases of LBP episodes can help reduce the long-term effects of LBP.

Judging from the perception of pain severity, only 17% in this study perceived their pain as being severe. This could represent those who would absent themselves from work as a result. This is low in comparison to the work absence rate in other studies which range from 24.1% to 93%.[14,15,18]Although the highest prevalence (83%) was found in those between 61 and 70 years, there was no linear relationship between advancing age with LBP as those between 51 and 60 years had less pain prevalence (40.6%) than those aged 41-50 (72.7%). This is similar to the findings of Wong et al.[10]Other studies have reported a significant association between advancing age and LBP.[8,19] It is possible that the younger consultants do more of the strenuous work while the older ones have more degenerative spine disease accounting for the increase in pain prevalence in both groups.

Treatment received for low back pain consisted mostly of NSAIDS in this study. This is worthy of note given the possible adverse drug reactions that may follow NSAIDs use especially in a population that may seek to quickly get rid of pain. NSAIDS have been reported to account for 30% of hospital admissions for adverse drug reactions.[20]Since there is some evidence that simple analgesics work as well as NSAIDS in the care of low back pain with less adverse effects, it will be necessary to use simple analgesics in the first instance.[21]

Conclusion

LBP has a high prevalence among consultants in UPTH potentially affecting patient treatment and student education. There is no gender difference noted. Most consultants take NSAIDS as treatment for low back pain. Individual risk factors noted in this study were in accordance with most literature findings. The high prevalence of LBP requires multidisciplinary involvement to reduce the disability and cost imposed.

References

1. Andersson GB, Epidemiological features of chronic low-back pain, *Lancet* 1999: **581**-5.
2. Coste J, Delecoeuillerie G, De Lara AC, LeParc JM, Paolaggi JB. Clinical course and prognostic factors in acute low back pain: an inception cohort study in primary care practice. BMJ. 1994; **308**:577-80.

3. Hoy D, March L, Brooks P, Blyth F, Woolf A, Bain C, Williams G, Smith E, Vos T, Barendregt J, Murray C. The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. *Annals of the rheumatic diseases*. 2014; **73**:968-74.
4. Ando S, Ono Y, Shimaoka M, Hiruta S, Hattori Y, Hori F, et al. Associations of self-estimated workloads with musculoskeletal symptoms among hospital nurses. *Occup Environ Med* 2000; **57**:211–6
5. Bejia I, Younes M, Jamila HB, Khalfallah T, Ben Salem K, Touzi M, et al. Prevalence and factors associated to low back pain among hospital staff. *Joint Bone Spine* 2005; **72**:254–9.
6. Johnson OE, Edward E. Prevalence and risk factors of low back pain among workers in a health facility in South-South Nigeria. *British Journal of Medicine and Medical Research*. 2016; **11**.
7. Awosan KJ, Yikawe SS, Oche OM, Oboirien M. Prevalence, perception and correlates of low back pain among healthcare workers in tertiary health institutions in Sokoto, Nigeria. *Ghana Medical Journal*. 2017; **51**:164-74.
8. Şimşek Ş, Yağcı N, Şenol H. Prevalence of and risk factors for low back pain among healthcare workers in Denizli. *AGRI* 2017; **29**:71-78.
9. Shah S, Dave B. Prevalence of low back pain and its associated risk factors among doctors in Surat. *Int J Heal Sci Res*. 2012 28; **2**:1-5.
10. Javed S, Dawood MH, Memon MW, Selod IZ, Seja A. Prevalence of low back pain among medical doctors of the teaching hospitals in Karachi, Pakistan: A cross-sectional survey. *SAGE Open Medicine*. 2023 Mar; **11**:20503121231157217.
11. Hofmann F, Stössel U, Michaelis M, Nübling M, Siegel A. Low back pain and lumbago–sciatica in nurses and a reference group of clerks: results of a comparative prevalence study in Germany. *International archives of occupational and environmental health*. 2002; **75**:484-90.
12. Smedley J, Egger P, Cooper C, Coggon D. Manual handling activities and risk of low back pain in nurses. *Occup Environ Med* 1995; **160**-3.
13. Wong TS, Teo N, Kyaw M. Prevalence and risk factors associated with low back among health care providers in a District Hospital. *Malaysian Orthopaedic Journal*. 2010; **4**:23-8.
14. Barrero LH, Hsu YH, Terwedow H, et al. Prevalence and physical determinants of low back pain in a rural Chinese population. *Spine* 2006: **31**:2728-34.20.
15. CaillardJF, Czernichow P and Doucet J. Le risque lombalgique professionnel a l'hopital. *Arch Mal Prof* 1987; **623**–9.
16. Owumi BE, Taiwo PA, Olorunnisola AS. Utilization of traditional bonesetters in the treatment of bone fracture in Ibadan North Local Government. *International Journal of Humanities and Social Science Invention*. 2013; **2**:47-57.
17. Gatchel RJ, Polatin PB, Noe C, Gardea M, Pulliam C, Thompson J. Treatment-and cost-effectiveness of early intervention for acute low-back pain patients: a one-year prospective study. *Journal of occupational rehabilitation*. 2003;-**13**:1-9.
18. Bejia I, Younes M, Jamila HB, Khalfallah T, Salem KB, Touzi M, Akrout M, Bergaoui N. Prevalence and factors associated to low back pain among hospital staff. *Joint bone spine*. 2005; **72**:254-9.
19. Adams MA, Mannion AF and Dolan P. Personal risk factors for first-time low back pain. *Spine* 1999: **2497**-505.
20. Pirmohamed M, James S, Meakin S, et al. (2004) Adverse drug reactions as cause of admission to hospital: prospective analysis of 18 820 patients. *BMJ* **329**:15–19.
21. Roelofs PD, Deyo RA, Koes BW, Scholten RJ, van Tulder MW, Cochrane Back and Neck Group. Non-steroidal anti-inflammatory drugs for low back pain. *Cochrane Database of Systematic Reviews*. 1996; **2011**.