Assessment of Health Status of Male Teachers in Abha City, Saudi Arabia

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Summary

This study was done to assess the health aspect of male teachers (384) and to assess level of job satisfaction of male teachers in different grades in Abha city.

Following a simple random sample, the sample from primary 184 (47.9%), intermediate 132 (34.4%) and secondary 68 (17.7%) school's male teachers in Abha City were selected. All respondent teachers were exposed to the validated questionnaire to assess health problem [medical history and co-morbidities] and work place risk factors.

The background data as age was 39.31 ±7.96[23:75] years; the average experience years were 16.1 ±7.43[1:36] years and 71.6% have experience more than 10 years. 100 % of the sample were males due to socio-cultural matters, as regard to the educational level 47.9% were from primary schools, 34.4% from intermediate schools and 17.7% from secondary schools.

The level of satisfaction regarding current job and salary of teachers revealed that 65.6% were satisfied while 34.4% were not satisfied.

The answers about some medical history like history of having medical problems that affect teacher's ability (9.4%), history of treatment in hospital (25.5%), sick leave 19% and all were within accepted range, apart from seeing a doctor in last year (43.2%).

The complaints or health problems among teachers as regards eyesight problems 15.4%, Hearing problems in 6.5%, Mental illness, psychological or psychiatric problem was 7.8%. The history of drug or alcohol problem was 2.3%, skin problems 12%, history of hepatitis or jaundice 1.6%. The heart or blood pressure problems were 11.32%. The history of allergies was 17.4%; asthma or chest problem was reported in 20.8% and cough for more than 3 weeks, coughed up blood or had any unexplained weight loss or fever, was 9.6%.

The history of Musculoskeletal disorders (MSD) was 21.1%, Low back pain (LBP) 21.6% and joint pain 32%. Regarding feeling well and healthy 154 (32%) gave the answer that they are NOT healthy or feeling well.

The relation between ill health and experience years gave a significant association but no significant association with teaching level.

The relation between job satisfaction and experience years showed no significant difference with experience years, but the higher rates with longer experience (70.2%) and gave significant relation with level, especially at primary level.

Introduction

Teachers' work today is multifaceted as they undertake not only teaching but also matters associated with curriculum, students, parents, the school community and departmental initiatives [1].

These are tough times to be a teacher. Emerging issues of concern in the teaching profession are attrition rates and burnout levels. Ewing and Smith [2] reported that between 25% and 40% of beginning teachers in countries in the Western World are leaving teaching or they are burned out.

In Australia, a study [3] highlighted an upward trend in early-career teacher resignations and according to Macdonald [4] overall teacher attrition in Australian government schools ranges from 3% to 8%. When this is considered in conjunction with the impending teacher shortage in Australia [5], it is important to determine how teachers feel about their roles as this has implications for meeting society's expectations for education and for youth today; it also has implications for teacher well-being.

Well-being, according to Dunn [6] involves comparative private experiences with regard to self-perceived quality of an individual's life; it also includes both affective and cognitive components.

Factors that influence teacher well-being, burnout and competence

Traditionally, the role of teaching has been one of nurturing and developing students' potential; teachers play a valuable role in helping children grow. In order to do this they must remain physically and mentally well [7]. However, there is apparent dissonance between teachers' perceived capacities and the expectations of their role. This may have implications for their physical and mental well-being and their professional competence as teachers [8].

Teacher well-being and competence have been related to job satisfaction and studies indicate that those teachers who are less satisfied are more likely to leave teaching. For example, Singh and Billingsley [9] found factors such as stress, burnout, work overload, and job dissatisfaction contribute to teacher attrition while factors such as administrative support, reasonable role expectations, and decreased workplace stress contribute to teachers' intention to stay in teaching. Principals play a pivotal role in steering the direction of their school which requires guiding the day-to-day business of the school including matters associated with both students and teachers.

The Management of Health and Safety at Work Regulations 1999 addressed various health hazards to which teachers are exposed [10].

Fitness criteria

To be able to undertake teaching duties safely and effectively, it is essential that individual teachers: have the health and well-being necessary to deal with the specific types of teaching and associated duties (adjusted, as appropriate) in which they are engaged; are able to communicate effectively with children, parents and colleagues; possess sound judgment and insight; remain alert at all times; can respond to pupils' needs rapidly and effectively; are able to manage classes and do not constitute any risk to the health, safety or well-being of children in their care.

Where disabilities exist, teachers should be enabled by reasonable adjustments, to meet these criteria. The decision on fitness should be considered using the above criteria and should be based on an individual's ability to satisfy those criteria in relation to all duties undertaken as part of their specific post and in relation to all of the individual's health problems [11]

Review of Literature

Saudi Arabia is a country with an independent monarchy situated in South West Asia. The first feature of the educational system in Saudi Arabia is the combination of different international education systems along Islamic lines. The Ministry of Education (MOE) was founded in 1954 as a replacement to the Directory of Education. It is the responsible body for educational policy development of the curriculum and teaching methods. The educational system is highly centralized, and decision making is top-down. General education is divided into three main levels: primary level for six years, middle level for three years and secondary level for three years. The schools in each city of Saudi Arabia come under the responsibility and supervision of the Educational Administration [12].

Due to the importance of Education in the Socio-Economic development of an individual, great efforts are always made to ensure that an individual goes through the Education cycle successfully by achieving high academic results. The need for good results puts every stake-holder in the Education Sector on alert. Many mechanisms are put in place to ensure high performance and good results. Such mechanisms include: introducing performance contracts by the government, initiation of Free Primary Education (FPE) and Subsidizing Secondary Education (SSE), increasing contact hours between the teacher and learner, holiday tuition, remedial teaching during weekends, intensive testing policies [13].

In considering implications of health problems for an individual's fitness to teach, it is important to recognize that some teaching duties involve exposure to potential health hazards. The risk arising from such hazards will vary according to the specific nature of the teaching duties and the environment in which the teacher is working. Teacher training providers and employing organizations have a statutory responsibility to safeguard the health, safety and welfare of teachers, to conduct risk assessments and take steps to address potential hazards and reduce the risk of adverse health effects. Occupational health professionals have a key role in advising organizations in this regard [10].

Physical, Chemical, Biological
Teachers are potentially exposed to a range of physical, chemical and biological hazards. The following are examples: Chemicals, plant and animal substances in those teaching the sciences, wood dusts, metal fumes, glues and noise in teachers of technical subjects, physical violence from pupils or parents, communicable diseases, ergonomic problems associated with bending, manual handling and sitting on small chairs, trauma for those involved in teaching physical education and any extra-curricular activities and voice trauma [14].

Physical Health
Only a few studies of varying quality have been published on teachers' physical health. When considering the main classes of diagnoses of physical diseases; musculoskeletal, respiratory, cardiovascular, nervous and hormonal disorders [14].

Moreover, when focusing on cardiovascular disorders, a study carried out in Germany showed that there was a lower risk for male teachers compared to men working in 12 other professions [15].
Another study at KSA during 1995 found the prevalence of obesity in males as 46% and females 49% [16].

About 12% of all teachers were considered hypertensive, 18% of males and 2% of females were current cigarette smokers. A greater proportion of males (57%) than females (20%) indicated they were performing a physical exercise at least one hour per week, 13% of males and 11% of females had hypercholesterolemia. Hypertriglyceridemia was found in 12% of males and 4% of females, and hyperglycemia was found in 8% of males and 4% of females.

Conclusions: The prevalence of cardiovascular risk factors among school teachers is not much different to that found in developed countries [16].

A study at KSA during 2006/2007 found the prevalence of hypertension (HTN) and pre-hypertension was 25.2 % in males and 43.0 % in females and diabetes was significantly associated with HTN [17].

A study conducted in Sofia , Bulgaria (1994), found that the estimated relative risk of arterial HTN for female teachers was 1.5 compared with other female employees (designers, researchers) who served as controls. This finding can classify the teaching occupation as high risk for arterial hypertension [18].

MSD represents one of the most common and most expensive occupational health problems in both developed and non-developing countries [19].

MSD is one of the leading causes for ill health retirement among school teachers [20].

Musculoskeletal complaints, especially of the lower back, neck and shoulders are also common among teachers. Recently, Hong Kong teachers showed a higher prevalence for neck (68.9%), shoulder (73.4%) and low back pain (59.2%) in the past 30 days [21].

Epidemiological studies have demonstrated that factors such as gender, age, length of employment and awkward posture are associated with higher MSD prevalence among teachers [19].

Among workers including teachers, prolonged posture, static work and repetition are the cause of repetitive strain injuries (RSIs), which is one type of MSD that directly affects the area of upper limb, neck, shoulder and low back [22].

Smith et al., 1997 showed that compared to a control group, teachers were significantly more likely to report having 6 voice symptoms, among which hoarseness was the most frequent, and 5 related physical discomfort symptoms (tiring, effortful, ache, uncomfortable and rough) [23,24].

It is worth mentioning that there are a few additional studies that have shown a different impact of a few other diseases on teachers: an excessive rate of some major cancers, in particular breast [25] and thyroid [26] cancers and surprisingly enough, an association between school teaching and mortality from autoimmune diseases [27].

A study by Kovess-Masféty, said that teachers do not seem to have poorer mental health. However, their physical condition is characterized by a higher prevalence of health problems related to the ENT tract, and to a lesser extent, depending on the gender, to skin, eyes, legs and lower urinary tract [28].

Teachers have an important responsibility in tobacco control given that they are highly respected in their communities as they influence the evolution for each aspect of life [29].

In addition, teachers have daily interaction with students and thus represent an influential group in tobacco smoking control. However, this potential can be limited if teachers use tobacco especially in the presence of students in school premises [30].

Psychological
Teaching, like many jobs, is potentially stressful. Some sources of pressure are specific to teaching but others are common to various professions and management structures. Pressures which teachers have encountered include: the need to be continually vigilant when supervising pupils, verbal abuse from pupils and parents, parental expectations, the requirement to manage staff including support assistants and other teachers, the responsibility for head teachers to effectively manage a 'business', pressure from peers and colleagues, coping with change e.g. in management systems, examination formats and the curriculum and poor or inappropriate management including delays in addressing disciplinary and grievance issues [14].

Factors Affecting Teachers' Mental Health
These include the lack of professional aptitude and spirit, occupational hazards, lack of social prestige, poor salaries, high moral expectations, workload, relationship among teachers, relationship between the administrator and teachers, insecurity of service and lack of facilities [14].

Subjects and Methods

Study design
Cross sectional research design

Population and sampling
Male teachers in Abha City constitute the study population. The minimum sample size for this study has been decided according to Swanson and Cohen [31].

Following a simple random sample, the researcher selected an equal sample from primary, intermediate and secondary school male teachers in Abha City. All respondent teachers were exposed to the questionnaire.

According to the Ministry of Education in Aseer region data, the number of schools in Abha city are 96 schools divided into 46 primary, 33 intermediate and 17 secondary with 2219 teachers in all levels. So the average number in each school is about 23 teachers. Number of teachers in primary schools was 1063, intermediate schools was 763 and secondary schools was 393 teachers.

Proportionate sample was taken from each level according to the following formulas: Primary= 384 (Sample Size) X 1063/ 2219=184; Intermediate= 384 (Sample Size) X 763/ 2219 =132; Secondary = 384 (Sample Size) X 393/ 2219= 68

So in Primary level we selected 184 teachers from 8 male Schools [due to socio-cultural aspect] randomly from the total primary schools to cover their sample size and avoided non responders and 6 intermediate schools and 3 secondary schools. We asked all school teachers to participate in the research. If extra numbers will be needed, extra schools will be selected randomly soon.

Data Collecting Tool
Sample of Employment Health Questionnaire (Department of Health) [32].

Data Design
A self-administered questionnaire including Personal characteristics as Demographic data, medical history and co-morbidities and Special Habits, was designed.

Administrative consideration:
The Researcher fulfilled all the required official approvals. The researcher explained to all participants how to fill out the questionnaire in the correct way and how to answer questions.

Ethical consideration:
Before Interviewing, Informed Consent was asked from all samples then all participants had the right not to participate in the study or to withdraw from the study prior to completion. The researcher explained the purpose to all respondents. This pre measurement education is an important part. Confidentiality and privacy were guaranteed for all participants.

Budget
This study was carried out at the full expense of the researchers.

Statistical Analysis
The statistical analysis of data was done by using Excel program for figures and SPSS (SPSS, Inc, Chicago, IL) program statistical package for social science version 17 [33]. The description of the data was done in form of mean (+/-) SD for quantitative data and Frequency and proportion for Qualitative data. The analysis of the data was done to test statistical significant difference between the groups. For quantitative date, student t-test was used to compare between two groups. Chi square test was used for qualitative data and odds ratio for risk assessment. Pearson Correlation was done to detect association between variables. P is significant if ≤ 0.05 at confidence interval 95%.

Results

In socio-demographic data of male teachers in Abha City (N=384) we found the mean age of 39.31, Gender (male) 384 (100%), experience less than or equal to 10 years was 109 (28.4%), experience more than or equal to 10 years was 275 (71.6%) and level of schools: primary (47.9 %), intermediate (34.4 %) and secondary (17.7%) .

(Tables of Results commence next page)

Discussion

This study was done to assess the health aspect of male teachers (384) and to assess level of job satisfaction of male teachers in different grades in Abha city.

A simple random sample, the sample from primary, intermediate and secondary school's male teachers in Abha City, was selected. All respondent teachers were exposed to the validated questionnaire to assess health problem [medical history and co-morbidities] and work place risk factors.

In our study background data is shown as age 39.31±7.96 [23:75] years, the average experience years were 16.1±7.43 [1:36] years and 71.6% have experience more than 10 years, 100 % of the sample was males due to socio-cultural matters. As regards the educational level 47.9% were from primary schools, 34.4% from intermediate schools and 17.7% from secondary schools.

The answers about some medical history like history of having medical problem that affects teacher' ability (9.4%), history of treating in hospital (25.5%), sick leave 19% are

Table 1: Medical history of male teachers in Abha City 2014

Medical History	Number	Percent (%)
Have you ever had any illness, medical problem or disability that may currently affect your ability to work safely as a teacher?	36	9.4%
Have you ever been treated in hospital?	98	25.5%
Have you seen a doctor in the last year for any kind of health problem?	166	43.2%
Are you having any treatment or investigations of any kind at the moment?	87	22.7%
Are you waiting for any treatment, operation or investigation?	48	12.5%
Have you ever had any illness or health related problem that may have been caused or made worse by your work?	44	11.5%
Have you ever been medically retired from any job, or left any job because of ill health?	7	1.8%
Have you had any days off sick in the last 2 years?	73	19%

Table 2: Medical Problems of male teachers in Abha City 2014

Medical Problems	Number	Percent
Eyesight problems not corrected with glasses	59	15.4%
Hearing problems	25	6.5%
Mental illness, psychological or psychiatric problem (depression, anxiety, nervous debility, nervous breakdown, schizophrenia or eating disorder (anorexia or bulimia)	30	7.8%
History of fits, blackouts or epilepsy	5	1.3%
Skin problems	46	12%
History of hepatitis or jaundice	6	1.6%
Current medication use	75	19.5%
CVS (heart or HTN)	43	11.32%
Allergic to anything	67	17.4%
Chest problems (asthma or bronchitis)	80	20.8%
Difficulties (standing, bending, lifting or with any other movements)	81	21.1%
Back problems	83	21.6%
Joints problems (pain, swelling or stiffness)	123	32%

Table 3: Relation between medical problem and experience years and level of male teachers

Parameters		Medical Problem (54)	p
Experience years	≤10 years	27(17.5%)	<0.001***
	> 10 years	127(82.5%)	
Level	Primary	71(64.1%)	0.52
	Intermediate	58(37.7%)	
	Secondary	25(16.2%)	

all within the accepted range but seeing a doctor in last year (43.2%) seems to be higher than normal range and mostly due to respiratory infections. Kovess-Masféty, V., et al 2009 [28] reported in France that among teachers their physical condition is characterized by a higher prevalence of health problems.

Some complaints or health problems among teachers in our study regarding eyesight problems recorded (15.4%). This is lower than Chong, E. Y., & Chan, A. H. (2010) in Hong Kong who reported 32% to 43% eye problems among teachers [21].

Hearing problems in 6.5%; this is lower than Martins, R. H. G. Et al., 2007 who reported 25% compared to 10% in controls with an acoustic notch predominating (11.25%; $p<0.05$), due to excessive classroom noise (93.5%) and auditory symptoms (65%). Noise levels close to 87dBA were recorded in classes at all teaching levels [34].

Mental illness, psychological or psychiatric problem, including depression, anxiety, nervous debility, nervous breakdown, schizophrenia or eating disorder was 7.8% and is much lower than Chong, E. Y., & Chan, A. H. (2010) in Hong Kong who reported high prevalence of Pseudo-neurological and mental disorders among teachers. The lower rates in this study may be due to fear of social stigma in our society and under-estimation and ignorance about the nature of psychological diseases [21].

The skin problems (12%) may be due to exposure to various irritants, either chemical or biological factors in schools. This is lower than Chong, E. Y., & Chan, A. H. (2010) who reported skin problems among teachers in Hong Kong at 24.4% [21].

The history of hepatitis or jaundice 1.6% is much less than prevalence of all types of hepatitis especially in the southwestern area of KSA as detected by Abdo, A. A., 2012. This may explained by health appraisal and screening being done before job allocation [36].

The heart or blood pressure problems were 11.32% and this rate is lower than community prevalence and does not differ than the level in developed countries as detected by Ghabrah, T. M et al.,1998, [16] but is not in agreement with Ibrahim, N. K et al., 2008 in his study in Jeddah which was higher. This difference may come from the detected prevalence of risk factors like obesity which was lower in our area [17].

The history of allergy was 17.4% due to exposure to different chemical and biological irritants in the school environment; this is in agreement with Chong, E. Y., & Chan, A. H. (2010).

A study in Hong Kong reported 19% prevalence of allergy among school teachers [21].

Suffering from asthma or chest problem was reported in 20.8% due to drawbacks from allergy or recurrent chest infections. This is higher than Chong, E. Y., & Chan, A. H. (2010) [21] in Hong Kong who reported 16.1%. The difference could be explained by Al Frayh, A. R., et al., 2001 [37] who reported data between Riyadh versus Hail (inland desert dry environment) and Jeddah versus Gizan (coastal humid environment) which revealed that the prevalence of asthma in the similar populations increased significantly from 8% in 1986 to 23% in 1995 due to environmental changes.
History of Musculoskeletal disorder 21.1%, Low back pain 21.6% and joint pain 32%.

These high rates due to age, length of employment and awkward posture, prolonged posture, static works and repetition are the cause of repetitive strain injuries which are associated with higher MSD prevalence rates among teachers. This is matched with Erick PN, Smith DR,2011 who reported that the schoolteachers represent an occupational group among which there appears to be a high prevalence of MSD [19].

In our study, regarding the relation between medical problem and experience years and level among the studied Group there is a significant association between medical problem and experience years more than 10 years due to accumulation of stressors and chronic diseases so the effect may be a false association due to confounder effect of the aging process.

There was no significant association with specific educational level; this may explained by the same stressors present in all levels.

Conclusion

The medical problems of male teachers increase with age increase. The health status of male teachers is not optimal since a high percentage of them have to see a doctor each year and one third of them are currently sick. Moreover, musculoskeletal problems are quite common among male teachers.

Recommendations

Provision of health educational program about the risks which the teachers have been exposed to, either communicable or non-communicable. Establishment of a specific health program for teachers caring with their health status. More availability of preventive health care measures to avoid co- morbidities associated with work environment. Multidisciplinary team approach toward the screening and diagnosis of health hazards among teachers that consists of "Clinical, Laboratory, radiological, Occupational and epidemiological researcher teams".

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