EVALUATION OF THE WORKING ENVIRONMENT BASED ON THE SELF REPORTINGS OF NURSES WORKING AT IBNI SINA HOSPITAL OF ANKARA UNIVERSITY FACULTY OF MEDICINE: SICK BUILDING SYNDROME

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Introduction

Sick building syndrome (SBS) is used to describe a situation in which the occupants of a building experience acute health –or comfort- related effects that seem to be linked directly to the time spent in the building [1,2]. No specific illness or cause can be identified. In most cases, SBS symptoms will be relieved soon after the occupants leave the particular room or zone [1-4].

Main affecting factors of SBS are; air conditioning sytems, pollutans from indoor sources and biological contaminants. Characteristic symptoms of SBS are defined as, fatigue, flu-like symptoms, headache, allergies, dizziness, nausea, eye, noise and throat irritation [1-4].

Although sick building syndrome has been recognized for decades, the burden of the problem is not clearly defined yet. But because SBS reduces work efficiency and increases absenteeism, a great many studies are carried out recently. It has been estimated that people living in the United States of America spend 89% of their time in indoors and people living in developing countries spend 79% of their time in indoors. Besides, based on the findings of a study it has been reported that SBS might be affecting 30-70 million people and absenteeism related cost could be approximately 60 billion dollars[5-9]. United States Environmental Protection Agency (EPA) placed SBS to the 10th rank at its priorities list to combat on 1987[10].

Aim

The purpose of this study is to document the supervisor and clinic nurses' perceptions related to both living and working environments so to evaluate the conditions with respect to health.

Material and Methods

Ankara University Faculty of Medicine was established on 19th October 1945 and is the 2nd founded faculty of medicine of the Turkish Republic. Faculty of Medicine with its two Research and Training Hospitals (İbni Sina and Cebeci Hospitals) has the largest patient bed capacity of the Country. Ibni Sina Hospital (ISH) established on 1984, serves with 2000 patient beds and 1500 professionals. Most significant characteristic of the 11 floor ISH building might be the use of technologies in the world's ultimate through; Department of Clinical Microbiology and Infectious Diseases and AIDS Laboratory, Department of Neurosurgery and Functional Neurosurgery Unit, Department of Anesthesiology and Reanimation and Reanimation Unit, Department of Urology and Ekstrakorporeal Shock Wave Lithotripsy (ESWL) Unit and Laser Therapy Unit, Laboratory of Urodynamics, Department of Nephrology and Peritoneal Dialysis Unit, Department of Orthopedics and Traumatology, Department of Hand Surgery, Microsurgery and Reconstruction, and Small Joint Arthroscopy Unit. ISH central operating theatre (has 26 operation rooms) has approximately 100-110 surgery capacity per day. More than 12000 sessions of hemodialysis performed in a year for 1500 patients with 35 devices at the Hemodialysis Unit. Chronic peritoneal dialysis is also performed at the Continuous Ambulatory Peritoneal Dialysis (CAPD) Unit. Approximately 30 kidney transplantations from living donors and cadavers are performed in a year. Furthermore liver transplantation practice from living donors like cadaver carries on with the continuing success. The number of the patient who have analyzed is increasing through modern equipment and perfect results with international quality control at ISH Central Laboratory.

Emergency Service which was renewed in 2007 as the biggest emergency unit of Turkey furnishes service to approximately 30.000 out and inpatients. Hasan Ali Yücel Conference Hall which has 180 seats, has being hosted so many scientific meetings including participants from domestic and foreign from the day of entry into service.

Figure 1. Ibni Sina Hospital of Ankara University Faculty of Medicine

The descriptive study has been carried out at Ibni Sina Hospital. Study group (n=119) consists of the nurses (selected randomly through staff lists) and the supervisor nurses of the clinics. The self-reported four part questionnaire was applied during 01 -15 January 2011. The work environment and symptom assessment parts were Likert type scales. Data was analysed with SPSS version 11.0. Chi-square-ANOVA test was used in data analysis. Official approval of the Faculty of Medicine, Headphysician of the ISH has been taken including Ethical Board permission. Study group has been formed according to informed consent.

Results

Mean age was 34.81±6.57 (95% CI: 33.61-36.00), the average working period at the organization was 13.95±7.89 (95% CI: 12.52-15.38). 12 of the participants reported working 45 hours and over per week. The average working period of the group at the organization was 15.59±8.34 (95% CI:13.51-17.68) years.

As seen Figure 2 Most of the study group (25.0%) was working as nurse for 20 years or more. Of the group 23.0% reported 15-19 years, 22.0% reported 9 years or less than 9 years, 30.0% 10-14 years work experience respectively .

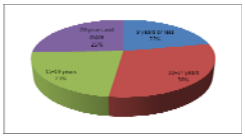

Figure 2. Distribution of the working period of the study group

Individual evaluation of the working environment is documented on Figure 3. Participants reported complaints related to crowd (63,0%), noise (49,6%), high temperature (57,2%), inappropriate lighting, cold and humidity in order.

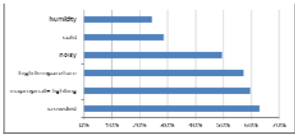

Figure 3. Self-reportings of the study group related to working environment

Most frequently occured symptoms were reported as; fatigue (54,7%), headache (56,3%), dry and sore throat (37,0%), flu-like symptoms (35,4%), menstrual problems (31,1%) and chest pain (5,9%) in order (Figure 4).

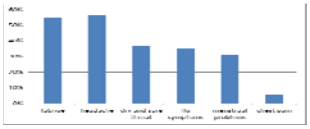

Figure 4. Distribution of the most frequent occured symptoms of the study group

Conclusion

Almost half of the participants report the working environment as crowded, one third report the working environment as hot, cold or noisy. Also almost one third of the group has fatigue complaint, followed by headache, dry and sore throat, flu-like symptoms, menstruel problems and chest pain. According to the self-reportings half of the group mentioned SBS related problem, one third personal symptom. This study is based on self-reportings and a preliminary work related to cross- sectional monitorization of the indoors of the Faculty of Medicine. It has been planned to share the findings institutionally and to conduct a long term intervention study for indoor monitorization and improvement.

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