

# Impact of Work Environment upon Housekeeping Services Staff's Health Status at Medical City in Baghdad City

## أثر بيئة العمل على الحالة الصحية للعاملين في خدمات التنظيف في مدينة الطب في مدينة بغداد

Ghufran Abdul Aziz Abdul Rahman Ahmad, MScN\*

Zahid jasim Mohammed, PhD\*\*

Aysin Kamal Mohammed Noori, PhD\*\*\*

\* Clinical Nurse Specialist, Medical City, Ministry of Health e-mail:lady.afuo@yahoo.com

\*\*Assistant professor, Basic science Department, College of Nursing, University of Baghdad e-mail: Zahid\_jasim2000@yahoo.com

\*\*\*Instructor, Community Health Nursing Department, College of Nursing, University of Baghdad e-mail:aysin\_kamal@yahoo.com

### المستخلص

**الأهداف:** لتقويم بيئة العمل والحالة الصحية للعاملين في خدمات التنظيف وكذلك تحديد أثر بيئة العمل على العاملين في خدمات التنظيف وحالتهم الصحية وكذلك تحديد أثر بيئة العمل على المنهجية: استخدم تصميم وصفي خلال الدراسة الحالية لتقويم بيئة عمل العاملين في خدمات التنظيف وحالتهم الصحية وكذلك تحديد أثر بيئة العمل على حالتهم الصحية من الثالث من تشرين ثاني ٢٠١٧ إلى الثالثون من حزيران ٢٠١٨. أختيرت عينة غرضية غير احتمالية من (١٠١) عامل تنظيف للدراسة الحالية. تم بناء أداة لغرض الدراسة مكونة من (٥) أجزاء: (١) الصفات الديموغرافية-الإجتماعية و(٢) المعلومات عن العمل و(٣) المعلومات عن إدارة الصحة والسلامة المهنية و(٤) تقويم بيئة العمل و(٥) تقويم الحالة الصحية للعاملين في خدمات التنظيف. أجريت دراسة إستقرائية لتحديد الصدق والثبات للأداة. تم تحديد صدق المحتوى للأداة بواسطة مجموعة من (٣٥) خبير. لذلك أعتبرت الأداة كمقياس له صدق كاف بعد إجراء التعديلات المستندة على إستجابات الخبراء. تم تحديد ثبات الإتساق الداخلي للأداة من خلال تقنية شطر-الوسط وحساب معامل الارتباط كرونباخ ألفا (٠,٨٧) والذي يشير إلى الثبات الكافي للأداة كمقياس. جمعت البيانات من خلال إستخدام أداة الدراسة وتقنية المقابلة المنظمة كوسيلتين لجمع البيانات. تم تحليل البيانات من خلال أسلوب تحليل البيانات الإحصائي الوصفي كالتكرارات والنسب المئوية والوسط الحسابي والوسط الحسابي للقيم والقيم الكلية والمعدل وإسلوب تحليل البيانات الإحصائي الإستنثاجي كالإختبار التائي وأختبار التضاد وتحليل التباين.

**النتائج:** أشارت الدراسة إلى أن بيئة العمل خطرة بمستوى الوسط (٩٢,١%) والحالة الصحية للعاملين في خدمات التنظيف تتراوح ما بين معتدلة (٤٢,٦%) إلى جيدة (٤٢,٦%) لأغلبهم. كان لجوانب بيئة العمل البيولوجية والكيميائية والطبيعية بالغ الأثر على الحالة الصحية للعاملين في خدمات التنظيف.

**التوصيات:** أوصت الدراسة إلى السيطرة على بيئة العمل للمحافظة على الصحة والسلامة المهنية مع القيام على تقديم الفحص الطبي الدوري للعاملين في خدمات التنظيف وإمكانية إجراء بحوث أخرى لمواقع مختلفة وعينة كبيرة الحجم.

**الكلمات المفتاحية:** أثر، بيئة العمل، العاملون في خدمات التنظيف، الحالة الصحية

### Abstract

**Objective(s):** To evaluate housekeeping services staff work environment and their health status, as well as to determine the impact of the work environment upon their health status.

**Methodology:** A descriptive design is employed throughout the present study to evaluate housekeeping services staff work environment and their health status, as well as to determine the impact of the work environment upon their health status from November 3<sup>rd</sup> 2017 to June 30<sup>th</sup> 2018. A purposive “nonprobability” sample of (101) housekeeping staff is selected for the present study. An instrument is constructed for the purpose of the study and it consists of (2) parts: (I) Evaluation of work environment, and (II) Evaluation of housekeeping staff's health status. A pilot study is conducted for the determination of the instrument's validity and reliability. The content validity of the instrument is determined by panel of (35) experts. So, the instrument is considered adequately valid measure after performing the modifications that based on the experts' responses. The internal consistency reliability is determined through split-half technique and the computation of Cronbach alpha correlation coefficient of (r=0.87) which is indicated that the instrument is adequately reliable measure. Data are collected through the use of the study instrument and the structured interview technique as means of data collection. Data are analyzed through descriptive statistical analysis approach of frequency, percentage, mean, total score and range and inferential statistical data analysis approach of linear regression.

**Results:** The study indicates that the work environment is moderately risky (92.1%) and the housekeeping staff health status is ranging between fair (42.6%) to good (42.6%) for most of them. The biological, chemical and physical aspects of work environment have great impact upon the housekeeping services staff health status.

**Recommendations:** The study recommends that work environment can be monitored to maintain occupational health and safety; periodic medical examination has to be initiated and presented to the housekeeping services staff and further research can be conducted on different settings and large sample size.

**Key Words:** Impact, Work Environment, Housekeeping Services Staff, Health Status

**Introduction:**

Housekeeping is defined as the provision of a clean, comfortable and safe environment for the in-mates of that particular area <sup>(1)</sup>. Housekeepers help make sure that hospital wards and other units are clean, safe and attractive places for patient care and the process of keeping a hospital clean and sanitized is usually very complex one. There is much that needs to be considered when hiring housekeeping staff in a hospital. Since the aim is to ensure a clean environment which is conducive to the services provided by a hospital, it important to hire staff that knows how to manage cleaning services in a hospital environment <sup>(2)</sup>.

Housekeeping services, also called environment services, are of paramount importance in providing a safe, clean, pleasant, orderly and functional environment for both patients and hospital personnel <sup>(3)</sup>.

In hospitals, hygiene and cleanliness are of particular importance in reducing the threat of cross infection with the result that housekeeping is highly organized <sup>(4)</sup>.

A clean and hygienic environment has a tremendous psychological impact upon

patients and visitors, which immediately gives them an overall impression of the hospital <sup>(5)</sup>.

It is difficult for people to judge the practice of medicine in any hospital because of their lack of medical knowledge, they often form their opinions about the hospital on the basis of its appearance and cleanliness <sup>(2)</sup>.

Good housekeeping is an asset and a powerful public and patient relation tool. No environment requires more cleanliness than that of a hospital. The fear of infections from hospital waste and other sources is enough to force a hospital's administration to hire many people for housekeeping services. Hospital housekeepers maintain a sterile environment throughout the hospital that they are working for. They make beds, handle waste management duties and replenish linen along with a bevy of other housekeeping duties. Hospital housekeepers clean patient rooms, surgical units, administrative offices and restroom several times a day to keep infection and disease at bay. They also polish furniture, vacuum carpets and distribute clean linen and hospital gowns in their assigned areas. Employment requirements for hospital

housekeepers include a high school diploma at the very least; they also need to be physically dexterous as there is a lot of lifting, bending and stooping involved in this work<sup>(3)</sup>.

In sum, the hospital environment may create or initiate dramatic impact upon housekeeping staffs' health status. So, the present study ought to determine such impact and attempts to identify the relationship between these staffs' health status and their demographic characteristics as they are specified in its objectives.

#### **Methodology:**

A descriptive design is employed throughout the present study to evaluate housekeeping services staff work environment and their health status, as well as to determine the impact of the work environment upon their health status from November 3<sup>rd</sup> 2017 to June 30<sup>th</sup> 2018.

Official permissions are granted from the Ministry of Planning Central Statistical Organization and the Ministry of Health and Environment Medical City Health Directorate to carry out the study. The permission, after being approved, is presented to the hospitals to ensure the agreement and cooperation.

Consent form is presented and signed by each participant prior to the study

conduct. Such action has been implemented to protect the participants' human rights and facilitate access to them in order to gather the necessary data for the study.

The study is conducted at Medical City in Baghdad City which is comprised of Baghdad Teaching Hospital, Ghazi Al-Hariri for Surgical Specialties Hospital, Child Protection Hospital, Private Nursing Home Hospital, Oncology Teaching Hospital, Gastroenterology and Liver Teaching Hospital, National Center for Teaching Laboratories, Iraqi Center for Cardiology, Bone Marrow Center, and Baghdad Center for Radiological Therapy and Nuclear Medicine. These settings are the designated site for data collection, because all of them are considered main hospitals in Medical City which contain all housekeeping services staff and the largest number of them is located under the same administration (contractor) only in the Medical City Institutions which has facilitated the process of data collection.

A purposive "nonprobability" sample of (101) housekeeping staff is selected for the present study. Therefore, it is also convenient to the study for data collection purposes.

An instrument is constructed for the purpose of the study and it consists of (2) parts: (I) Evaluation of work environment, and (II) Evaluation of housekeeping staff's health status. A pilot study is conducted for the determination of the instrument's validity and reliability. The content validity of the instrument is determined by panel of (35) experts. So, the instrument is considered adequately valid measure after performing the modifications that based on the experts' responses. The internal consistency reliability is determined through split-half technique and the computation of

#### Results:

**Table (1): Overall Evaluation of Work Environment**

Work Environment	F	%	M	SD
Low risky	0	0	2.08	0.271
Moderate risky	93	92.1		
High risky	8	7.9		
<b>Total</b>	<b>101</b>	<b>100</b>		

**F: Frequency, %: Percentage, M: Mean, SD: Standard Deviation, Low risky= (48-64), Moderate risky= (65-80), High risky= (81-96)**

Such overall evaluation depicts that the work environment is moderately risky (92.1%).

**Table (2): Overall Evaluation of Health Status for Housekeeping**

#### Services Staff

Health Status	F	%	M	SD
Poor	15	14.9	2.28	0.709
Fair	43	42.6		
Good	43	42.6		

Cronbach alpha correlation coefficient of ( $r=0.87$ ) which is indicated that the instrument is adequately reliable measure.

Data are collected through the use of the study instrument and the structured interview technique as means of data collection for the period from February 8<sup>th</sup> 2018 to May 11<sup>th</sup> 2018.

Data are analyzed through descriptive statistical analysis approach of frequency, percentage, mean, total score and range and inferential statistical data analysis approach of linear regression.

<b>Total</b>	<b>101</b>	<b>100</b>		
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**F: Frequency, %: Percentage, M: Mean, SD: Standard Deviation, Low = (8-10), Moderate = (11-13), High = (14-16)**

This table indicates that the housekeeping staff health status is ranging between fair (42.6%) to good (42.6%) for most of them.

**Table (3): Evaluation of the Impact of Work Environment upon Health Status among Housekeeping Services Staff**

Work Environment \ Health status	Un standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
<b>Physical</b>	-.310	.153	-.218	-2.026	<b>0.046</b>
<b>Chemical</b>	-.364	.143	-.249	-2.546	<b>0.013</b>
<b>Biological</b>	.067	.239	.029	.280	<b>0.008</b>
<b>Mechanical</b>	-.264	.148	-.186	-1.782	0.078
<b>Psychosocial</b>	.235	.155	.173	1.518	0.132
<b>Fire prevention</b>	.044	.141	.033	.309	0.758
<b>Total</b>	.427	.272	.164	1.570	0.120

**Dependent variable: Housekeeping Services Staff Health Status**

Such evaluation depicts that the biological, chemical and physical aspects of work environment have impact upon the housekeeping services staff health status.

## **Discussion:**

### **Part I: Discussion of Overall Evaluation for Work Environment**

The overall evaluation of the work environment reveals that the housekeeping staff have experienced moderately risky work environment (Table 1).

Environmental hazards in the workplace can range from something as simple as cleaning products not stored properly to the improper handling of bodily fluids. An environmental hazard is any hazard that presents a danger to a surrounding environment. These dangers come in many forms and are not often

noticed until an accident occurs. Understanding the various environmental hazards and taking precautions can help prevent accidents<sup>(6)</sup>.

Workplace hazards are classified as dangerous and damaging working environment factors. The dangerous factors could cause a trauma or a sudden worsening of employees' health. It might involve some sort of an unexpected event resulting in an injury. The damaging working environment factor could cause illnesses or the constant decrease in ability to work. In regard to this factor, we can usually talk about its' long-term effect on employees' health. Dangerous working environment factors cause occupational accidents and damaging ones work-related illnesses. The aforementioned dangerous factors are classified under such physical hazards like the moving or sharp parts of machines and devices, insufficient lighting, falling or electrocution hazards and other similar factors. Some are mostly related to a manufacturing process and they are either used (chemical and biological hazards) or generated during work. Others are connected to the unjust and irrational organization of work (physiologic and psychosocial hazards), including long duration of the workday; too intense work; uneven

alteration of work and resting times in the working mode; prolonged forced body position; and overstrain of a group of muscles or organs<sup>(7)</sup>.

A study has attempted to identify psychosocial factors at work that promote positive changes in employee health and factors that prevent negative changes in employee health. Specifically, the study wants to see if certain changes in the work environment would have a positive or negative impact on changes in the general health of the employee. The results show that if employees' perception of leadership and social climate improved, their health would also improve. A decrease in employees' perception of leadership, organizational commitment and experiencing job strain are related to a decrease in their health<sup>(8)</sup>.

The work environment contributes to employee health. A sick environment can threaten health through biological and psychological pathways. A cross-sectional study is designed to examine the effects of nature contact experienced at work on employee stress and health. Office staff at a southeastern university (n=503, 30% response rate) have participated in the study. There is a significant, negative

association between nature contact and stress and nature contact and general health complaints. The results indicate that as workday nature contact increased perceived stress and generalized health complaints decreased<sup>(9)</sup>.

## **Part II: Discussion of the Housekeeping Services Staff Health Status**

Concerning the overall evaluation of health status for housekeeping services staff, the study depicts that most of them have experienced fair to good health status (Table 2). Such findings are obvious in the mean of scores on items that create no effect on their health status of having negative viral tests; do not take sedatives and narcotics on regular base; do not develop cough associated with sputum and blood; and do not develop skin rash and diagnosed eczema.

A cross-sectional study performs a comparison between health behaviors and health status of employees with those of the general population, to evaluate the association between employee health behaviors, health status, and absenteeism. The study enrolls (2433) employees from (16) Korean companies in 2014, and recruited (1000) general population randomly in 2012. The distribution of

employee health behaviors, health status, and association with absenteeism are assessed. Employees have significantly worse health status and low rates of health behaviors maintenance compared with the general population. Multiple logistic regression models reveal that regular exercise, smoking cessation, work life balance, proactive living, religious practice, and good physical health status were associated with lower absenteeism. Maintaining health behaviors and having good health status are associated with less absenteeism<sup>(10)</sup>.

A healthy workplace is vital for productivity and employee retention. To maximize employee and workplace wellness, empower the employees to stay healthy or manage their health concerns through a comprehensive set of engagement tools that work with the apps and devices they already use. Using these tools to gather a great quantity of de-identified data will help to plan the health initiatives and coverage<sup>(11)</sup>.

The association between social support and team climate at work and various outcomes are studied in a sample of working population (n = 3347–3430) derived from the Health 2000 Study of the

National Institute for Health and Welfare. Results of the study indicate that there is no difference between gender and the perceived team climate. Instead, women have perceived more social support, both at work and in private life. Low social support, both at work and in private life, is associated with depressive and anxiety disorders and many sleep related problems. Poor team climate is associated with both depressive and anxiety disorders. Low social support from supervisors and from co-workers is associated with subsequent antidepressant use. Poor team climate also predicts antidepressant use during the follow-up. Low social support from the supervisor seems to increase the risk for disability pension. The study recommends that it is important to pay attention to the well-being of employees at work since low social support and poor team climate are associated with mental health problems and future work disability<sup>(12)</sup>.

### **Part III: Discussion of the Impact of Work Environment upon Housekeeping Services Staff Health Status**

Throughout the course of data analysis, the study findings endorse that the biological, chemical and physical aspects of the work environment have impact upon

housekeeping services staff health status (Table 3).

A study is focused on the workplace environment in a health facility and how it affects the health worker. An unsafe health facility environment such as unsuitable furniture, poorly designed workstations, lack of ventilation, excessive noise, inappropriate lighting, poor supervisor support, poor work space, poor communication, poor fire safety measures for emergencies, and lack of personal protective equipment, can adversely affect the productivity of the employee. Health workers in such environment are exposed to occupational diseases such as heat stress, deafness, ergonomic disorders and suffocation. Health worker's productivity and performance can decrease due to poorly planned workplace environment as this adversely affects their morale and may give rise to poor motivation and no job satisfaction as a result, it becomes a challenge for the management to provide a safe work environment for the workers to ensure health, efficiency, productivity and good performance. The relationship between the health worker, work and the workplace environment is very crucial and hence it becomes an integral part of work itself<sup>(13)</sup>.



It has documented that the top workplace factors that directly impact the health of employees are: (1) Job design, including control over work; (2) Overtime and number of hours worked; (3) Providing social support; (4) Conflict between work and family commitments; (5) Perceived fairness and justice at work; (6) Layoffs and economic insecurity; and (7) Offering health insurance. When these factors aren't managed favorably, employees are far more likely to experience a slew of mental and physical health problems including unhealthy weight gain, anxiety, depression, alcoholism, hypertension, cardiovascular disease, and even death<sup>(14)</sup>.

It is widely known that being in work is good for people's health and wellbeing, but it's increasingly being recognized that a healthy workforce is beneficial to employers too. By creating a positive, safe and healthy environment for employees, we can increase morale, improve the employees' work-life balance and, in turn, positively impact the business<sup>(15)</sup>.

It has reported the benefits of a healthy work environment that include attract better quality employees; increased

productivity; reduced turnovers, reduced healthcare costs; and lower rates of absenteeism<sup>(16)</sup>.

### Recommendations:

1. The housekeeping services staff can be provided with information about maintaining health status and safe work environment.
2. Work environment can be monitored to maintain occupational health and safety.
3. Periodic medical examination has to be initiated and presented to the housekeeping services staff.
4. Further research can be conducted on different settings and large sample size.

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