



ANALYTICAL STUDY AND PREVALENCE OF HEALTH HAZARDS AMONG EMPLOYEES OF SMALL SCALE INDUSTRIES IN UAE

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HIGHLIGHTS

- The study builds on interviews with employees of small-scale enterprises in the cleaning sector in Abu Dhabi (UAE)
- The study gives insights to how small business owners incorporate responsible leadership and implementation
- The study gives insights to how small business employees work with occupational safety and health management.
- The behavioral patterns seem to promote good psychosocial working conditions in the environment.
- Systematic approaches were not applied regarding physical working environment and safety issues.
- Occupational health and safety are important for sustainability and internal dimensions of corporate social responsibility in the cleaning sector

ABSTRACT

Small business employees in the cleaning sector were interviewed regarding their personal views and experiences concerning employer responsibilities in relation to occupational safety and health management for this study. The analysis is guided by a qualitative content analysis exploring strategies applied to responsible leadership. We found that there was one specific behavioral pattern that stood out above all others. Small business owners regularly implemented a form of responsible leadership we call *management by values*. Management by values was applied using three strategies *building employee relationships*, *rational management* and *transferring responsibility*.

This managing style can be both a strength and a weakness for the employees working conditions. The strengths are that the employees are supporting, guiding, and communicating in their leadership. As a result, there is a transference in responsibilities from the small business employees their team for measures related to the working environment. The conclusions of the study are that by applying *management by values*, the small business employees seem to promote good psychosocial working conditions in their enterprises while showing a lack of knowledge about occupational safety and health management. This might mean a risk that systematic approaches will not be applied to physical working environment conditions regarding safety issues.

INTRODUCTION

This study focuses on how small business employees the Abu Dhabi's cleaning sector experience and describe their occupational safety and health (OSH) management. In this study, we define small business owners (SBO) as owners of small-scale enterprises (SSEs) with 1–19 employees. SBO are important as they contribute to economic growth, innovation, employment and social integration. There is few small scale trading involved in cleaning sector of various companies, eventually that deals with various workplace experience in scrap work. They are usually exposure with many hazardous chemicals.

LITRATURE REVIEW

C&D waste legislation differs across the emirates of UAE. For example, all the new constructions after 1 March 2014 in Dubai had to implement the Green Building Regulations and Specifications (GBRS) [7] requiring 50% diversion of construction generated waste [8]. Ras Al Khaimah (RAK) emirate sat the target of construction waste management in Burjeel regulations in December 2018 to be the reduction of waste sent to landfills decreasing the demand on raw materials. It also requires labelled waste skips and segregation. Date stamped photos and invoices of RAK waste management agency represent the appropriate evidence for the authority [9].

Waste management in Abu Dhabi - Waste in Abu Dhabi Emirate is being considered under the provision of EAD that was established in 1996 seeking air quality, groundwater and the biodiversity protection and enhancement in Abu Dhabi Emirate desert and marine ecosystems looking forward to raising the environmental awareness, facilitating sustainable development and ensuring environmental sustainability to remain as one of the top priorities of the UAE agenda [3].

EAD has assigned waste management responsibilities to be split among three main institutions; Tadweer for municipal solid, commercial, medical, agricultural, industrial, construction and demolition waste, ADNOC for oil and gas waste and FANR for radioactive waste [1]. Centre of Waste Management Abu Dhabi (CWM) and the Department of Municipal Affairs (DMA) represent other supportive authorities for waste reduction in Abu Dhabi [10].

In 2014, EAD has published Abu Dhabi Environment Policy Agenda (ADEPA) to be followed focusing on six main guiding principles (a) avoiding waste generation and reduce it as much as possible; (b) maximizing reusing; (c) proceeding with recycling for certain precious materials; (d) recovering high value materials that cannot be recycled to be a source of energy; (e) improving treatment of waste that cannot be utilized; and (f) providing controlled sanitary engineered landfills targeting a diversion of 85% of the generated waste from landfills [13] in 2021 [14]. ADEPA aims to improve waste regulations, ensure effective enforcement, enhance the quality of waste data, and promote awareness and education in terms of waste management across key sectors between 2016 and 2020 [15]. In November 2015, Tadweer established Abu Dhabi Waste Management Master Plan 2040 (ADWMMP-2040) [14] while the detailed goals are not available for public. In April 2016, the first committee meeting regarding ADWMMP-2040 was held aiming to clarify the waste situational analysis and characteristics [16] followed by a second meeting in December 2016 representing a workshop for stakeholders [17].

METHODOLOGY

A qualitative approach was selected since it's the most appropriate to explore the views and experiences giving the opportunity for better understanding [19] of waste management in construction sites. Specifically, unstructured interviews that are defined as interviews that neither have fixed questions nor answers [20] while it's addressed as appropriate method of understanding complex people behavior regardless of categories for best exploration which is the aim for this research [21].

Exploratory unstructured interviews were conducted with employees between February and March 2023 aiming to understand waste management practices in Abu Dhabi's SEPCO 3 electrical procurement and construction

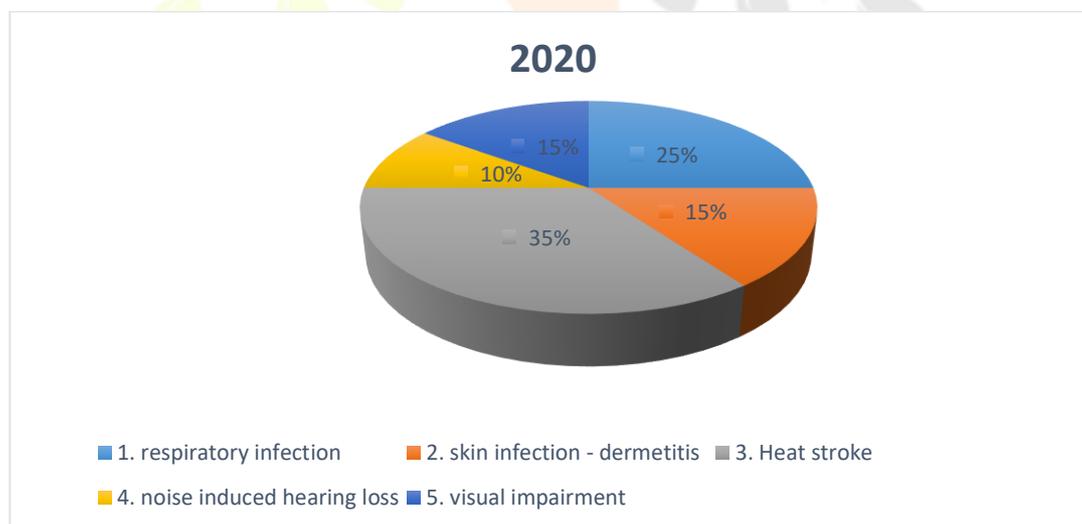
Ltd... interviewees are currently involved in Simple thematic analysis that is defined as “a process of encoding qualitative information” representing “a bridge between qualitative and quantitative research” [22] was used to analyze the interviews of this study.

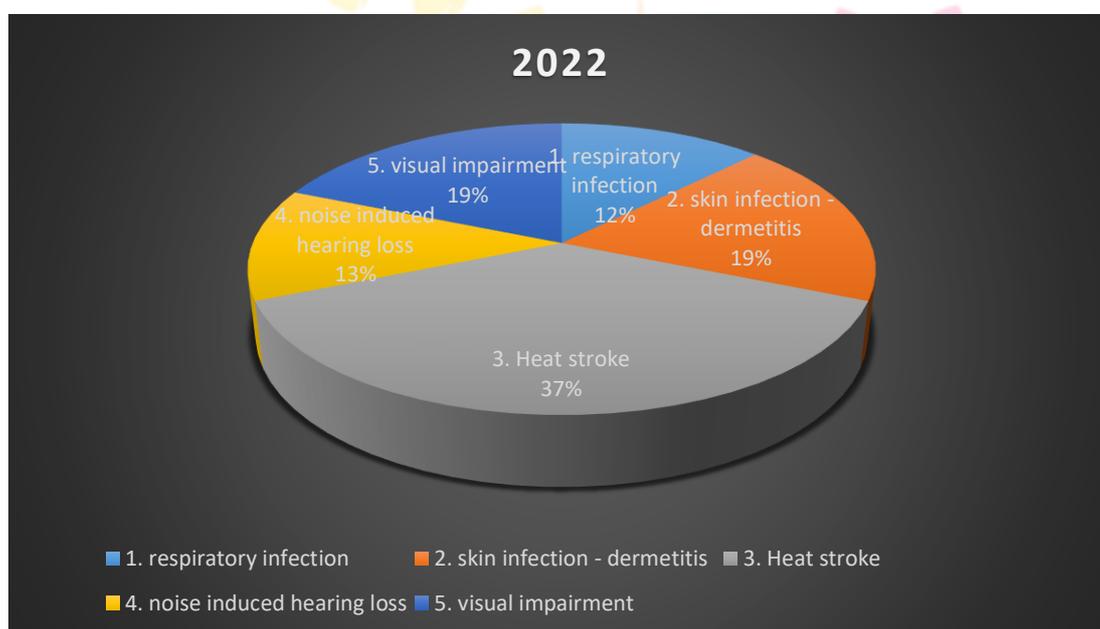
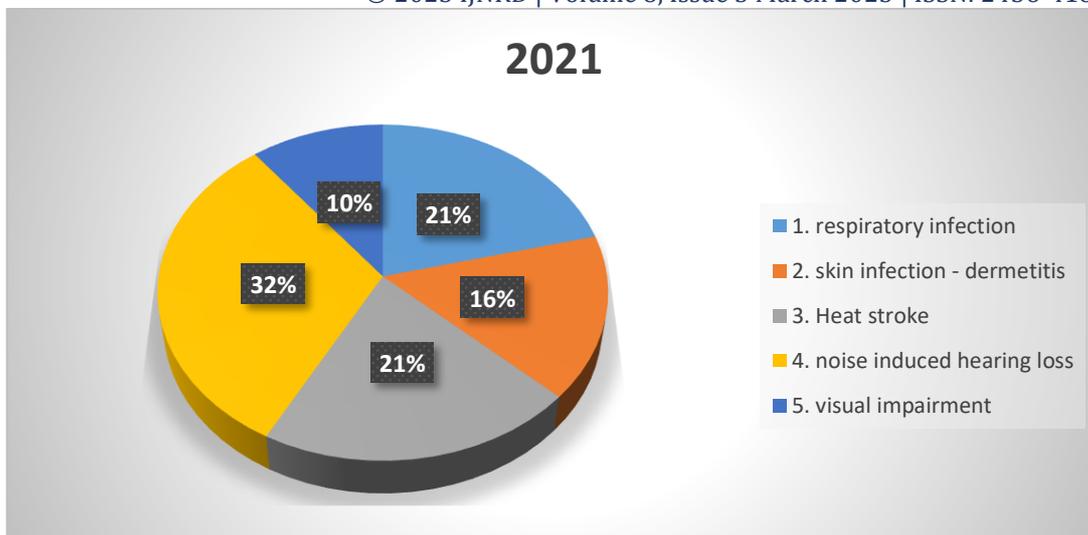
MATERIALS AND METHODS

A study with 40 individuals in the United Arab Emirates was conducted to learn more about the factors that contribute to the prevalence of health hazards such as respiratory infections, heat stroke, noise induced hearing loss, visual impairment, dermatitis. Respondents from different backgrounds were recruited because the responses from such a diverse group could give a better insight into how people feel about starting a new business. Many respondents might already be running their enterprises or have plans to do so. The respondents were recruited using a convenience sampling protocol considering the availability of the respondents to the researcher for the data collection process.

To achieve a response rate of one hundred percent, the researchers who conducted the study handed out the questionnaires, waited for the respondents to finish filling them out, and then personally collected the questionnaires. The survey questionnaire contained 27 items, 4 related to demographics and 18 related to individual perceptions. Each item was measured on a Likert scale with 5 points, ranging from 1 (strongly disagree) to 5 (strongly agree) Some respondents lacked a strong command of English, and thus every item was provided in English. The data were analyzed using many different statistical methods. The identified factors were subjected to a regression analysis to determine how important they were to the prevalence of health hazards.

STATISTICAL ANALYSIS





Recent three-year data were collected among prevalence of health hazards in small scale industries employees, through survey by a self-made questionnaire. As per the analysis in the year 2020. Respiratory infection (25%), dermatitis (15%), NIHL (10%), v.I (15%)& heat stroke is (35%). Precautions were taken to reduce heat stroke prevalence in future year. By providing split working hour.

As per 2021-year analysis heat stroke prevalence is reduced to (21%). But NIHL was raised up to (32%). Then many awareness safety measures were implemented to reduce the hazards. But in the year 2022 again the prevalence in heat stroke was spiked up to (38%). This were ruled out to train the employees to Rehydrate themselves with proper fluid intake filled with electrolytes. Allow them to take rest during the peak sun in the afternoon. Frequent screening was done for their rehydration and safety assessment.

RESULTS AND DISCUSSION

The participants of this study included employees of 3 small scale industries as follows PAK trading agency, TORHAM trading agency, CYBERNIK trading agency. All above mentioned agencies working under the dealership criteria in SEPCO3 EPC (Electrical Procurement and Construction) Ltd.

In the year 2020, 2021 and 2022 data analysis there are 5 major occupational hazards are commonly associated with respiratory infections, dermatitis, noise induced hearing loss, visual impairment and heat stroke. There are some fluctuations is noted in above mentioned health hazards. But more dangerous is death ratio due to heat stroke is markedly increasing every year among the employees

SUMMARY

The present study performed on a self-developed HMS (health management and safety scale) and extracted five factors: physical, biological, sociological and psychological, ergonomic, and chemical hazards. Subsequently, the factor-loading values, eigenvalues, and explanatory variance values of all of the factors achieved favorable standards. The results of an internal consistency analysis showed that the factors individually and collectively achieved favorable reliability. Based on these results, the HMS developed in the present study was suitable for measuring the frequency of hazard management of employees of scrap (cleaning sector)

The sequential order of frequency for managing the five hazard types was chemical, physical, ergonomic, biological, and sociological and psychological hazards. Regarding individual hazard items, the 5 most frequent hazards that were identified as being managed by scrap dealers (in order of most to least frequent) were organic solvents, illumination, other chemical substances, machinery and equipment, fires or explosions, electricity, noise, specific chemical substances, human error, and lifting or handling within industries can now discuss plans revolving around these five areas instead of having to deal with all of the separate hazards

REFERENCES

- [1] EAD, Abu Dhabi State of Environment Report 2017, 2017.
- [2] EAD, Greenhouse Gas Inventory for Abu Dhabi Emirate. www.ead.ae/wp-content/uploads/2014/03/AD-Greenhouse-gas-inventory-Eng.pdf.
- [3] EAD, Annual Report 2017, 2017.
- [4] Environment Agency – Abu Dhabi, Waste and environment 2016, 2016.
- [5] EAD, Sustainable Construction and Demolition Waste Management in Abu Dhabi.
- [6] Geranpayeh, S., Abu Dhabi's waste to double in the next 25 years. Gulf News. <https://gulfnews.com/news/uae/environment/abu-dhabi-s-waste-to-double-in-the-next-25-years-1.1622404>. Accessed 20 Feb. 2019.
- [7] Dubai Municipality, Government of Dubai, Circular No. (198) 2014, 2014.
- [8] Dubai Municipality, Government of Dubai, Dubai Electricity and Water Authority. Green Building Regulations and Specifications, 2011.
- [9] Municipality Department, Government of Ras Al Khaimah, Burjeel, Ras Al Khaimah, Green Building Regulations, 2018.
- [10] Yahya, M.M., Sustainable solutions for construction waste reduction, The British University in Dubai, 2015. <https://bspace.buid.ac.ae/bitstream/1234/947/1/120177.pdf>.
- [11] Estidama, Estidama Pearl Rating System: Information Bulletin #3, 2011.
- [12] UPC, Estidama. The Pearl Rating System for Estidama, building rating system design and construction, 2010.
- [13] EAD, Waste management, Waste as a source of energy, 2014.
- [14] US Green Building Council, Emirates Green Building Council, World Green Building Council. Green Building City Market Brief, 2017.
- [15] EAD, Strategic Plan 2016–2020.