

Short communication: Disorders of labours in the field ofpoultry

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Abstract

Introduction: *Maintainingon occupational health is important in raising production and keeping human safety. The study aimed to assess the health problems of the poultry sector workers on the farm, processing, and marketing.*

Methods: *The study was conducted with a sample of 150 males and 50 females, to assess their health status during the last month in Baghdad. A survey was set that included demographic queries as well as about health problems during this month.*

Results:*Large of the workers suffered from some healthy defects due to daily, unorganized continuous without new machinery work such as muscular and auricular pains, headaches defects in eyes, ears, skin, and upper respiratory tract, or general problems as fever, emitting, and diarrhea due to contact with the biological agents in the scattering of poultry remains.*

Conclusion:*It'svery necessary to use personal protective equipment. The authority must support the workers economically and ethically through awareness of maintaining their physical and health fitness for preserving the environment and its aesthetics.*

Keywords: *poultry sector, health problems, worker*

Introduction

Years ago and until today, poultry is the main and fastest-growing sector of the world meat products industry. The work of poultry workers is no less dangerous than a dentist, immigration and customs inspectors, oil and gas lift operators, stationary engine engineers as mentioned by the Occupational Safety and Health Administration (OSHA). Musculoskeletal injuries and illnesses are thought to be the principal on-the-job safety problems for workers on the processing line in poultry factories. The aspects of the work environment as humidity, animal proteins, pollution from poultry excreta, feathers, and other organic substances, knives, and scissors in crowded conditions are thought to be responsible for more types of injuries and illnesses(1) Workers

often see the dangers as part of the job, or they move on to other jobs as they begin to progress symptoms, particularly when the signs bound work activity. Recording illnesses and injuries are difficult for this brings fear to themselves of losing their job loss or deportation (2). The only bases of occupational health statistics for the poultry production are (OSHA) reports. In the poultry manufacturing, there are occupational safety and health standards that define general protection like personal protective equipment (PPE) or fire safety from ecological dangers such as radiation, sound, and unsafe elements, machinery, and electrical hazards and other parts of the work location, but there are no specific standards for the poultry industries (3).

Well health, one's real wealth, improves an individual's efficacy for doing work which grows productivity and brings economic success. A healthy one is always cheery, active, and willing worker. The fact that a person owns a job gives him a feeling of wealth and sufficiency, required, and reflects one's skill to complete this also influences the self-esteem, fiscal well-being of a person. Occupation and health are inseparably linked and hence both factors need suitable responsiveness for the improvement of society and individuals (4)

Occupational health deals with all aspects of health and safety in the workplace and has a strong focus on the primary prevention of risks. According to World Health Organization (WHO), there are various risk issues in the workplace that can lead not only to accidents but also to many diseases like cancer, musculoskeletal complaints, hearing impairment, circulatory, respiratory, and many communicable diseases. Occupational health care can help in personal defense, a helpful economic effect, thus, it may be observed as a productive factor, rather than an economic problem (5,6).

The study was aimed to assess the self-reported specific signs, injuries and illnesses among poultry workers in the Baghdad governorate and to evaluate the health status related to this occupation.

METHODS

Data collection

In study was designed a questionnaire to evaluate the physical personal health status of workers during the last month of work. The questionnaire was distributed to the workers of poultry fields in popular markets of Baghdad city and its suburbs. The participants were 150 males and 50 females, range (17-65) mean 42, SD ± 10.5 yrs. The information was involved the statistical program, SPSS software version 22, for comparisons between variables the chi-square test was used with a level of significance lower than 0.05. In the start of the survey, explained the aim and the benefits of the study. The study was conducted during a period of 3 months from the 1st of March to the 31st of May of 2020.

Measures

The interviewer contained two parts of queries, the first part was a demographic, such as gender, age, precedence, marital status and the type of tasks assigned to it in this sector, such as poultry breeder catching, slaughtering chickens, plucking feathers, cutting, canning and others which recognized by OSHA (7).

The second part of questioner contained a self assessment of the health status and physical defect of the workers during the last month. The items were selected from several symptom inventories, including the Cohen-Hoberman Inventory of Physical Symptoms (8) and the Quality of Well-being, a Self-Administered instrument (9). Ten items of self-rated health assessment was used as in the table.

Results

The study showed the age of participants was 17-65 yrs. $SD \pm 10.5$ mean 42. The males were 85% of all the workers, 43% of the workers were in aged 40-49 yrs. The least 4% were aged 17-19 yrs. Approximately the period of employment 90% of the workers were employed since 5-15 years ago, the least at 3% were employed 1-4 years and 70% of the workers were satisfied about their everyday jobs. Regarding their health, 52% of them were labelled as upright. Disorder symptoms were verified on workers, almost more than half of the sample feel pain in legs 52%, arms 45%, knee 29% and headache 30%. As for skin, the defects like roughing, itching or rash were 20%. The Systemic symptom such as fever, vomiting, diarrhea, nausea, dizziness were 15%. In addition to the respiratory symptoms such coughing, sneezing, or problem in breathing were 6% and finally hearing problems were 10% with vision problems were 5%.

Discussion

The rising request for meat and egg supply has led to rapid growth and enlargement of the poultry sector around the world, which it's in the home breeding or widely as in the poultry industry. In this study, the males were shaped the greater group, which they are mainly aged 20-50 years and the small group was women, for all that, these signposts that women work in hard job that may go back to the present reality of Iraq as a hot area over the decades and the loss of their family official (10). Disorganized work for multiple years, combined with the absence of health care, may lead to illness. Poultry sector is an integrated and wide system, starting from the field breeding and reaching to the consumer's meal, this system passes through many stages of transportation, veterinary inspection, managed care, slaughtering, processing and marketing etc (11).

The study showed that age, duration of work, and work system, if manually or mechanization, were of significant value in causing some non-health, physical symptoms such as neck, back and leg problems, or eye, ear and skin trouble. In this study mainly workers run for a period about 10 years, as well as most of the workers in this field they came by their own choice, and this indicates the efficiency and vitality of this occupation as a

good source of financial income for living and adopting a type of job for a period of time has a positive effect in that a person advances experience but, the negative impact things in some times may costs himself more than he can and unprotected to many dangers, which may cause many defect symptoms in back, neck and limbs as a result of raising feed bale, shovelling of waste and carrying tools in the workshop (12). Occupational threats in livestock production can be categorised as accidents, physical, chemical, biological hazards and psychological factors as mentioned by International Labor Organization ILO (13). Sometimes exposure to microbial agents as bacteria, fungi and other creatures by the main air pollutants – present in poultry production and hatcheries include poultry dust (mainly produced from microbes and their metabolites), pathogens, endotoxins, as well as NH₃ and carbon dioxide (CO₂), as a result of the decomposition of waste, respiration of poultry, these and others aspects like manure, litter, feather and fragments of animals are related with hostile environmental and health influences (14). Zoonosis diseases are transferred between animals and humans by massive routes and infective agents, including parasites, fungus, mycoplasma, bacteria, viruses and endotoxins. Contact with polluted air in the industry, the farm or in markets for a long period without using the personal protection equipments (PPE), may cause respiratory symptoms such as coughing, sneezing and chest pain. Some of these agents have adverse health impacts involve interfering with the immune system and causing hypersensitivity or other cause sinusitis, bronchitis, mucus membrane inflammation and decline of pulmonary functions (15, 16)

Polluted water or air incubate many harmful organisms and pollutants that may cause pathological symptoms such as, headache, diarrhea, eye inflammation, or a defect in the sense of hearing, skin infections and body-contact can result serious illness and diseases, such as typhoid fever, and cholera (17).

The conclusion:

Investing the energies of young people move up from agricultural, veterinary, economic and administrative academies that have a association with livestock to connect these learned energies and put them on the lane to practicing the occupations scientifically so the recommendation is developing and supporting the private and mixed sector, facilitating procedures, and thus advancing the country's economy.

The self-rated health assessment of the physical symptom

Acknowledgements

I would like to express my appreciation to the workers in the poultry sector all the relevant groups, including veterinarians, farmers, producers and technician who have shown support through direct or indirect communication whom helped me throughout this study.

Conflict of interest

The author declares that she has no conflict of interest.

Funding /Support

The physical symptom		No.	%	<i>X² test:</i>		
				P value, (df) Asymp., Sig. (2- sided)		
				Age	Duration of work	System of Labor (manually or mechanization)
1	Overall physical health	96	48	83.838 ^a , 11, 0.001	15.344 ^a , 3, 0.002	62.571 ^a , 7, 0.001
2	Neck or back	68	34	81.909 ^a , 11, 0.001	26.084 ^a , 3, 0.001	59.102 ^a , 7, 0.001
3	Arm, wrist or hand	90	45	69.559 ^a , 11, 0.001	4.907 ^a , 3, 0.179	44.375 ^a , 7, 0.001
4	Leg or foot	104	52	100.000 ^a , 11, 0.001	30.804 ^a , 3, 0.001	43.340 ^a , 7, 0.001
5	Skin(dry rashes, etc.)	40	20	76.690 ^a , 11, 0.001	5.872 ^a , 3, 0.118	59.949 ^a , 7, 0.001
6	Headache	60	30	70.833 ^a , 11, 0.001	75.000 ^a , 10, 0.001	50.606 ^a , 7, 0.001
7	Hearing	20	10	227.568 ^a , 33, 0.001	78.066 ^a , 9, 0.001	125.331 ^a , 21, 0.001
8	Vision	10	5	182.635 ^a , 33, 0.001	78.219 ^a , 9, 0.001	133.523 ^a , 21, 0.001
9	Systemic symptom (fever, vomiting, diarrhea, nausea, dizziness)	30	15	70.833 ^a , 11, 0.001	75.000 ^a , 10, 0.001	77.616 ^a , 14, 0.001
10	Respiratory symptoms (coughing, sneezing, or problem with breath)	12	6	100.000 ^a , 11, 0.001	3.780 ^a , 3, 0.286	67.529 ^a , 7, 0.001

Financial support of this study was provided by the University of Baghdad

References

1. MS Cartwright, F.O. Walker, J.N. Blocker et al, The prevalence of carpal tunnel syndrome in Latino poultry-processing workers and other Latino manual workers. *J Occup Environ Med*,; 2012;54(2):198-201.
2. H.J. Lipscomb, R. Argue, M.A. McDonald Exploration of work and health disparities among black women employed in poultry processing in the rural South. *Environ Health Perspect* 2005; 119:1833–1840.
3. . P. Becker, J Morawetz Impacts of health and safety education: Comparison of worker activities before and after training. *Am J Ind Med* 2004; 46:63–70.
4. . P. Buijs, B. Gunnyeon & C.V. Weel Primary health care: what role for occupational health. *The British journal of General Practice* 2012; 62(605): 623-624.
5. H.H Alabbody Carcinogenic effect of external formula International Journal of Psychosocial Rehabilitation, 2020; Vol. (8) :12500-12510.
6. S. Joshi & P. Dahal,. Study of occupational health risks due to small scale/household industries with more focus towards children within Kathmandu valley. A Report submitted to *Nepal Health Research Council (NHRC)*, Kathmandu, 2006, Nepal. Retrieved from: <http://library.nhrc.gov.np:8080/nhrc/bitstream/handle/123456789/177/479.pdf?sequence=1>
7. Occupational Safety and Health Administration. 2005a. Meat packing industry standards. <http://www.osha.gov/SLTC/meatpacking/standards.html>. Date accessed: December 6, 2005.
8. S. Cohen,. & H. M. Hoberman,. Positive events and social supports as buffers of life change stress 1. *Journal of Applied Social Psychology*, 1983; 13, 99–125.
9. R.M. Kaplan, W.J. Sieber, T. G. Ganiats,. The quality of well-being scale: Comparison of the interviewer-administered version and a self administered questionnaire. *Psychol Health* 1997; 12:783–791.
10. N. Al-Ali and N. Pratt, What Kind of Liberation?: Women and the Occupation of Iraq, *University of California Press*, Berkeley and Los Angeles, California, 2009; p;5-7
11. AHO, P. Challenges and opportunities for marketing poultry products in developed and developing countries. Presented on behalf of *The American Soybean Association in Romania and Turkey* June 2004; 1-16.
12. A. Ali, S. Jahan, A. Islam, And M. Islam, Impact of socio-economic factors on production performance of small and medium size broiler farming in Bangladesh. *Journal of new sciences, Agriculture and Biotechnology*, 2015; 15 (1): 479-487,. <http://www.jnsciences.org/agri-biotech/23-volume-15/59>.

13. B. N. Atsumbe, J. F. Maigida, F. Abutu, J. D. Amine, & E. B. Enoch, Occupational diseases and illnesses in manufacturing industries in Adamawa State: Causes and effects. *IOSR Journal of Environment Science, Toxicology and Food Technology*, 2013; 3(4) 7-13.
14. T. Zhang, M. Bu, W. Gang, Pollution status and biogas producing potential of livestock and poultry excrements in China. *Shengtaixue Zazhi* 2012; 31 (4) 1241–1249.
15. D. Heederik, T. Sigsgaard, P. S. Thorne, et al Health effects of airborne exposures from concentrated animal feeding operations. *Environ. Health Perspect.* 2007; 115 (2), 298–302.
16. K. J. Donham, S. Wing, D. Osterberg, J. L. Flora et al, Community health and socioeconomic issues surrounding concentrated animal feeding operations. *Environ. Health Perspect.* 2007; 115 (2), 317–320.
17. [18] S. Vandeplass, R. D. Dauphin, Y. Beckers, P. Thonart, The A. *Salmonella* in Chicken: Current and Developing Strategies To Reduce Contamination at Farm Level. *J Food Protect.*, 2010; 73(4)774–85.