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## Health Problems of Workers in the Poultry Sector

Huda Alabbody Hameed Kadhim\*

*Master in internal and preventive veterinary medicine*

*Lecture in Market Research Center and Consumer Protection, University of Baghdad, Baghdad, Iraq*

*Email: hudaalabbody@gmail.com*

### Abstract

Care must be taken of occupational health due to its importance for raising of production and maintenance of human safety. The study aimed to assess the health problems of the poultry sector workers on the farm, processing, and marketing. The study was conducted with a sample of 150 males and 50 females, to evaluate their physical status during the last month in Baghdad. A questionnaire was prepared that included demographic questions as well as about health problems during the last month. Big 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 systemic problems as fever, vomiting, and diarrhea due to contact with the biological agents in the scattering of poultry residues. Therefore, we recommend using serious personal protective equipment. The authority must support the workers economically and ethically through awareness of maintaining their physical and health fitness and preserving the environment and its aesthetics.

**Keywords:** poultry sector; health problems; worker

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\* Corresponding author.

## **1. Introduction**

Decades ago and until now, poultry is the largest 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 dampness, animal proteins, contamination 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 hazards as part of the job, or they move on to other jobs as they begin to develop symptoms, especially when the symptoms limit work activity. Reporting illnesses and injuries are difficult because brings with the fear of job loss or deportation [2]. The only sources of occupational health statistics for the poultry industry are (OSHA) reports. In the poultry industry, there are occupational safety and health standards that define general protection from environmental threats (such as radiation, noise, and harmful substances), personal protective equipment (PPE), machinery, and other aspects of the work environment, fire safety and electrical hazards but, there are no special standards for the poultry industry [3].

Good health, one's real wealth, enhances an individual's efficiency for doing work which increases productivity and brings economic prosperity. A healthy person is always cheerful, active, energetic, and willing worker. Being employed gives a sense of being worthy, required, and reflects one's ability to perform this also influences the self-esteem, economic well-being of a person. Occupation and health are inseparably linked and hence both factors require appropriate attention for the betterment 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 hazards. According to World Health Organization (WHO), there are many risk factors in the workplace that can lead not only to accidents but also to many diseases like cancer, musculoskeletal disorders, hearing impairment, circulatory, respiratory, and many communicable diseases. Occupational health care can help in personal protection, a positive economic impact, thus, it may be regarded as a productive factor, rather than an economic burden [5,6].

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

## **2. Methods**

### ***Data collection***

In study was formed a questioner to assess 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 the nearby regions. The participants were 150 males and 50 females, range (12-65) mean 42, SD  $\pm 10.5$  yrs. The information was input 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 beginning of the questionnaire, explained the purpose and the benefits of the study. The study was conducted during a period of 3 months from the 1<sup>st</sup> of March to the 31<sup>st</sup> of May of 2020.

### ***Measures***

The questioner contained two parts of questions, the first part was a demographic question 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 past 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 the following:

## **3. Results**

The study showed the age of participants was 18-65 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 18-19 yrs. About the period of employment that 90% of the workers were employed since 5-15 years ago, and the least at 3% were employed 1-4 years and 70% of the workers were interested this job. Concerning their health, 52% of them were described as good. Illness symptoms were proven on participating workers in this study, almost more than half of the sample suffers from pain in legs 52%, pain arms 45%, headache 30%, and pain knee 29%. As for skin problems, like dryness, 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%.

#### **4. Discussion**

The growing demand for meat and egg supply has led to rapid development and enlargement of the poultry sector around the world, which it sometimes on a small scale, as in the home breeding or widely as in the poultry industry. In this study, the males were formed the greater group which they are mainly aged 20-50 years and the small group was women, for all that, this indicates that women work in hard job that may go back to the current reality of Iraq as a hot area over the decades and the loss of their breadwinner [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, and eye, ear and skin trouble. In this study mainly worker worked for a period about 10 years, as well as most of the workers in this sector they came by their own choice, and this indicates the effectiveness and vitality of this occupation and 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 gains experience but, the negative impact things in some times may load on the body more than its capacity and exposed to many dangers, which may cause the emergence of 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 hazards in livestock production can be classified as accidents, physical, chemical and biological hazards, and psychological factors as mentioned by International Labor Organization ILO [13]. Sometimes exposure to microbial agents as bacteria, fungi and other organisms by the main air pollutants – present in poultry production and hatcheries include poultry dust (mainly produced from microorganisms and their metabolites), pathogens, endotoxins, as well as NH<sub>3</sub> and carbon dioxide (CO<sub>2</sub>), as a consequence of excreta decomposition, respiration of poultry, these and others factors like manure, litter, feather and fragments of animals are associated with adverse environmental and health impacts [14]. Zoonosis diseases are transferred between animals and humans via different routes and infective agents, including parasites, fungus, mycoplasma, bacteria, viruses and endotoxins. Exposure to polluted air in the industry, the field or during markets the products may cause respiratory symptoms such as coughing, sneezing and chest pain when exposed to for a long period without the using of personal protection equipments (PPE). 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].

Contaminated water with atmosphere 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].

**Table 1:** The items of self-rated health assessment (pain, stiffness, cramps, and weakness)

The defect in the health condition of the body		No.	%	<i>X<sup>2</sup> 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 <sup>a</sup> , 11, 0.001	15.344 <sup>a</sup> , 3, 0.002	62.571 <sup>a</sup> , 7, 0.001
2	Neck or back	68	34	81.909 <sup>a</sup> , 11, 0.001	26.084 <sup>a</sup> , 3, 0.001	59.102 <sup>a</sup> , 7, 0.001
3	Arm, wrist or hand	90	45	69.559 <sup>a</sup> , 11, 0.001	4.907 <sup>a</sup> , 3, 0.179	44.375 <sup>a</sup> , 7, 0.001
4	Leg or foot	104	52	100.000 <sup>a</sup> , 11, 0.001	30.804 <sup>a</sup> , 3, 0.001	43.340 <sup>a</sup> , 7, 0.001
5	Skin) dry rashes, etc.)	40	20	76.690 <sup>a</sup> , 11, 0.001	5.872 <sup>a</sup> , 3, 0.118	59.949 <sup>a</sup> , 7, 0.001
6	Headache	60	30	70.833 <sup>a</sup> , 11, 0.001	75.000 <sup>a</sup> , 10, 0.001	50.606 <sup>a</sup> , 7, 0.001
7	Hearing	20	10	227.568 <sup>a</sup> , 33, 0.001	78.066 <sup>a</sup> , 9, 0.001	125.331 <sup>a</sup> , 21, 0.001
8	Vision	10	5	182.635 <sup>a</sup> , 33, 0.001	78.219 <sup>a</sup> , 9, 0.001	133.523 <sup>a</sup> , 21, 0.001
9	Systemic symptom (fever, vomiting, diarrhea, nausea, dizziness)	30	15	70.833 <sup>a</sup> , 11, 0.001	75.000 <sup>a</sup> , 10, 0.001	77.616 <sup>a</sup> , 14, 0.001
10	Respiratory symptoms (coughing, sneezing, or problem with breath	12	6	100,000 <sup>a</sup> , 11, 0.001	3.780 <sup>a</sup> , 3, 0.286	67.529 <sup>a</sup> , 7, 0.001

## 5. Conclusions

investing the energies of young people graduating from agricultural, veterinary, economic and

administrative academies that have a relationship with livestock to harness these learned energies and put them on the path 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.

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### **Conflict of interest**

The author declares that she has no conflict of interest.

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