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Research Article

Statistical Evaluation of Employees' Perceptions of Exposure to Physical Risk Factors

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Abstract

This research was conducted to determine the exposure perceptions of employees working in a food production facility in Çanakkale to physical risk factors that they may encounter in their workplaces and to examine the relationship between these risk factors and the descriptive characteristics of employees. A questionnaire including sociodemographic characteristics and occupational risk factors was administered to a total of 400 business employees. SPSS 27.0 statistical package program was preferred in the analysis of the data. Statistical methods such as frequency, percentage, mean, standard deviation, t-test and ANOVA test were used to evaluate the data. The results were evaluated at 95% confidence interval and 5% significance level. The results show that employees have a high level of exposure perceptions regarding the physical risk factors they encounter in the workplace. Despite the training and precautions taken, it has been revealed that adequate measures are not taken for occupational risks in the working environment. It has been determined that the risk factors that the employees are exposed to differ according to age, gender, education level, education about occupational risks, knowledge about occupational risks and the level of precautions taken. However, it was concluded that the unit is not related to the working time.

Keywords: Physical Risks, Occupational Health, Occupational Health and Safety.

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1. Introduction

Information related to occupational health and safety is provided separately. The concept of occupational health and safety, which is suitable to be viewed from a broad perspective and treated as a whole, means fully protecting the safety and health of individuals working within the workplace or outside the workplace as a necessity of the job. Occupational health encompasses the entirety of efforts aimed at ensuring that employees feel good both psychologically and physically, while occupational safety refers to the condition in which employees' safety is ensured within the aforementioned boundaries. As examples of these, while it may vary depending on the industry, incidents such as terrorism or cyber-attacks can occur in both factory and office environments. In addition, examples such as natural disasters, chemical explosions, and equipment damage threaten the safety of working individuals (Cinar and Cebi, 2020). For these reasons, emergency plans, and risk assessments are carried out and measures are taken to prevent these dangers from occurring (Cinar et.al., 2020). In the workplace, many determinants can affect the health of employees, including risk factors that can lead to accidents, respiratory diseases, circulatory diseases, infectious diseases, musculoskeletal disorders, hearing loss, stress-related disorders, and others. Worker health is a crucial precondition for productivity, household income, and economic development. Therefore, an important function of healthcare services is to preserve the working capacity of individuals. Occupational health and safety, in accordance with this, involve the identification, analysis, assessment, and control of risks and hazards that may arise from the workplace and the nature of the work, aiming to protect the workplace and employees from harm. When occupational health and safety is mentioned, it means the compliance of the job with the person who will perform that job and protection from occupational accidents (Kilkis, 2014).

The subject of Occupational Health and Safety comprises the exploration of appropriate methods to minimize or eliminate the hazards arising from the performance of work, and the formulation of provisions based on the findings obtained through this process. The issue that affects and covers all the processes of work is occupational health and safety. It is influenced by many disciplines and many disciplines continue to work on this issue. Since every factor that affects occupational health and safety at workplaces may be a factor in any accident, it is necessary to go to the source of the accident with scientific research and take precautions. Machines at work, technical maintenance, risk assessment, personnel training, organizational structure, age of personnel, geographical location of the workplace, human resources and occupational health and safety policy, social services, production technology, protective equipment, ergonomic conditions, legal regulations, health organization, suitability of personnel for work, physical environment, wages, working hours, etc. numerous factors affect occupational health and safety. It has also been found that a safe and healthy working environment improves the peace and well-being of those who work, improves motivation and morale in terms of motivation, and increases the quality of management and production. The concepts of safety and health cover not only the prevention of accidents but also the improvement of working individuals and working environments mentally and physically and the elimination of the spiritual, physical, and social risks that working life poses to individuals (Ozkilic 2005).

Significant steps have been taken over time in the field of occupational health and safety in Turkey. The first legal regulations on occupational health and safety were made in the 1950s. However, since these regulations were not sufficient, the ‘Regulation on Occupational Safety and Occupational Health’ was prepared for the first time in 1973. In the 1990s, many regulations were made on occupational health and safety. With the laws enacted during this period, the measures that employers need to take at their workplaces and the rights of employees have been determined. In 2003, the ’Occupational Health and Safety Law' was adopted, and this law aimed to take more comprehensive and effective measures on occupational health and safety (Guzel and Okur, 2003).

In 2012, the ’Occupational Health and Safety Law No. 6331' was adopted, and it was aimed to take more effective measures to ensure the safety of workers and prevent occupational accidents. With this law, it has been made mandatory for employers to identify the risks in their workplaces and take measures accordingly. However, there are still some problems regarding occupational health and safety in Turkey. Particularly in small businesses, sufficient measures are not taken on occupational health and safety. Additionally, there are issues such as employers not giving sufficient importance to this matter and workers not being adequately aware of their rights (Kilkis, 2014).

Physical risk factors are directly related to the physical and chemical properties of the environment in the workplace environment where employees are located. Depending on the severity of physical risk factors and the duration of exposure, employees are negatively affected by these factors. There are many physical risk factors that employees in the textile industry are exposed to. The employer is responsible for the health and safety of the employees. Therefore, employers should identify situations in the work environment that may endanger the health and safety of workers, as well as the risks that may arise from these situations (Cagri, 2021).

Clause 5 - (1) The employer is obliged to protect employees from the harmful effects of substances and working environment conditions found, used, originated, or processed in any way at the workplace. In this regard, the employer must;

a) Determine the presence of physical, chemical, and biological hazard sources through environmental and personal exposure measurement, testing, and analysis, if deemed necessary, while risk assessment is carried out and renewed in order to provide a safe working environment.

b) Repeat the measurement, testing, and analysis of environmental and personal exposure in terms of evaluating the effectiveness of the control measures taken (Cagri, 2021).

The aim of this study is to examine the place and importance of physical risk factors in occupational health and safety. Within the scope of the study, it is tried to emphasize what physical risk factors are and their importance in terms of occupational health and

safety. In addition, it will be tried to determine how much knowledge the employees have about these risk factors and whether the measures taken by the workplace are considered sufficient.

Occupational health and safety are among the issues that are increasing their importance all over the world every day. Since it has a structure that concerns many disciplines, it is an area that should be focused on and should be the subject of study. This study is aimed to determine how the physical risk factors in the field of occupational health and safety are perceived by the employees and whether adequate precautions are taken by the employers or not. This aspect of the study is aimed to contribute to the literature. Furthermore, it is desired that this study serves as a source for future research in the field.

2. Material and Method

2.1. The Type of Research

In this study, a specially developed questionnaire application was planned to determine the exposure levels of the personnel working in a food production facility in Çanakkale to physical risk factors. The study group of the research consists of 400 people. In the questionnaire, 5 questions about sociodemographic characteristics, 7 questions about occupational health and safety, 3 questions about lighting, 4 questions about thermal comfort, 3 questions about dust, 3 questions about vibration, 3 questions about temperature, 3 questions about noise, 3 questions about pressure, 3 questions about airflow warning, 3 questions about humidity, and 4 questions about radiation.

2.2. The Method of Research

The analysis given in this study will be performed with SPSS 27.0. In the research, exploratory factor analysis was performed to determine the structural validity of the scales; Cronbach's Alpha coefficient was calculated to determine the reliability level. As a result of the analysis, scores were calculated, and the skewness and kurtosis coefficients were evaluated to determine the conformity of the scores to a normal distribution. The skewness and kurtosis values falling within the range of +3 and -3 for the obtained scale items are considered to be sufficient for a normal distribution (Groeneveld and Meeden, 1984; Moors, 1986; Hopkins and Weeks, 1990; De Carlo, 1997). When evaluating the skewness and kurtosis values of the obtained data, it was found that all the survey items had skewness and kurtosis values within the range of +3 and -3. Therefore, no data transformation was performed. For this reason, it has been found appropriate to use all the data for the hypothesis to be formed with the survey data. In order to analyze the difference in the scale score according to demographic characteristics, T-test and ANOVA tests were used. While the T-test was used in the analysis of demographic variables with 2 groups, the ANOVA test was preferred in the analysis of variables with k (k>2) groups.

2.1.1. Exploratory Factor Analysis

In order to evaluate the structural validity of the scales used in the research, exploratory factor analysis was applied. Kaiser-Meyer-Olkin (KMO) and Bartlett tests were used to determine whether the scales were suitable for factor analysis. While the KMO coefficient is calculated to test the sample size, the Bartlett sphericity test examines the normal distribution condition. In this context, it is necessary that the measurement result is 0.50 or higher in the KMO test and that the Bartlett sphericity test is statistically significant (Jeong, 2004).

2.1.2. Cronbach's Alpha Coefficient

Cronbach's alpha coefficient gives the reliability level of the scale. The coefficient varies between 0 and 1. Depending on the alpha (α) coefficient, the reliability of the scale is interpreted as follows (Nunnally, 1975).

- If it is $00 \leq \alpha < .40$, the scale is not reliable.
- If it is $00 \leq \alpha < .60$, the scale has low reliability.
- If it is $00 \leq \alpha < .80$, the scale is reliable.
- If it is $00 \leq \alpha < .100$, the scale was highly reliable

3. Research Results and Discussion

Table 1. Descriptive Statistics Related to Socio-Demographic Characteristics

Variables		**n**	**%**
1- Gender	Man	179	44,8
	Woman	221	55,3
2- Your Marital Status	Single	138	34,5
	Married	262	65,5
3- Your age	18- 25	115	28,7
	26- 34	100	25
	34- 45	92	23
	46- 54	83	20,8

	55 and above	10	2,5
4- Your Educational Status	Primary school	21	5,3
	Secondary Education	69	17,3
	High school	181	45,3
	University	84	21
	Undergraduate	38	9,5
	Master's Degree	7	1,8
5- Your Working Duration	0- 5 years	149	37,3
	5- 10 years	130	32,5
	10- 15 years	83	20,8
	15 years and above	38	9,5

Table 2. Physical Risk Factors T-Test

n	Average	SS	t	p
400	15,21	2,63	-644,205	000
400	6,52	1,20	-1558,993	000
400	11,07	2,47	-719,966	000
400	11,09	1,97	-900,552	000
400	8,43	1,73	-1059,467	000
400	7,29	1,63	-1140,080	000
400	8,07	1,49	-1233,049	000
400	9,06	1,71	-1064,129	000
400	9,29	1,58	-1148,332	000
400	9,75	1,86	-972,327	000
400	7,85	1,34	-1373,584	000

p<05 Single Sample T-Test SS Standard Deviation

Table 3. Descriptive Statistics Related to Occupational Health and Safety Questions

Variables		n	%
1- Do you think you received enough information about occupational health and safety when you started working?	I definitely think so	111	27,8
	I think so	229	57,3
	I'm undecided	18	4,5
	I definitely don't think so	41	10,3
	I don't think so	1	0,3
2- Do you think that occupational health and safety training is provided regularly at work?	I definitely think so	109	27,3
	I think so	226	56,5
	I'm undecided	15	3,8
	I definitely don't think so	43	10,8
	I don't think so	7	1,8
3- Do you think that you have received any training related to your occupational risks in the last year?	I definitely think so	147	36,8
	I think so	189	47,3
	I'm undecided	11	2,8
	I definitely don't think so	49	12,3
	I don't think so	4	1
4- Do you think you are sufficiently informed about the physical risk factors in occupational health and safety?	I definitely think so	98	24,5
	I think so	235	58,8
	I'm undecided	14	3,5
	I definitely don't think so	49	12,3
	I don't think so	4	1

5- Do you think that there is a board established at your workplace related to occupational health and safety?	I definitely think so	181	45,3
	I think so	145	36,3
	I'm undecided	20	5
	I definitely don't think so	47	11,8
	I don't think so	7	1,8
6- Do you think that the work you do affects your physical health?	I definitely think so	35	8,8
	I think so	93	23,3
	I'm undecided	67	16,8
	I definitely don't think so	200	50
	I don't think so	5	1,3
7- Do you think that adequate precautions have been taken against physical risk factors at your workplace?	I definitely think so	41	10,3
	I think so	283	70,8
	I'm undecided	38	9,5
	I definitely don't think so	35	8,8
	I don't think so	3	0,8

Table 4. Descriptive Statistics for Lighting Questions

Variables		**n**	**%**
1. Do you think the lighting system in the workplace is sufficient?	I definitely think so	64	16
	I think so	302	75,5
	I'm undecided	26	6,5
	I definitely don't think so	6	1,5
	I don't think so	2	0,5
2. Do you think you benefit from sufficient daylight in the working environment at work?	I definitely think so	22	5,5
	I think so	213	53,3
	I'm undecided	89	22,3
	I definitely don't think so	75	18,8
	I don't think so	1	0,3
3. Do you think artificial lighting is sufficient in areas where there is insufficient access to natural daylight in the workplace environment?	I definitely think so	43	10,8
	I think so	320	80
	I'm undecided	24	6
	I definitely don't think so	11	2,8
	I don't think so	2	0,5

Table 5. Descriptive Statistics for Dust Questions

Variables		**n**	**%**
1. Do you think the working environment at work is too dusty?	I definitely think so	10	2,5
	I think so	76	19
	I'm undecided	24	6
	I definitely don't think so	267	66,8
	I don't think so	23	5,8
2. Do you think the necessary protective equipment against excessively dusty environments is provided by the employer in the workplace?	I definitely think so	38	9,5
	I think so	314	78,5
	I'm undecided	25	6,3
	I definitely don't think so	18	4,5
	I don't think so	5	1,3
3. Do you think that the equipment provided by the employer against excessive dust is protective?	I definitely think so	17	4,3
	I think so	321	80,3
	I'm undecided	31	7,8
	I definitely don't think so	24	6
	I don't think so	7	1,8

Table 6. Descriptive Statistics for Temperature Questions

Variables		n	%
1. Do you think that the working environment at work is extremely hot?	I definitely think so	31	7,8
	I think so	29	7,2
	I'm undecided	28	7
	I definitely don't think so	299	74,8
	I don't think so	13	3,3
2. Do you think that the area/machine you are working in has a high temperature?	I definitely think so	18	4,5
	I think so	83	20,8
	I'm undecided	36	9
	I definitely don't think so	248	62
	I don't think so	15	3,8
3. Do you think that the necessary protective equipment is provided by the employer against the high temperature in the workplace?	I definitely think so	27	6,8
	I think so	284	71
	I'm undecided	32	8
	I definitely don't think so	54	13,5
	I don't think so	3	0,8

Table 7. Descriptive Statistics for Noise Questions

Variables		n	%
1. Do you think the working environment at work is overly noisy?	I definitely think so	23	5,8
	I think so	71	17,8
	I'm undecided	27	6,8
	I definitely don't think so	262	65,5
	I don't think so	17	4,3
2. Do you think the area/machine you work in produces high levels of noise?	I definitely think so	39	9,8
	I think so	73	18,3
	I'm undecided	37	9,3
	I definitely don't think so	236	59
	I don't think so	15	3,8
3. Do you think that protective measures are taken against machines that operate with excessive noise in the workplace?	I definitely think so	11	2,8
	I think so	314	78,5
	I'm undecided	23	5,8
	I definitely don't think so	39	9,8
	I don't think so	13	3,3

Table 8. Descriptive Statistics for Pressure Questions

Variables		n	%
1. Do you think the workplace environment has high levels of pressure?	I definitely think so	32	8
	I think so	28	7
	I'm undecided	56	14
	I definitely don't think so	261	65,3
	I don't think so	23	5,8
2. Do you think that the necessary protective equipment is provided by the employer against high pressure in the workplace?	I definitely think so	28	7
	I think so	303	75,8
	I'm undecided	24	6
	I definitely don't think so	33	8,3
	I don't think so	12	3
3. Do you think that the protective equipment provided by the employer against high pressure is protective against pressure?	I definitely think so	30	7,5
	I think so	279	69,8
	I'm undecided	50	12,5
	I definitely don't think so	29	7,2
	I don't think so	12	3

Table 1 shows the socio-demographic structure statistical results of 400 people who participated in the survey. When these data are examined, it is seen that 221 (55.3%) of the 400 people who participated in the survey were women and 179 (44.8) were men. It is observed that 65.5% of the people who participated in the survey (262 people) are married and the remaining 34.5% (138 people) are single. When examining the ages of the participants, it was determined that out of the employees who participated in our survey, 28.7% or 115 individuals were in the age range of 18 to 25. It was found that this age group had the highest number of participants in the age distribution. On the other hand, individuals in the age range of 55 and above accounted for the lowest number of participants among the employees, with a percentage of 2.5% or 10 individuals. Apart from these two groups, the age range of 26-34 with 100 individuals (25%) is the second group, the age range of 34-45 with 92 individuals (23%) is the third group, and the age range of 46-54 with 83 individuals (20.8%) is the fourth age group that stands out.

In other data included in Table 1, the educational status of the participants can be examined. Within this variable, the group with the highest number of individuals is those who graduated from high school, with a total of 181 (45.3%). The number of people who have a master's degree has been determined as the group with the most people in this variable group with 7 (1.8) people. Apart from these two groups, the university was determined as the second group with 84 (21%) people, secondary education was determined as the third group with 69 (17.3%) people, bachelor's degree was determined as the fourth group with 38 (9.5%) people and the number of primary school graduates was determined as the fifth group with 21 (5.3%) people. When examining the data regarding the duration of employment, it is observed that the majority of employees fall into two groups, with the majority having less than 10 years of work experience. Out of these groups, the 0-5 year range consists of 149 individuals, which corresponds to 37.3% of the total participants. The 5-10 year range, on the other hand, includes 130 individuals, accounting for 32.5% of the total. Apart from these two groups, there are 83 individuals in the 10-15 year range, representing 20.8% of the total count. The last group, the number of people with a working life of 15 years and above, is determined as 38, that is, 9.5%.

Table 2 presents the comparisons between the scores obtained from the Physical Risk Factors tests and their mean values in the population. The analysis revealed a statistically significant difference between the results obtained from the Occupational Health and Safety test and the population mean ($t(399) = -644.205$; $p < .05$). The findings from the study group were lower than the population mean. The examination of other physical risk factors data is also as follows. It was found that the statistical results of all of them had significant differences compared to the population mean, Enlightenment ($t(399) = -1558.993$; $p<.05$), Thermal Comfort ($t(399) = -719.966$; $p<.05$), Radiation ($t(399) =-900.552$; $p<.05$), Humidity ($t(399) =-1059.467$; $p<.05$), Airflow warning ($t(399) =-1140,080$; $p<.05$), Pressure ($t(399) = -1233.049$; $p<.05$), Noise ($t(399) =-1064.129$; $p<.05$), Temperature ($t(399) = -1148.332$; $p<.05$), Vibration ($t(399) =-972.327$; $p<.05$) and Dust ($t(399) = -1373.584$; $p<.05$). All had statistical results that were lower than the population mean for all study groups.

Table 3 presents the descriptive statistics of the responses given to the 7 questions in the section related to occupational health and safety in our survey. For the first question, out of the 400 participants, 229 individuals (57.3%) responded with "I think so," while 111 individuals responded with "I definitely think so". For the second question, a majority of the participants (226 individuals, 56.5%) again responded with "I think so," representing a significant portion of the total participants. In the third question, a majority of the participants (147 individuals, 36.8%) responded with "I definitely think so" while 189 individuals (47.3%) responded with " I think so ". For the fourth question, 235 participants responded with "I think so," and 98 participants responded with "I definitely think so". In the fifth question, out of the 400 participants, 326 individuals responded with both "I definitely think so" and "I think so". For the sixth question, more than half of the participants responded with "I don't think so" and "I definitely don't think so". In the seventh question, 283 individuals responded with "I think so," representing 70.8% of the total participants.

In Table 4, there are descriptive statistics of the answers given to 3 questions asked about lighting. When the answers given for question 1 are examined, it is seen that 302 people say they think so, 302 people make up 75.5% of the total participants. When the answers given to question 2 are examined, it is seen that 213 people say they think so, that is, 53.3% of the total number of people say they think so. For question 3, 80% of the respondents gave the answer "I think so."

Table 5 represents the statistics regarding the responses given to the 3 dust-related questions in the survey studies conducted. When we look at the answers given for question 1, we see that a very large segment of 66.8% (267) answered that I definitely don't think so. When the answers to questions 2 and 3 are examined, it is seen that the vast majority of the answers given in the two questions are collected in the "I don't think so" option. For question 2, 314 people selected the "I don't think so" option, while 321 people answered "I don't think so" for question 3.

Table 6 contains the statistical results of the answers given to the determined questions related to the temperature problem in the survey. Looking at the answers given for question 1, the "I definitely don't think so" option was determined as the most selected option with 299 votes. The 299 votes given represent 74.8% of the total number of individuals who participated in the survey. Out of the 400 individuals in the group, 248 people responded with "I definitely don't think so" for question 2, representing a percentage of 62%. When examining the statistics of the responses given for question 3, it is observed that 284 individuals responded with "I think so" representing a percentage of 71%.

In Table 7, there are statistical data on 3 questions asked about noise, which are included in the physical risk factors. When this data was examined, 65.5% of the people who answered the first question, i.e., 262 people, marked the "I definitely don't think so" option. In question 2, a large majority of respondents, 59%, marked the "I definitely don't think so" option. In question 32, a large majority of the participants, 314 individuals, marked the option "I think so" which statistically corresponds to 78.5%.

Table 8 contains descriptive statistical data of the answers received from the questions related to pressure. The statistical analyses of the responses given by the 400 participants to the three questions in our study can be examined as follows. When the answers given

in question 1 are checked, it is seen that 261 people marked the answer "I definitely don't think so" and they correspond to 65.3% of the group. In the statistics of the answers given to questions 2 and 3, it is seen that the vast majority of the answers given in both questions are collected in the option "I think so". 303 individuals responded with "I think so" for question 2, while 279 individuals responded with "I think so" for question 3.

4. Result

This study was conducted in order to examine the views of employees on Occupational Health and Safety in a production enterprise, hazards, and risk factors related to occupational accidents and occupational diseases. The research was conducted using the survey method and the obtained data has been evaluated.

The distribution of the employees included in the study in terms of gender, age ranges, marital statuses, educational levels, and income statuses are as follows:

55.3% of the employees are women and 44.7% are men. In terms of age distribution, 28.7% of the employees are in the 18-25 age range, 25% are in the 26-34 age range, 23% are in the 34-45 age range, and 20.8% are in the 46-54 age range. The percentage of employees aged 55 and above is 2.5%. 65.5% of the participants are married, while 34.5% are single.

When it comes to the education levels of employees, 1.8% have a master's degree, 9.5% have a bachelor's degree, 21% have completed a higher vocational school, 45.3% have completed a high school, and 17.3% have a secondary education degree. The remaining 5.3% are considered to have completed primary school.

It has been determined that there is a variation in the factor of Identifying Risks Beyond Defined Risks based on the gender of the participating employees. However, no gender-related differences were found in terms of the levels of exposure to other risk factors. Based on the average scores of women, they have obtained higher scores in Identifying Risks Beyond Defined Risks. This result shows that other risk factors and awareness of this issue are higher in women.

It has been observed that there is a variation in the factors of Identifying Risks and Identifying Risks Beyond Defined Risks based on the ages of the participating employees. However, there was no age-related difference in the levels of exposure to other risk factors. According to this result, as age increases, there is an increasing perception that there are high levels of chemical, physical, and other risk factors in the workplace. Additionally, it has been observed that as age increases, there is a positive trend in the attitude toward reducing and preventing risk factors in the workplace.

It has been identified that there is a variation in the factor of Identifying Risks Beyond Defined Risks based on the educational status of the participating employees. However, there has been no observed difference based on educational status in terms of encountering other risk factors. According to the average scores, undergraduate degree holders have obtained the highest score, while postgraduate degree holders have obtained the lowest score. Based on this result, it can be observed that undergraduate degree holders have the most positive attitude towards reducing and preventing risk factors in their workplace.

It has been determined that there are differences among the factors of Identifying Risks, Reducing Risk Factors, Education, and Prevention based on the level of sufficient information regarding occupational risks among the participating employees. However, no difference has been observed in terms of encountering different risk factors based on the level of sufficient information regarding occupational risks. According to this finding, employees who have the necessary knowledge about occupational risks show more awareness of the presence of chemical, physical, and similar risk factors in the hospital. In addition, according to the average scores, employees who have sufficient knowledge about occupational risks score higher on Reducing the Factors of Risks, Measures, and Training. According to these results, employees who have the necessary knowledge about occupational risks have a positive attitude toward preventing or reducing risk factors in the institution where they work

It has been identified that there is variation in the factors of Reducing Risk Factors, Precautions, and Training based on the adequacy of taking necessary precautions regarding occupational risks in the working environment of the participating employees. However, no difference has been found in terms of encountering other risk factors based on the adequacy of taking necessary precautions regarding occupational risks in the working environment. Within the scope of this result, employees who have taken adequate measures related to occupational risks at the workplace have a more positive attitude to the prevention and reduction of risk factors at the workplace where they work

Regarding the impact of work on the physical health of the employees, differentiation has been observed in the factors of Reducing Risk Factors, Precautions, and Training. However, no difference has been found in terms of encountering different risk factors based on the impact of work on physical health. Within the scope of this result, employees whose work does not affect their physical health have a more positive attitude towards the reduction and prevention of risk factors in the institution where they work.

As a result of the research, it has been observed that there are differences in the encountered risk factors based on age, gender, educational background, receiving training on occupational risks, being adequately informed about occupational risks, and the implementation of sufficient precautions related to occupational risks.

The following recommendations can be made for production jobs in the context of the study;

- More training on occupational risks should be provided to employees.

- More precautions should be taken against occupational risks, and the necessary safety measures should be increased in the working environment.
- Ergonomic conditions should be improved in the working environment, the health and comfort of employees should be taken into account.
- Occupational Health and Safety culture should be developed among employees through awareness-raising campaigns.
- A special unit should be established at workplaces to ensure the health and safety of employees and periodic monitoring should be carried out.
- Risk assessment should be disseminated to all workplace employees.
- Effective coordination should be established among different departments when assessing risks and their consequences.
- Informative and skill-building in-service training programs should be organized for employees working in a risky environment about the effects of the devices, tools, supplies, and chemicals they work with on health and prevention methods.
- The physical factors of the working environment such as noise, lighting, and heating should be improved.
- Similar studies can be applied in different workplaces and can serve as a basis for collaboration between organizations.

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