

Stress Levels and Risks among Casino Employees in Bulgaria

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The aim of this study was to measure the stress level and the risk of developing high levels of stress among female and male casino workers in Bulgaria. This quantitative study was conducted on 388 casino employees (221 women and 167 men) from 18 casinos, who completed Perceived Stress Scale questionnaire. The results show higher stress levels and risks of developing stress among the group of female casino workers.

Key words: work stress, casino workers, gender, Perceived Stress Scale.

Introduction

Stress has become a part of modern working life, but it can lead to increased rates of occupational stress and stress-related disorders [1, 2, 10]. Gender is one of the most important determinants of human health [6] and male and female possessed different capabilities of dealing with stress and understandings of what is stressful [1, 2, 5, 6, 11].

Casino employees experienced high levels of work stress [3, 8, 11] compared to other occupations and the general workforce [4, 9, 11] and have to be well prepared for meeting the requirements of their occupation [4, 11]. Furthermore, in the light of the above data, the purpose of the present study was to examine general levels of stress and their gender distribution in 18 casinos in the territory of Bulgaria.

Materials and Methods

In order to determine the general levels of stress among casino employees in this study, we used the Bulgarian adaptation of Perceived stress scale (PSS) [7]. There are three versions of the questionnaire. We used the 10 item version for the purposes of this study. There were 388 participants (221 women and 167 men) from 18 casinos who completed the questionnaire. The results were statistically processed with MED CALC.

The general stress levels for each of the participants were measured as the sum of the points of the answers to each of the 10 questions from the test. Data for general stress levels of those persons is written as variable general levels of stress (Total_T2). Classification of general stress levels for each of the participants was done in accordance with the code table of the questionnaire in one of these three categories: code “0” – no stress, code “1” – moderate level of stress, and code “2” – high level of stress.

Results and Discussion

Descriptive statistics, frequency and graphical analysis have been performed to evaluate the data for Total_T2 among men and women working in casinos. The data for these two groups (221 women and 167 men from 18 casinos) have equal variances and among them there are no highly diverted from their mean value. Data for the group of women are normally distributed, but not those from the group of men (**Table 1**).

Comparative analysis of the mean of data for general levels of stress is used in the groups of working women and men in casinos. The comparison is done with Kruskal-Wallis test, which in the case of two variables gives identical results to those of the test of Mann-Whitney for independent samples (**Table 2**).

Table 1. Data for the group of women are normally distributed, but not those from the group of men

	Gender							
	female				male			
	N	Mean	SD	Normal Distr.	N	Mean	SD	Normal Distr.
Total_T2	221	17.597	5.5453	0.2961	167	15.048	5.7955	0.0288

Table 2. General levels of stress in the group of working women and men in casinos

Descriptive statistics						
Factors	N	Minimum	25 th percentile	Median	75 th percentile	Maximum
Female	221	3.000	14.000	17.000	21.000	34.000
Male	167	4.000	11.000	15.000	19.000	33.000
Kruskal-Wallis test						
Test statistic		19.3743				
Corrected for ties Hit		19.4313				
Degrees of Freedom (DF)		1				
Significance level		P = 0.000010				
Factor				N	Average Rank	
(1) female				221	216.29	
(2) male				167	165.67	

It was found that there was a highly statistically significant difference ($P < 0.0001$) at the average rank of these two groups (216.29 for the group of women, and 165.67 for the group of men). This means that there are statistically significant higher levels of stress in the group of working women than in the group of men.

Comparing risks of developing high stress levels among men and women displays 3.74 greater risk for stress among working women than men (**Table 3**).

Table 3. Risks of developing high stress levels among men and women. This risk is statistically significant ($P < 0.0001$) and with 95% confidence interval will vary from 2.42 to 5.79

Outcome	Code_for_T2_results			Relative risk & Odds ratio	
Group	Gender			Exposed group: female	
Outcome	Group			Relative risk	3.740
	female	male		95% CI	2.4176 to 5.7874
0	122	147	269 (69.3%)	z statistic	5.924
1	99	20	119 (30.7%)	Significance level	$P < 0.0001$
	221	167	388		

The principal findings were as follows: First, the group of women is normally distributed, but not those from the group of men. These results are generally similar to those observed in previous studies [1, 2]. Second, our data provide the evidence that there are statistically higher levels of stress and risk of developing stress in the group of working women than in the group of men.

Conclusion

The results show higher general stress levels among working women in casinos than men. The risk of developing stress is also higher in the group of women. The study of the levels of stress and risk of developing stress has never been done before among Bulgarian casino employees. These new data may open the way to new studies in working stress and perhaps, one of the future challenges for Bulgarian casinos will be integrating stress prevention and awareness programs to sensitize gaming employees to problems related to stress.

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