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FACTORS AFFECTING EMPLOYEE ABSENTEEISM[*] (A STUDY ON A SAMPLE OF TEXTILE WORKERS)

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ABSTRACT

The purpose of this paper is to examine the factors that influence absenteeism in a sample of workers from a leading textile company in Turkey. The statistical analysis indicated that absenteeism was significantly correlated with age, tenure, type of work and marital status. An interesting finding was that absenteeism was found to be positively and significantly related to astrological signs. Finally, the regression analysis revealed that tenure and level of education were found to be the significant predictors of absenteeism.

Keywords: *employee absenteeism, demographic factors, astrological sign, Turkey.*

1. INTRODUCTION

The term “absenteeism” originates from the Latin word, “absentia" (Mashonganyika, 2004). Although there is not a standard definition of absenteeism, it is extensively used to describe non-attendance of employees for scheduled work (Banks et al. 2012).

The phenomenon of absenteeism entered into the public consciousness in 1904, when the term “absenteeism” appeared in New York Times (Patton, 2005). Absenteeism started to attract scholarly attention in 1940’s with the appearance of the first empirical studies by Jackson (1944), and Noland (1945) on the causes and consequences of absenteeism (Mashonganyika, 2004).

The statistics reflect that employee absenteeism produces dramatic costs to national economies in terms of lost productivity. For example, the Statistics Canada (2014) reports that the average absenteeism rate per full-time worker was 9.2 days in 2013. The direct cost of absenteeism to the Canadian economy in 2012 was estimated by The Conference Board of Canada (2013) to be as $16.6 billion. According to the U.S. Bureau of Labor Statistics (2014), the absence rate for 2013 was 2.9% in US. The annual cost of absences to U.S. employers amounts to more than $74 billion (Weiner, 2010). In UK, the figures have shown that the average number of lost days was 9.8 per employee in 2013 (Stevens, 2013), amounting to a total of 131 million lost days of work (ONS, 2014). It has been calculated that the annual cost of sickness absenteeism to UK companies is about £29 billion (Stevens, 2013).

The empirical findings on employee absenteeism with regard to certain demographic factors have been reported widely. For example, Markussen et al (2009) pointed out the relationship between absence behavior and age, indicating a sharp decline at older ages (up to around 45 years). Similarly, Keller (2008) reported in his study among 367 service employees that age was significantly correlated to absenteeism.

Numerous studies were intended to find out the impact of gender on absence behavior. For instance, Markussen et al. (2009) concluded that female employees had much higher absence rates than male employees, regardless of being married or not, having children or not. Laaksonen et al (2007) reached a similar conclusion in their study on sex differences among 5470 female and 1464 male employees over 2 years (2000-2002) in Finland. However, the findings of the study by Keller (2008) seem to provide little contrary evidence.

Experience is another studied factor affecting absenteeism. Compton (2001) found that years of experience were significantly related to absenteeism. Consistent with these results, Adebayo and Nwabuoku (2008) revealed that working experience was significantly and positively correlated with absenteeism. The study by Hoque and Islam (2003) supports the view that absenteeism is associated with experience.

Examining the relationship between family responsibilities and employee absenteeism, Westhuizen (2006) demonstrated the significant impact of marital status and the number of dependents on the

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frequency of absenteeism. Adebayo and Nwabuoku (2008) also confirmed the significant correlation of absenteeism with marital status. Similarly Langenhoff (2011) noted a negative relationship between absenteeism and family size.

In addition to the above, some studies have investigated other factors influencing absenteeism such as tenure (Keller, 2008), stress (Marzec, 2013; Darr, 2004), level of education (Langenhoff, 2011), country of origin (Hansen et al., 2013) and local unemployment rate (Scoppa and Vuri, 2012).

The studies also identify several organizational variables that directly or indirectly affect employee absenteeism. In that context, job satisfaction is considered as the key explanatory variable. For example, a study by Kehinde (2011) concluded that there was a significant correlation between absenteeism and overall job satisfaction. Similarly, Cohen and Golan (2007) indicated that among work attitudes, job satisfaction had a strong impact on absenteeism. Contrary to these findings, a study by Mashonganyika (2004) observed an insignificant relationship between overall job satisfaction and absenteeism. Drakopoulos and Grimani (2011) found that injury absenteeism was weakly connected to job satisfaction in their sample.

Additionally, other organizational factors have been reported likely to have an impact on absence behavior including ownership structure (Block et al., 2014), organizational trust (Romero and Strom, 2011), transformational leadership, job characteristics and psychological empowerment (Belhaj, 2012), peer group effect (Paola, 2003), and pay level (Keller, 2008; Langenhoff, 2011).

The purpose of the present paper is to examine the factors that influence absenteeism in a sample of workers from a leading textile company in Istanbul, Turkey. More specifically, the paper aims to answer the following research questions: (1) are there statistically significant differences in absenteeism by demographic variables (such as gender, age, marital status, presence of children, astrological sign, and level of education)? (2) To what extent are demographic variables correlated with absenteeism? (3) Is there any influence of demographic differences on absenteeism? (4) To what extent do demographic characteristics predict absenteeism?

The remaining of the paper is organized as follows: the next section lays out the methodology of the study, the empirical findings are summarized in the third section, and the last section presents the conclusions and recommendations of the study.

2. METHOD

2.1. Population

The population for the study included 231 full-time employees who worked for a textile manufacturer. 53.7% (124) of the sample were female, and 46.3% (107) male. The age of workers ranged from 19 to 59 years, where the mean age was 35.3 years, with a standard deviation of 7.94. The average tenure in the sample was 5.6 years. Approximately two thirds of workers were married (66.7%). Nearly one-third of the sample had a primary school education (31.3%, secondary 13.5%, high school 25.7%, associate's degree 13.5%, bachelor's degree 16.1%).

2.2. Procedure

The study used the databases available from a leading textile company operating in Istanbul, Turkey. The absenteeism data used in the study covered the period from January 1 through December 31, 2013. The data was gathered from the records of the human resource department.

2.3. Measures

The dependent variable was absenteeism, which was classified into three categories: sickness, paid and unpaid absenteeism. Absenteeism was measured by the number of hours.

The independent variables were demographic factors such as gender, age, presence of children, type of work (i.e. white or blue collar), marital status, level of education and astrological sign.

2.4. Data Analysis

The descriptive statistics provided the means and standard deviations for absenteeism by demographic characteristics. The Kruskal-Wallis and Mann-Whitney tests were utilized to analyze the significant differences in demographic characteristics regarding absenteeism. The Spearman correlation analysis was conducted to measure the significant relationships among the study variables. Moreover, the Univariate analysis was used to test for the impact of some demographic variables (gender, marital status

and astrological sign) on absenteeism. Finally, the regression analysis was performed to identify the predictive factors of absenteeism.

3. RESULTS

3.1. Descriptive Statistics

Table 1 presents descriptive statistics (means and standard deviations) for the variables. Relatively higher means were observed in paid absenteeism. The most common reason for absence from work among male, married, having children, primary school and blue-collar employees was illness. However, the paid absenteeism was more prevalence among female, single, not having children, university graduate and white-collar employees.

TABLE 1: RESULTS OF THE DESCRIPTIVE STATISTICS

Variables		The Number of Absence Hours					
		Sickness Absenteeism		Paid Absenteeism		Unpaid Absenteeism	
		Mean	SD	Mean	SD	Mean	SD
Gender	Male	16,9	60,5	17,1	32,1	7,1	17,2
	Female	7,7	34,9	32,7**	121,9	5,9	20,4
Marital statue	Single	4,1	11,8	39,4	156,3	4,8	12,9
	Married	15,8	58,6	18,5	21,2	7,3	21,3
Presence of children	Having children	16,9	60,9	18,3	21,6	7,5	21,9
	Not having children	3,9	11,3	36,9	145,6	4,8	12,6
Level of education	Primary	19,6	60,8	10,9	15,1	8,6	19,6
	Secondary	9,1	46,8	16,1	20,5	6,6	13,3
	High school	9,7	47,2	26,1	36,8	2,9	7,6
	Associate's degree	3,9	13,8	16,6	14,5	10,9	36,4
	Bachelor's degree	9,5	45,2	68,6**	220,3	4,5	11,6
Type of work	White-collar	8,9	38,4	36,7**	114,2	5,1	20,9
	Blue-collar	17,2	62,4	6,30	12,3	8,8**	14,9
Astrological sign	Aries	16,5	74,5	17,0	24,2	7,3	17,9
	Taurus	0,0	0,0	19,9	19,8	1,4	4,5
	Gemini	22,2	85,9	19,9	26,3	3,2	12,2
	Cancer	6,4	19,5	23,2	21,7	7,8	11,7
	Leo	9,0	13,1	12,6	17,3	15,1	36,1
	Virgo	2,0	6,6	23,6	30,1	5,2	10,1
	Libra	0,9	4,1	36,3	56,4	14,2	43,5
	Scorpio	23,6	71,9	20,7	24,5	2,5	4,6
	Sagittarius	5,1	12,7	19,9	15,4	5,3	10,5
	Capricorn	4,0	14,2	15,9	16,7	6,2	13,1
	Aquarius	31,8*	67,4	17,9	22,7	6,0	18,1
	Pisces	11,3	38,5	72,0	288,1	6,8	13,2

***p < .05**
****p < .001**

The Kruskal-Wallis and Mann-Whitney analysis revealed that there were some significant differences in the sample characteristics in terms of sickness, paid and unpaid absenteeism. For example, it was found significant gender differences in paid absenteeism, meaning that women were more likely to have paid absence than men. Paid absenteeism also demonstrated statistically significant differences regarding level of education. Similar results were obtained in sick and paid absence between white and blue-collar

workers. Finally, sickness absenteeism seemed to differ by astrological sign; employees born under Aquarius or Scorpio had higher means in terms of sickness absenteeism than employees born under other signs.
In reference to the presence of children and marital status, no significant differences were observed in the sample.

3.2. Correlation Analysis of Variables

The spearman correlation was used to examine the correlations between the study variables (as shown in Table 2). The results indicated that there were some moderate relationships between personal characteristics and absenteeism variables.
According to the correlation matrix, marital status was significantly and positively correlated with sickness absenteeism (r= .31), indicating that sickness absenteeism was associated with single workers, but not with married workers. Similarly, astrological sign was observed to be significantly and positively related to sickness absenteeism (r= .38).

TABLE 2: RESULTS OF THE CORRELATION ANALYSIS

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Sickness absenteeism	-										
2. Paid absenteeism	,21	-									
3. Unpaid absenteeism	,09	-,02	-								
4. Gender	-,08	,08	,03	-							
5. Age	,03	,15*	-,05	-,31**	-						
6. Tenure	,29	,16*	,06	-,07	,36**	-					
7. Marital status	,31****	,09	-,02	-,34**	,49**	,31**	-				
8. Type of work	,01	-,41**	-,11	-,49**	,21**	-,01	,35**	-			
9. Level of education	-,24	,17*	,09	,50**	-,31**	-,12	-,39**	-,63**	-		
10. Presence of children	-,29	-,08	,02	,39**	-,51**	-,29**	-,87**	-,38**	,43**	-	
11. Astrological sign	,38*	-,02	-,08	-,01	,04	,01	,08	,06	-,14*	-,07	-

*Correlation is significant at the 0.05 level (2-tailed).
**Correlation is significant at the 0.01 level (2-tailed).

Moreover, paid absenteeism appeared to be associated with the number of variables. For example, age was significantly and positively correlated with paid absenteeism (r= .15), meaning that absenteeism level of older employees was higher than that of younger employees. Level of education was significantly and positively associated with paid absenteeism (*r*= .17), such that workers with higher education degree tended to have higher levels of absenteeism. Also there was significant and positive between paid absence level and tenure. However, the type of work was negatively and significantly related to paid absence (*r*= -.40), such that higher absence rates were associated with white-collar workers.

3.3. Univariate Analysis

The Univariate analysis was run to test the influence of gender and astrological sign on absenteeism. As shown in Table 3, sickness absenteeism significantly differed by gender and astrological sign ($p < .05$), meaning that male employees born under the sign of Aries, Gemini and Pisces had a significantly higher absence rates compared to female employees born under those signs. Similar differences by gender and astrological sign were seen in unpaid absenteeism ($p < .05$), indicating that female workers born under the sign of Taurus, Virgo, Libra and Aquarius were more likely to have experienced unpaid absence than male workers born under those signs.
Although female workers had higher means in paid absenteeism than male employees, there were no significant differences by gender and astrological sign.

Table 3 also presents that paid absenteeism significantly differed by marital status and astrological sign ($p < .05$), indicating that single workers born under the sign of Aries, Virgo, Libra and Pisces had significantly higher rates of paid absenteeism than married workers born under those signs.

TABLE 3: RESULTS OF THE UNIVARIATE ANALYSIS

Absenteeism Variables	The Number of Absence Hours							
	Astrological Sign				Astrological Sign			
	Men (mean)	Female (mean)	F	R^2	Single (mean)	Married (mean)	F	R^2
Sickness	78,4*	47,6	3,260	.21	44,2	172,1	,763	7,8
Paid	24,0	33,8	,794	-,031	539,8*	222,9	2,064	18,7
Unpaid	22,2	24,6*	2,335	.19	61,5	97,1	,696	7,2
*p < .05.								

On the other hand, sickness and unpaid absenteeism by marital status and astrological sign showed no meaningful differences.

3.4. Predictors of Absenteeism

The multiple regression analysis was conducted to identify the determinants of absenteeism. While the predictor variables in the model 1 (sickness absenteeism) involved age, tenure, type of work, and level of education, the model 2 (paid absenteeism) included level of education and astrological sign as the explanatory variables. The findings of the regression analysis are illustrated in Table 4.

The overall model was significant for sickness absenteeism ($p < .05$). R square (r^2) is 0.25, meaning that the predictor factors of sickness absenteeism can explain 25% of the total variance. Only tenure in the equation contributed significantly and positively to the prediction of sickness absenteeism.

TABLE 4: RESULTS OF THE REGRESSION ANALYSIS

Model		B	SD	β	R^2 for Model
Model 1 Sickness Absenteeism	Age	76,3	118,9	,105	%25
	Type of work	-612,9	2238,8	-,052	
	Level of education	-565,5	749,8	-,117	
	Tenure*	477,1	173,2	,429	
Model 2 Paid Absenteeism	Level of education*	649,7	301,2	,154	%3,2
	Astrological sign	187,4	119,7	,157	

Similarly the entire model was significant for paid absenteeism ($r^2 = .032$, $p < .05$). The results for the equation explained 3.2% of the variance in paid absenteeism. Of the variables in the model, only level of education proved to be a significant for paid absenteeism.

4. DISCUSSION AND CONCLUSIONS

There is a large body of empirical research to identify the factors influencing absenteeism. The purpose of the current study is to contribute to the literature by analyzing the degree to which employee absenteeism is correlated with demographic variables in a sample from Istanbul, Turkey. The study also investigated the differences in absenteeism with respect to individual characteristics. Lastly, the relative contribution of

the independent variables to the prediction of employee absenteeism was evaluated. It is possible to draw some conclusions from the present results.

The statistical analysis indicated that there were significant gender differences with respect to paid absenteeism, meaning female workers tended to have higher paid absenteeism than male workers. This finding is compatible with the other studies (Markussen et al., 2009; Laaksonen et al., 2007). Similar differences were also observed regarding level of education, and type of work.

Another noteworthy finding was that the correlation between absenteeism and type of work was highly negative, showing that absenteeism levels of white-collar workers had significantly higher compared to blue collar workers. This result contradicts with the findings of Love et al. (2012), which revealed that white collar employees had less sickness absence days than blue-collar employees. The correlation results also indicated that a statistically significant positive relationship existed between absenteeism and tenure. This concurs with the findings on study of Keller (2008), which concluded that tenure significantly affected absenteeism. The results of the study also showed that marital status had significant correlation with sickness absenteeism. This is consistent with the study of Adebayo and Nwabuoku (2008) and Westhuizen (2006), which indicated a relationship between absenteeism and marital status, but contradict with the results of Compton (2001).

An interesting result was that absenteeism was found to be positively and significantly correlated to astrological sign (r=0.38), which suggests that employees born under Scorpio and Aquarius had a higher probability of absenteeism compared to other astrological signs. In addition, the Univariate analysis found that sickness and unpaid absenteeism varied significantly by gender and astrological sign. The results pointed out that male workers born under the sign of Aries, Gemini and Pisces were likely to experience higher levels of sickness absenteeism. However, female workers born under the sign of Taurus, Virgo, Libra and Aquarius tended to have more paid absenteeism.

Moreover, the regression analysis demonstrated that while tenure predicted sickness absenteeism, education degree was a significant predictor of paid absenteeism. This result agrees with the findings of Frenkel et al. (2005), who identified managerial tenure and managers' education as predictors of absenteeism. In contrast, gender was not seen to be a significant determinant of employee absenteeism. This result is similar to the findings of Adebayo and Nwabuoku (2008), which concluded that sex was not a predictive variable in employee absenteeism, but not in line with Allisey's results (2011), which reported that gender was a significant predictor of absenteeism behavior.

Finally, it is important to note that employee absenteeism is a social phenomenon influenced by diverse individual, social and organizational factors. Thus, more detailed studies using different samples and methods need to be performed to evaluate the contribution of background factors to absence behavior. Future studies should consider other socio-economic variables such as wage rates, cultural habits, stress, personality traits and unemployment rate to describe the predictors of employee absenteeism.

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