

An experimental investigation of the contribution of regular physical activity to organizational commitment of employees in a food company

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Summary. *Objective:* Participation in regular physical exercise and sports activities has positive effects on physical and mental health. Organizational commitment is a very important factor affecting the productivity of employees in the business world. The purpose of this study is to investigate the contribution of participation in physical exercise and team sports activities on organizational commitment of employees. *Methods:* Ninety employees who have been working for a food production company for two years or more participated in this research. Participants grouped as control (CG), individual physical exercises (IPEG) and team sports activities (TSAG). IPEG participated in individual physical exercise programmes and TSAG groups participated in team sports activity programmes throughout eight weeks and two days in a week. Organizational Commitment Scale developed by Meyer, Allen and Smith (1993) and adopted to Turkish Culture and Turkish Language by Dağlı, Elçiçek and Han (2018) was used to determine the organizational commitment status of participants. Paired t-test and ANOVA test were used in the statistical analyses. *Results:* TSAG mean score was significantly higher than control group regarding organizational commitment total score means ($p < 0.05$). Emotional commitment, normative commitment and total organizational commitment post-test mean scores of TSAG were significantly higher than their pre-test mean scores ($p < 0.05$). *Conclusion:* Finally, participation in team sports activities increases employees' emotional and normative commitments to their companies without any financial profit.

Key words: employee, food, organizational commitment, physical activity, sports,

Introduction

In our age innovations in technology and communication cause to deepen inter-enterprise rivalry by increasing the effect of globalization in the business world. In this competitive environment enterprises and companies plunge into different quests for multi-lateral development (1). The effect of human resources is a known fact on development and performance in the business world.

Today, technological developments and innovations in many sectors led to fewer workers and the need for the labor force. However, scientific researches

revealed that the employees' characteristics and their attitude towards the company are still very effective in product quality and customer satisfaction. Therefore, labor force and employees should not be underestimated in many sectors (2,3). The attitudes, expectations and commitments of employees toward the work environment are quite effective. As of the 1950s, the concept of Organizational Commitment, have constituted a conceptual framework related to psychological proximity between employee and the company. Financial situations were observed to have certain effects on organizational commitment levels of employees in first-period scientific research. However, it is stated that or-

ganization commitments of employees will not only be a subject to investigate with financial situations but also its social aspects will be focused in the years ahead. It was determined that the causes which have influences on organizational commitment are generally; individual demographic factors like gender, age and health status, organizational factors like work, workplace and management structure and non-organizational factors like finding a new job (4). Among the factors affecting organizational commitment, there are inter-organizational factors, culture, organizations' missions, financial possibilities, and shift periods are directly associated with perceptions and behaviours related to employer and workplace. Scientific research on organizational commitments of employees proved that positive and negative changes in inter-organizational factors are directly associated with the performance of employees (5). In accordance with this information, employers care research and development activities in order to increase organizational commitments of employees by enhancing inter-organizational factors (6). When scientific research is reviewed on this issue; it can be seen that research related to the effects of recreational and sports activities on organizational commitment were not sufficiently investigated. Today it is scientifically proved that participating in regular physical exercise and sports has physical, mental and psychological benefits on people. Especially psychologically; sports and regular physical activity have been determined to have positive effects on socializing and belongingness to an establishment or a group (7,8). In this regard, one can think that physical exercise and sports activities to be organized in workplaces might have effects on organizational commitments of employees. In this direction, the purpose of this study is to investigate the contribution of participation in individual physical exercises and team sports activities on organizational commitment of employees.

Materials and Methods

The Study Group

Ninety participants (twenty female, seventy male) who have been working for a food production company for two years or more in 2019 participated in this re-

search voluntarily. Participants were between 21-51 ages and averages ages were 33.18 ± 7.14 . Their professional seniority was at least three years and a maximum of 17 years and they had 8.17 ± 4.18 average working years. In the scope of research, employees participated in individual physical exercises (running, walking, fitness, dart and bicycle) and team sports activities (basketball, futsal, and volleyball) programmes throughout eight weeks and two days in a week. Each exercise session was planned as 30 minutes. Participants randomly grouped into control (CG, $n=30$), individual physical exercises (IPEG, $n=30$) and team sports activities (TSAG, $n=30$). Both physical exercises and team sports were carried out in the workplace campus in time-off periods. This research was conducted according to the criteria set by the Declaration of Helsinki and ethical standards in sport and exercise science research.

Data Collection Method

Demographic info like age, gender, professional seniority, educational status of participants were obtained by using information form prepared by the researcher. For determining organizational commitment status of participant after eight-week sports activity Organizational Commitment Scale developed by Meyer, Allen and Smith (1993) and adopted to Turkish Culture and Turkish Language by Dağlı, Elçiçek and Han (2018) were used (9,10). The scale is 5 Likert type and consisted of 18 items with emotional (6 items), continuity (6 items) and normative commitment (6 items) three sub-dimensions. The least score that can be obtained from answers of the scale was 18 and the maximum score was 90. The highest scores expressed organizational commitment levels.

Statistical Analysis

Data obtained from the research were analyzed by the SPSS 20.0 statistical analysis package programme. Frequency and percentage values for categorical data, arithmetic mean \pm standard deviation values for continuous variables were calculated. At first normality analysis of data obtained from organizational commitment, the scale was made through Shapiro – Wilk test and data were determined to show a normal distribu-

tion. Paired t-test used to determine the differences between scale means of groups in the before and after this research. ANOVA test was used to determine the differences between organizational commitment scores of study groups. Post-Hoc Tukey test protocol was applied to determine the source of difference according to the results of the one-way ANOVA. Significance level was taken as $p < 0.05$ in statistical analysis.

Results

Pre-test score means statistical analysis results according to research groups were shown in Table 1. Statistical analysis results showed that there were no significant differences between groups according to sub-dimension and total score means of organizational commitments ($p > 0.05$).

Mean scores related to organizational commitments before and after eight weeks of sports activity period in participants were shown in Table 2.

Statistical analysis results revealed that there were no statistically significant differences between pre-test and post-test score means of IPEG and CG according to sub-dimensions and total score means of participants ($p > 0.05$). Emotional commitment, normative commitment and total organizational commitment post-test mean scores of TSAG were significantly higher than their pre-test mean scores ($p < 0.05$). However, there were no statistically significant differences between pre-test and post-test mean scores of continuance commitment in TSAG ($p > .05$).

Organizational commitment post-test mean score of employees groups were shown in Table 3. Statistical analysis results revealed that there was no statistically significant difference between organizational

Table 1. Comparison of pre-test organizational commitments scores in employees groups

Variables	IPEG (n=30)	TSAG n=30)	CG (n=30)	f	p
	Mean ± Standart Deviation				
Emotional Commitment	19.51 ± 6,47	20.10 ± 5,06	19.18 ± 6,14	1.582	0.07
Continuance Commitment	19.03 ± 3,56	20.40 ± 4.46	20.70 ± 5,24	1.275	0.08
Normative Commitment	19.76 ± 4.04	19.48 ± 4.70	19.96 ± 5,04	0.528	0.32
Total	58.03 ± 9,23	59.99 ± 8,54	59.94 ± 9,14	0.862	0.23

Table 2. Comparison of pre-test and post-test organizational commitment scores of participants

Variables	Group	Pre-Test	Post-Test	f	p
Emotional Commitment	IPEG	19.51 ± 6.47	21.15 ± 6.35	1.442	0.09
	TSAG	20.10 ± 5.06	21.48 ± 5,06	3.612	0.02*
	CG	19.18 ± 6.14	19.78 ± 5,75	0.584	0.36
Continuance Commitment	IPEG	19.03 ± 3.56	19.59 ± 4.71	0.916	0.13
	TSAG	20.40 ± 4.46	21.24 ± 4.83	1.353	0.14
	CG	20.70 ± 5.24	20.28 ± 6.41	0.482	0.29
Normative Commitment	IPEG	19.76 ± 4.04	20.84 ± 5.28	1.163	0.18
	TSAG	19.48 ± 4.70	21.34 ± 5.43	3.816	0.01*
	CG	19.96 ± 5.04	20.07 ± 4.54	0.125	0.42
Total	IPEG	58.03 ± 9.23	61.58 ± 8,15	1.814	0.06
	TSAG	59.99 ± 8.54	64.06 ± 5,65	2.916	0.03*
	CG	59.94 ± 9.14	60.13 ± 8,57	0.612	0.24

* $p < 0.05$

Table 3. Comparison of post-test organizational commitment scores of employees groups.

Variables	IPEG	TSAG	CG	f	p	Post-Hoc
	Mean ± Standart Deviation					
Emotional Commitment	21.15 ± 6.35	21.48 ± 5,06	19.78 ± 5,75	1.161	0.08	n/a
Continuance Commitment	19.59 ± 4.71	21.24 ± 4.83	20.28 ± 6.41	1.043	0.09	n/a
Normative Commitment	20.84 ± 5.28	21.34 ± 5.43	20.07 ± 4.54	0.678	0.31	n/a
Total	61.58 ± 8,15	64.06 ± 5,65	60.13 ± 8,57	2.739	0.03*	TSAG > CG

*p < 0.05, n/a: not applicable

commitment according to sub-dimension score means of participants ($p > 0.05$). However, the mean score of TSAG was significantly higher than control group regarding organizational commitment total score means ($p < 0.05$).

Discussion

The results of this study on organizational commitment status of employees who participated in recreational physical exercises and team sports activities within the research revealed that eight weeks of participation in recreative volleyball, basketball and futsal sports activities caused a positive increase in general organizational commitment and emotional and continuance commitment status of employees. Emotional commitment can be defined as having a positive and emotional interaction and identification with fellow employees and organization (9). Scientific studies reveal that participation in sports is important activities which provide individuals having similar and different characteristics to liaise and to show well-adjusted behaviours (11). Especially in educational institutions; sports activities were revealed to be effective with regard to increasing belongingness of teachers and students to their school in research have been carried out so far (8). Similarly, Dindar and Güler (2019) and Togo (2018) determined that employees participated in Companies League Basketball competitions had increases in emotional commitment levels (12,13). In this regard, regular participation in team sports seemed to have positive effects on emotional commitment levels of employees. Therefore, it may be beneficial to give a place to group activities rather than individual

activities in sports organizations in order to develop emotional commitments of employees towards their companies they work for (13).

Normative commitment is defined as an organizational commitment dimension which employees feel depending on their responsibility feeling against their environment and the organization they work for (8). Participation in sports activities from each age group is an activity that develops people's responsibility emotion against their individual and group they are involved (14). Similarly, participation in team sports during the eight-week had effects on normative organizational commitment of employees due to their sense of responsibility towards their team and teammates.

Continuance commitment of employees is defined as an organizational commitment dimension associated with incomes which employees gain from their companies (9). When sports activities are organized professionally they become activities providing financial income. However, recreational sports activities are not activities which financial benefits come first (15). In this sense in the current study, it is an expected situation when there are not any significant changes in continuance commitment related to financial expectation and satisfaction for employees participating in both individual and team sports are not paid an overtime pay or a bonus earning. But the effects of awarding these sportive achievements from sports organizations financially or lending credence are recommended to study and research as well.

Scientific studies reveal that participating in regular physical and sports activities not only contribute to the physical development of children and adolescents but also have positive social and psychological effects. Organizational commitments of employees working in

business areas where the labor force is effective to become a factor in employees' performance and success of the company (3). Factors that are effective on organizational commitments of employees in literature have long been investigated for years (16). Participation in sports activities is expected to be effective on belongingness and commitments of individuals (8). However, recreational sports activities involve a wide range of activities from hiking to motorsports. For this reason, the subject of what kind of sports activities will be useful for enhancing the organizational commitment of employees should be overviewed. In accordance with that, the results of this study reveal that participating in team sports will be more contribute the emotional, normative and general organizational commitments of employees than individual physical exercises.

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References

1. Sabır H. Küreselleşen dünyada rekabet politikası ve gelişmekte olan ülkeler [Competition policy and developing countries in the globalising world]. *International Journal of Political Science*. 2013; 1(1): 121–133.
2. Aslan M, Koçak MS. Determination of the service quality among sport and fitness centers of the selected universities. *International Journal of Human Sciences [Online]*. 2011; 8(2): 817–833.
3. Gong Y, Law KS, Chang S, Xin KR. Human resources management and firm performance: The differential role of managerial affective and continuance commitment. *Journal of Applied Psychology*. 2009; 94: 263–275.
4. Zaraket M, Garios R, Malek LA. The impact of employee empowerment on the organizational commitment. *International Journal of Human Resource Studies*. 2018; 8: 284–299.
5. Visanh P, Xu H. Factors affecting organizational commitment of employees of Lao development bank. *Social Int J*. 2018; 2: 809–818.
6. Baird KM, Tung A, Yu Y. Employee organizational commitment and hospital performance. *Health Care Management Review*. 2019; 44: 206–215.
7. Tazegül Ü, Çimen K, Atar Ö. Comparison of social anxiety levels of students that do and do not sports. *North Asian International Research Journal of Social Science & Humanities* 2016; 2: 32–40.
8. Uğraş S, Özen G. Investigation of the relationship between attitude to physical education course and school belonging. *Pedagogy of Physical Culture and Sports*. 2020; 24: 48–53.
9. Meyer JP, Allen NJ, Smith CA. Commitment to organizations and occupations: Extension and test of a three-component conceptualization. *Journal of Applied Psychology*. 1993; 78: 538–551.
10. Han B, Dağlı A, Elçiçek Z. Örgütsel bağlılık ölçeği'nin Türkçeye uyarlanması: Geçerlik ve güvenilirlik çalışması [Adaptation of the "Organizational Commitment Scale" into Turkish: Validity and reliability study]. *Electronic Journal of Social Sciences*. 2018; 17(68): 1788–1800.
11. Daniels E, Leaper CA. longitudinal investigation of sport participation, peer acceptance, and self-esteem among adolescent girls and boys. *Sex Roles*. 2006; 55: 875–880.
12. Dindar MD, Bilir Güler S. Spor Aktivitelerinin Şirket Çalışanları Üzerindeki Etkisi [The Effect of Sports Activities on Company Employees]. *Nobel Bilimsel Eserler: Ankara*, 2019.
13. Togo OT. Evaluation of the Effect of Corporate Sport Organizations on Organizational Commitment and Quality of Life. Master Thesis, Marmara Üniversitesi Sağlık Bilimleri Enstitüsü, İstanbul, 2018.
14. Hellison D, Martinek T, Walsh D. Sport and responsible leadership among youth. In *Positive Youth Development Through Sport* (pp. 63–74). Routledge, 2007.
15. Gratton C, Taylor P. Economics of sport and recreation (2. Ed.). E & FN Spon Ltd., 2000.
16. Ramaprasad BS, Prabhu KN, Lakshminarayanan S, Pai YP. Human resource management practices and organizational commitment: A comprehensive review (2001–2016). *Pra-bandhan: Indian Journal of Management*. 2017; 10: 7–23.

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