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Working Experience and Perceived Physical Activity and Exercise Barriers

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Abstract

The purpose of this study was to assess the relationship between physical activity levels and the type of barriers of engaging in physical activity and exercise depending on working experience years among women who have sedentary long hours jobs. Participants of this study were (101) female workers (M=36.6, SD=6.2 years) who were recruited randomly from (Yarmouk University, Irbid Jordan). Participants were grouped according to years of working experience: less than 5 years (n=34), 5-9 years (n=32), more than 10 years (n=35). Current exercise levels and perceived barriers to physical activity were assessed by the Arabic short form of the International Physical Activity Questionnaire (IPAQ) and the Barriers to Being Active Quiz of the Centers for Disease Control and Prevention (CDC) questionnaire. Results: No significant differences were observed between years of experience and type of barriers. Whereas, the results of this study showed that the physical activity and exercise barrier among all participants where the lack of energy (M=6.1, SD=1.7), followed by lack of time barrier (M=5.9, SD=1.8). The findings of this study suggest that working women despite their working experience have similar physical activity and exercising barriers, that might benefit from interventions and strategies to overcome barriers by enhancing physical activity and exercise during working hours.

Key words: *physical activity, exercise, barriers, working experience years*

Introduction

Incidents of ill health, including chronic health disease, have significantly increased in working populations, and research studies have related it to high job demands and long working hours (Cook & Gazmararian, 2018). The increased working hours and related stress contribute to the obesogenicity increased rates among workers. Research studies have sought that long working hours reduce the availability of leisure and exercise time that impact daily physical activity levels (Steinborn & Huestegge 2016; Lohmann-Haislah, 2013). Also previous literature has demonstrated that the extent working hours could upraise risks of severe work-related injuries (Dembe, Erickson, Delbos, & Banks, 2005), work efficiency (Golden, 2012), affect employees physical and psychological status (Cho, Ju, Paek, Kim, & Jung-Choi, 2018) and even cause family conflict (Ronda, Ollo-López, & Goñi-Legaz, 2016). Whereas, the adopted office workers inactivity is tides to be carried out though their life span and affect family members too as addressed by many researchers. For example, the impact of inactivity habitual of workers on surrounded family members physical activity levels have been studied by Mailey, Huberty, Dinkel, and McAuley (2014) and Floderus, Hagman, Aronsson, Marklund, and Wikman (2008) where they found that working mothers and fathers have low physical activity levels due to fatigue lack of time and feeling of guilt (Floderus et al., 2008; Mailey et al., 2014). Hence, an employee's with sedentary and longer working hours have demonstrated a bigger tendency to smoke, low physical activity levels, and poorer eating habits, also poor medical and health checkups routines (Sparks, Faragher, & Cooper, 2001). Whereas, researchers found that socio-economic backgrounds of employees might play an integral role in lower physical activity rates. For example, younger workers showed higher prevalence to adopt poor life quality habits as addressed previously than more experien-

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ced workers and were closely correlated to primary and secondary risks of developing chronic diseases (Tomei, Cangemi, Giubilati, & Fioravanti, 2007). In the other hand gender plays a significant role when it comes to workers activity rates, researchers have addressed that women, in general, are less active than men (Cook & Gazmararian, 2018) and female workers typically have higher inactivity levels than their male counterparts (Cook & Gazmararian, 2018; El Ansari & Lovell, 2009). A recent study by Klingberg et al. (2018), have investigated the impact of work demands and stress on workers overall life equality through the use of questionnaires and included 3,872 working men and women. The researchers followed study participants over twenty years tracking their body weight, demands, and control at work. The results of this study founded three main aspects of the effect of working environments on workers life quality. The first was that work demands had a significant impact on women's weight gain whereas no similar association was found in men participants. Similar results have been indicated by other researchers (Jang, Kim, Lee, Myong, & Koo, 2013; Luckhaupt, Cohen, & Calvert, 2014; Park, Pan, & Lankford, 2014) indicating that women inactivity was higher and associated with higher stress levels. Longer working hours have also been suggested to impact leisure time significantly that could be spent in exercising (Jang et al., 2013; Luckhaupt et al., 2014; Park et al., 2014). In an attempt to address and increase physical activity levels for women's, environmental interventions have been suggested and carried out in neighborhoods and working places (Knox, Musson, & Adams, 2015). Most commonly cited barriers to participating in physical activity include a perceived lack of time due to work demands and responsibilities (Gidlow, Johnston, Crone, Ellis, & James, 2006). Nonetheless, these findings correspond with previous study results suggesting incongruences between perceived and actual barriers, with lack of time and work demands presenting a "convenient excuse" to avoid demanding activity (Gidlow et al., 2006). Besides, physical activity barriers type founded to be sex depended as women were found to be less active than men despite the socioeconomic backgrounds. Whereas, family responsibilities, household, society norms, and tradition have been defined as the main factors that impact women's leisure time that could be spent in physical activity and exercising. Besides long working hours, employees and characteristically female workers have also addressed that lack of energy and will power have been integral to barriers of their participation in physical activities (Borodulin et al., 2016).

Inactivity is defined as one of the main risk factors of mortality in this century, globally at least 25% of adults are insufficiently active according to the World Health Organization 2016 report. Whereas, studies showed that these numbers increase in the Arab world due to norms and traditions especially for women (Kahan, 2015; Sharara, Akik, Ghattas, & Obermeyer, 2018). The strong relationship between life quality and daily habits has been a critical factor for interventions aim for consolidation of building up healthy behaviors. Likewise, interventions focused on the overcoming physical activity barriers have defined lack of time due to long working hours as a significant obstacle that leads to inactivity. Further research is needed due to the uniqueness of the environments and lifestyles of working women which demand customized interventions which also consider the sociodemographic variables of the populations. The purpose of this study was to assess the type of barriers of engaging in physical activity and exercise depending on working experience years among women who have sedentary long hours jobs at Yarmouk University.

Methods

This study is a cross-sectional study recited a connivance sample size from Yarmouk University working body. The sample size included female employs who had a full time working job and had sedentary desk tasks. One hundred one females from Yarmouk University working body volunteered to participate in this study (M=36.6, SD=6.2 years). Study's inclusion criteria were healthy with no medical recommendation not to exercises or are physically active. Also, had no injuries or surgeries during the past six months. This study was conducted during the spring semester of 2018 at Yarmouk University, Irbid-Jordan. Participants were then grouped into three categories depending on their years of working experience at Yarmouk University; the first group consist of (N=34) with (less than five) years of working experience, the second group consisted of (N=32) with (6 to 10) years of working experience, and the third group cosseted of (N=35) with (more than ten) years of working experience. This grouping was done according to previous research studies and regarding the Yarmouk University working code.

A brief explanation of the purpose and the procedures of the study were given to the participants. Also, confidentiality, the anonymous of the subjects were explained and insured. Participants then were asked to sign an informed consent that also included participants demographic data (age, sex, years of working experience, higher education level and job type: teaching, office worker, worker) were as the data of females, years of experience and only office worker job type were analyzed for this study. This study has fulfilled the ethical and safety standers and accomplished Yarmouk University code of ethics, that have been developed and followed the ethical principles of the Declaration of Helsinki Human rights.

Data collection were collected using well-known and valid self-administrated questionnaires, to indicate participants physical activity and exercise levels and barriers of physical activity and exercise. As physical activity levels were assessed using the Arabic Short Form of the International Physical Activity Questionnaires (IPAQ). IPAQ include seven items that represent the time that is spent in walking, physical activity with viragoes moderated intensity and time spent in sedentary behaviors during the past week of reporting. Physical activity intensity was assessed following the questioner protocol and based on the compendium of physical activity IPAQ (Ainsworth et al., 2011) as vigorous physical activity is defined as an activity that increases heart and respiration rates, in addition to sweating for at least ten-minute duration. This has a metabolic equivalent value above 6 (Morrow, Mood, Disch, & Kang, 2015).

Whereas, the moderate physical activity is defined as activities that moderately increases respiration rates, heart rates and sweating for at least ten minutes duration; which is equivalent to 3-6 metabolic equivalents (Morrow et al., 2015). As the number reported represent how many days of the week participants were active, in moderate and/or vigorous activities in the last seven days for at least one hour a day. The mean of both activity levels during the reported days (moderate and vigorous) was used to assess participants activity levels (0 to 4) un-active from (5-7) active (Grao-Cruces, Fernández-Martínez, Nuviala, & Pérez-Turpin, 2015). The internal consisten-

cy of participants responses to the questionnaire items was high (Cronbach α = 0.849).

Participants barriers of being active and excessing in this study were assessed by using the Barriers to Being Active Quiz (CDC) this tool is available from the Centers for Disease Control and Prevention and can be found at their official Website, this questionnaire is designed to assess self-identifying barriers of being physical active and participation in exercises. The questionnaire contains 21 items that represent the following barriers: lack of energy, lack of willpower, lack of time, social influence, fear of injuries, lack of skills and the availability of resources. Whereas, these barriers indication items were rated on a five-point Likert type scale. Health status and ability to exercise were approached from participants self-report.

Statistical analysis of the perceived physical activity and exercise barriers among the working experience groups were analyzed through the use of Statistical Package for the Social Sciences for Windows version 19.0 (SPSS Inc, Chicago, IL, USA). Scores on all 21 items were computed as the mean item response on each perceived barrier to facilitate sympathetically and the interpretation of obtained scores of participant responses. Whereas, descriptive statistics to express the results in terms of mean ± standard deviation were used. Independent t-test was used to measure the differences in the means of each item and the total scores for the external and internal barriers. The significance level was set at 0.05. The assumption of equality of variance and normality was determined using Levene's and Shapiro-Wilk tests, respectively.

The Statistical Package for the Social Sciences (SPSS 15.0) for Windows was used to perform all data analyses. Scores on all measures were computed as the mean item response on each instrument in order to facilitate understanding and interpretation of the meaning of scores in terms of participant responses. Data were summarized by using descriptive statistics, and the measurement characteristics of the BHADP were examined by using factor analysis. The primary analyses included a multivariate analysis of variance and hierarchical regression analysis. Multivariate analysis of variance (MANOVA) was used to determine whether participants in the three functional disability groups differed from each other on the two subscales for perceived health barriers to physical activity.

Results

The recruited female working body of Yarmouk University, had overall low physical activity level as calculated according to the (IPAQ). Participants had grouped it three categories based on their working experience years at Yarmouk University. Table 1 shows participants characteristics.

Table 1. Participants Characteristics

Working Experience Groups	Sample	Age (Mean ± SD)	Activity level
less than 5 years	34	29.2 ± 3.8	2
between 6 and 10 years	32	35 ± 4.1	3
more than 10 years	35	41.1 ± 4.3	2

No significant differences were observed between years of experience groups and type of barriers. Whereas, the results of this study showed that the physical activity and exercise barrier among all participants where the lack of energy (M=6.1, SD=1.7), followed by lack of time barrier (M=5.9, SD=1.8) and lack of willpower (M=5.6, SD=1.7). Whereas, fear of injuries and lack of skills were not reported as barriers. Table 2 shows working experience groups and physical activity and exercise barriers.

Table 2. Physical and Exercise Barriers among Working Experience Groups

Psysical activity and exercise barriers	Working Experience Group	Sample	Mean	St. Dev.
Lack of Time	less than 5 years	34	6.5	1.7
	6 to 10 years	32	5.8	1.9
	more than 10 years	35	5.7	1.8
	Total	101	6.0	1.8
Social Support	less than 5 years	34	5.6	1.8
	6 to 10 years	32	5.3	1.8
	more than 10 years	35	5.1	1.9
	Total	101	5.3	1.8
Lack of Energy	less than 5 years	34	6.1	1.9
	6 to 10 years	32	6.3	1.5
	more than 10 years	35	5.9	1.8
	Total	101	6.1	1.7
Willpower	less than 5 years	34	5.9	1.7
	6 to 10 years	32	5.5	1.7
	more than 10 years	35	5.3	1.9
	Total	101	5.6	1.8
Fear of Injury	less than 5 years	34	4.3 *	2.3
	6 to 10 years	32	4.5 *	2.3
	more than 10 years	35	4.4 *	2.1
	Total	101	4.4 *	2.2

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Psysical activity and exercise barriers	Working Experience Group	Sample	Mean	St. Dev.
Lack of Skilled	less than 5 years	34	4.7 *	2.4
	6 to 10 years	32	4.3 *	1.8
	more than 10 years	35	4.4 *	2.6
	Total	101	4.5 *	2.3
Lack of Resources	less than 5 years	34	6.1	2.3
	6 to 10 years	32	5.1	1.7
	more than 10 years	35	5.7	2.1
	Total	101	5.6	2.1

Legend: (*) Indicates non-physical and exercise barrier among groups

Discussion

The current study aimed to seek for the barriers that are effecting Yarmouk University female workers physical activity and exercising levels. In addition to investigating if there are any differences between working experience years of the participants and perceived physical activity and exercising barriers. Results of this study demonstrated that levels of physical activity in Yarmouk University females working body were generally low. The inactivity levels were related to the perceived barriers of lack of time, lack of energy and willpower among participants. These results were consistent with earlier findings of studies that addressed time and fatigue as the main barriers of working women despite of their sociographic background (Neil-Sztramko, Gotay, Demers, Muñoz, & Campbell, 2017).

Notwithstanding the benefits of physical activity and exercising are well established and working demands and related stress are an integral barrier of health and life quality. Extended working hours could have a significant negative impact on time management and leisure periods that could be spent on improving physical activity levels (Lohmann-Haislah, 2013). Sedentary desk work and increase levels of stress are the characteristics of nowadays working environments (Walters & Wadsworth, 2016) which have been linked directly to the declination in employees' health and increased the bad health habits especially in younger employees (Justine, Azizan, Hassan, Salleh, & Manaf, 2013). However, when it comes to working women, more barriers could be suggested to affect their leisure time, which could be due to the combination of job and household responsibilities. Where it conceivably makes it challenging to find time to be physically active and enhance life quality. In a study conducted by Bengoechea, Spence, and McGannon (2005) have reported that focus groups meetings addressed the lack of time barrier due to traditional roles of women where they face an increased domestic responsibilities (in work and houses) than their men component, which significantly reduces time for leisure time activities (Bengoechea et al., 2005).

Which also could affect participants willpower of spending their leisure time in exercising and increasing physical activity levels especially after work. The current study has indicated that the willing power barrier was the third most significant barrier of physical activity and exercise among participants. Despite women's awareness of the benefits and need of meeting the recommendation of daily physical activity, participants of previous research studies have reported that they know how to enhance their daily physical activity but wouldn't because they feel "Lazy" (Cook & Gazmararian, 2018). Women's willpower as perceived barrier could also be related to the fact that it has been reported as not a priority when planning leisure time schedules (Segar, Taber, Patrick, Thai, & Oh, 2017). Even when, scheduled and supervised exercise programs have been recommended and offered by health professionals (Kelly et al., 2016). Participants hesitated to register themselves to the professional physical activity sessions and tend to drop off (Pavey et al., 2012). Whereas the tendency not to participate or chose not to proceed with physical activities training sessions rates have been reported to be higher in young populations (≤29 years and 30–39 years) than in seniors (50–69 years) (El Ansari & Lovell, 2009) and suggested to be even higher in inactive adult women (Gidlow et al., 2006).

Whereas, another explanation of the lack of willpower as results of the current study addressed as a barrier, could be psychological as the feeling of guilt of being away from their families. A study conducted by Mailey and colleagues (2014) showed that working mothers and fathers who had low activity levels did report the feeling of guilt as a barrier of exercising during their leisure time (Mailey et al., 2014). The feeling of guilt is driven by the belief that they are limiting the time they spend with their children farther to exercise whereas, their leisure is already limited due to daily responsibilities (Guendouzi, 2006). Dixon (2009), conducted focused groups meeting to investigate the physical activity and exercise levels and barriers among forty-four working mothers from a university in the Southwestern United States. The results of his study indicated that high work demands, guilt, and lack of participating and facilities in physical actives and exercising programs, where the main barriers. Also, the author reported that the reported barriers were correlated by marital status and socioeconomic background (Dixon, 2009). Long working hours, household and social responsibility of working women's, could be driving the perceived barrier of lack of energy that has been addressed by participants of the current study. As described by researchers and working women's the "role overload" experienced by many working mothers is in fact declining their life quality, increasing levels of stress, depression, and anxiety (Guendouzi, 2006; El Ansari & Lovell, 2009; Cook & Gazmararian, 2018).

The author prophesied that long years of experience might play a significant role in better managing time and energy during working hour; thus, more time could be dedicated to physical activity and exercise. While this study did not find significant differences between working experience groups workers with lower experience years (less than 5 years) tend to be more affected by physical activity barriers than the group with more extended experience (more than 10 years).The current results are in agreement with evidence that suggested that the effect of long work hours on physical activity levels and meeting the recommendations among employees working

status (including occupations type, and years of experience) consider as an effect modifier in the relationship, affecting differently across occupations (Cook & Gazmararian, 2018). Research studies have related the impact of working hours on employees physical activity levels to the professional level occupation, whereas, those with higher occupational level were more likely to be more active and meet the leisure-time physical activity recommendations (Kirk & Rhodes, 2011). On the other hand, some studies have demonstrated differences in the effect of long working hours across occupational groups. The results suggested that higher occupation status corresponds to more sedentary desk working style, whereas, a lower working status report to have complex occupational activity, resulting in higher levels of total physical activity than their co-workers in higher working positions (Kirk & Rhodes, 2011).

Moreover, in the current study results showed that participants with less than five years of experience showed a higher impact of time barrier and the availability of resources than participants with higher working experience years more than ten years. These differences could be attributed to the fact that social norms and traditions affect younger women and could negatively impact exercising and engaging in physical activity outside the house and the availability of gyms in late hours after work. In a study conducted by Samara and colleges (2015) also founded that adults females reported that the lack of facilities and encouragement were the main barriers of engaging in physical activities, whereas, restrictions by society norms and families barriers had less impact on female physical activities engagements (Samara, Nistrup, Al-Rammah, & Aro, 2015). The findings of this study could be used to promote the importance of interventions that teach strategies for overcoming barriers and enhancing physical activity for women's during working hours.

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Conflict of Interest
The authors declare that there are no conflicts of interest.

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