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OCCUPATIONAL AND LEISURE TIME PHYSICAL ACTIVITY OF TERRITORIAL ARMY SOLDIERS DURING THE COVID-19 PANDEMIC IN THE CONTEXT OF THEIR PERCEIVED WORK ABILITY

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Abstract
Objectives: Physical activity (PA) is important for the prevention and management of numerous diseases and may have a positive effect on ability to work. The study aimed to assess the level of occupational and leisure time PA of soldiers during the COVID-19 pandemic and to explore whether there was a relationship between PA and perceived work ability. **Material and Methods:** The study involved 305 men and 68 women who were territorial army soldiers aged 18–55 (M±SD 32.9±9.01). The *Seven-Day Physical Activity Recall* (SDPAR) and the *Work Ability Index* (WAI) were used. **Results:** The level of self-reported PA for the studied soldiers was relatively high; 80% of them met the recommendations of the WHO and were characterized by having a good (60%) or excellent (20%) WAI status. The level of occupational PA of male soldiers was higher than the level of leisure time PA, and they indicated higher levels of occupational PA and leisure time PA during the workweek than the weekend. **Conclusions:** Current work ability in comparison to the best in life and work ability related to the physical requirements of the work were positively correlated with leisure time PA. Work ability related to physical requirements was also positively correlated with occupational and total PA, and work ability related to mental requirements was positively correlated with total PA. The study supports the relationship between PA and several aspects of work ability. Int J Occup Med Environ Health. 2022;35(3):327–37

Key words:
physical activity, energy expenditure, WHO recommendations, COVID-19 pandemic, *Work Ability Index*, *Seven-Day Physical Activity Recall*

INTRODUCTION

Physical activity (PA) is important for the prevention and management of numerous diseases, including obesity, cardiovascular diseases, low back pain, type II diabetes, and others [1–4]. Physical activity is essential for maintaining good physical and mental health and physical function, especially during the COVID-19 pandemic. However, the closure of gyms, fitness clubs, recreation centers, as well as public spaces (parks, hiking trails, gardens) due to the COVID-19 pandemic [5] might result in lifestyle changes for many Polish people in regard to their physical activity, stress management, and mental health. The American College of Sports Medicine (ACSM) stated that people should stay active during the COVID-19 pandemic, always taking safety measures to avoid infection [6]. It is important to note that PA decreased the risk

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of infection, such as in the upper respiratory tract [7]. Acute exercise (moderate-to-vigorous intensity, <60 min) may increase immune defense activity and metabolic health [6,7]. In contrast, a high exercise training workload or high-vigorous-intensity occupational PA, and the associated psychological, metabolic, and physiological stress, are connected with an increased risk of illness [7].

Work ability reflects how an individual's physical and mental health affect their ability to perform their job. *Work Ability Index* (WAI) is an important tool for occupational health assessments. Previous studies have pointed out that one of the factors determining the ability to work may be undertaking regular physical activity during leisure time [8–10]. Other studies have reported that PA can have an influence on mental health complaints [11,12]. However, the role of PA, in particular occupational PA, as a possible predictor of work ability is still not fully known.

The role of the territorial defense army is to support the local community, educational institutions, and activities of the police, border guards, and other services. In addition, service in territorial armies is voluntary and the number of vocations depends on the capabilities and availability of the volunteers, who are professionally active and represent different levels of physical activity. Regardless of their PA level, all soldiers are obliged to maintain their physical fitness individually, with the army providing them the opportunity to use the gym and improve their swimming skills at a swimming facility at the rate of 2 h/week. During the COVID-19 pandemic, territorial army soldiers are trained in pre-emergency response to support hospitals, medical facilities, sanitation services, and non-governmental organizations.

There have been a small numbers of studies focusing on physical activity among workers in the context of their perceived work ability [9,10,13–15], and to the best of authors' knowledge, there has been a lack of these studies conducted during the COVID-19 pandemic. There has also been a small number of studies on PA in military personnel [16–18].

The study aimed to accomplish the following:

– to assess the level of occupational and leisure time physical activity of male and female territorial army soldiers during the COVID-19 pandemic,
– to explore whether there was a relationship between PA and perceived work ability.

MATERIAL AND METHODS

Study design

A cross-sectional survey research of male and female Polish soldiers was conducted. This study was approved by the Bioethics Committee of the Jerzy Kukuczka Academy of Physical Education in Katowice (certificate of approval No. KB/13/17) and conformed to the standards established by the Declaration of Helsinki. All participants were informed about the type and aim of the study and gave their verbal consent prior to filling out the questionnaire. The study was performed using a direct pen-and-paper interview method in the workplace of the studied participants.

Participants

The study involved 305 men and 68 women who were territorial army soldiers aged 18–55 years (M±SD 32.9±9.01). The study's sample comprised all soldiers of the 13th Silesian Territorial Defense Brigade (Poland), who possessed a medical certificate of fitness to serve in the territorial army, had finished the entire training cycle, were authorized to perform tasks related to their official duties, had been serving in the territorial army at least 6 months, did not previously suffer from COVID-19, and were not convalescents, and gave their informed consent to participate in the study.

Methods and procedures

The study was conducted in October–November 2020 (during COVID-19 pandemic).

The *Seven-Day Physical Activity Recall* was used for assessing the occupational and leisure time PA levels of the studied soldiers. The questionnaire serves to collect data concerning the frequency, intensity, and duration of both occupational and leisure time PA, and the time spent sleeping 7 days prior to examination. Domestic PA and active transport were included in leisure time PA, except for active transport to work, which was included in occupational PA due to the sparse reporting of these activities by the studied soldiers.

Participants declared their occupational PA and leisure time PA separately (in min), for each day of the week, describing its intensity as moderate, vigorous, or highly vigorous, as well as the number of hours spent sleeping. The declared PA was estimated according to the SDPAR procedure:

- energy expenditure during sleep – 1 MET,
- moderate-intensity PA (MPA) – 4 METs,
- vigorous-intensity PA (VPA) – 6 METs,
- high-vigorous-intensity PA (HVPA) – 10 METs,
- remaining activities and sedentary time as 1.5 METs [18,19,20].

Taking into consideration all the data, weekly and daily energy expenditures were calculated [kcal, MET min].

The level of leisure time PA of the studied soldiers was compared with the recommendations put forth by WHO [21]. According to these recommendations, adults ages 18–64 should do at least 150 min of moderate-intensity aerobic PA throughout the week or do at least 75 min of vigorous-intensity aerobic PA throughout the week or an equivalent combination of moderate- and vigorous-intensity activity.

For assessing the perceived work ability of the studied soldiers, the *Work Ability Index* (WAI) was applied. The WAI includes 7 subjective estimations on work ability in the context of job requirements and psychophysical resources, and also includes information about illnesses and work absenteeism. Each of the WAI items is determined according to different scales arranged in order of importance. Current work ability compared with the best during lifetime was assessed at 0–10 pts, whereas the self-estimated prognosis of work ability for 2 years was assessed at 1–3 pts. In 3 questions (No. 3, 4, and 5), the scale order was reversed so that the highest score would be attributed to the most favorable conditions. The WAI was calculated by summing up the estimated points for each appraisal. According to the classification for work ability assessment, the following WAI can be distinguished: poor (sum of all items values up to 27 pts), moderate (28–36 pts), good (37–43 pts), and excellent (44–49 pts). The WAI has been used and checked many times in cross-sectional and prospective studies throughout the world [8,13–15,22]. Body height and mass were given by the participants, and BMI was calculated for each study participant.

Statistical analysis

Results are expressed as the mean and standard deviation. The normality of distribution was verified with the Shapiro-Wilk test. The results of PA were compared with a t-test or the Mann-Whitney U test. The results of WAI were compared with the Mann-Whitney U test. The PA levels of 3 independent groups determined by WAI status were as follows: 1 – poor and moderate, 2 – good, 3 – excellent compared by the Kruskal-Wallis 1-way ANOVA by ranks or 1-way ANOVA. For comparing the meeting of WHO recommendations, Pearson's χ^2 test of independence was applied. Correlations between variables of PA, somatic values, age, and the results of WAI were analyzed by Spearman's rank correlation coefficient. The level of significance was set at $p \leq 0.05$. Statistical analysis was undertaken using Statistica v. 13.

RESULTS

The mean body height and body mass were, respectively: in women 167.9±6.8 cm and 64.6±11.6 kg, in men 179.2±5.7 cm and 83±11.2 kg. The mean BMI was

Table 1. Occupational physical activity (PA) and energy expenditure (EE) on occupational PA for the studied soldiers and differences in the level of PA between women and men, in the study conducted at the Jerzy Kukuczka Academy of Physical Education, Katowice, Poland, October 1–November 30, 2020

Variable	Participants (N = 373)				p
	men (N = 305)		women (N = 68)		
	M±SD	p	M±SD	p	
Weekly PA					
[min]					
moderate-intensity	641.6±668.05		420.4±522.30		**0.015**
vigorous-intensity	213.8±253.63		128.5±212.27		**0.009**
high-vigorous-intensity	58.6±110.49		36.5±84.54		n.s.
[MET × min]					
moderate-intensity	2566.2±2672.21		1681.5±2089.20		**0.015**
vigorous-intensity	1282.8±1521.76		771.2±1273.65		**0.009**
high-vigorous-intensity	586±1104.86		365.4±845.37		n.s.
total	4435.1±4217.20		2818.1±3608.55		**0.003**
PA [MET × min/day]					
moderate-intensity					
Monday to Friday	444.5±469.69[a]		272.1±342.93[a]		**0.003**
weekend	171.8±291.80[a]	**<0.001**[a]	160.4±266.57[a]	**0.036**[a]	n.s.
vigorous-intensity					
Monday to Friday	218.4±261.90[b]		126.2±220.11		**0.003**
weekend	95.5±167.49[b]	**<0.001**[b]	70.2±156.32		n.s.
high-vigorous-intensity					
Monday to Friday	99±187.32[c]		61±146.50		n.s.
weekend	45.6±119.11[c]	**<0.001**[c]	30.2±88.58		n.s.
EE – total weekly physical activity [kcal]	6153.2±5937.99		3053.5±3945.74		**<0.001**
per day	879±848.28		436.2±563.68		**<0.001**

n.s. – not significant.
[a] Statistically significant differences between MPA during the work week and the weekend.
[b] Statistically significant differences between VPA during the work week and the weekend.
[c] Statistically significant differences between HVPA during the work week and the weekend.
Bolded are statistically significant values.

22.9±3.7 in women and 25.8±3.1 in men. Based on the BMI cut-off points, 9% women and 1% men were underweight, 69% women and 40% men were in the normal range, 18% women and 48% men were overweight, and 4% women and 11% men were obese. Body height, body mass, and BMI differed between men and women in a statistically significant manner.

The findings for occupational PA participation during the COVID-19 pandemic are presented in Table 1. Male soldiers reported a significantly higher occupational mod-

Table 2. Level of leisure-time physical activity (PA), energy expenditure (EE) on leisure-time PA, remaining activities, time spent sleeping for the studied soldiers, and the differences in the level of PA between women and men, in the study conducted at the Jerzy Kukuczka Academy of Physical Education, Katowice, Poland, October 1–November 30, 2020

Variable	Participants (N = 373)			p
	men (N = 305)		women (N = 68)	
	M±SD	p	M±SD	
Weekly PA [min]				
moderate-intensity	488.7±511.29		499.3±518.04	n.s.
vigorous-intensity	189±204.74		143.8±177.76	n.s.
high-vigorous-intensity	73.4±112.72		56±96.12	n.s.
Time spend sleeping [h/day]	7±0.98		7.1±1	n.s.
Remaining activities and sedentary time [h/day]	14.3±2.17		14.7±1.89	n.s.
Weekly PA [MET × min]	3823.3±3487.98		3420.6±3326.73	n.s.
moderate-intensity	1955±2045.15		1997.4±2072.16	n.s.
vigorous-intensity	1134.2±1228.42		862.9±1066.57	n.s.
high-vigorous-intensity	734.1±1127.17		560.3±961.21	n.s.
PA [MET × min/day]				
moderate-intensity				
Monday to Friday	288.8±314.43		292.5±306.02	n.s.
weekend	255.5±304.86		267.4±314.12	n.s.
vigorous-intensity				
Monday to Friday	173.9±191.91[a]		131.3±172.30	n.s.
weekend	132.5±174.72[a]	**0.006**[a]	103.2±180.40	n.s.
high-vigorous-intensity				
Monday to Friday	113.3±177.89[b]		81.2±148.54	n.s.
weekend	83.8±150.46[b]	**0.027**[b]	77.1±146.97	n.s.
EE – total weekly physical activity [kcal]	5250.9±4855.23		3618.6±3608.43	**0.009**
per day	750.1±693.60		516.9±515.49	**0.009**

Abbreviations as in Table 1.
[a] Statistically significant differences between VPA during the work week and the weekend.
[b] Statistically significant differences between HVPA during the work week and the weekend.
Bolded are statistically significant values.

erate-intensity PA (MPA), vigorous-intensity PA (VPA), total weekly PA (sum of MPA, VPA, and HVPA), and energy expenditure (EE) of total weekly PA than female soldiers. Men were characterized by higher MPA and VPA undertaken during the workweek than women. The comparison of occupational PA undertaken during the workweek (Monday–Friday) and during the weekend (Saturday and Sunday) showed that MPA, VPA, and HVPA undertaken during the workweek were significantly higher than those undertaken during the weekend in male soldiers, whereas in

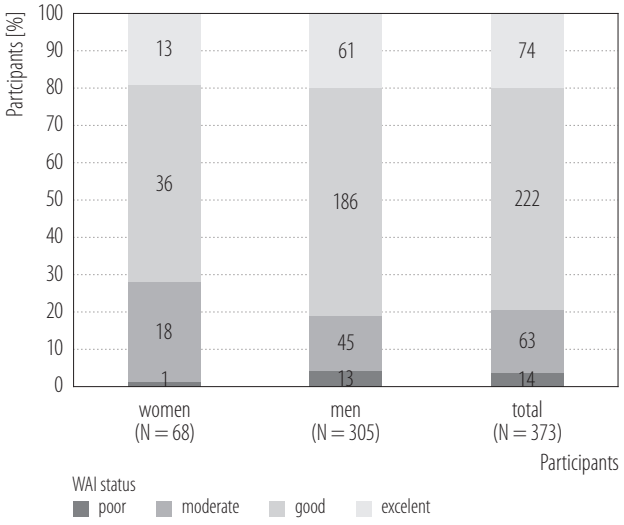

Figure 1. Status of *Work Ability Index* (WAI) in studied soldiers, in the study conducted at the Jerzy Kukuczka Academy of Physical Education, Katowice, Poland, October 1–November 30, 2020

female soldiers MPA undertaken during the workweek was higher than that undertaken during the weekend (Table 1).

The findings for leisure time PA participation, remaining activities and sedentary time, and time spent sleeping during the COVID-19 pandemic are presented in Table 2. The results show a significant difference in EE on total weekly leisure time PA between men and women. Male soldiers were also characterized by higher VPA and HVPA undertaken during the workweek than those undertaken during the weekend.

The majority of participants (76% of women and 81% of men) met the WHO recommendations regarding their leisure time PA. There was no significant difference in meeting WHO recommendations between genders.

The comparison of participation in occupational vs. leisure time PA revealed significantly higher occupational MPA than leisure time MPA ($p = 0.002$), significantly higher occupational total weekly PA than leisure time total weekly PA ($p = 0.040$) in male soldiers, a lack of differences in female soldiers, and significantly higher occupational MPA than leisure time MPA ($p = 0.010$) and HVPA ($p = 0.049$) amongst the entire group of participants.

The majority of male and female soldiers were characterized by having a good (60%) or excellent (20%) WAI status (Figure 1).

The findings of the *Work Ability Index* (WAI) of soldiers are presented in Table 3. Men reported a higher work ability related to the physical requirements of the work than women (Table 3).

ANOVA did not demonstrate any differences in PA between soldiers who were characterized by a poor or moderate WAI status vs. those with a good WAI status vs. those with an excellent WAI status. In addition, meeting or not meeting the WHO recommendations did not lead to a differentiation in work ability amongst the studied participants.

The findings of correlations between occupational and leisure time weekly PA (in MET min) and WAI items are presented in Table 4.

The analysis of PA (in MET min) in relation to age and somatic values in the entire group of participants showed that age was inversely associated with occupational VPA ($R = -0.13$, $p < 0.001$), leisure-time VPA ($R = -0.15$, $p = 0.003$), and leisure-time HVPA ($R = -0.11$, $p = 0.035$). Body mass was positively associated with occupational MPA ($R = 0.11$, $p = 0.034$), and BMI was inversely associated with leisure-time MPA ($R = -0.10$, $p = 0.045$). In male soldiers the relationship between age and occupational VPA ($R = -0.19$, $p = .001$), leisure-time VPA ($R = -0.15$, $p = 0.008$), and total PA ($R = -0.15$, $p = 0.011$) was observed. The correlation analysis did not reveal any relationships in female soldiers.

However, most of the observed correlations were weak ($R < 0.2$).

DISCUSSION

The aim of this study was to assess the level of occupational and leisure time physical activity of male and female territorial army soldiers during the COVID-19 pandemic, and to explore whether there was a relationship between PA and perceived work ability.

Table 3. *Work Ability Index* (WAI) of the studied soldiers, and the differences in WAI between women and men, in the study conducted at the Jerzy Kukuczka Academy of Physical Education, Katowice, Poland, October 1–November 30, 2020

Work Ability Index item	*Work Ability Index* score [pts]		p
	men (N = 305)	women (N = 68)	
Total WAI	39.47±4.83	38.97±4.43	n.s.
1. Current work ability in comparison to the best in life (0–10 pts)	7.62±1.86	7.32±2.22	n.s.
2a. Work ability related to requirements of the work – physical requirements (1–5 pts)	4.38±0.75	4.15±0.82	**0.03**
2b. Work ability related to requirements of the work – mental requirements (1–5 pts)	4.42±0.69	4.25±0.68	n.s.
3. Number of diagnosed diseases (1–7 pts)	6.42±1.18	6.57±0.80	n.s.
4. Estimated work impairment due to diseases (1–6 pts)	5.50±1.00	5.49±0.95	n.s.
5. Sick leave during past year (1–5 pts)	4.63±0.91	4.71±0.77	n.s.
6. Self-estimated prognosis of work ability for 2 years(1–3 pts)	2.83±0.39	2.85±0.36	n.s.
7. Mental resources for the work (1–4 pts)	3.67±0.61	3.63±0.62	n.s.

Bolded is statistically significant value.

Overall, the level of self-reported PA of the studied soldiers during the COVID-19 pandemic was relatively high. The majority of the studied soldiers met the WHO recommendations regarding their leisure time PA and were characterized by having a good or excellent WAI status.

The current findings showed that the weekly EE of both occupational and leisure time PA was higher in male than female soldiers, which should not be surprising due to the significantly higher body mass in men and the differences in total weekly PA (in MET min). Men were also characterized by higher occupational PA than women. Previous studies confirmed gender differences in PA levels and reported higher mean scores for occupational and leisure time PA in men compared to women [13,23–25]. Nevertheless, in this study leisure time PA (in min, and MET min) was not differentiated between women and men.

The findings revealed that the level of occupational PA was higher than the level of leisure time PA, particularly in male soldiers. The majority of the studied soldiers indicated higher levels of occupational PA during the workweek than the weekend. Men were especially more likely to report higher levels of occupational PA during the workweek than women. This result could suggest that men were more burdened with physical work than women. What is more, the level of leisure time PA was also higher in the workweek than during the weekend. This result may be surprising, considering the fact that the level of occupational PA was also significantly higher during the workweek. This could indicate an overload of PA during the workweek. The relatively high level of occupational and leisure time PA may result from the fact that the specificity of the quality of execution of the service duties and tasks, especially during COVID-19 pandemic, requires maintaining an optimal level of physical fitness.

In contrast to this study, Pihlainen et al. [17], who assessed the occupational physical load during a 6-month military operation, observed that the average daily PA of soldiers did not exceed the population-wide activity guidelines (10 000 steps), and the occupational physical load was low. Kaleta and Jegier [20] in their study identifying factors that can contribute to the lack of leisure time

Table 4. Spearman's correlations: occupational and leisure-time weekly physical activity (PA) vs. *Work Ability Index* (WAI) of the studied men, women, and entire group of soldiers (total), in the study conducted at the Jerzy Kukuczka Academy of Physical Education, Katowice, Poland, October 1–November 30, 2020

Work Ability Index (WAI) item	Spearman's correlation							
	occupational physical activity [MET × min]				leisure time physical activity [MET × min]			total physical activity [MET × min]
	moderate-intensity	vigorous-intensity	high-vigorous-intensity	total	moderate-intensity	vigorous-intensity	high-vigorous-intensity	
Current work ability in comparison to the best in life						men: 0.14, p = 0.018 total: 0.12, p = 0.022		
Work ability related to requirements of the work								
2a. Physical requirements	total: 0.13, p = 0.014	men: 0.12, p = 0.038 total: 0.13, p = 0.012	men: 0.12, p = 0.040 total: 0.14, p = 0.005	men: 0.12, p = 0.042 total: 0.16, p = 0.002	total: 0.11, p = 0.036	total: 0.12, p = 0.017	women: 0.27, p = 0.028 total: 0.12, p = 0.022	men: 0.11, p = 0.049 women: 0.36, p = 0.002 total: 0.19, p < 0.001
2b. Mental requirements								total: 0.10, p = 0.049

Variables non significant were: number of diagnosed diseases, estimated work impairment due to diseases, sick leave during past year, self-estimated prognosis of work ability for 2 years, mental resources for the work, total WAI.

PA observed that men who performed physical work and expended 4000 kcal/week or more on occupational PA were more likely at risk of not undertaking any leisure-time PA than those who did not.

On the other hand, high levels of PA could be explained by the overestimation of PA levels resulting, for example, from the problem with determining the appropriate intensity of exercises or other activities. Previous studies have also indicated an overestimating of weekly energy expenditure and VPA by PA questionnaires compared with accelerometer data [26,27].

The WAI findings did not differ between women and men except with regard to work ability related to the physical requirements of the work, which was higher in men than women. The majority of the studied soldiers had a good or excellent work ability. Similar results regarding WAI status were obtained by Arvidson et al. [15] in their study of 2783 health care workers.

The present study did not reveal any significant differences in PA depending on WAI status, as well as any significant differences in work ability depending on meeting/not meeting the WHO recommendations for health-related PA. This result may be caused by the relatively high PA of the studied soldiers and the fact that the majority of them met the WHO criteria. The opposite findings have been found in previous studies.

Grabara et al. [13] reported significant differences in weekly MPA, VPA, total PA, and EE of PA among teachers with poor or moderate vs. good vs. excellent WAI status. Nawrocka et al. [9] observed that white-collar workers who did not meet the WHO recommendations achieved lower scores in each part of the WAI questionnaire and

presented a higher risk of poor work ability than employees who met the WHO recommendations.

The results of this study support the relationship between PA and several aspects of work ability. Current work ability in comparison to the best in life and work ability related to the physical requirements of the work were correlated with leisure time PA. Work ability related to physical requirements was also correlated with occupational and total PA, and work ability related to mental requirements was correlated with total PA. Based on these results, it can be assumed that performing both occupational and leisure time PA has a positive effect on ability to work. However, it should be noted that the observed correlations were very weak, and a cautious approach toward these findings is needed.

A positive relationship between PA and work ability was observed by other authors. Arvidson et al. [15] in their a cross-sectional and prospective studies revealed that self-reported leisure time PA was positively related to work ability. The authors also noticed that even light PA may increase the chance of having improved work ability, whereas MPA and VPA were more strongly related to a positive change in WAI. Calatayud et al. [10] observed a positive relationship between work ability and the duration of leisure time VPA, in a dose-response fashion. Workers with physically demanding jobs who performed ≥5 h of VPA per week had, on average, an 8-point higher work ability than those who were not performing such activities. Grabara et al. [13] in their study of Polish teachers found many dependencies between self-reported PA and all WAI items, except for the number of diagnosed diseases and estimated work impairment due to diseases, and supported a positive relationship between MPA, VPA, total PA, and work ability. However, the authors did not assess occupational and leisure time PA separately.

The opposing effects of occupational and leisure time PA on global health were observed by Holtermann et al. [28]. The results of 341 men and 620 women who experienced a spell of long-term sickness absence (LTSA) (period of ≥3 consecutive weeks) were analyzed. The authors noticed a decreased risk for LTSA among workers who performed leisure time MPA and VPA than those who did not. In contrast, an increased risk for LTSA was shown among workers who performed occupational MPA and VPA referencing those with low occupational PA [28]. However, the authors focused on LTSA only, which could be considered as one of the 7 WAI items. The authors did not find any relationship between PA and sick leave during the past year.

Limitations of the study

There are several limitations to this study which are worth mentioning. In this study, the level of PA is based on self-reported weekly PA. This can cause problems with the correct estimation of the intensity of PA and the overestimation of the PA level. Another limitation is not distinguishing between domestic PA and active travel as domains of PA, whereas participants reported occupational and leisure time PA separately. Further, another limitation is the self-reporting of body height and mass and the lack of information about their education, social and marital status, and number of children, respectively.

Further studies focusing on physical activity in the context of work ability should include both blue collar and white-collar workers with diverse occupational PA, as well as analyze all domains of PA separately.

CONCLUSIONS

In conclusion, the findings have demonstrated that during COVID-19 pandemic the level of occupational PA of studied territorial army soldiers was higher than the level of leisure time PA. The majority of the soldiers, particularly men, indicated higher levels of occupational PA and leisure time PA during the workweek than the weekend. It is known that these services perform various tasks, especially during the COVID-19 pandemic.

Most of studied soldiers (80%) were characterized by having a good or excellent WAI status. The study supports the relationship between PA and several aspects of work ability, especially those with physical requirements for the work. However, the authors did not find any significant differences in PA based on WAI status, as well as any significant differences in work ability based on meeting/not meeting the WHO recommendations for health-related PA, probably due to the relatively high level of self-reported PA and most (80%) of studied soldiers meeting the WHO recommendations.

The study was conducted during the COVID-19 pandemic, among a specific group of workers with relatively high PA, therefore the results should not be generalized. Nevertheless, engaging in physical activity and maintaining good work ability is an important issue for every employee during his or her entire working life regardless of occupation, especially in periods of pandemics.

The present study contributes to supporting the use of high levels of physical activity with a specific population of workers, and adding more evidence to other research findings in which high levels of physical activity is related to physical aspects of work ability.

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