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RESEARCH ARTICLE

AGE-RELATED DIFFERENCES IN FUNCTIONAL CAPACITY, PHYSICAL ACTIVITY, LIFE SATISFACTION, WELL-BEING AND QUALITY OF LIFE IN TURKISH ADULT POPULATION DURING COVID-19

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ABSTRACT

Purpose: During the COVID-19 pandemic, the physical and mental health of general population has been adversely affected. This study aims to investigate if there are age-related differences in functional capacity, physical activity, life satisfaction, well-being and quality of life among adults of different age groups during this era.

Methods: One-hundred fifty participants aged between 18-65 years were included. Participants were divided into 5 age groups, with 30 people in each age group i.e., 18-25, 25-35, 35-45, 45-55, and 55-65 years, using a block randomization. Functional capacity was evaluated with 1-minute sit-to-stand test (1-min STST); level of physical activity with International Physical Activity Questionnaire-Short Form (IPAQ-SF); life satisfaction with The Satisfaction with Life Scale (SWLS); well-being with WHO-5 Well-Being Index (WHO-5); and the quality of life with Short Form-12 (SF-12). All assessments were applied via an online form.

Results: Age negatively correlated to 1-min STST ($p<0.01$, $r=-0.214$) and IPAQ total score ($p<0.01$, $r=-0.173$), whereas positively correlated to SWLS score ($p<0.05$, $r=0.168$) and MCS-12 score ($p<0.01$, $r=0.339$). There were statistically significant age-related differences in IPAQ total scores ($p=0.001$; $F=5.169$), MCS-12 scores ($p<0.001$; $F=8.624$) and SWLS scores ($p=0.046$; $F=2.485$). Individuals aged 18-25 years had the best IPAQ-SF score, and the worst SWLS and MCS-12 scores among other age groups.

Conclusion: Younger individuals seem to have worse impairment in mental aspects of their lives compared to older counterparts, despite having relatively higher functional capacity and physical activity participation during COVID-19. These age-related differences should be taken into account when tailoring rehabilitation and/or counselling programs during this era.

Keywords: Functional capacity, physical activity, life satisfaction, well-being, quality of life

INTRODUCTION

A novel coronavirus disease (COVID-19) first appeared in Wuhan, China in December 2019 and quickly spread around the world (1). To slow the spread of the pandemic, governments have implemented several preventions such as social distancing rules and self-quarantine. These preventions have changed the daily lives of billions of

people. While the preventions can help to reduce the infection rate, they can also negatively affect individuals' physical and mental health (2).

As a result of restrictions and home confinement during the COVID-19 pandemic, individuals' physical activity levels decreased, and daily sitting hours increased (3, 4). Physical activity is a significant determinant of health. The benefits of physical activity include improved cardiorespiratory compliance, positive effects on body composition, bone health, and cognitive health (5). On the other hand, sedentary behavior can impair oxygen transport and mitochondrial function, and the risk of heart illness rises as muscle tissue declines and fat tissue increases. Functional capacity indicates a individual's capacity to do submaximal tasks that require the coordinated efforts and health of the respiratory, cardiovascular, and skeletal muscle systems (6). Increased sedentary behavior in the COVID-19 pandemic results in a decrease in the functional capacities of individuals (7). Furthermore, studies show that functional capacity tends to decrease gradually after adolescence (8, 9). In addition to the physical health benefits of physical activity, individuals who are physically active or participate in exercise programs may also have improved well-being (10). However, the restrictions applied during the COVID-19 pandemic and the decrease in physical activity of individuals had a negative influence on well-being (11), life satisfaction (12), and quality of life (13).

Examining individuals' functional capacity, physical activity level, life satisfaction, well-being and quality of life during the COVID-19 pandemic is crucial for protecting and enhancing their physical and mental health both during and after the pandemic. Furthermore, it is also critical to understand which age groups are most physically or mentally impacted by the COVID-19 pandemic, because different age groups will require different rehabilitative approaches. However, to our knowledge, no research has been conducted to determine whether there are age-related differences in people's physical and psychological functioning during the COVID-19 pandemic. The current study aims to examine the functional capacity, physical activity, life satisfaction, well-being, and quality of life of adults in different age groups during the COVID-19 pandemic and to investigate whether there are age-related differences in these variables.

METHODS

Study design and participants

A cross-sectional, prospective study was conducted. Between June 2021 and August 2021, 150 volunteers aged between 18 and 65 years were included in the study. To obtain a homogeneous sample, participants were allocated to five subgroups according to age, with 30 participants in each group i.e., 18-25, 25-35, 35-45, 45-55, and 55-65 years, using a block randomization. Inclusion criteria were not having history of confirmed COVID-19 infection, currently not having confirmed COVID-19 infection, volunteering to participate in the study. Exclusion criteria were having a diagnosed orthopedical or neurological conditions that may impede physical activity level and functional capacity, being diagnosed with a psychiatric illness. Study data was collected online using Google Forms®. Participants were invited to the study by sharing an announcement poster through authors' social media channels. The study was approved by the ethics committee of Izmir Bakircay University (approval number: 2021/285) and carried out according to the Declaration of Helsinki. Informed consents were obtained from all participants via Google Forms®.

Outcome measures

Functional capacity

Functional capacity was evaluated with the 1-minute sit-to-stand test (1-min STST). The participants completed the 1-min STST test at their homes and recorded the number of sit-to-stand maneuvers completed in 1 minute. The materials needed to execute the test, as well as the method of application, were explained written in the online form. In addition, a visual representation of how the test will be performed has also been supplied in the online form. 1-min STST is shown to be a valid measure of functional capacity for both healthy individuals (14) and various cardiopulmonary diseases including COPD (15).

Physical Activity

The International Physical Activity Questionnaire-Short Form (IPAQ-SF), which consists of 7 items covering the previous week, was used to assess the level of physical activity. This scale provides information about the time individuals spend sitting, walking, moderate-intensity activities, and vigorous activities. A score is calculated as "Metabolic

equivalent (MET)-minute/week (METmin/wk)" by multiplying the minute, day, and MET value. The sitting score is calculated separately. Physical activity levels are also classified as low (<600 MET-min/wk), moderate (600-3000 MET-min/wk), or high (>3000 METmin/wk) according to the total MET-min/wk values (16). Turkish version of the IPAQ-SF was used in the study (17). In addition, perceived changes in physical activity participation (increased, decreased, or unchanged) during COVID-19 were questioned.

Life satisfaction

The life satisfaction of participants was evaluated with the Satisfaction with Life Scale (SWLS). The scale consists of 5 items and is scored on a seven-point Likert scale (1 “strongly disagree” to 7 “strongly agree”). Higher scores indicate better life satisfaction. According to SWLS scores, life satisfaction can be classified as extremely satisfied (31 – 35), satisfied (26 – 30), slightly satisfied (21 – 25), neutral (20), slightly dissatisfied (15 – 19), dissatisfied (10 – 14), extremely dissatisfied (5 – 9) (18). Turkish version of SWLS was used in the study (19).

Well-being

The term "well-being" refers to all of the positive ways in which people experience and evaluate their life (20). The well-being of the participants was evaluated with the World Health Organisation-5 Well-Being Index (WHO-5). WHO-5 is one of the most widely used scales, which is a short and general assessment scale that measures subjective well-being. The scale consists of 5 items. Each item is scored on a Likert-type scale with 0 “at no time” and 5 “all of the time”. The last 2 weeks are taken into account during scoring. The raw score is calculated by adding the numbers from the five answers. The final score is calculated by multiplying the total raw score, which ranges from 0 to 25, by 4, with 0 represents the worst possible whereas a score of 100 represents the best possible well-being (21). Turkish version of WHO-5 was used in the study (22).

Quality of Life

The Short Form-12 (SF-12) scale was used to evaluate the quality of life. SF-12 consists of 8 sub-dimensions and 12 items: physical functionality, physical role, body pain, general health, energy, social functionality, emotional role, and mental health. While the items related to the physical and emotional role are answered as yes or no, other items have Likert-type options ranging between 3 and 6. The SF-12 provides a summary assessment of both physical and mental health. While the physical component summary (PCS-12) score is obtained from the sub-dimensions of general health, physical functionality, physical role, and body pain, the mental component summary (MCS-12) score is obtained from the sub-dimensions of social functionality, emotional role, mental health, and energy. Both PCS-12 and MCS-12 scores range from 0 to 100, with a higher score representing better quality of life (23, 24). Turkish version of SF-12 was used in the study (23).

Sample size and statistical analysis

Literature suggests that age significantly correlates to physical activity level and well-being during the COVID-19 pandemic, having a correlation coefficient (Pearson’s r) ranging from 0.19 to 0.27 (25). Considering this, we hypothesized to detect a significant relationship among age, physical activity, and well-being with a correlation coefficient of at least 0.23 in our study. Then, it was calculated that 150 participants are needed in our study to be able to detect such relationship with 80% power and 95% confidence level (26).

Statistical analysis was conducted using SPSS 20.0 statistical program (SPSS Inc., USA). Numeric variables were expressed as mean ± standard deviation, whereas nominal variables as n (%). Correlation of age with numeric variables of interest was explored using Pearson’s product-moment correlation. Numeric variables of functional capacity, physical activity, life satisfaction, well-being, and quality of life were compared among age-groups using One-way Analysis of Variance (ANOVA). Post-hoc comparisons were conducted using Tukey HSD test or Dunnett’s test depending on whether equal variances are assumed. Nominal variables of physical activity and life satisfaction were compared among age-groups using Chi-Square test.

RESULTS

The online form filled by 322 participants aged between 18 and 65 years. These participants were divided into 5 age groups. Then, 15 female and 15 male participants were randomly selected using block randomization from each age group to be included in the final study cohort, totaling 150 participants. 14.66% (n=22) of the participants were students, 60.66% (n=91) were employed, 10% (n=15) were

Table 1. Characteristics of entire cohort (n=150)

	Mean±sd [min-max] or n (%)	Correlation with Age[a]
Age (years)	40.31±13.78 [18-65]	
Body mass index (kg/m^2)	25.11±4.67 [14-40.12]	
Gender n (%)		
Female	75 (50%)	
Male	75 (50%)	
1-min STST (repetitions)	31.35±10.75 [7-64]	-0.214**
IPAQ-SF total score (MET.min/wk)	1352±1160 [0-5190]	-0.173**
IPAQ-SF PA classification (n)		
Low	42 (28%)	
Moderate	94 (62.7%)	
High	14 (9.3%)	
PA change during COVID-19 (n)		
Unchanged	33 (22%)	
Decreased	107 (71.3%)	
Increased	10 (6.7%)	
Satisfaction with Life Scale (5-35)	21.37±5.90 [5-32]	0.168*
SWLS classification (n)		
Extremely Dissatisfied	3 (2%)	
Dissatisfied	21 (14%)	
Slightly dissatisfied	30 (20%)	
Neutral	12 (8%)	
Slightly satisfied	43 (28.7%)	
Satisfied	38 (25.3%)	
Extremely satisfied	3 (2%)	
WHO-5 (%) (0-100)	48.96±19.01 [8-88]	0.014
SF-12		
PCS-12	50.66±8.50 [25.42-63.72]	-0.158
MCS-12	41.54±8.08 [18.37-55.96]	0.339**

[a] Pearson correlation coefficients (r values) are presented. * p<0.05, **p<0.01. 1-min STST: 1-minute sit-to-stand test, IPAQ-SF: The International Physical Activity Questionnaire-Short Form, PA: Physical activity, SWLS: Satisfaction with Life Scale, WHO-5: World Health Organisation-5 Well-Being Index, PCS-12: Physical component summary, MCS-12: Mental component summary

unemployed, and 14.66% (n=22) were retired. 1.33% (n=2) of the participants had primary school education, 4% (n=6) had secondary school education, 14% (n=21) had high school education, 62% (n=93) had university education and 18% (n=28) had post-graduate degree.

The demographics and the 1-min STST test, IPAQ, SWLS, WHO-5, and SF-12 results of the entire cohort are shown in Table 1. All participants were able to perform the STST in line with the information provided via the online form. Concerning physical activity participation, 62.7% (n=94) of participants had moderate physical activity, 28% (n=42) had low-level physical activity, and 9.3% (n=14) had high-level physical activity. 71.3% (n=107) of the participants stated that their physical activity levels decreased during the COVID-19 pandemic. Most of the participants' SWLS scores were in the slightly satisfied subclass. Age negatively correlated to 1-min STST repetition number (p<0.01, r=-0.214) and IPAQ total score (p<0.01, r=-0.173), whereas positively correlated to SWLS score (p<0.05, r=0.168) and MCS-12 score (p<0.01, r=0.339). No significant correlation was present between the age and WHO-5 scores or between the age and PCS-12 scores (p>0.05) (Table 1).

Age-related differences in functional capacity, physical activity, life satisfaction, well-being, and quality of life are shown in Table 2. IPAQ total scores (p=0.001; F=5.169), MCS-12 scores (p<0.001; F=8.624) and SWLS scores (p=0.046; F=2.485) were significantly different among age groups. Post-hoc analysis revealed that participants in the age group of “18-25 years” had significantly higher IPAQ total score and significantly worse MCS-12 score compared to other 4 age groups. SWLS score was also lowest in the age group of “18-25 years”, however post-hoc analysis did not reveal a statistical difference compared to other age groups. 1-min STST showed a trend to decline as the age increases, however this decline was not statistically significant among the age groups. WHO-5 score was

also lowest, and PCS-12 score was highest in the age group of "18-25 years", with no significant differences among the age groups.

Distribution of the physical activity classification, SWLS classification and physical activity changes during the COVID-19 for each age group are shown in Table 3. Physical activity classes (p=0.027, χ^2=17.356), physical activity change during the COVID-19 pandemic (p=0.006, χ^2=21.514), and SWLS classes (p=0.019, χ^2=40.542) were found to have an age-related difference (Table 3.).

DISCUSSION

In our study, we found that "age" positively correlates to life satisfaction and mental quality of life, whereas negatively correlates to functional capacity and physical activity participation during COVID-19. Individuals in the age group of "18-25 years" have higher physical activity level, whereas worse life satisfaction, and mental quality of life compared to the age groups of "26-35 years", "36-45 years", "46-55 years" and "56-65 years". During COVID-19, younger individuals seem to have worse impairment in mental aspects of their lives compared to older counterparts, despite having relatively higher functional capacity and physical activity participation. Individuals in the age group of "18-25 years" also tend to have worst well-being among all age-groups.

In the present study, the mean value of 1-min STST repetitions was highest in individuals aged between 18-35 years as 34 repetitions, which was gradually decreased to 28 repetitions in individuals aged 56-65 years. Strassmann et al. (27) investigated the reference values of the 1-min sit-to-stand (STS) test in healthy adults. Mean value of 1-min STST in individuals aged between 20-65 was reported as 50 to 37 repetitions in men and 55 to 34 repetitions in women. Compared to our results, it is seen that all age-groups in our study performed well below reference values. Similarly, our results are also below the mean values reported by the Gürses et al. (28). These results can be attributed to the increase in the sedentary behavior of individuals during the COVID-19 pandemic. Rees-Punia et al. (29) determined that remote evaluation of the 30-second video-guided sit-to-stand test is feasible. A 2-minute video was used to describe and demonstrate the testing method in order for the test to be performed during the pandemic process (29). Similarly, there were no difficulties with the remote administration of the 1-min STST with written and visual instructions in our study.

Many measures taken to prevent the spread of COVID-19, such as the closure of gyms, home restrictions, restrictions on walking distance, adversely affected the exercise habits and physical activity levels of individuals (30). The majority of the participants in our study reported that their physical activity levels decreased during the COVID-19 pandemic. Decrease in the physical activity negatively effects the functional capacity of individuals (7, 31). Moro and Paoli (7) reported that sedentary behavior may result in decreased muscle mass, oxygen transport disorders and mitochondrial dysfunctions, and a decrease in maximum oxygen consumption. Supporting this, it has also been shown that the home confinement applied during the COVID-19 pandemic causes a decrease in the aerobic capacity of adolescent soccer players despite their home exercise programs (31). This dramatically lower 1-min STST performances in our sample is worrying, since lower cardiopulmonary capacity is associated with cardiovascular diseases, hypertension, diabetes mellitus, and cardiovascular events (32). We believe that these individuals should be informed about the risks associated with decreased cardiopulmonary capacity and receive counseling on how to improve cardiopulmonary capacity and general health through supervised or unsupervised training programs.

Previous studies report that there is an age-related decrease in the aerobic capacity (33, 34). Also, functional capacity assessed by field tests such as 6-min walk test (35) and 1-min STST (27) clearly indicates that test performance decreases as the age increases. In our study, although the 1-min STST performance decreases as the age of the individual increases, there was not a statistically significant difference among different age-groups. This suggest that the functional capacity of individuals in the younger age-groups may be more severely impacted compared to older counterparts during COVID-19. Reference values of 1-min STST from the study by Strassmann et al. (27) supports this assumption. For example, individuals in the age group of "26-35 years" performed 34 repetitions in our study compared to the reference value of 45 repetitions. On the other hand, individuals in the age group of "56-65 years" performed 28 repetitions compared to reference value of 34 repetitions. To the best of our knowledge, studies on the functional capacity of healthy individuals during the COVID-19 pandemic are insufficient in number. While the different levels of impairment in functional capacity among age-groups

Table 2. Age-related differences in functional capacity, physical activity, life satisfaction, well-being, and quality of life

	18-25 years (a) (n=30)	26-35 years (b) (n=30)	36-45 years (c) (n=30)	46-55 years (d) (n=30)	56-65 years (e) (n=30)	Between-groups difference	Post-hoc significance
1-min STST (rep.s)	33.50±9.25	33.50±10.75	32.90±10.75	28.63±11.12	28.20±11.14	p=0.109 F=1.924	NS
IPAQ-SF total score (MET.min/wk)	2138±1420	1095±936	1091±807	1065±969	1370±1254	p=0.001 F=5.169	a vs b a vs c a vs d a vs e
SWLS (5-35)	18.47±6.36	21.73±4.18	22.40±6.18	22.53±5.99	21.70±5.94	p=0.046 F=2.485	NS
WHO-5 (%)	47.07±19.07	49.33±17.99	48.53±21.50	52.40±18.36	47.47±18.75	p=0.832 F=0.367	NS
PCS-12	52.68±8.8	51.88±7.94	49.12±7.61	52.28±6.79	47.35±10.24	p=0.061 F=2.310	NS
MCS-12	35.06±8.16	40.71±6.91	44.02±8.81	44.9±5.63	43.01±6.87	p<0.001 F=8.624	a vs b a vs c a vs d a vs e

1-min STST: 1-minute sit-to-stand test, IPAQ-SF: The International Physical Activity Questionnaire-Short Form, SWLS: Satisfaction with Life Scale, WHO-5: World Health Organisation-5 Well-Being Index, PCS-12: Physical component summary, MCS-12: Mental component summary NS: Not significant

Table 3. Age-related differences in physical activity classification, physical activity change during COVID-19 and life satisfaction classification

	18-25 years (n=30)	26-35 years (n=30)	36-45 years (n=30)	46-55 years (n=30)	56-65 years (n=30)	Between-groups difference
IPAQ-SF PA classification (n)						
Low	3 (10%)	10 (33.3%)	7 (23.3%)	12 (40%)	10 (33.3%)	p=0.027 χ^2=17.356
Moderate	20 (66.7%)	19 (63.3%)	22 (73.3%)	17 (56.7%)	16 (53.3%)	
High	7 (23.3%)	1 (3.3%)	1 (3.3%)	1 (3.3%)	4 (13.3%)	
PA change during COVID-19 (n)						
Unchanged	0	5 (16.7%)	9 (30%)	13 (43.3%)	6 (20%)	p=0.006 χ^2=21.514
Decreased	26 (86.7%)	22 (73.3%)	21 (70%)	16 (53.3%)	22 (73.3%)	
Increased	4 (13.3%)	3 (10%)	0	1 (3.3%)	2 (6.7%)	
SWLS classification (n)						
Extremely Dissatisfied	3 (10%)	0	0	0	0	p=0.019 χ^2=40.542
Dissatisfied	7 (23.3%)	2 (6.7%)	4 (13.3%)	3 (10%)	5 (16.7%)	
Slightly dissatisfied	5 (16.7%)	5 (16.7%)	5 (16.7%)	8 (26.7%)	7 (23.3%)	
Neutral	1 (3.3%)	6 (20%)	2 (6.7%)	1 (3.3%)	2 (6.7%)	
Slightly satisfied	11 (36.7%)	12 (40%)	7 (23.3%)	6 (20%)	7 (23.3%)	
Satisfied	3 (10%)	5 (16.7%)	11 (36.7%)	12 (40%)	7 (23.3%)	
Extremely satisfied	0	0	1 (3.3%)	0	2 (6.7%)	

IPAQ-SF: The International Physical Activity Questionnaire-Short Form, PA: Physical activity, SWLS: Satisfaction with Life Scale

in our study are remarkable, more research is needed to identify the underlying mechanisms for these differences.

Most of the participants (63%) in the current study had a moderate level of physical activity. However, 71% of the participants stated that their physical activity levels decreased during the pandemic process. Tison et al. (36) reports that the number of step counts decreased worldwide after the COVID-19 pandemic. Many studies have also indicated that during the COVID-19 pandemic, physical activity levels decreased, and daily sitting hours increased for individuals of all ages (36, 37). The importance of physical activity in preventing infectious diseases and strengthening the immune system is well known (38). In addition, the importance of physical activity in the COVID-19 pandemic for individuals of all ages has also been demonstrated (39). In the latest guidelines published by the World Health Organization on physical activity, aerobic physical activity for adults is recommended as at least 150-300 minutes of moderate-intensity or at least 75-150 minutes of vigorous-intensity or a combination of these (40). Another important finding of the current study is the determination of age-related differences in the level of physical activity. It has been determined that the physical activity levels and functional independence of the elderly are low due to various reasons such as the presence of comorbidity, decrease in muscle mass, balance and cardiovascular endurance (41), social isolation (42), lack of social support (43), living alone, low education level and lack of environmental conditions suitable for recreational activities (44). Consequently, younger adults are shown to have a significantly higher level of physical activity than their older counterparts (45). Our results suggest that this situation is similar during the pandemic as well. University-age youth seems to be more active than other age groups, regardless of the pandemic. Considering the individuals in the age group of “18-25 years” are relatively physically active, it may be more beneficial that if the interventions for encouraging the physical activity participation focus on the other age groups.

The life satisfaction levels of individuals are shown to be affected in the COVID-19 pandemic (46). It was determined that individuals' life satisfaction decreased especially during home quarantine periods (46). Thus, it was not surprising to find that 36% of individuals were dissatisfied with their lives in our study. However, we also found that the youngest individuals had the worst life satisfaction. There are studies in the literature showing that life satisfaction interestingly increases with aging (47, 48). Although general health deteriorates with age, it has been determined that there may be an improvement in well-being with age, which is defined as “paradox of well-being (47). Strine et al. (49) determined that life satisfaction is negatively affected by poor mental health, especially depression and anxiety, and chronic diseases that cause disability (49). In addition, Mahmoud et al. (50) determined that life satisfaction in young adults was also inversely related with depression, anxiety, and stress levels. The stress levels of young adults are reported to be higher than that of older adults (51), and this may help explaining the age-related difference in life satisfaction in our study as well. One explanation for this condition is that younger age groups are more vulnerable to the impacts of the pandemic on mental health and stress, particularly throughout the pandemic period (52). Moreover, it is reported that the effectiveness of the coping strategies also improves with aging (51), which may also contribute to the better life satisfaction scores in older individuals compared to their younger counterparts. In the COVID-19 pandemic, fear of COVID-19, anxiety, physiological distress, sleep problems are some of the factors that can affect life satisfaction (53). In addition, Eek et al. (12) determined that those who reported that their physical activity levels decreased during the pandemic process had lower life satisfaction. In our study, it was determined that the percentage of those who reported a decrease in the level of physical activity during the COVID-19 period was the highest between the ages of 18-25. This may be another reason why the life satisfaction of the 18-25 age group is lower than that of other age groups. Decreased activity can be both a cause and a consequence of low life satisfaction, and vice versa (12). Future research may investigate the factors influencing life satisfaction in different age groups during the COVID-19 pandemic, as well as age-specific interventions targeted to individuals' needs.

Similar to life satisfaction, mental aspect of the quality of life was also worst in the youngest individuals in our study. Studies show that the general quality of life decreases with aging (54, 55). However, this might differ in terms of mental health-related quality of life. Studies report that the mental health of older adults is better compared to other age groups during the pandemic process (56). Similar to our study, in the

study of Pieh et al. (57), the average scores of young adults between the ages of 18-24 years in the psychological domain of quality of life were lower than those of other age groups. Moreover, the COVID-19 pandemic and lockdowns are reported to be particularly stressful for adults under the age of 35 years (57). These findings are in accordance with the lower mental health-related quality of life of young people in our study compared to other age groups. The factors affecting the quality of life also differ among age groups (54). The presence of chronic diseases, and mobility and self-care problems (58) were found to be major factors negatively affecting the quality of life in older adults. However, these factors mainly affect the physical aspects of quality of life rather than the mental aspects. On the other hand, it is shown that increased stress levels, sleep problems, burnout and depression are the major factors impairing quality of life in university students (59) which may also help explaining why the mental quality of life is worst in the individuals in the age group of 18-25 years.

Yoga, mindfulness meditation, and positive psychological interventions are one of the approaches reported to have positive effects on mental health during the COVID-19 pandemic (60). These approaches have been reported to reduce anxiety, stress, depression, and sleep problems in the COVID-19 pandemic (60). Considering the youngest individuals were found to have the worst mental quality of life in our study, we believe that it may be beneficial for psychological interventions to primarily target young adults in the COVID-19 pandemic.

Because we collected our data online through phone or computer, individuals with low socioeconomic status may have a hard time participating in the study. In addition, socioeconomic status may also have an impact on both mental and physical health, which may be considered as another limitation. Another limitation is that we had to apply the 1-min STST remotely with instructions provided via online form due to the pandemic. Preliminary results indicate that STSTs may be used remotely, however more studies are needed to confirm their remote applications.

CONCLUSION

Our results showed that during the COVID-19 pandemic, functional capacity of the general population seems to be lower than the reference values for all age groups. Although the individuals in the age group of “18-25 years” had the best functional capacity and physical activity level, all age groups may benefit from the training and/or counselling programs that focus on improving functional status and physical health during the pandemic, considering the fact that they all performed below the reference values in functional tests. On the other hand, individuals in the age group of “18-25 years” had the worst life satisfaction and mental health-related quality of life among all age groups, suggesting that it may be more beneficial if the psychological interventions primarily focus on this age group during the pandemic. In this study, we explored the differences in the levels of physical or mental exposure to the COVID-19 pandemic in different age groups, which may help tailoring the rehabilitation programs for different age groups during this era.

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