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# Digital Technologies and Psychological Well-Being; Covid-19 Pandemic

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ORIGINAL ARTICLE

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#### **Abstract**

This study examined women's use of digital technologies for exercising during the COVID-19 pandemic vis-à-vis the Six-factor Model of Psychological Well-being. A qualitative research design was adopted in investigating women's experiences of using digital exercise applications during the pandemic considering model of psychological well-being. The population of the study consisted of twelve (12) volunteer female participants who used digital exercise applications during the pandemic. A personal information form and a semistructured interview form were used as data collection tools. Thematic content analysis was applied to the data. The study concluded that during the pandemic, the participants could get ahead of various negative circumstances through physical activity, which contributed to them physically, mentally, psychologically, and socially. It is held that thanks to the technological devices that have become indispensable in the modern age, individuals can develop strategies to cope with life's negativities and feel good.

Keywords: COVID-19 Pandemic, Exercise Programs, Digital Technology, Psychological Well-Being, Women.

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### Dijital Teknolojiler ve Psikolojik İyi Oluş; Covid-19 Pandemi Etkisi

Öz

COVID-19 salgını, birçok endüstride ve bir bütün olarak toplumda dijital ortamlara geçişleri desteklemiş hatta zorunlu hale getirmiştir. Özellikle egzersiz uygulayıcıları, pandeminin ilk aşamasından itibaren dijital çözümleri ve ileri teknoloji araçlarını hızla benimsemişlerdir. Bu kapsamda bireylerin dijital çözümleri benimseme hızları da dikkat çekmiştir. Bu araştırmanın amacı, COVID-19 salgını sırasında kadınların egzersizde dijital teknolojileri kullanma pratiklerinin psikolojik iyi oluş perspektifinden incelenmesidir. Pandemi sürecinde kadınların dijital çözümleri egzersizde kullanımlarına dair deneyimlerini psikolojik iyi oluş kuramı açısından derinlemesine incelemek amacıyla nitel araştırma yöntemi tercih edilmiştir. Araştırmanın çalışma grubunu pandemi sürecinde dijital egzersiz uygulamalarını kullanan 12 gönüllü kadın katılımcı oluşturmaktadır. Araştırmanın çalışma grubu, çok aşamalı örneklem yöntemi ile seçilmiştir. Araştırmada veri toplama aracı olarak kişisel bilgi formu ve yarı yapılandırılmış görüşme formu kullanılmıştır. Araştırma verilerine tematik analiz uygulanmıştır. Sonuç olarak katılımcıların fiziksel aktivite aracılığıyla pandeminin sebep olduğu çeşitli olumsuz durumların önüne geçebildiği, bu durumun fiziksel, zihinsel, psikolojik ve sosyal açıdan bireylere katkı sağladığı görülmektedir. Modern çağın vazgeçilmezi haline gelen teknolojik imkanlar sayesinde ise bireylerin bu tür olumsuzluklarla baş edebilme ve iyi hissetme stratejilerini geliştirebildiği söylenebilmektedir.

Anahtar kelimeler: Covid-19 Pandemisi, Egzersiz Programları, Dijital Teknoloji, Psikolojik İyi Oluş, Kadınlar.

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#### Introduction

Starting from its onset on December 2019, the COVID-19 pandemic has significantly affected human life (Tison et al., 2020). During this global pandemic, many negativities were faced due to the precautionary restrictions and lockdowns, one of which was related to the operations of recreational sports facilities. As the equipment in these facilities was shared and users and personel were in close contact to the extent of violating the social distancing rule, recreational sports facilities were considered high-risk for virus transmission and closed (Amagasa et al., 2020). The significant reduction in physical activity caused by the imposed restrictions was considered a long-term threat to individuals' health (Celik and Yenal, 2020; Schwendinger and Pocecco, 2020). Indeed, sedentary behaviors increased due to many reasons, such as the increase in time spent at home and the work environments switching to online platforms (Schrempft et al., 2019). The sedentary lifestyle during quarantine affects people negatively by increasing their stress and anxiety levels (Dixit and Nandakumar, 2022). In addition, the World Health Organization has drawn attention to the increasing inactivity worldwide and recommended various exercises that can be done at home to keep individuals active (WHO, 2020). The importance of doing physical activities, including house cleaning, gardening, short walks, dances, and exercises accessible online free of charge, was emphasized during the pandemic (WHO, 2020). Physically active individuals were found to have lower odds of SARS-CoV-2 infection, COVID-19 hospitalization, severe COVID-19 illness, and COVID-19-related death than physically inactive individuals. Furthermore, such benefits are said to be maximized if approximately 150 minutes of moderate exercise per week or 75 minutes of vigorous exercise per week is performed (Ezzatvar et al., 2022).

In the post-pandemic period, various regulations and measures have been introduced to safely reopen exercise facilities or to prepare for other future infectious diseases. However, even after facilities were opened, the fear of infection discouraged individuals from performing their exercise in these facilities for a long time. Individuals, therefore, resorted to alternative solutions, including home exercise or individual outdoor exercise, which was allowed during and after quarantine (de la Vega et al., 2022; Yumuk et al., 2023). Therefore, the solutions offered by the digital age gained more importance, and digital resources, which became even more indispensable with the pandemic, came to the fore as an extremely useful tool for exercise. It became possible to access various exercise programs through digital media and live broadcasts on YouTube, Zoom, and Instagram, as well as applications offered in Google Play Store or App Store. Studies emphasized the comfort of exchanging knowledge with video conferencing platforms such as Zoom, which enabled individuals to connect with health and fitness communities (Greenwood-Hickman et al., 2021).

Guidance on online individual or group exercise programs is provided by the exercise instructors or personal trainers. The main purpose of these platforms, which are said to be more motivating and consistent than self-exercise, was to combat the sedentary lifestyle brought about by being confined at home due to lockdowns and to contribute to the safe increase in physical activity under the guidance of experts. In their study on adults' and adolescents' use of digital platforms for physical activity during the COVID-19 pandemic, Parker et al. (2021) stated that individuals accessed and subscribed to exercise programs through platforms such as YouTube, Facebook, Zoom, MyFitnessPal, and Centr under the categories of dance, sports training, fitness, etc. The findings of the said study revealed that digital platforms can play a critical role in helping support physical activity engagement during the pandemic when people have limited access to facilities or opportunities for exercise outside the home. Women were also noted using these platforms more than men. In addition, some studies suggest promoting physical activity through digital technologies for women (Guerra-Balic et al., 2023). The literature shows that incorporating digital technologies into exercise programs increases individuals' physical activity levels. Research indicates that exercise participation during pandemic isolation provides individuals with the opportunity to rebalance activity, thoughts, and feeling and reset physical and mental well-being (Matias et al., 2020). There is research describing the positive links of using digital technological exercise and learning with communication with others, self-actualization and well-being (Papouli et al., 2020). Individuals' physical and mental experience with exercising in the face of lockdowns during the COVID-19 pandemic was examined vis-à-vis psychological well-being.

#### Theoretical Framework: Psychological Well-Being

The concept of psychological well-being is defined as a state of well-being in which the individual can develop and maintain positive and trusting interpersonal relationships, have a purpose in life and a feeling of self-acceptance, continuously work for personal growth, and get satisfaction from life (Keyes et al., 2002). Psychological well-being has six dimensions. One of these dimensions, "Positive Relations with Others," refers to the individuals' ability to establish a positive, trusting relationship with others that they value sincerely. Another dimension, "Environmental Mastery", refers to the ability to choose or create contexts suitable to personal needs and values. "Personal Growth" refers to individuals' self-awareness of their potential to overcome the difficulties they encounter and the desire to grow and expand. "Purpose in Life" refers to a sense of directedness, acting in line with the life goals individuals set. The dimension of "Self-Acceptance" refers to individuals' acknowledging and accepting multiple aspects of self, including good and bad qualities. Last, "Autonomy" refers to being self-determining and independent, that is, the ability to make decisions on one's own and think and act in certain ways (Keyes et al., 2002; Ryff, 1989).

Individuals with high scores from dimensions are expected to have a high level of life satisfaction and psychological well-being (Ryff, 1995). Psychological well-being helps individuals communicate effectively, achieve success, improve their finances, protect their health, and make their life easier and happier by having orientations that will positively affect their personal development (Ryff and Keyes, 1995). The most prominent characteristic of individuals with high levels of psychological well-being is that in addition to having a positive outlook on life, they are able to achieve and sustain happiness (Budak, 2022; Ryff, 1989).

As supported by relevant research, psychological well-being is positively affected by exercise and physical activities (Öner, 2020; Özçelik et al., 2022). Ejiri et al. (2021) found physical activity to positively impact psychological well-being. Gürkan et al. (2021) found that the more individuals participated in exercises individually or in groups in their leisure time the more their level of psychological well-being increased. Edwards et al. (2004) found the psychological well-being scores of the participants who engaged in physical exercise to be higher than those who did not. In addition, individuals who engage in different physical activities have been reported to have higher psychological well-being than individuals who participate in activities that do not, which positively contributes to leisure exercise participation (Gürbüz, 2017; Gürbüz and Henderson, 2014; Edward et al., 2005). Li et al. (2015) found that regular exercise positively contributes to individuals' psychological health.

Research indicates that exercise participation during pandemic isolation provided individuals with the opportunity to rebalance activity, thoughts, and feeling and reset physical and mental wellbeing (Demirel et al., 2021; Matias et al., 2020). Individuals, therefore, resorted to alternative means of physical exercise, including home or individual outdoor exercise, which was allowed during quarantine (Ricardo de la Vegal et al., 2020). From this perspective, digital resources, which became even more indispensable with the pandemic, can be said to have been used as extremely useful tools for exercise. Starting from the onset of the pandemic, individuals realized that it is possible to access exercise programs from several digital platforms. On these platforms, information on both individual and group exercise programs was offered by the physical education teachers or personal trainers, who are professionals on the topic. These platforms, contributing to motivation and persistence, mainly aim to combat the sedentary lifestyle imposed by being confined at home due to lockdowns and to contribute to the increase in physical activity under the guidance of professionals in the area and a safe manner.

In this context, this study aims to determine how women between the ages of 25 and 44 used these digital platforms during the pandemic for physical exercise. The study attempts to elaborate on the issue by conducting interviews with the participants and adopting a phenomenological approach

to examining the participants' psychological well-being. The thematization of the data obtained as a part of this study was envisaged be able to serve as a guide for future research on improvements that can be made.

#### Method

#### Research Model

The research is a phenomenological design study. Phenomenology is the study of experiences with a phenomenon or concept of which individuals are aware but do not have a detailed understanding (Creswell, 2013; Patten and Newhart, 2018). In other words, it is the appearance of things or things as they appear in our experience. This study examines women's experiences of using digital platforms for physical exercise during the COVID-19 pandemic from a psychological well-being perspective. In this respect, we tried elaborating on women's experiences with these platforms in detail.

This research, which aims to examine women's experiences of using digital platforms for physical exercise during the COVID-19 pandemic from a psychological well-being perspective is a phenomenological design study conducted with the which is one of the qualititative research methods. Phenomenology is the study of experiences with a phenomenon or concept of which individuals are aware but do not have a detailed understanding (Creswell, 2013; Patten and Newhart, 2018). With the prevalence of qualitative methods in the field of sports and exercise, researchers are increasingly using interviews to collect data (Sparkes and Smith, 2009). In order to explore the research questions, gain more in-depth knowledge of subject and to benefit from the experiences semi-structured in-depth interviews were conducted with women. In this respect, we tried elaborating on women's experiences with these platforms in detail. Some of the participants participated in exercises individually via applications or Youtube, and some of them participated in group exercises with different trainers.

#### Study Group

Multistage sampling was used in the selection of the study sample. In the first stage, criteria were determined through criterion sampling, one of the purposive sampling methods. The criteria of the study are a) engaging in online exercise activities at least three days a week and b) being female.

Considering the criteria required to be included in the research group, the interviews were terminated when the data obtained from the interviews reached saturation within the scope of the sample selected and it was assumed that the desired sample group was reached.

In light of these criteria, snowball sampling, a purposive sampling method, was used in the second stage. For snowball sampling, a volunteer who participated in an online physical exercise program and met the criteria was contacted. Afterward, a second volunteer who engaged in online

exercise activities was contacted and asked the question "From whom can I get the most information about this subject?". All participants were contacted and recruited by following this method. Ultimately, the study group consisted of twelve (12) female participants. Detailed information on the participants' demographic information is presented in Table 1. The names in Table 1 are code names assigned to the participants, and their real names are kept confidential due to ethical concerns.

Table 1

Demographic Information of Participants

Participant	Age	<b>Education Status</b>	Profession	Exercise Experience Duration	District/Province of Residence
Ayda	44	Associate degree	Accounting	4 months	Marmaris/Muğla
Banu	42	Bachelor's degree	Yoga instructor	1.5 years	Çankaya/Ankara
Beril	25	Associate degree	Tourist guide	3 months	Marmaris/Muğla
Ceray	32	Bachelor's degree	Accounting	3 months	Defne/Hatay
Derin	36	Master's degree	Psychologist	3 months	Küçükesat/Ankara
Gül	35	Ph.D.	Academician	7 months	Çankaya/Ankara
Hale	25	Bachelor's degree	Student	1 year	Konyaaltı/Antalya
İklim	32	Bachelor's degree	Civil Servant	1 year	Marmaris/Muğla
Mine	27	Bachelor's degree	Accounting	5 months	Defne/Hatay
Nalan	26	Master's degree	Journalist	3 months	Merkez/Kırıkkale
Oya	26	Bachelor's degree	Chemical engineer	1.5 years	Çankaya/Ankara
Zeynep	25	Associate degree	Tourism	4 months	Karşıyaka/İzmir

#### Data Collection

A personal information form was developed by the researchers, and it was used as a data collection tool to determine the sociodemographic characteristics of the participants. The personal information form includes information about the participants' ages, education levels, occupations, and places of residence. In addition, a semistructured interview form was developed in light of the psychological well-being model and used for data collection. A thorough literature review was performed before the development of the semistructured interview form. Then, a six-question semistructured interview form, the theoretical basis of which is Ryff (1989)'s Six-factor Model of Psychological Well-being, was developed. Examples of questions in the interview form are as follows;

- 1- How do you think the online exercise program you participated in affected your interpersonal relationships?
- 2- How did the online physical exercise program in which you participated affect your personal development?
- 3- What is the importance of online physical exercise in your life?

One-to-one interviews were conducted in the online environment using the developed semistructured interview form. The online interviews lasted approximately 40 minutes for each participant. The interviews were recorded with online methods and then transferred to the computer.

#### Data Analysis

The obtained data were analyzed by thematic analysis. Thematic analysis is defined as the process of identifying patterns or themes within qualitative data (Braun and Clarke, 2006). The stages of thematic analysis are presented below.

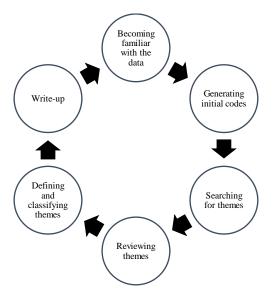


Figure 1. Analyses Process

The answers participants gave to the questions prepared from the perspective of psychological well-being were transcribed. The transcribed data were then coded in line with the views of each participant. After codes had been identified, themes were sought. Later, themes were reviewed and a classification was made. Then, metaphoric titles were determined by defining and naming the subthemes for the themes. As a result, six (6) thematic titles and twelve (12) subthemes emerged within the scope of six (6) themes.

#### Credibility, Transferability, Consistency, and Dependability

The implementation of the four-dimension criteria (credibility, dependability, consistency, and confirmability) instead of the criteria of validity and reliability has been suggested to be more in line with the nature of qualitative research (Lincoln and Guba, 1985). To ensure credibility, participants and themes were described and explained. In addition, the research process was explained in detail. In ensuring transferability, the obtained data were recorded to prevent data loss, and then, the content of the recordings was transcribed into a Microsoft Word document. Data were checked repeatedly during interpretation. Also, the data were presented in tables, and excerpts from the participants' answers were presented to provide insight into their opinions. To ensure consistency,

the data were analyzed and coded by the two researchers separately, and they evaluated each other's analysis results. In addition, Miles and Huberman's (1994) coefficient of agreement (Agreement = Agreement/Agreement + Disagreement X 100) was utilized. As a result, the study's concordance coefficient was found to be.87. Within the scope of dependability, all data obtained are stored in the computer environment.

#### **Findings**

#### Positive Relations with Others

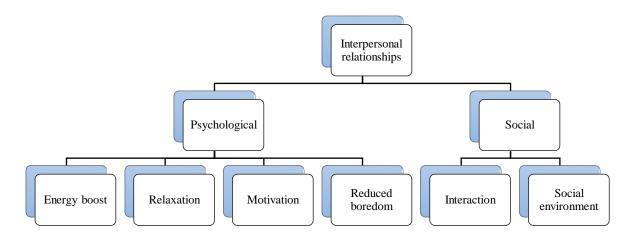


Figure 2. Building Positive Relationships

Because of the analysis of the obtained findings, two subthemes emerged under the theme of positive relations with others. Thus, it was seen that online physical exercise programs contributed to interpersonal relationships, pointing to their psychological and social benefits. Online physical exercise platforms were observed to have boosted the participants' energy, helped them relax, built motivation, and reduced boredom. A participant statement, "When I work out, I become a happier, more unwound, and relaxed individual, so this reflects on my relationships. My relationships are naturally more amicable, more serene, and healthier." (Ayda), served as the emerging point of the findings above. Another participant's statement, "It boosted my energy. It was as if there was a coach present, encouraging me. It felt nice to be doing an activity" (Derin) and had a role in reaching the said findings.

#### **Environmental Mastery**

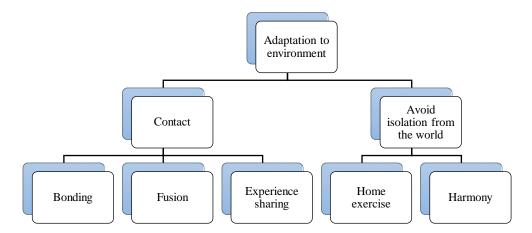


Figure 3. Adaptation

Because of the analysis of the obtained findings, two subthemes emerged under the theme of environmental mastery. As such, it is seen that online physical exercise programs enabled participants to communicate with others and helped them avoid being isolated from the world. Online physical exercise platforms are observed to have contributed to the participants' lives in the form of experience sharing, fusion, and harmony. A participant's statement, "When curfews and lockdowns were being imposed, these platforms helped me share my experience with others and enabled us to encourage each other" (Gül), shows that despite the restrictions brought about by the COVID-19 pandemic, individuals strove to achieve the best outcomes. Another participant supported the findings above, stating: "Because I was at my own home, I was already adapted to the environment, and I could more easily keep up with the exercises. I had not been that comfortable at the beginning, but later I started to feel comfortable; I got over this adaptation process quickly. (Nalan)"

#### Personal Growth

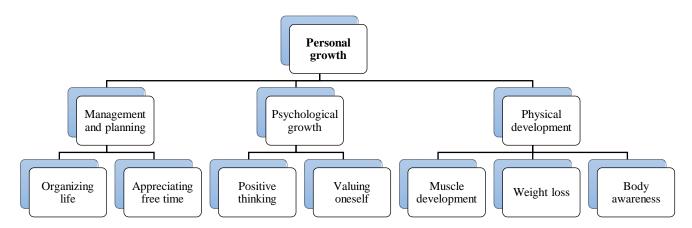


Figure 4. Change and Transformation

Because of the analysis of the obtained findings, three subthemes emerged under the theme of personal growth. As such, it can be seen that online physical exercise programs contributed to the participants' lives in terms of physical development, psychological development, and management and planning. The statements of the participants on these benefits of online physical exercise programs are as follows:

"It contributed a lot to me in a positive way. I tried to do it regularly, which helped me organize my life." (Ceray)

"I felt physically stronger, I could see the improvements." (İklim)

"When I looked in the mirror, I felt so strong, so beautiful. So, there was both a physical and psychological change." (Zeynep)

#### Purpose in Life

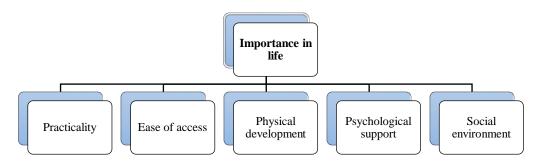


Figure 5. Sparing Time for the Self

Because of the analysis of the obtained findings, five subthemes emerged under the theme of purpose in life. As such, participants hold that online physical exercise programs are practical and accessible. Additionally, it was seen that individuals who engaged in physical exercise through digital platforms not only felt like a part of a community but also achieved physical progress. Accordingly, the fact that participants made time for themselves affected their psychological well-being positively, and being a part of a community fostered a sense of support. Participant opinions supporting the findings above are as follows:

"I realized that exercising was helpful to relax after waking up or clocking out, without having to commute somewhere. Later on, it turned into something that I followed up on, that is, I internalized the notion that it is possible to do exercise at home." (Nalan)

"Since we were not engaging in any activities due to lockdowns, I would spare some time only for myself and do exercise on online platforms, thus creating a space of my own. I was investing in myself, so it was very important." (Derin)

"Exercise definitely makes one feel better off in physical terms, helps to protect health. Also, as a woman, I was motivated by the changes I saw in my body. Actually, such a perception is not ideal, but I started to love my body." (Ceray)

#### Self-Acceptance

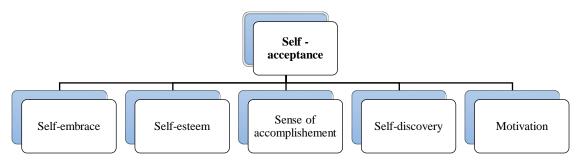


Figure 6. Self-actualization

As a result of the analysis of the obtained findings, five subthemes emerged under the theme of self-acceptance. As such, it is seen that online physical exercise programs help individuals build self-confidence, help them accept themselves as they are, and bolster motivation. The participant statements supporting these findings are as follows:

"I confronted my weaknesses and tried to turn them into strengths." (Zeynep)

"While I was previously an unhappy, self-disliking person, suddenly I became self-confident, thanks to the belief of being able to succeed, maybe..." (Banu)

"Sport has always helped me get to know myself. The more one does it, the more they see changes in their body and the more they want to keep doing it. I think people first need to recognize the capacity of their body, like, know what their body is capable of." (Gül)

#### Reasons for Preference for Online Physical Exercise Programs

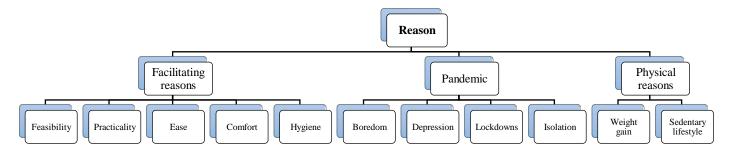


Figure 7. Improved Quality of Life

As a result of the analysis of the obtained findings, three subthemes emerged under the theme of reasons for turning to online physical exercise programs. Participants turned to online exercise programs for physical, facilitating, and pandemic reasons. The participant statements supporting the findings above are as follows:

"Actually, for me, the selling point was not being around too many people for isolation purposes." (Ayda)

"I had considerations such as maybe adopting this as a lifestyle, as we were too sedentary, and we are not getting any younger. And I gained a lot of weight. We had to lose weight somehow."
(Banu)

"Hygiene was important for me. Outside, we don't know how clean the environment we're in is, but that's not the case for home. I have my own exercise area that's clean and sanitary, as well as comfortable and convenient." (Zeynep)

#### **Discussion and Conclusion**

This study examines women's experiences of using digital platforms for physical exercise during the COVID-19 pandemic from a psychological well-being perspective. The findings obtained in the study were presented under six main themes, namely, personal relations with others, environmental mastery, personal growth, purpose in life, self-acceptance, and reasons for preference for online physical exercise programs.

Participant statements showed that online exercise platforms positively contributed to their interpersonal relationships (building positive relationships), pointing to their social and psychological benefits. These findings are in parallel with those of Huang et al. (2020), who concluded that spending time exercising in the home environment may cause a decrease in depression levels. The problem that the pandemic pushed individuals into loneliness was proven to be remediable through exercise programs offered on digital platforms. Because online exercise platforms seem to have had an important role in eliminating negative outcomes lockdowns brought about such as isolation and asociality. There are similar studies showing that people who participated in an online home-based exercise program during the Covid-19 period experienced physical and psychological recovery (Sagarra-Romeo et al., 2022). It has been helpful in creating a new normal and coping with social isolation through online exercises, online applications and virtual social support during the COVID-19 era (Rodrigues et al., 2022). As stated by the participants, the fact that online exercise platforms offered a trusting environment, a chance to engage in interpersonal communication, and the opportunity to socialize at home, which are related to the "positive relations with others" theme of the psychological well-being model.

According to the statements of the participants with regard to the environmental mastery (adaptation) subtheme, online physical exercise platforms enabled individuals to share their experiences with others and to adapt to their environment. In addition, these contributions were reported to strengthen communication between individuals. The findings of Daşdanbek-Acun and

Yıldırım (2020) on the increase in relationship strength and communication in social environments in their study with online exercise participants support the findings of this study. Individuals engaging in activities they had usually done outdoors in the home environment due to the lockdowns brought with it many changes. Although it may initially have been difficult for individuals to engage in these activities in the home environment, they could adapt in time, which can be claimed to have contributed to the individuals' adaptation to other new developments. As can be inferred from the assumptions of the psychological well-being model, individuals' being in a digital environment with others and sharing the experiences they had in the environment they created for their personal needs in line with their values also contributes to their lives in the form of socializing.

As for the *personal growth* (change and transformation) dimension, physical development, transition to regular life, and positive approach to development are among the benefits of online physical exercise programs the participants enjoyed. The findings of this study are parallel with those of Lades et al. (2020), which revealed that exercising regularly during the pandemic positively changed individuals' mental states. Although the general opinion is that the pandemic wore individuals down, it is possible to reverse this mental wear and tear through online physical exercise. As the participants noted, physical, mental, and personal development through online exercise platforms can help individuals gradually improve their mental status, which was badly affected by the pandemic and its outcomes. The participants' strife for continuous self-improvement and focus on the positive and disregard of the negative is parallel with the assumptions of the *personal growth* dimension of the psychological well-being model.

The participant statements grouped under the theme *purpose in life* (sparing time for the self) show that engaging in online exercise activities helped them spare some time for themselves. The finding that online exercise programs helped participants maintain their high quality of life or enhanced their life quality during the pandemic is similar to those of Ferreira et al. (2021). As stated by the participants, the fact that online exercise platforms provided individuals with a community to be a part of and helped them develop themselves physically and psychologically is indicative of the assumptions of the psychological well-being model's *purpose in life* dimension (the conviction that life holds meaning).

The concepts of motivation and self-confidence stand out in the participant statements grouped under the theme of *self-acceptance* (self-actualization). The change in body image and perception that individuals who used online exercise platforms underwent provided an opportunity for them to feel more motivated and empowered. Similarly, in their study on the exercise behaviors of high school students during the pandemic, Wang et al. (2022) found that physical exercise helped participants to rebalance themselves and experience physical and mental relaxation, contributing to

their self-confidence. In a study dealing with the physical activity outputs of older adults using digital technologies, it was concluded that physical and psychological well-being was positively affected (Suh and Li, 2022). Indoor leisure activities, which include physical exercises, provide individuals with not only physical results, but also social and psychological results (Yumuk et al., 2023). Similar findings were obtained with the adult female participants in this study. Individuals' acceptance of their positive and negative qualities led to their progress and development. As stipulated by the *self-acceptance* dimension of the psychological well-being model, positive perceptions that build self-confidence and motivation such as self-sufficiency contributes to individuals' psychological well-being.

As can be seen in the participant statements grouped under the *reasons for preference for online physical exercise programs* (improved quality of life), such programs helped individuals enhance the quality of their life. Matias et al. (2020) suggested that participation in online exercise classes during the pandemic positively affected individuals' social skills and created a social space for them. It was suggested that online exercise programs and social connections made through these programs can serve as developing various emotions such as autonomy and competence. These programs positively contribute to individuals' quality of life also through emotions brought about achieving goals and personal satisfaction. In light of the statements of our study's participants, it can be said that the pandemic in a way encouraged individuals to engage in physical exercise. Throughout the pandemic, individuals were on a quest to discover activities that improve their psychological wellbeing; so, they resorted to online physical exercise platforms. Within the framework of the psychological well-being model, considering all the benefits these programs and platforms offered to individuals, their impact power was fairly high.

In conclusion, this study found that the participants were able to tackle the many negativities brought about by the pandemic through physical exercise, which contributed to them physically, mentally, psychologically, and socially. It is held that individuals can make use of the digital technologies at their disposal, which have become indispensable in the modern age, to cope with such negativities and improve their mental state.

This study is limited to twelve female volunteers who actively engaged in online exercise classes during the pandemic. Future studies can be carried out with sample groups with different limitations. Also, a conceptual framework different from the psychological well-being model can be used.

In this study, the use of technological means in physical exercise was addressed within the theoretical framework of psychological well-being. In future studies, the physical exercise behaviors

of individuals from different demographic backgrounds during the COVID-19 pandemic can be investigated from the perspective of different theories. Research shows that women are more prone to using digital platforms for physical exercise than men (Parker et al., 2021). The underlying causes of this situation can be investigated. Steps can be taken to make access to digital exercise platforms easier for individuals who lack financial freedom. Further research is recommended to investigate whether there is a change in the use of online exercise platforms after the lifting of pandemic restrictions and the normalization of work and study life or to examine the users' persistence in accessing these platforms. It is recommended to conduct longitudinal studies vis-à-vis different variables covering the period between the onset of the pandemic and today.

#### **Ethics Statement**

Ethics assessment committee: Kırıkkale University Ethical Committee of Social Sciences and Humanities

Ethics assessment document date: 25.05.2022

Ethics assessment number of document: 05

#### **Statement of Researchers' Contribution**

All three authors contributed equally at all stages of the research.

#### **Declaration of Conflict**

The authors do not have a statement of conflict regarding the research.

#### References

- Amagasa, S., Machida, M., Ding, D., & Inoue, S. (2020). Preventing infectious diseases outbreaks at exercise facilities. *Managing Sport and Leisure*, 27(1-2), 22-25. DOI: 10.1080/23750472.2020.1779116
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. DOI: 10.1191/1478088706qp063oa
- Budak, D. (2022) Predictive Power Of Leisure Boredom On Psychological Well Being In Adults, 3. International Recreation and Sports Management Congress, Antalya, Turkey, pp.22-23.
- Creswell, J. W. (2013). Qualitative inquiry & research design choosing among five approaches, qualitative research methods, (3rd ed.). California: SAGE Publication.
- Demirel, M., Kaya A, Budak, D., Bozoğlu, M. S., & Yusuf, E. R. (2021). Effect of Covid-19 pandemic on recreational awareness and quality of life. *Turkish Journal of Sport and Exercise*, 23(2), 197-207.
- Çelik, F., & Yenal, T. H. (2020). COVID-19 ve hareketsiz yaşam. *Akdeniz Spor Bilimleri Dergisi*, 3(2), 249-259. DOI: 10.38021/asbid.804705
- Daşdanbek-Acun, M., & Yıldırım, S. (2022). COVID-19 sürecinde sağlık çalışanlarının serbest zaman davranışları ve fiziksel aktivite düzeyindeki değişimde çevrim içi egzersiz uygulamalarının rolü: Nitel araştırmalar. *Türkiye Klinikleri Journal of Sports Sciences*, 14(3), 318-327. DOI: 10.5336/sportsci.2022-91379
- De la Vega, R., Almendros, L. J., Barquín, R. R., Boros, S., Demetrovics, Z., & Szabo, A. (2022). Exercise addiction during the COVID-19 pandemic: An international study confirming the need for considering passion and

- perfectionism. International Journal of Mental Health And Addiction, 20(2), 1159–1170. DOI: 10.1007/s11469-020-00433-7
- Dixit, S., & Nandakumar, G. (2021). Promoting healthy lifestyles using information technology during the COVID-19 pandemic. *Rev. Cardiovasc. Med.*, 22(1), 115–125. DOI: 10.31083/j.rcm.2021.01.187
- Edwards, D. J., Edwards, S. D., & Basson, C. J. (2004). Psychological well-being and physical self-esteem in sport and exercise. *International Journal of Mental Health Promotion*, 6(1), 25-32. DOI: 10.1080/14623730.2004.9721921
- Edwards, S. D., Ngcobo, H. S. B., Edwards D. J., & Palavar, K. (2005). Exploring the relationship between physical activity, psychological wellbeing and physical self-perception in different exercise groups. *South African Journal for Research in Sport, Physical Education and Recreation*, 27(1), 75-90. DOI: 10.4314/sajrs.v27i1.25908
- Ejiri, M., Kawai, H., Kera, T., Ihara, K., Fujiwara, Y., Watanabe, Y., & Obuchi, S. (2021). Exercise as a coping strategy and its impact on the psychological well-being of Japanese community-dwelling older adults during the COVID-19 pandemic: A longitudinal study. *Psychology of Sport and Exercise*, 57, 102054. DOI: 10.1016/j.psychsport.2021.102054
- Ezzatvar, Y., Ramírez-Vélez, R., Izquierdo, M., & Garcia-Hermoso, A. (2022). Physical activity and risk of infection, severity and mortality of COVID-19: A systematic review and non-linear dose-response meta-analysis of data from 1 853 610 adults. *British Journal of Sports Medicine*, 56(20), 1188-1193. DOI: 10.1136/bjsports-2022-105733
- Ferreira, L. N., Pereira, L. N., da Fé Brás, M., & Ilchuk, K. (2021). Quality of life under the COVID-19 quarantine. *Quality of Life Research*, 30, 1389-1405. DOI: 10.1007/s11136-020-02724-x
- Greenwood-Hickman, M. A., Dahlquist, J., Cooper, J., Holden, E., McClure, J. B., Mettert, K. D., Perry, S. R., & Rosenberg, D. E. (2021). "They're going to zoom it": A qualitative investigation of impacts and coping strategies during the COVID-19 pandemic among older adults. *Front Public Health*, *9*, 679-976. DOI: 10.3389/fpubh.2021.679976
- Guerra-Balic, M., González-González, C. S., Sansano-Nadal, O., López-Dóriga, A., Ming-Kai, C., Ding, K., Yang, J., & Durstine, J. L. (2023) Impact of COVID-19 lockdown on physical activity, insomnia, and loneliness among Spanish women and men. *Sci Rep 13*, 2912. DOI: 10.1038/s41598-023-30173-2
- Gürbüz, B. (2017). *The conception and perception of leisure in Turkey*. In K. Henderson, & A. Sivan (Eds), Leisure from International Voices, Champaign, IL: Sagamore Publishing.
- Gürbüz, B., & Henderson, K. A. (2014). Leisure activity preferences and constraints: Perspectives from Turkey. World Leisure Journal, 56(4), 300-316. DOI: 10.1080/16078055.2014.958195
- Gürkan, R. K., Koçak, F., & Başar, A. (2021). Engelli sporcularda psikolojik iyi oluş ve serbest zaman doyumu arasındaki ilişkinin incelenmesi. *International Journal of Sport, Exercise & Training Sciences IJSETS*, 7(2), 73-83. DOI: 10.18826/useeabd.890800
- Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y. et al. (2020). Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *The Lancet*, *395*(102233), 497-506. DOI: 10.1016/S0140-6736(20)30183-5
- Keyes, C. L., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology*, 82(6), 1007-1022.
- Lades, L., Laffan, K., Daly, M., & Delaney, L. (2020). Daily emotional well-being during the COVID-19 pandemic. *British Journal of Health Psychology*, 25(4), 902–911. DOI: 10.1111/bjhp.12450
- Li, M., Nie, J., & Ren, Y. (2015). Effects of exercise dependence on psychological health of Chinese college students. *Psychiatria Danubina*, 27(4), 0-419.
- Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. California: SAGE Publications.
- Matias, T., Dominski, F. H., & Marks, D. F. (2020). Human needs in COVID-19 isolation. *Journal of Health Psychology*, 25(7), 871-882. DOI:10.1177/1359105320925149
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. California: SAGE Publications.
- Öner, Ç. (2019). Egzersiz katılımcılarının temel psikolojik ihtiyaçları ve mental iyi oluşlarının incelenmesi. *Akdeniz Spor Bilimleri Dergisi*, 2(2), 159-174.

- Özçelik, E., Dönmez, E., Işık, Ö., & Güngör, N. B. (2022). Fitness merkezi üyelerinde COVID-19 korkusu ve kaygı ilişkisi. *Akdeniz Spor Bilimleri Dergisi*, 5(Özel Sayı 2), 1101-1110. DOI: 10.38021/asbid.1203527
- Papouli, E., Chatzifotiou, S., & Tsairidis, C. (2020). The use of digital technology at home during the COVID-19 outbreak: Views of social work students in Greece. *Social Work Education*, *39*(8), 1107-1115.
- Parker, K., Uddin, R., Ridgers, N. D., Brown, H., Veitch, J., Salmon, J., Timperio, A., Sahlqvist, S., Cassar, S., Toffoletti, K., Maddison, R., & Arundell, L. (2021). The use of digital platforms for adults' and adolescents' physical activity during the COVID-19 pandemic (our life at home): Survey study. *Journal of Medical Internet Research*, 23(2), e23389. DOI: 10.2196/23389
- Patten, M. L., Newhart M. (2018). *Understanding research methods: An overview of the essentials*. (10th Ed.) Routledge, New York.
- Rodrigues, N. G., Han, C. Q. Y., Su, Y., Klainin-Yobas, P., & Wu, X. V. (2022). Psychological impacts and online interventions of social isolation amongst older adults during COVID-19 pandemic: A scoping review. *Journal of Advanced Nursing*, 78, 609–644. DOI: 10.1111/jan.15063
- Ryff, C. D. (1989). Happiness is everything, or is it? Exploration of the meaning of psychological well-being. *Journal of Personality and Social Psychology*, *57*(6), 1069-1081.
- Ryff, C. D. (1995). Psychological well-being in adult life. Current Directions in Psychological Science, 4(4), 99-104.
- Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69(4), 719.
- Sagarra-Romero, L., Butragueño, J., Gomez-Bruton, A., Lozano-Berges, G., Vicente-Rodríguez, G., & Morales, J. S. (2022). Effects of an online home-based exercise intervention on breast cancer survivors during COVID-19 lockdown: a feasibility study. Supportive Care in Cancer: Official Journal of the Multinational Association of Supportive Care in Cancer, 30(7), 6287–6297. DOI: 10.1007/s00520-022-07069-4
- Schrempft, S., Jackowska, M., Hamer, M., & Steptoe, A. (2019). Associations between social isolation, loneliness, and objective physical activity in older men and women. *BMC Public Health*, *19*(1), 1-10. DOI: 10.1186/s12889-019-6424-y
- Schwendinger, F., & Pocecco, E. (2020). Counteracting physical inactivity during the COVID-19 pandemic: Evidence-based recommendations for home-based exercise. *International Journal of Environmental Research and Public Health*, *17*(11), 3909. DOI: 10.3390/ijerph17113909
- Sparkes, A. C., & Smith, B. (2009). Judging the quality of qualitative inquiry: Criteriology and relativism in action. *Psychology of Sport and Exercise*, *10*(5), 491–497. DOI: 10.1016/j.psychsport.2009.02.006
- Suh, A., & Li, M. (2022). How the use of mobile fitness technology influences older adults' physical and psychological well-being. *Computers in Human Behavior*, 131, 107205. DOI: 10.1016/j.chb.2022.107205
- Tison, G. H., Avram, R., Kuhar, P., Abreau, S., Marcus, G. M., Pletcher, M. J., & Olgin, J. E. (2020). Worldwide effect of COVID-19 on physical activity: A descriptive study. *Annals of Internal Medicine*, 173(9), 767-770. DOI: 10.7326/M20-2665
- Van Manen, M. (1990). Researching Lived Experience: Human Science for an Action Sensitive Pedagogy. London: Althouse Press.
- Wang, F., Gao, S., Chen, B., Liu, C., Wu, Z., Zhou, Y., & Sun, Y. (2022). A study on the correlation between undergraduate students' exercise motivation, exercise self-efficacy, and exercise behaviour under the COVID-19 epidemic environment. *Frontiers in Psychology*, 13:946896. DOI: 10.3389/fpsyg.2022.946896
- WHO. Considerations for quarantine of individuals in the context of containment for coronavirus disease (COVID-19) Interim guidance 19 March 2020. <a href="https://apps.who.int/iris/handle/10665/331497">https://apps.who.int/iris/handle/10665/331497</a>.
- Yumuk, E. D., Satılmış, S. E., & Güngörmüş, H. A. (2023). Back to the leisure: Covid scene vs. the post-Covid era in leisure activity participation. *Herkes için Spor ve Rekreasyon Dergisi*, 5(1), 22-26.



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