





The Impact of Physical Activity Application Product Features on Improving Young People's Leisure Experiences

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Article Info

Article type:

Original Research

How to cite this article:

Mirahmadi, M., Zarei, A., Nikaeen, Z., & Esmacili, M. R. (2024). The Impact of Physical Activity Application Product Features on Improving Young People's Leisure Experiences. *Journal of Adolescent and Youth Psychological Studies*, 5(2), 14-21.

<https://doi.org/10.61838/kman.jayps.5.2.2>



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ABSTRACT

Objective: Leisure experiences play a significant role in individuals' lives. Accordingly, the current study aimed to determine the impact of physical activity application product features on improving young people's leisure experiences.

Methods and Materials: This cross-sectional study was correlational. The research population included all youths in the northern and western areas of Tehran in 2021 who used the physical activity application (Samsung Health) on their mobile phones at least twice a week. The sample consisted of 410 individuals selected through purposive sampling and responded to personal information checklists and researcher-made questionnaires on physical activity application product features and leisure experiences. Data were analyzed using structural equation modeling in SPSS and SMART-PLS software.

Findings: Results showed that physical activity application product features and all three of its components, including perceived dynamism, usefulness features, and pleasure-seeking features, had a direct and significant effect on young people's leisure experiences ($P < 0.05$).

Conclusion: The results indicate the effective role of physical activity application product features and all three of its components, including perceived dynamism, usefulness features, and pleasure-seeking features, in improving young people's leisure experiences.

Keywords: Product features, physical activity application, leisure experiences, young people.

1. Introduction

Leisure time and how it is spent have become significant topics following the Industrial Revolution, and examining how it is spent is considered a crucial need for individuals in contemporary societies. Indeed, leisure represents a new social arena that has gained increased importance within the context of modernity, contemporary socio-cultural changes, and the growth of consumerism

(Matthews et al., 2020; Souto et al., 2023). Leisure is part of the organization of everyday life, influenced by and influencing daily activities. Leisure is not a given; its amount varies. The less leisure activities are connected to earning a living, the more likely they are to be considered leisure activities (Foroughi et al., 2018; Fredriksson et al., 2018). Leisure is an important aspect of personal and social life that includes participation in recreational activities. Leisure

activities are those engaged in after fulfilling job, family, and social obligations, with willingness, enthusiasm, and interest, aimed at entertainment, enjoyment, free participation, and the flourishing of talents and creativity (Fredriksson et al., 2018; Moore et al., 2016; Patel et al., 2015). The way leisure time is spent plays a significant role in the education and upbringing of individuals in society, preventing personal, social, and cultural problems, and reflects the social, economic, political, and cultural conditions of society (Matthews et al., 2020; Pourang et al., 2021). Leisure activities are joyous, enjoyable, and unrelated to job or profession, providing numerous opportunities for practicing social roles and activities to develop individual abilities and capacities (Rouhani, Abdi, Mirhosseini, & Kazemi, 2021). Leisure is one of the most important indicators of social welfare, and its organization and management can significantly contribute to fulfilling human material and spiritual needs (Kouhsali et al., 2007; Souto et al., 2023). People need leisure for survival and continuity of life, engaging in it to maintain health and perform pleasurable activities. Today, societal stresses and workloads have led to human exhaustion, highlighting the importance of leisure time in improving life and reducing fatigue (Pourang et al., 2021; Smith et al., 2023). Societies today are undergoing growth in various fields, and technological advancement has led to less physical exertion and more leisure time. Optimal use of this leisure time requires special planning, where physical activity can have positive outcomes (Agate et al., 2007; Bredtmann & Vonnahme, 2019; Dehghani Sheshdeh & Yousefi, 2019; Powrie et al., 2019).

Physical activity is a variable related to leisure and recreation, as it is often undertaken for enjoyment, with both being realized in the context of leisure time. Today, physical activity and sports play an important and effective role in improving leisure programs and can prevent many diseases and social and ethical deviations (de Looft et al., 2022; Mayes et al., 2022; Wendt et al., 2022). In the current world, physical activity and sports are recognized as undeniable necessities, and with technological advancements and the creation of various welfare factors, leading to sedentariness, allocating hours from life to physical activity and sports is felt and mandatory (Dimitri et al., 2020; Shahidi et al., 2020). Physical activity in leisure time makes it useful and enjoyable, having a significant impact on physical and mental health. Leisure-time physical activity consists of sports and recreational activities undertaken for pleasure, competition, creating social relationships, along with

gaining physical fitness (Jafari et al., 2017; Zierys & Jansen, 2015). Physical activity is a valuable tool for filling the leisure time of many in society, and in recent years, people's knowledge and awareness of the benefits and outcomes of physical activities have significantly increased (Agorastos & Chrousos, 2022; Andel & Austin, 1984; de Looft et al., 2022). These activities reduce anxiety and depression, create a protective shield against psychological stress, increase self-esteem, improve mood, and develop physical and mental health, which is why many developed countries emphasize physical activity and sports to preserve and expand the health of different segments (Ahmadi Bajestani et al., 2018; Bagheri Sheykhangafshe et al., 2021; Trudel-Fitzgerald et al., 2019). Physical activity and sports are important components of a healthy lifestyle, having psychological and social effects beyond physical impacts, and accordingly, policies in advanced countries always aim to increase the inclination towards expanding physical activity (Ardouin et al., 2023; Garcia et al., 2016). Regarding the positive effects of physical activity on leisure, it should be said that the physical effects of physical activity and the health of various body organs have led to an increasing inclination towards sports activities more than other effects. Insufficient physical activity and low participation in such activities can lead to physical problems like overweight and obesity, cardiovascular diseases, diabetes, etc., posing significant concerns for the individual, family, and society (Bagheri Sheykhangafshe et al., 2021; Gao et al., 2022; Hashemi malekshah et al., 2021; Kim & Park, 2021; Trudel-Fitzgerald et al., 2019).

Few studies have been conducted on the impact of physical activity applications on leisure experiences. Today, with the expansion of civilization and industrialization of societies, we witness the unchecked growth of the economy and the flourishing of technology, and alongside this growth, unfortunately, physical and bodily activities have been increasingly reduced. Today's adolescents and young people are a generation that grew up with the internet as part of their daily life, filling a significant portion of their leisure time, with less engagement in physical activity (Sadeghi et al., 2022; Xiang et al., 2020; Yang et al., 2022). Physical activity, due to its wide audience, can be an attractive and suitable method for enriching leisure time, especially for adolescents and young people. Physical activities, by compensating for deficiencies and maintaining fitness, prepare young people for a better life and offer a suitable opportunity for protection against cultural problems and social anomalies. Undoubtedly, enriching leisure time with

physical activity and sports in the age of technological advancement leads to joy, health, psychological and physical enhancement, disease prevention, skill learning, and economic assistance due to physical readiness. Therefore, considering physical activity and its role in attracting the young generation and enriching leisure time, it is necessary for authorities to plan in this area (Fredriksson et al., 2018; Hollingworth, 2011; Kalan & Taleb, 2018; Kelishadi et al., 2009; Powrie et al., 2015; Rejali & Mostajeran, 2013). Another important point is that very few studies have been conducted on the impact of physical activity applications, and none have examined their impact on improving leisure experiences. Thus, there are many gaps in this area, and conducting this study could significantly help experts and planners in improving the current situation, especially in terms of improving leisure experiences. Since leisure experiences play a significant role in individuals' lives, the present study was conducted with the aim of determining the impact of physical activity application product features on improving leisure experiences.

2. Methods and Materials

2.1. Study Design and Participants

This cross-sectional correlational study targeted all youths in the northern and western areas of Tehran in 2021 who used the physical activity application (Samsung Health) on their mobile phones at least twice a week. The sample consisted of 410 individuals selected through purposive sampling based on specific eligibility criteria. These criteria included using the Samsung Health physical activity application at least twice a week, having a minimum of a high school diploma, being at least 20 years old, having a history of physical activity and sports, and willingness to participate in the study. Additionally, exclusion criteria were withdrawal from the study and failure to respond to at least ten percent of the items.

The implementing steps of the current study were as follows: initially, based on theoretical foundations, research instruments were designed and their face validity was confirmed by experts after several reviews. Subsequently, after assessing eligibility criteria, samples were identified, and the importance and necessity of the research were explained to them, assuring them about the observance of ethical considerations. After obtaining the samples' consent to participate in the research, they were asked to carefully read and honestly respond to the items in the personal information checklist and the researcher-made

questionnaires described above. It was emphasized that there were no right or wrong answers, and the best response was one that reflected their actual situation. Finally, after completing the instruments and their review by the researcher, the samples were thanked for their participation in the research and for completing the instruments.

In this study, in addition to a personal information checklist including gender, education, age, marital status, and history of sports activity, the following questionnaires were used:

2.2. Measures

2.2.1. Physical Activity Application Product Features

This questionnaire was designed by the current study's researchers with 11 items and three components: perceived dynamism, usefulness features, and pleasure-seeking features. The perceived dynamism component had 3 items, the usefulness features component had 4 items, and the pleasure-seeking features component had 4 items. Responses to each item were measured using a five-point Likert scale ranging from strongly disagree (score of 1) to strongly agree (score of 5). The score of each component was calculated by averaging the scores of its items, and the overall instrument score was calculated by averaging all item scores, with higher scores indicating a greater presence of that feature. The face validity of the researcher-made physical activity application product features questionnaire was confirmed by experts, and its reliability, including the three components of perceived dynamism, usefulness features, and pleasure-seeking features, was calculated using Cronbach's alpha as 0.81, 0.84, 0.81, and 0.80, respectively.

2.2.2. Leisure Experiences

This questionnaire was designed by the current study's researchers with 15 items. Responses to each item were measured using a five-point Likert scale ranging from strongly disagree (score of 1) to strongly agree (score of 5). The instrument score was calculated by averaging all item scores, with higher scores indicating more and better leisure experiences. The face validity of the researcher-made leisure experiences questionnaire was confirmed by experts, and its reliability was calculated using Cronbach's alpha as 0.92.

2.3. Data analysis

Data were analyzed using structural equation modeling in SPSS and SMART-PLS software, after collection with the

personal information checklist and the researcher-made physical activity application product features and leisure experiences questionnaires.

3. Findings and Results

The majority of the current study's sample were female (61.03%), single (58.09%), with bachelor's degrees

(48.77%), aged between 21-25 years (38.72%), and had a sports activity history of 6-10 years (48.77%). Table 1 presented the means and standard deviations of physical activity application product features (and all three of its components: perceived dynamism, usefulness features, and pleasure-seeking features) and leisure experiences of youths.

Table 1

Results of Mean and Standard Deviation for Physical Activity Application Product Features and Leisure Experiences of Youths

Variable	Mean	Standard Deviation
Perceived Dynamism	3.80	0.86
Usefulness Features	3.72	0.85
Pleasure-Seeking Features	3.70	0.90
Physical Activity Application Product Features	3.74	0.74
Leisure Experiences	3.63	0.84

Based on the results in Table 1, the mean of both variables, physical activity application product features (and all three of its components: perceived dynamism, usefulness features, and pleasure-seeking features) and leisure

experiences of youths, was above average. Table 2 presented the fit indices results of the model of youths' leisure experiences based on the physical activity application product features.

Table 2

Fit Indices Results for the Model of Youths' Leisure Experiences Based on Physical Activity Application Product Features

Indices	Obtained Value	Acceptance Threshold
SRMR	0.07	< 0.08
RMS Theta	0.10	< 0.12
NFI	0.91	> 0.90

According to the results in Table 2, the model of youths' leisure experiences based on physical activity application product features had a suitable fit. Figure 1 presented the

results of the model of youths' leisure experiences based on physical activity application product features, and Table 3 presented the results of the effects of the said model.

Table 3

Results of Model Effects on Youths' Leisure Experiences Based on Physical Activity Application Product Features

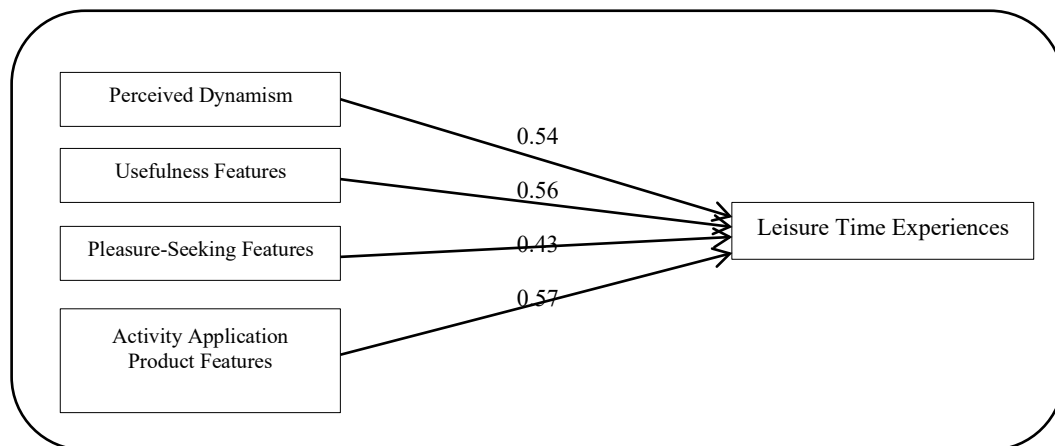
Model Effects	Path Coefficients	Critical Ratio	Result
Effect of Perceived Dynamism on Leisure Experiences	0.54	41.57	Significant
Effect of Usefulness Features on Leisure Experiences	0.56	46.80	Significant
Effect of Pleasure-Seeking Features on Leisure Experiences	0.43	33.61	Significant
Effect of Physical Activity Application Product Features on Leisure Experiences	0.57	50.24	Significant

Based on the results of Figure 1 and Table 3, the physical activity application product features and all three of its components: perceived dynamism, usefulness features, and

pleasure-seeking features, had a direct and significant effect on the leisure experiences of youths ($P < 0.05$).

Figure 1

Final Model with Path Coefficients



4. Discussion and Conclusion

Physical activity and sports have become one of the most important human activities in the modern era, essential for today's sedentary lifestyle. Therefore, this research aimed to determine the impact of physical activity application product features on improving leisure experiences.

The results of this study showed that the model of leisure experiences of youths based on the features of the physical activity application had a suitable fit, and the features of the physical activity application and all three of its components, including perceived dynamism, usefulness features, and pleasure-seeking features, had a direct and significant effect on the leisure experiences of youths. Although no research was found on the impact of physical activity application product features on leisure experiences, the results of this study are consistent with the previous findings (Dimitri et al., 2020; Fredriksson et al., 2018; Hollingworth, 2011; Iliadis et al., 2021; Kalan & Taleb, 2018; Kelishadi et al., 2009; Nielsen et al., 2020; Powrie et al., 2019; Powrie et al., 2015; Rejali & Mostajeran, 2013; Smith et al., 2023; Souto et al., 2023).

Interpreting the results of this study, it can be said that perceived dynamism helps create a positive experience and leads to a higher perception of the value and benefits of physical activity and leisure experiences. Therefore, perceived dynamism has potential value for improving the user experience and plays a key role in influencing users' perceptions of the benefits and value of an application. Additionally, usefulness features represent the profitability

or usefulness of the outcomes presented for products and services and the extent to which the consumer feels they have achieved their goals, leading to consumer satisfaction. Physical activity application product features increase enjoyment in the consumer experience, leading to profitable value and boosting intrinsic motivation (Nielsen et al., 2020). In other words, consumers achieve their goals while experiencing happy, attractive, and pleasant moments. Moreover, pleasure-seeking features can significantly create enjoyable experiences and keep users engaged in an activity for an unlimited period, improving leisure experiences (Iliadis et al., 2021). The goal of physical activity applications is to create an enjoyable and happy experience, and through increasing enjoyment in consumers, they create profitable and pleasure-seeking values, leading to customer satisfaction with the services received, which in turn improves leisure experiences. Understanding and performing pleasure-seeking features reduce consumers' inclination towards profitable values and have a positive effect in response to preferential stimuli. Considering the discussed points, value is highlighted as an emotional dependency between the consumer and producer after using a product or service, and consumers' motivations are focused on the values they can potentially obtain from consumption behaviors. Indeed, the value of a product or service includes tangible and mental factors that can serve as a general judgment of utility. From a functional perspective, consumers want products and services that are timely, efficient, and effective for their purposes to achieve their goals with less time and cost, allowing them to allocate their other time and resources to other important tasks.

5. Limitations & Suggestions

The most significant limitations of this study include conducting the research only on youths in the northern and western areas of Tehran, using questionnaires for data collection, research only on youths who use the Samsung Health application on mobile, and not differentiating the research results based on gender or education. Therefore, conducting research on other groups, such as children and adolescents or even adults, research on individuals using other applications, and research differentiated by gender and education is recommended. Another research suggestion is to use other tools such as observation or interviews to reduce the bias error from using questionnaires. Lastly, investigating the impact of physical activity application product features on improving other features, including perceived values, perceived benefits, and perceived brand equity, is suggested.

The results of this study demonstrated that the features of the physical activity application and all three of its components, including perceived dynamism, usefulness features, and pleasure-seeking features, had a direct and significant effect on the leisure experiences of youths. These results indicate the effective role of physical activity application product features and all three of its components in improving leisure experiences in youths. Therefore, it is recommended that managers, officials, and practitioners in the sports field use physical activity applications as an approach to develop and engage the general public in physical and sports activities to enhance their health. It is also suggested that they use physical activity applications to fill leisure time and create happy, attractive, and pleasant moments, continually enhancing their features.

Acknowledgments

We would like to express our appreciation and gratitude to all those who cooperated in carrying out this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethics Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

Funding

This research was carried out independently with personal funding and without the financial support of any governmental or private institution or organization.

Authors' Contributions

All authors contributed equally.

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