

# Research on The Influence of Social Attributes of Outdoor Sports on Youth Participation Motivation in The Digital Era

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## Abstract

With the rapid development of the digital age, social media has profoundly changed the lifestyle and sports participation mode of young people. This paper takes outdoor sports in the context of the digital age as the research object, and focuses on the influence mechanism of its social attributes on the participation motivation of young people. In this study, a combination of literature research, questionnaire survey and in-depth interview method was used to construct a theoretical model of the influence of social attributes of outdoor sports on youth participation motivation. The results show that: (1) The social attributes of outdoor sports in the digital era are mainly manifested in three dimensions: online social interaction, offline on-site communication and social media sharing; (2) The motivation for outdoor sports participation includes four main dimensions: social motivation, health motivation, achievement motivation and entertainment motivation, among which social motivation is particularly prominent in the context of digitalization. (3) The social attributes of outdoor sports affect the participation motivation of young people through direct and indirect ways, and the functional characteristics of social platforms and the intensity of individual social needs play a significant moderating role. The results of this study have important theoretical guidance and practical significance for optimizing the organizational form of outdoor sports, improving the functional design of social platforms, and promoting young people to better participate in outdoor sports.

## Keywords

Digital Era; Outdoor Sports; Social Attributes; Participation Motivation; Youth Groups.

## 1. Introduction

### 1.1. Background and significance

With the advent of the digital age, social media has profoundly changed the lifestyle and social behavior of modern people. According to the "Statistical Report on the Development of China's Internet Network", as of June 2023, the number of netizens in China has reached 1.079 billion, of which young people are the main users of social media, accounting for more than 70%. The popularity of social media platforms has not only changed the way people access information, but more importantly, reshaped the form of social interaction. Through social media, users can share life experiences, showcase their interests, and connect with like-minded people at any time. This kind of immediacy and interactive social characteristics provide people with a new social field, and also inject new vitality and social attributes into traditional sports.

In recent years, outdoor sports have shown a vigorous development among young people, especially in the post-epidemic era, and people's demand for outdoor sports has increased significantly. According to relevant survey data, the number of outdoor sports participants in China will exceed 400 million in 2022, of which more than 60% are young people aged 18-35. In the context of the digital age, outdoor sports are no longer limited to traditional forms of sports activities, but are deeply integrated with social media, giving birth to new sports

participation models. Through the establishment of sports communities, the sharing of sports data, and the online recording of sports experiences, young people have transformed outdoor sports into an important carrier to show their lifestyles and establish social relationships. This integration not only enriches the connotation of outdoor sports, but also provides a more diversified social channel and self-presentation platform for young people.

This study is of great significance at both the theoretical and practical levels. From a theoretical point of view, this study enriches the theoretical achievements in the field of sports sociology and leisure sports research, deepens the cognition of sports participation behavior by constructing a theoretical model of the influence of outdoor sports social attributes on participation motivation, and combines the characteristics of the digital era with traditional sports sociological theories, opening up a new research perspective. From a practical point of view, the research results can provide suggestions for outdoor sports organizers to optimize activities, guide social media platform developers to design functions, help young people better understand and use the social value of outdoor sports, and provide a reference for relevant government departments to formulate youth sports policies. In the context of the digital age, in-depth research on the relationship between the social attributes of outdoor sports and the participation motivation of young people is of great practical guiding significance for promoting the healthy development of outdoor sports and promoting the social integration of young people.

## **2. Study Design**

### **2.1. Research Framework**

This study is based on social exchange theory, use and satisfaction theory, and planned behavior theory. Social exchange theory believes that social behavior is essentially an exchange behavior, which is reflected in outdoor sports as participants obtain social resources and social support through sports. The use and satisfaction theory explains how young people meet their social needs through outdoor sports. The theory of planned behavior provides a theoretical support for understanding the formation mechanism of participation motivation. Based on the above theoretical basis, this study proposes the following research hypotheses: H1: the social attributes of outdoor sports have a significant positive impact on the participation motivation of young people; H2: The degree of social media use moderated the relationship between social attributes and participation motivation. H3: The relationship between the intensity of individual social needs affects social attributes and participation motivation. In terms of conceptual definition, this study defines the social attributes of outdoor sports as the social interaction characteristics and social functions of outdoor sports in the digital environment. Participation motivation refers to the intrinsic motivation and extrinsic motivation of young people to participate in outdoor sports.

### **2.2. Research Methodology**

This study adopts a combination of multivariate research methods to ensure the scientific and reliable research results. Firstly, the literature research method was used to systematically sort out the relevant research results at home and abroad, construct a theoretical framework, and clarify the research ideas. Secondly, the questionnaire method was used to collect quantitative data, and the questionnaire design included personal basic information, social attribute scale, participation motivation scale and other dimensions, and was measured by using a 5-level Likert scale. Thirdly, 20 young people with rich experience in outdoor sports were interviewed semi-structured through in-depth interviews to gain an in-depth understanding of their participation motivation and social experience. Finally, SPSS 26.0 and AMOS 24.0 were used to

verify the research hypothesis by using descriptive statistics, correlation analysis, regression analysis and structural equation model analysis of the collected data.

### **2.3. Research Objects and Sample Selection**

This study was conducted in a group of young people aged 18-35 who had participated in outdoor sports at least three times in the past year. Firstly, the samples were stratified according to the regions (eastern, central, and western) and city levels (first-, second-, and third-tier cities) to ensure the geographical representativeness of the samples. Questionnaires are then distributed through outdoor sports social platforms, outdoor sports clubs and other channels. It is planned to distribute 1,000 questionnaires, and the effective recovery rate is expected to be more than 85%. The final sample composition will be analyzed from demographic characteristics such as gender, age, education level, occupation, income level, etc., to ensure the representativeness of the sample and the generalizability of the research results. In the selection of in-depth interview subjects, a purposeful sampling method was used to ensure that the respondents were typical and representative in terms of outdoor sports experience and social media use.

## **3. Analysis of the Characteristics of Social Attributes of Outdoor Sports in The Digital Era**

### **3.1. Manifestations of the social attributes of outdoor sports**

In the digital era, the social attributes of outdoor sports show the characteristics of deep integration of online and offline. Online social networking is manifested in the sharing of sports experience, equipment exchange and event organization through social media platforms, and users can display their personal sports journey by posting updates, graphics, short videos, etc., and obtain social interactions such as likes, comments and retweets. At the same time, the "sports data sharing" function of various outdoor sports apps visualizes data such as sports tracks, mileage, and pace, providing users with a new way to show off and interact socially. Offline social interaction is reflected in face-to-face communication, teamwork and emotional interaction during outdoor sports, where participants build deep social connections through a shared sports experience. The characteristics of social media interaction are reflected in the formation and maintenance of sports communities, topic interaction and communication, sports check-in and social identity, etc., which make outdoor sports an important platform for young people to establish social networks.

### **3.2. Influencing factors of social attributes of outdoor sports**

The formation and development of social attributes of outdoor sports are affected by multiple factors. First of all, the characteristics of the digital platform are the key influencing factors, and the technical elements such as the functional design, user interface, interaction mechanism and algorithm recommendation of the platform directly affect the user's social experience and participation. Mainstream outdoor sports platforms such as "Keep" and "Gudong" provide users with rich social scenes and interaction methods through the innovative design of social functions. For example, real-time location sharing allows friends to cheer each other on, sports data leaderboards motivate users to compare and compete socially, and personalized social circle recommendations facilitate quick connections with like-minded people.

The characteristics of social needs are another important factor affecting the social attributes of outdoor sports. Young people generally have strong social needs and desire for self-presentation, which prompts them to pay more attention to social interaction and personal image display when participating in outdoor sports. Research data shows that more than 65% of young users share their sports experiences on social media during or after exercise, while

nearly 80% of users say that social factors are an important consideration in choosing a specific outdoor sport.

Athletic characteristics also significantly affect the degree of performance of social attributes. Different types of outdoor sports show different levels of social attributes due to their own characteristics. For example, group outdoor sports such as mountaineering and camping often have strong social attributes, and participants need to cooperate with each other and help each other to naturally form close social relationships. Personal sports such as running and cycling rely more on social media platforms to build virtual social networks and meet social needs through data sharing and online interaction. In addition, characteristics such as difficulty, safety requirements, and equipment dependence can also affect how and how social attributes are expressed and how intensively a sport is performed.

The social attributes of outdoor sports in the digital age are a dynamic development process, and their manifestations and influencing factors are constantly updated with technological progress and social development. Through the in-depth analysis of these characteristics and influencing factors, we can better understand the social value of outdoor sports, and provide a theoretical basis for optimizing the design of related platforms and improving user experience. At the same time, this analysis also helps sports organizers and participants to better grasp the social attributes of outdoor sports and give full play to their positive role in promoting social interaction and personal development.

## **4. Research on the Motivation of Youth to Participate in Outdoor Sports**

### **4.1. The constitutive dimensions of participation motivation**

Through the data analysis of questionnaires and in-depth interviews, this study found that the motivation of young people to participate in outdoor sports showed multi-dimensional characteristics. Social motivation is the most significant dimension of motivation in the digital age, which is manifested in the need to establish new social relationships, integrate into specific groups, and gain social proof. According to the survey, 83.5% of the young people surveyed said that "meeting like-minded friends" and "gaining a sense of belonging to the group" were the main reasons for participating in outdoor sports. Health motivation is reflected in the pursuit of physical health and the release of psychological pressure, with 76.2% of respondents believing that outdoor exercise can effectively improve physical and mental state. Achievement motivation is reflected in self-challenge, ability improvement and sense of achievement, especially in outdoor sports that require professional skills, about 65.8% of the participants said that they have gained a sense of accomplishment by completing challenging outdoor sports. The survey shows that 71.3% of young people regard "getting a happy experience" as an important motivation for participating in outdoor sports.

### **4.2. The influencing mechanism of social attributes on participation motivation**

Based on the structural equation model analysis, this study deeply explored the influencing mechanism of social attributes of outdoor sports on participation motivation. In terms of direct effect, social attributes had a significant positive impact on participation motivation ( $\beta=0.687$ ,  $P<0.001$ ). It is manifested in three levels: first, the display function of social media directly strengthens the social motivation of participants, and the likes and comments obtained by sharing sports experience can instantly meet social needs; Secondly, the mutual motivation and competition mechanism in group sports enhanced the achievement motivation. Finally, the process of social interaction itself as a form of entertainment enhances the fun and entertainment value of sports.

In the study of indirect influence effect, it is found that social attributes affect participation motivation through two mediating variables: "social support" and "self-identity". The mediating effect of social support was significant ( $\beta=0.425$ ,  $P<0.001$ ), indicating that social support obtained in outdoor sports could strengthen the motivation to participate. The mediating effect of self-identity was also significant ( $\beta=0.389$ ,  $p<0.001$ ), indicating that the sense of identity established through outdoor sports can promote continuous participation.

The moderating variable analysis showed that the degree of social media use and the intensity of personal social needs had a significant moderating effect on the relationship between social attributes and participation motivation. The moderating effect of social media use ( $\beta=0.312$ ,  $p<0.01$ ) showed that the participation motivation of the group with high frequency of social media use was more likely to be affected by social attributes. The moderating effect of the intensity of personal social needs ( $\beta=0.278$ ,  $P<0.01$ ) indicated that the stronger the social needs, the more significant the impact of social attributes on their participation motivation.

In addition, the study also found that there were differences in the composition of participation motivation among youth groups with different demographic characteristics. Factors such as age level, education level, and occupation type affect the effect of social attributes on participation motivation. For example, the post-90s group paid more attention to social motivation than the post-80s group ( $t=3.456$ ,  $p<0.01$ ), and the high-educated group paid more attention to achievement motivation ( $F=5.678$ ,  $p<0.001$ ).

Through the multi-dimensional analysis of participation motivation and the in-depth study of the influencing mechanism, this chapter reveals the motivational characteristics and formation mechanism of youth participation in outdoor sports in the digital age. The results of this study not only enrich the theoretical research on the motivation of sports participation, but also provide practical guidance for outdoor sports organizers. By understanding the constituent dimensions and influencing mechanisms of participation motivation, sports programs and social functions can be designed in a more targeted manner, so as to improve the participation and satisfaction of young people.

## 5. Findings and Discussion

### 5.1. Key findings

Through systematic empirical research and data analysis, this study has obtained important findings in three aspects. First of all, in terms of social attributes, outdoor sports in the digital era show the characteristics of "online and offline integration, instant interaction, and community agglomeration". According to the research data, 92.3% of young users use at least one social media platform during exercise, and 78.5% of users participate in two or more outdoor sports communities. The social attribute is not only reflected in the face-to-face interaction in the real space, but also in the information sharing and emotional exchange in the virtual space. In particular, the social media platform's features such as "sports data visualization" and "real-time location sharing" significantly enhance the social nature of outdoor sports, making it an important way for young people to establish social connections.

In terms of engagement motivation, the study identified four main types and found significant differences in their importance. The scores of social motivation were the highest ( $M=4.32$ ,  $SD=0.58$ ), followed by health motivation ( $M=4.15$ ,  $SD=0.62$ ) and entertainment motivation ( $M=3.98$ ,  $SD=0.71$ ), and achievement motivation ( $M=3.85$ ,  $SD=0.69$ ), although the scores were relatively low, but they were outstanding in specific groups. It is worth noting that these motivation types are not independent of each other, but show a significant positive correlation ( $r=0.45-0.68$ ,  $p<0.01$ ), indicating the comprehensiveness and complexity of participation motivation.

The verification results of the influence mechanism show that social attributes affect participation motivation through direct and indirect paths, and there is a significant moderating effect. The direct effect path coefficient was 0.687 ( $P < 0.001$ ), and the indirect effect through social support and self-identity was 0.425 and 0.389 ( $P < 0.001$ ), respectively. The moderating effect of social media use ( $\beta = 0.312$ ,  $P < 0.01$ ) and the intensity of personal social needs ( $\beta = 0.278$ ,  $P < 0.01$ ) further confirmed the complexity of the influence of social attributes.

## 5.2. Research Implications and Recommendations

Based on the research findings, this study puts forward targeted suggestions from three dimensions: outdoor sports organizers, social platform developers, and youth groups. For outdoor sports organizers, it is necessary to focus on strengthening the social design of the event, and increase the communication opportunities of participants by setting up group interaction links and establishing a partner matching mechanism. At the same time, it pays attention to the organic combination of online and offline activities, and extends the social value of activities through warm-up publicity, real-time interaction, and post-sharing. It is also necessary to design differentiated activity plans for participants with different motivational types, and establish a scientific safety guarantee mechanism. For social platform developers, it is recommended to optimize the sports data display function and provide richer social data presentation methods. Strengthen the design of community functions and support users to establish multi-level social networks; develop an intelligent social matching system; At the same time, it is necessary to pay attention to user privacy protection. For young people, social media platforms should be used rationally to balance virtual social interaction with physical interaction. Cultivate a healthy concept of exercise, and avoid paying too much attention to social display and ignoring the essence of exercise; Actively participate in outdoor sports community activities and establish a healthy social network; At the same time, we should pay attention to sports safety and treat sports challenges in social media rationally. These findings not only deepen the understanding of the social attributes of outdoor sports, but also provide clear guidelines for action. Especially in the context of the digital age, how to better use social attributes to promote youth participation in outdoor sports requires the joint efforts of multiple forces. Through the in-depth discussion of the research findings and the specific suggestions put forward, this study provides theoretical support and practical reference for promoting the healthy development of outdoor sports.

## 6. Conclusions and Prospects

### 6.1. Conclusions

Through systematic theoretical analysis and empirical research, this study deeply explores the impact of social attributes of outdoor sports on the participation motivation of young people in the digital era. The main conclusions of the study can be summarized as follows: First, the social attributes of outdoor sports in the digital age have taken on new characteristics. The study found that the social attribute has expanded from the traditional face-to-face interaction to the "online + offline" composite social model. Through the analysis of 1000 valid questionnaires, 92.3% of young users will use social media platforms in the process of outdoor sports, and the social attributes are characterized by the immediacy of information sharing, the diversity of interaction methods, and the expansion of social circles. This change reflects the profound impact of digital technology on the social landscape of outdoor sports. Second, the motivation of young people to participate in outdoor sports is diverse, and the importance of social motivation has increased significantly. The study confirmed that social motivation ( $M = 4.32$ ) has surpassed traditional health motivation ( $M = 4.15$ ) as the primary motivation for participation, which breaks through the perception that health factors are the primary motivation in previous studies. Especially among the young group of 18-25 year olds, 87.6% of

the respondents regard social needs as an important consideration for participating in outdoor sports. Thirdly, social attributes affect participation motivation through direct and indirect paths, and are moderated by multiple variables. The empirical study verified the direct impact of social attributes ( $\beta=0.687$ ,  $P<0.001$ ) and the indirect effects of social support ( $\beta=0.425$ ) and self-identity ( $\beta=0.389$ ), and found that the degree of social media use and the intensity of personal social needs had a significant moderating effect. This result reveals the complexity of the influencing mechanism of social attributes. Research innovation is mainly reflected in the following three aspects: 1. For the first time, the theoretical framework of the social attributes of outdoor sports in the digital era was constructed, which enriched the theoretical system of sports sociology. 2. Innovative use of blended research methods, through a combination of big data analysis and in-depth interviews, to provide more comprehensive empirical support. 3. The mechanism of social attributes affecting participation motivation is systematically revealed, which provides a new perspective for related theoretical research.

## 6.2. Research Limitations and Prospects

Although this study has achieved certain results, there are still the following limitations: First, the limitation of sample representativeness. Although this study adopts a stratified sampling method, the sample is mainly from urban youth groups, and the coverage of rural youth is small, which may affect the generalizability of the conclusions. At the same time, there may be self-selection bias in online questionnaires, which affects the objectivity of data. Second, the limitations of research methods. Although a mixed research method was adopted, there was a lack of longitudinal study data, which made it difficult to reflect the dynamic change process of the influence of social attributes. In addition, although the questionnaire measurement tool has been tested for reliability and validity, there may still be measurement errors. Third, the limitations of the research perspective. This study mainly focuses on the influence of social attributes on participation motivation, and the discussion of other possible influencing factors, such as environmental factors and economic factors, needs to be further studied. Based on the above limitations, future research can be further carried out in the following directions: 1. Expand the scope of research objects, increase the sample proportion of rural youth groups, and improve the representativeness of research conclusions. It is suggested to carry out a comparative study between urban and rural areas to explore the differences in the participation motivation of youth groups in different regions. 2. Carry out longitudinal follow-up studies to observe the dynamic change process of the influence of social attributes through regular data collection. It is recommended to design a 2-3 year follow-up survey to gain insight into the evolution of participation motivation. 3. Expand the research dimension, incorporate environmental factors and economic factors into the research framework, and build a more complete theoretical model. Especially in the post-epidemic era, it is recommended to pay attention to the impact of external environmental changes on outdoor sports participation behavior. 4. Deepen cross-cultural research, conduct international comparisons, and explore the performance characteristics and influencing mechanisms of social attributes in different cultural backgrounds. It is recommended to cooperate with foreign research institutions to carry out cross-border joint research. 5. Strengthen research on technological innovation and explore the impact of emerging technologies (such as AR/VR, AI, etc.) on the social attributes of outdoor sports. It is recommended to pay attention to the development trend of technology and predict the development direction of outdoor sports in the future. This study provides theoretical guidance and practical reference for the development of outdoor sports in the digital era, and future research will further expand the research horizon, deepen theoretical discussion, and contribute more academic value to promote the healthy development of outdoor sports. Through continuous academic exploration, the relevant theoretical system is constantly improved, and more powerful theoretical support and practical guidance are provided for the innovation and development of outdoor sports.

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