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Investigating the Relationship Between Bicycle Use and Positive Psychology Concepts: A Systematic Review

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ABSTRACT

The relationship between physical activity and psychological well-being has been extensively studied in the general literature. But, within this general framework, the number of studies that systematically examine the effects of cycling, in particular, on the aforementioned psychological factors is relatively limited. This study is a systematic review examining the relationship between cycling and positive psychology concepts. The research aims to evaluate the effects of bicycle use on psychological factors such as well-being, happiness, motivation, and hope. A comprehensive literature search conducted on Google Scholar identified 61 studies that met the specified criteria, and 7 of these were included in the review based on inclusion criteria. The findings from the included studies indicate that cycling is associated with well-being, hope, happiness, motivation, and life satisfaction. A positive relationship between cycling and Positive Psychology concepts is among the findings of these studies. While physical activities and Positive Psychology concepts are discussed in the literature, studies specifically linking them to cycling appear relatively limited. Therefore, a systematic review of research associating cycling with Positive Psychology concepts is important for offering insights into future research. In this context, this systematic review provides a crucial foundation for more comprehensively understanding the effects of bicycle use on psychological and emotional health and for developing effective interventions.

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KEYWORDS

Cycling;
positive psychology;
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INTRODUCTION

Positive Psychology is defined as a scientific field that investigates processes beneficial to an individual's adherence to life and self-development, contributing to their engagement with positive aspects (Peterson, 2000; Gable and Haidt, 2005). Positive psychology asserts that while it does not deny the difficulties in people's lives, focusing solely on these difficulties leads to an incomplete interpretation of an individual's condition (Peterson, 2009). Therefore, Positive Psychology emphasizes an individual's strengths rather than their weaknesses, concerning itself with achieving solutions through an individual's strengths (Demir and Türk, 2020). It is argued that focusing on character strengths will positively impact an individual's life and support their potential realization (Güngör, 2017). Positive Psychology is an

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umbrella term explained by many concepts (Seligman et al., 2005). Positive Psychology addresses concepts such as well-being and satisfaction related to the past, hope related to the future, and happiness related to the present (Seligman and Csikszentmihalyi, 2000).

Well-being is a broad concept encompassing creativity, strong social bonds, successful coping mechanisms for problems, and life expectancy (Diener et al., 2017). Psychological well-being is explained by an individual's understanding of their life goals, awareness of their capacity, and the quality of their social connections (Ryff and Keyes, 1995). Hope is conveyed as a multifaceted human characteristic that arises in response to existing problems and is positioned as a positive emotion (Nazir, 2020). This emotion stems from the expectation of achieving desired goals (Lazarus, 1999). Happiness, in its most general definition, is the feeling of pleasure (Thomason et al., 2020). Happiness is an attempt to maximize the pleasure derived from life (Thomason et al., 2020). Happiness is a concept that encompasses individuals from psychological, physiological, and social perspectives. In psychology, happiness refers to positive affect (Demir and Murat, 2017). Happiness is one of the important concepts in understanding Positive Psychology (Gönener et al., 2017).

The concept of motivation is fundamentally described as a force that drives an individual to behavior, determines the intensity of the behavior, and is effective in its continuity (Schunk et al., 2013). People engage in behaviors more for personal pleasure than for external factors. In this regard, pleasure and curiosity are effective in the formation of intrinsic motivation (Ryan and Deci, 2000). Intrinsic motivation, in its general definition, is an individual performing a behavior solely for personal satisfaction and pleasure (Ryan, 1995). Life satisfaction is conveyed as an individual's emotional responses and attitudes towards life, defined as their time outside of work and responsibilities (Dikmen, 1995). The concept of life satisfaction expresses the result obtained by comparing an individual's expectations with what they possess (Haybron, 2007). Life satisfaction focuses on all areas of life (Veenhoven, 1996). Therefore, life satisfaction is considered one of the fundamental goals of life by individuals (Gündoğar et al., 2007).

Engaging in physical activities is exceedingly necessary for improving individuals' health (Muhammet and Uzuner, 2014). Regularly performed physical activities benefit in alleviating physical ailments and are also effective in individuals' psychological development (Işık et al., 2014). Positive experiences and lived experiences are beneficial in increasing an individual's happiness (Ashby et al., 1999). Activities that support psychological well-being contribute to individuals overcoming difficulties and focusing on the positive in life (Zuzanek, 1998). Physical activities that have a positive effect on mental disorders can also have a preventive effect in these situations. In this respect, physical activities carry the preventive quality of Positive Psychology (Faulkner et al., 2015). Research in the literature indicates that physical activities are discussed together with concepts such as hope, well-being, life satisfaction, and happiness. It is stated that efforts to strengthen well-being will increase physical activity, and thus increased physical activity will be protective of mental health (Roman et al., 2023). Higher physical activity is also reported to be significantly related to better life satisfaction and happiness (An et al., 2020).

In addition to demonstrating the positive effects of physical activity on mental health, this study compiles research specifically examining how cycling might have an effect within the context of Positive Psychology. It determines the extent to which bicycle use is associated with Positive Psychology concepts such as happiness, well-being, motivation, and hope, and explains how the effects of this physical activity on mental health are addressed. Therefore, this review is important for highlighting the role cycling can play in mental health. The study emphasizes how cycling can play a role not only in the treatment of existing mental disorders but also in their prevention. This emphasis contributes to the literature by establishing a connection between the preventive nature of Positive Psychology and the preventive

effects of physical activity. In this way, it provides a practical basis for considering cycling as a tool in public health policies and community-based education programs. Therefore, it is crucial to scientifically and systematically understand the contributions of bicycle use to Positive Psychology and its positive effects on mental health from the studies conducted in this field, and to offer insights for potential future studies.

The purpose of this systematic review is to bring together studies that explain the relationship between cycling or bicycle use and Positive Psychology concepts such as well-being, hope, happiness, motivation, and life satisfaction, and examine the possible effects of this physical activity on these variables.

METHODOLOGY

Research Model

This research is a systematic review conducted to examine the relationships between cycling and the positive psychology concepts of well-being, happiness, motivation, and hope. A Systematic Review (SR) is defined as a scientific research method that aims to find an answer to a specific research question by systematically and unbiasedly searching for studies on the same topic according to predetermined criteria, evaluating the validity of the found studies, and synthesizing them (Çınar, 2021). Systematic reviews aim to reduce bias by using explicit methods for comprehensive literature searching and critical appraisal of individual studies (Crowther et al., 2010). Systematic reviews determine whether scientific findings are consistent and generalizable across populations, settings, and treatment differences, or whether findings differ significantly by specific subgroups (Mulrow, 1994).

Study Selection Process

To identify the studies to be examined within the scope of this research, a search and selection process was carried out using English keywords in research articles published on Google Scholar. To find research addressing both cycling and positive psychology concepts, the terms "Cycling" and "Motivation," "Cycling" and "Hope," "Cycling" and "Happiness," "Cycling" and "Wellbeing," and "Cycling" and "Life Satisfaction" were searched.

Ethical Statement

The research was conducted in compliance with general academic ethical rules. This study did not involve any human or animal experimentation and utilized data solely from open-access sources. Therefore, a separate ethics committee approval was not required.

The scanning and selection process for determining the studies to be examined within the scope of the research involved searching for English keywords in research articles published on Google Scholar. To identify research that addresses both cycling and Positive Psychology concepts, the terms "Cycling" and "Motivation," "Cycling" and "Hope," "Cycling" and "Happiness," "Cycling" and "Wellbeing," and "Cycling" and "Life Satisfaction" were searched as shown in Table 1

Table 1. *Search Keywords Used in Literature Review*

Data Source	Search Keywords	Document Type	Full Text
Google Scholar	“Cycling”” and “Motivation”	Research Article	+
	“Cycling” and “Hope”		-
	“Cycling” and “Happiness”		+
	“Cycling” and “Wellbeing”		+
	“Cycling” and “Life Satisfaction”		+

Various inclusion criteria were considered when selecting the research found as a result of the literature search to be included in the study. The inclusion criteria used for selecting studies to be included in the research scope are presented in Table 2.

Table 2. *Inclusion Criteria for Studies to be Included in the Research Scope*

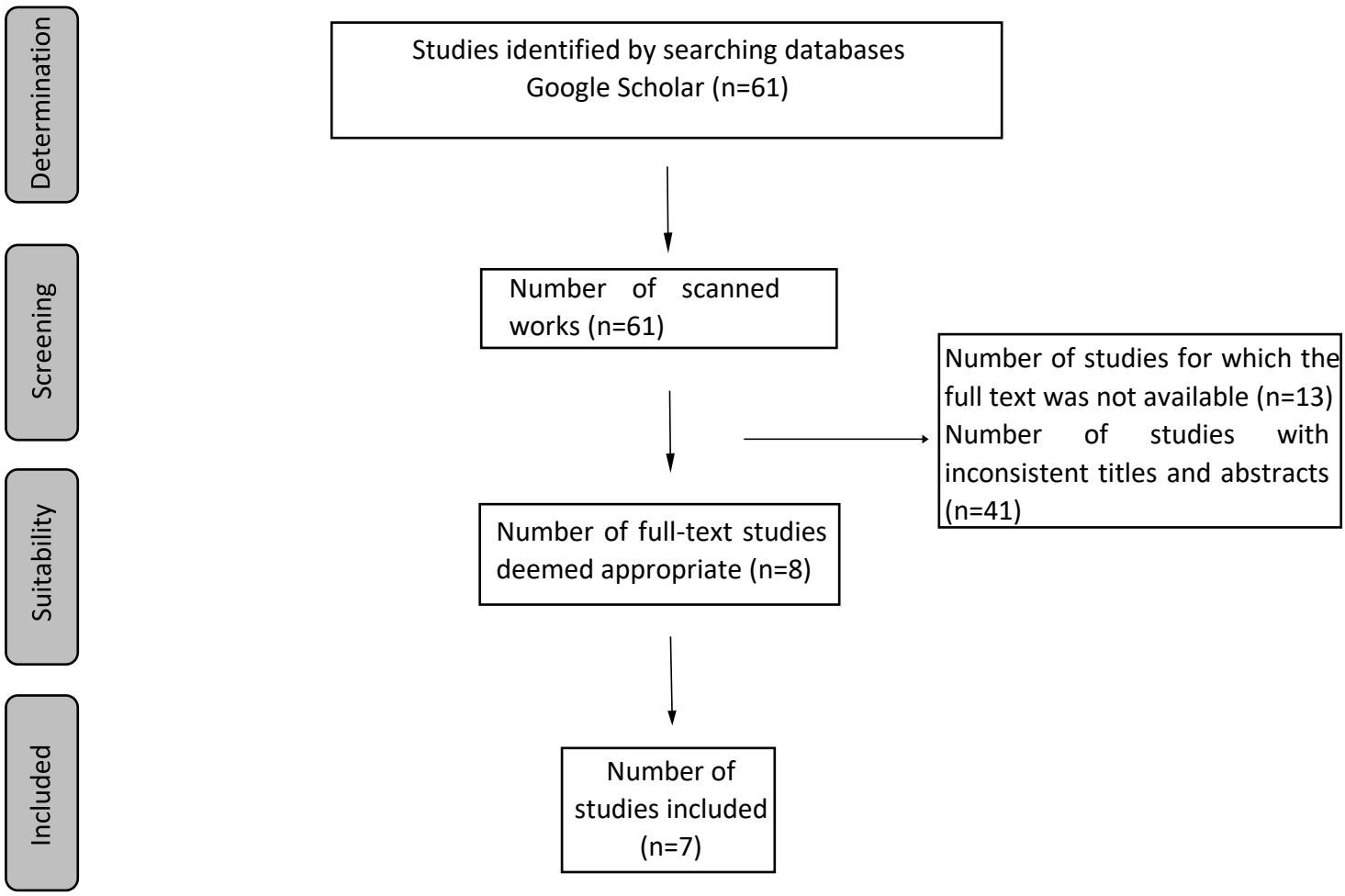
1. Research articles explaining the effect of cycling on Positive Psychology concepts and understanding the underlying Positive Psychology concepts of cycling were included.
2. Research articles available on Google Scholar were included.
3. Research articles were included on the condition that their titles contained the keywords.

As a result of the literature review, 61 studies meeting the specified conditions were found, and among these, 7 research articles were included in the scope of the study, considering the inclusion criteria. The study group consists of 7 research articles accessible from the Google Scholar database that examine the relationship between cycling and Positive Psychology concepts. Information regarding the bibliographic details of the studies examined within the research scope is presented in Table 3.

Table 3. *Studies Examined within the Research Scope*

Author and Year	Title
Barbour ve Mannering, 2023	Intended cycling frequency and the role of happiness and environmental friendliness after COVID-19
Gray ve Gow, 2020	Cycling Without Age: Assessing the Impact of a Cycling-Based Initiative on Mood and Wellbeing
Dementyev, Fish, Opoku, Tesfaye, Chan, Ortiz, Montgomery, Walker, Wilson, 2023	Middle school cycling program is associated with improved mental health and wellbeing in adolescents during COVID-19
Kesenheimer, Sagioglou, Kronbichler, Gauckler, Kolbinger, 2023	Why do people cycle (a lot)? A multivariate approach on mental health, personality traits and motivation as determinants for cycling ambition
Brown, O'Connor ve Barkatsas, 2009	Instrumentation and Motivations for Organised Cycling: The Development of the Cyclist Motivation Instrument (CMI)
Xu, Yuan ve Li, 2019	Exploring the relationship between cycling motivation, leisure benefits and well-being
Ballıkaya, Barut, Demir, Çifçi, Akın, 2018	Examining the relationship between self-efficacy and life satisfaction in cycling and trekking individuals

The flow chart for the systematic search of articles in the study is shown below.



Ethics approval was not required for this systematic review as it exclusively analyzed pre-existing, published data and did not involve human participants or primary data collection.

RESULTS

Table 4. *Features of Reviewed Studies*

Article Title/Author-Year	**Sample**	**Measurement Tools**	**Variables**	**Results**
Intended cycling frequency and the role of happiness and environmental friendliness after COVID-19/Barbourve Mannering, 2023	N=7421 participants	Survey	Cycling frequency Happiness Environmental friendliness	Individuals with high life satisfaction are more likely to increase their cycling frequency.
Cycling Without Age: Assessing the Impact of a Cycling-Based Initiative on Mood and Wellbeing/ Gray ve Gow, 2020	N=49 older adults	Warwick-Edinburgh Mental Wellbeing Scale and UWIST Mood Adjective Checklist	Wellbeing Mood	A cycling activity resulted in short-term positive changes in the mood and well-being of participants, which continued even after the event day.
Middle school cycling programis associated with improved mental health and wellbeing in adolescents	1,268 pre-program and 910 post-program participants-	R4F program and survey	Wellbeing Mental health	Participation in a cycling program helped improve well-being in adolescents,

during COVID-19/ Dementyev, Fish, Opoku, Tesfaye, Chan, Ortiz, Montgomery, Walker, Wilson, 2023	students			depending on factors such as gender, screen time, physical activity level, and sleep duration.
Why do people cycle (a lot)? A multivariate approach on mental health, personality traits and motivation as determinants for cycling ambition/Kesenheimer, Sagioglou, Kronbichler, Gauckler, Kolbinger, 2023	2331 participants	Survey	Mental health Personality traits Motivation	Significant relationships have been found between cycling motivation and the mental health status of participants.
Instrumentation and Motivations for Organised Cycling: The Development of the Cyclist Motivation Instrument (CMI)/ Brown, O'Connor ve Barkatsas,2009	422 participants	Cyclists Motivation Instrument (CMI) Scale	Social-physical experience Self-presentation Environmental exploration Physical health outcomes	Social, economic, and ecological factors influencing cyclists' motivation have led to an increase in their interest and participation levels in the sport.
Exploring the relationship between cycling motivation, leisure benefits and well-being/ Xu, Yuan ve Li, 2019	326 undergraduate students	Survey	Wellbeing Motivation	Cycling motivation is affected by both intrinsic and extrinsic factors, yet psychological benefits are perceived as greater than social benefits.
Examining the relationship between self-efficacy and life satisfaction in cycling and trekking individuals/ Ballıkaya, Barut, Demir, Çifçi, Akın, 2018	156 participants	Perceived Self-Efficacy Expectation Scale Life Satisfaction Scale	Perceived Self-Efficacy Expectation Scale Life Satisfaction Scale	Individuals who regularly engage in cycling and trekking were found to have increased life satisfaction as their self-efficacy scores increased.

This section of the research presents the results obtained from the analyses conducted in line with the general and sub-objectives of the study.

Study Groups

The studies correlating cycling with Positive Psychology concepts have been conducted with various groups. In the study by Gray and Gow (2020), 49 older adults residing in care homes and supported living environments who could provide informed consent were included in the study group, with specific inclusion and exclusion criteria. These older adults were capable of answering questions but required assistance in physically completing them. In the study by Dementyev et al. (2023), data was collected from 1,268 pre-program and 910 post-program participant students from 20 middle schools in North America participating in the R4F academic middle school cycling physical education program. The age range of the participating students was 11-14, depending on their grade level. In the study by Barbour and Mannering (2023), the final sample, determined by various inclusion and exclusion criteria, consisted of 7421 participants. In the research conducted by Xu et al. (2018), a university sample was selected to form a

convenience sample. A total of 326 participants-students were included as the study group. In the study by Kesenheimer et al. (2023), a suitable sample was found by utilizing social media applications (mostly cycling-specific Facebook groups, Instagram, and Strava) and a cycling podcast. Out of 2,366 participants who completed the survey over seven weeks, 35 were excluded as they did not consent to the use of their data at the end of the survey. The resulting sample consisted of 2331 participants. The study group showed a diverse distribution from 59 countries and more than 27 occupational groups. In the study by Ballıkaya et al. (2018), the sample consisted of 156 participants (51 women, 105 men) who regularly cycled in Mersin province. The average age of the participants was 38.79 ± 14.89 years. In the research conducted by Brown et al. (2009), 422 participants selected from 2000 registered cyclists in Victoria, Australia, were identified as the study group. Demographic characteristics of the participants included age, gender, marital status, employment status, cycling class, and regular training speed.

Measurement Tools

In the study conducted by Brown et al. (2009), the measurement tool was specified as the Cyclists Motivation Instrument (CMI). CMI was developed to measure cyclists' motivation. CMI measures five factors influencing cyclists' motivation: social, physical experience, self-presentation, environmental exploration, and physical health outcomes. The measurement tool consisted of 51 items, and participants were asked to express their opinions on these items using a seven-point Likert scale. The measurement tool was developed and tested to understand cyclists' motivation. Furthermore, the psychometric properties of the measurement tool (principal components analysis, confirmatory factor analysis) were examined, and the reliability and validity of the measurement tool were found to be sufficient.

In the study conducted by Dementyev et al. (2023), PSC-17-Y (Pediatric Symptom Checklist-Youth Version) and WHO-5 (World Health Organization-Five Well-Being Index) were used as measurement tools. PSC-17-Y is a measurement tool used to identify and evaluate emotional and behavioral problems in children and adolescents. It has externalizing, internalizing, and attention sub-dimensions. The externalizing sub-dimension includes behavioral problems, while the internalizing sub-dimension includes anxiety and mood disorders. The attention sub-dimension includes attention deficit hyperactivity disorder (ADHD) and attention deficit disorder (ADD). WHO-5 is a measurement tool used to measure well-being. It consists of five questions and measures well-being experienced in the last two weeks. Additionally, a survey was used in the study in addition to the measurement tools. The survey was designed to measure students' opinions and experiences about the R4F program. In the study by Barbour and Mannering (2023), a survey was used as the measurement tool. The characteristics of the survey and the details of the scales used were not discussed in the research. The measurement tool in the study by Xu et al. (2018) utilized a questionnaire to assess participants' opinions on cycling motivation, benefits obtained from leisure activities, and well-being levels. The questionnaire included demographic information, bicycle ownership status, cycling experience, and items aimed at measurement. The questionnaire used a 5-point Likert scale. It contained 38 items to evaluate participants' opinions regarding cycling motivation, benefits from leisure activities, and well-being levels. In the study conducted by Kesenheimer et al. (2023), the Ten-Item Personality Inventory (TIPI), Brief Sensation Seeking Scale, International Classification of Functioning, Disability and Health (ICF) Checklist, Self-Generated Sport Motivation Scale, Self-Generated Cycling Masochism Scale, and Cycling-Related Pain Proximity scales were included. Different psychological and motivational factors were attempted to be evaluated through the measurement tools used. TIPI is a 10-item measurement tool developed to assess personality traits. The Brief Sensation Seeking Scale and ICF Checklist were used to assess physical and mental problems. The measurement tools for the research conducted by Ballıkaya et al. (2018) are the Perceived Self-Efficacy Expectation Scale and the Life

Satisfaction Scale. The Perceived Self-Efficacy Expectation Scale measures individuals' beliefs about performing the actions necessary to cope with potential situations. The Life Satisfaction Scale was used to measure life satisfaction. In the study by Gray and Gow (2020), the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) and the UWIST Mood Adjective Checklist (UMACL) scales were used. WEMWBS is a 14-item scale that measures aspects of mental well-being such as positive emotions, satisfying social relationships, and positive functioning. WEMWBS uses a 5-point Likert scale and consists of 14 items. The total score is 70, and higher scores are associated with better mental well-being. UMACL measures mood using 24 adjectives and is divided into three subscales. This scale uses a 5-point Likert scale. The total score is 120, and higher scores are associated with a more positive mood. The measurement tools of the studies reviewed in the compilation include various scales for assessing participants' motivation, well-being, and psychological states.

Examined Variables

Since this study is a systematic review examining research that correlates bicycle use with Positive Psychology concepts, all selected studies included the variables "happiness," "motivation," "hope," "wellbeing," and "life satisfaction" in relation to cycling. In addition to these variables, other variables were included in the studies: in Brown et al.'s (2009) study, social-physical experience, self-presentation, environmental exploration, and physical health outcomes influencing motivation; in Dementyev et al.'s (2023) study, physical activity, screen time, socioeconomic status; in Barbour and Mannering's (2023) study, gender, age, ethnicity; in Kesenheimer et al.'s (2023) study, mental health, cycling masochism, and propensity for cycling-related pain; in Ballıkaya et al.'s (2018) study, self-efficacy and cycling duration; and in Gray and Gow's (2020) study, mood, length of residency, and number of event participations. The reviewed studies commonly examined the relationships between cycling and Positive Psychology concepts such as "happiness," "motivation," "hope," "wellbeing," and "life satisfaction". The studies generally investigated the effects of individuals' cycling experiences on motivation and well-being. Additionally, factors such as social interactions, physical health outcomes, self-efficacy, mood, and socioeconomic status were considered important variables in analyzing these relationships.

Research Findings

The research conducted by Brown et al. (2009) revealed social, economic, and ecological factors influencing cyclists' motivation. These factors were stated to affect cyclists' interest and participation levels in the sport. In the study by Dementyev et al. (2023), the R4F program was found to be effective in improving mental health and well-being in all students. A significant decrease was observed in the attention, internalizing, and externalizing sub-dimensions after the program. The proportion of participants with a PSC-17-Y score ≥15, which was 30% before the program, decreased to 27% after the program. The proportion of participants with a WHO-5 score ≤50, which was 26% before the program, decreased to 21% after the program. The R4F program facilitated an understanding of its effectiveness in improving adolescents' mental health and well-being and the role of various factors in these effects.

In Barbour and Mannering's (2023) study, many individuals intending to increase cycling frequency after the COVID-19 pandemic stated a reason such as "I realized I really love cycling". Employees, those with high happiness, and environmentally conscious individuals were found to have a higher likelihood of increased cycling frequency compared to others. Although women tended to cycle less than men, it was stated that women were more likely to increase their cycling frequency after the pandemic. In Xu et al.'s (2018) study, significant relationships were found between cycling motivation, benefits derived from leisure activities, and well-being levels. According to the research results, cycling motivation and leisure

activities were found to positively affect well-being. The results indicated that cycling can provide various benefits for individuals' well-being.

In Kesenheimer et al.'s (2023) research, cycling motivation was found to be significantly linked to personality traits, mental health, and cycling-related psychological factors. Cycling motivation was found to be related to personality traits, masochistic tendencies, and attitudes towards cycling-related pain. Various types of motivation, such as extrinsic motivation, health motivation, social motivation, and well-being motivation, were found to influence the cycling experience. In the study conducted by Ballıkaya et al., it was understood that individuals who regularly cycled and trekked had high average scores for life satisfaction and self-efficacy. No statistically significant difference was found between self-efficacy and life satisfaction scores based on gender and age variables. Furthermore, a positive correlation was reported between participants' self-efficacy and life satisfaction scores. In Gray and Gow's (2020) research, the activity was found to have positive effects on the mood and well-being of older adults. A significant increase in WEMWBS and UMALC scores was observed in older adults participating in the activity after the event. The reviewed studies emphasize various psychological and physical benefits of cycling. Cycling motivation is seen to be associated with social, economic, and ecological factors and to influence individuals' levels of engagement in the sport.

DISCUSSION

This study aimed to systematically examine the relationships between bicycle use and Positive Psychology concepts, identify whether the variables affect each other, and compile the studies reviewed for this purpose to provide a framework. Based on the results of the studies included in the research, it can be generally concluded that bicycle use and Positive Psychology concepts influence each other. Therefore, relationships were found between bicycle use and the concepts of happiness, motivation, well-being, and life satisfaction (Ballıkaya et al., 2018; Barbour and Mannering, 2023; Brown et al., 2009; Dementyev et al., 2023; Gray and Gow, 2020; Kesenheimer et al., 2023; Xu et al., 2019). In three of the selected studies, bicycle use was found to be associated with well-being. In this regard, it was understood that the concept of well-being was most frequently associated with bicycle use in the studies (Dementyev et al., 2023; Gray and Gow, 2020; Xu et al., 2019).

In most of the reviewed studies, it was stated that cycling has positive effects on mood, motivation, and well-being. From this, it was emphasized that cycling affects Positive Psychology concepts (Ballıkaya et al., 2018; Brown et al., 2009; Dementyev et al., 2023; Gray and Gow, 2020; Kesenheimer et al., 2023; Xu et al., 2019). In addition to this emphasis, it was stated that Positive Psychology concepts also affect cycling; individuals who are happy and have life satisfaction have a higher cycling frequency compared to others (Barbour and Mannering, 2023). The common emphasis on the effects of motivation on cycling and the psychological benefits it creates ensured that the studies had mutually supportive results (Brown et al., 2009; Kesenheimer et al., 2023; Xu et al., 2019). Gray and Gow's (2020) study, which showed that cycling activities in older adults led to short-term positive changes, was supported by Kesenheimer et al.'s (2023) study, which emphasized the importance of motivation. However, in studies addressing cycling and motivation, motivation was differentiated by being separately associated with environmental factors and intrinsic psychological benefits (Brown et al., 2009; Kesenheimer et al., 2023).

In studies conducted by age groups, differences were observed between the effects on adolescents and older adults. For example, the increase in psychosocial well-being in adolescents was understood to be more pronounced when compared to the short-term effects in older adults (Dementyev et al., 2023; Gray and Gow, 2020). The reviewed studies focused on a specific age, demographic group, or geographical region. Therefore, limitations regarding generalization can be stated. Since most studies used surveys

based on participants' self-reports, there may be uncertainties regarding the objectivity and accuracy of the responses. The lack of control groups in some studies can create difficulties in determining the relationship between correlation and causality. Considering it as a systematic review, while the diversity of the reviewed studies offers an advantage in distinguishing similarities and differences, this diversity can also lead to more superficial evaluations and difficulty in clarifying the context of the subject.

Looking at the studies in the literature, a positive significant relationship between physical activity and psychological well-being levels has been stated (Elmas et al., 2021). Therefore, it has been supported by the reviewed studies that cycling, as a physical activity, has a positive relationship with well-being. It has also been stated that physical activity positively affects quality of life (Karataş, 2018). Indirectly, through quality of life, the idea that cycling has a positive relationship with life satisfaction has been supported. In this regard, the assertion that cycling is positively related to the concept of happiness has been strengthened. In a study addressing the relationship between physical activity and motivation, it was stated that motivation is an important determinant of physical activity in children and adolescents (Çiftçi and Ballıkaya, 2023). Additionally, intrinsic motivation was stated to be an effective motivator for physical activities. From the literature, the conclusion that there is a mutually influencing positive relationship between bicycle use and the concept of motivation has been supported. Based on the findings obtained from the results of this systematic review, it is seen that bicycle use has a strong relationship with Positive Psychology concepts. In this context, some points arise that should be suggested for future research. Firstly, it is important for future research to increase sample size to conduct studies across a wider demographic spectrum, encompassing different socioeconomic conditions and cultural differences. With the use of control groups and objective measurements, future research can more clearly establish cause-and-effect relationships of bicycle use. Furthermore, to understand the effects of motivation on bicycle use in more detail, it would be beneficial to conduct studies focusing on how motivation is related to environmental factors and intrinsic psychological benefits. These suggestions can guide future research in understanding the effects of bicycle use on psychological and emotional health more comprehensively and developing more effective interventions.

Conclusion

This systematic review compiled research examining the relationship between bicycle use and Positive Psychology concepts such as well-being, happiness, motivation, and life satisfaction. The study generally reveals a positive, reciprocal relationship between bicycle use and these psychological factors.

The reviewed studies indicate that bicycle use is most frequently associated with the concept of well-being. Findings state that cycling has positive effects on mood, motivation, and well-being , while also showing that individuals with high life satisfaction and happiness have a higher cycling frequency. The study also determined that the psychological benefits of cycling differ across age groups. These findings support that cycling has a positive effect on individuals' psychological and emotional health.

Limitations and Suggestions for Future Research

This systematic review significantly contributes to understanding the relationship between bicycle use and positive psychology concepts, yet it has some practical limitations stemming from the nature of the reviewed literature. Specifically, the limited number of studies focusing on bicycle use has narrowed the scope of the review. Most of the studies included are correlational, which makes it difficult to determine whether the relationship between bicycle use and positive psychology concepts is one of causality or merely correlation. To overcome this, conducting experimental and longitudinal studies is recommended.

In many studies, psychological concepts like happiness, well-being, and motivation were measured using self-report questionnaires. These subjective data have the potential to be influenced by factors like social desirability or memory bias. It is recommended that more objective measurements be used in the future to address this issue.

Also, by integrating cycling into school-based educational programs, the long-term effects on positive psychology concepts from the individual to the community level can be understood. Such applied studies will provide practical information on how cycling can be used as an intervention tool to enhance psychological well-being.

REREFENCES

An, H. Y., Chen, W., Wang, C. W., Yang, H. F., Huang, W. T., & Fan, S. Y. (2020). The relationships between physical activity and life satisfaction and happiness among young, middle-aged, and older adults. *International journal of environmental research and public health, 17*(13), 4817. https://doi.org/10.3390/ijerph17134817

Ashby, F., Isen, A., & Turken, A. (1999). A neuropsychological theory of positive affect and its influence on cognition. *Psychological Review*, 106, 529-550. https://doi.org/10.1037/0033-295X.106.3.529

Bekir, Ç., Kurtoğlu, A., Metin, S. N., & Öcal, T. (2022). Üniversite Öğrencilerinin Spor Yaparken Psikolojik ve Fiziksel Olarak Nasıl Hissettiklerinin İncelenmesi. *İnönü Üniversitesi Beden Eğitimi ve Spor Bilimleri Dergisi, 9*(2), 15-24.

Crowther, M., Lim, W., & Crowther, M. A. (2010). Systematic review and meta-analysis methodology. *Blood, 116*(15), e11-e18. https://doi.org/10.1182/blood-2010-04-276458

Çiftçi, F., & Ballıkaya, E. (2023). Ortaokul Öğrencilerinin Fiziksel Aktivite Düzeyleri ile Fiziksel Aktiviteye Yönelik Motivasyonları Arasındaki İlişkinin İncelenmesi. *Akdeniz Spor Bilimleri Dergisi, 6*(1), 186-200. https://doi.org/10.38021/asbid.1213660

Demir, R., & Murat, M. (2017). Öğretmen adaylarının mutluluk, iyimserlik, yaşam anlamı ve yaşam doyumlarının incelenmesi. *OPUS International Journal of Society Researches, 7*(13), 347-378. https://doi.org/10.26466/opus.347656

Demir, R., & Türk, F. (2020). Pozitif psikoloji: Tarihçe, temel kavramlar, terapötik süreç, eleştiriler ve katkılar. *Humanistic Perspective, 2*(2), 108-125.

Diener, E., Pressman, S. D., Hunter, J., & Delgadillo-Chase, D. (2017). If, why, and when subjective wellbeing influences health, and future needed research. *Applied Psychology: Health and Well-Being, 9*(2), 133-167. https://doi.org/10.1111/aphw.12090

Dikmen, A. A. (1995). İş doyumu ve yaşam doyumu ilişkisi. *Ankara Üniversitesi SBF Dergisi, 50*(03).

Ekiz, M. A., Kır, S., & Ulucan, H. (2021). Ortaokul ve Lise Öğrencilerinin Fiziksel Aktiviteye Katilim Motivasyon Düzeylerinin Karşılaştırılması. *Uluslararası Türk Spor ve Egzersiz Psikolojisi Dergisi, 1*(2), 1-11.

Elmas, L., Yüceant, M., Ünlü, Hüseyin & Bahadır, Z. (2021). Üniversite öğrencilerinin fiziksel aktivite düzeyleri ile psikolojik iyi oluş durumları arasındaki ilişkinin incelenmesi. *Sportive, 4*(1), 1-17.

Faulkner, G., Hefferon, K., & Mutrie, N. (2015). Putting positive psychology into motion through physical activity. In G. H. I. Positive psychology in practice: *Promoting human flourishing in work, health, education, and everyday life* (pp. 207-222).

Gable, S. L., & Haidt, J. (2005). What (and why) is positive psychology*? Review of General Psychology, 9*(2), 103-110. https://doi.org/10.1037/1089-2680.9.2.103

Gönener, A., Öztürk, A., Yılmaz, O. (2017). Kocaeli üniversitesi spor bilimleri fakültesi öğrencilerinin mental iyi olma düzeylerinin mutluluk düzeylerine etkisi. *Sportif Bakış: Spor ve Eğitim Bilimleri Dergisi, 4*(1),

44-55.

Gündoğar, D., Gül, S. S., Uskun, E., Demirci, S., & Keçeci, D. (2007). Üniversite öğrencilerinde yaşam doyumunu yordayan etkenlerin incelenmesi. *Klinik Psikiyatri, 10*(1), 14-27.

Güngör, A. (2017). Eğitimde pozitif psikolojiyi anlamak. *Türk Eğitim Bilimleri Dergisi, 15*(2), 154-166.

Haybron, D. (2007). Life satisfaction, ethical reflection, and the science of happiness. *Journal of Happiness Studies,* 8, 99-138. https://doi.org/10.1007/s10902-006-9041-x

Işık, Ö., Gümüş, H., Okudan, B., Yılmaz, M. (2014). Üniversite öğrencilerinin yaşam kalite düzeylerinin depresyon düzeyleri üzerine etkisinin incelenmesi. *International Journal of Science Culture and Sport,* SI(1), 836-843.

Karataş, M. (2018). Rekreasyonda yaşam kalitesi ve fiziksel aktivitenin yeri ve önemi. *Uluslararası Güncel Eğitim Araştırmaları Dergisi, 8*(2), 443-459.

Muhammet, E. Uzuner, K.E. (2014). Rekreatif amaçlı spor yapan bireylerin yalnızlık düzeylerinin incelenmesi. *Kocaeli Üniversitesi Sosyal Bilimler Dergisi,* 107-120.

Nazir, T. (2020). Pozitif psikoloji ve umut. *Pozitif Psikoloji.*

Okyay, E. K. (2018). *Doğum sonu dönemde fiziksel aktivite düzeyinin yaşam kalitesi ve depresyon düzeyine etkisi* (Master's thesis, İnönü Üniversitesi Sağlık Bilimleri Enstitüsü).

Peterson, C. (2000). The future of optimism. *American Psychologist*, 55(1), 44–55. https://doi.org/10.1037/0003-066X.55.1.44

Román, J. E. I., Ekholm, O., Algren, M. H., Koyanagi, A., Stewart-Brown, S., Hall, E. E., ... & Santini, Z. I. (2023). Mental wellbeing and physical activity levels: a prospective cohort study. *Mental Health and Physical Activity, 24*, 100498. https://doi.org/10.1016/j.mhpa.2023.100498

Ryan, R. (1995). Psychological Needs and the Facilitation of Integrative Processes. *Journal of Personality*, 398-427.

Seligman, M. E. P., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *American Psychologist*, 60, 410–421. https://doi.org/10.1037/0003-066X.60.5.410

Thomason, T., Doğan, T., & Akcanbaş, M. (2020). Nasıl Mutlu Olunur? Sigmund Freud ile Sanal Bir Konuşma. *Üsküdar Üniversitesi Sosyal Bilimler Dergisi,* (10), 185-194.

Veenhoven, R. (1996). The study of life-satisfaction. In W. E. Saris, R. Veenhoven, A. C. Scherpenzeel, & B. Bunting (Eds.), *A comparative study of satisfaction with life in Europe* (pp. 11-48). Eötvös University Press.

Zuzanek, J. (1998). Time use, time pressure, personal stress, mental health, and life satisfaction from a life cycle perspective. *Journal of Occupational Science, 5*(1), 26-39. https://doi.org/10.1080/14427591.1998.9686398