The shield of health: relations of physical activity and psychological wellbeing

El escudo de la salud: relaciones entre la actividad física y el bienestar psicológico

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Abstract

Introduction: Well-being is typically studied from an hedonic perspective associated with the feeling of positive affects as happiness, but are few literature about the Eudaimonic perspective associated with physical activity.
Objective: Analyze the literature about the relation of physical activity and psychological well-being from an Eudaimonic perspective.
Methodology: A systematic Review was carried out using the PRISMA 2020 Statement.
Results: The inclusion and exclusion criteria agreed upon by the experts were applied and a sample of 10 articles were obtained.
Discussion: The results show a positive association between physical activity and psychological well-being based on Ryff's Model.
Conclusion: This systematic review highlights the importance of self-acceptance, personal growth, and life purpose for the psychological well-being of participants in physical or sports activities, which implies various practical considerations for improving athletes' psychological well-being.

Keywords

Mental health, physical activity; psychological wellbeing.

Resumen

Introducción: El bienestar se estudia habitualmente desde una perspectiva hedónica asociada a la sensación de afectos positivos como la felicidad, pero existe poca literatura sobre la perspectiva eudaimónica asociada a la actividad física.
Objetivo: Analizar la literatura sobre la relación entre la actividad física y el bienestar psicológico desde una perspectiva eudaimónica.
Metodología: Se realizó una revisión sistemática utilizando la Declaración PRISMA 2020.
Resultados: Se aplicaron los criterios de inclusión y exclusión acordados por los expertos y se obtuvo una muestra de 10 artículos.
Discusión: Los resultados muestran una asociación positiva entre la actividad física y el bienestar psicológico según el modelo de Ryff.
Conclusión: Esta revisión sistemática destaca la relevancia de la autoaceptación, el crecimiento personal y el propósito en la vida para el bienestar psicológico de los participantes en actividades físicas o deportivas, lo que implica diferentes consideraciones prácticas a tener en cuenta para la mejora del bienestar psicológico de los deportistas.

Palabras clave

Salud mental; actividad física; bienestar psicológico.

Introduction

It is common these days to think that mental health and psychological well-being are synonymous with the absence of illness or diseases or absence of negative feelings. This is a simplistic fallacy that has implications for health, since on the one hand, a person who does not have an illness considers themselves healthy, and on the other hand, people who experience negative feelings may consider themselves sick. Then, may we speak about physical activity as a shield regarding mental health indicators and Psychological Well-being?

Despite the knowledge of the benefits on health -physical and psychological- of physical activity is large, the World Health Organization (WHO) reports in 2024 that 31% of the adult population does not perform physical activity in accordance with the minimum recommendations of WHO (Strain et al., 2024). WHO understand physical activity like any activity that requires physical movement, like walking, participating in games and recreational or outdoor activities.

The WHO proposes guidelines on levels of physical activity – attending to frequency, intensity and duration - according to different variables such as age, gender, pregnant people or people with chronic diseases. For example, the WHO considers that adolescents should engage in at least 60 minutes of moderate-intensity physical activity per day; adults and older adults should engage in at least 150 minutes of moderate-intensity physical activity per week.

It's important to clarify, that Physical Activity refers to any bodily movement that results in energy expenditure and sport is a specific form of physical activity characterized by organization, clear rules, and often a competitive component.

One of the current issues may seems to be the confusing or lax use of words -and their concepts behind them- as mental health or well-being, which has an impact on the behaviors and believes of common -and somewhat in specialized- people.

The concept of mental health has its official origin in the definition made by the WHO, when it included in its Constitution: "Health is not merely the absence of disease, but a state of complete physical, mental, and social well-being." (WHO, 1946, p. 1).

The American Psychology Association defines mental health as "Mental health encompasses a person's emotional, psychological, and social well-being. It affects how we think, feel, and behave in daily life, as well as how we manage stress, relate to others, and make decisions" (VandenBos, 2007, p. 556).

Regarding the key concept of well-being, it is traditionally divided into two philosophical approaches. On one hand, the hedonic tradition, rooted in utilitarian thinkers, associates well-being with the presence of positive affects (e.g., happiness) and the absence of negative affects (e.g., sadness) (Bentham, 1789; Mill, 1863). In scientific literature, this approach is often referred to as subjective well-being or mental well-being, and it is typically assessed using mood or affect scales that measure emotional states.

On the other hand, the eudaimonic tradition, originally developed by Aristotle, defines well-being as the actualization of human potential through a life of virtue, purpose, and personal growth (Aristotle, trans. 2009). This approach emphasizes the cultivation of personal excellence and living in accordance with one's values, rather than the pursuit of transient pleasures. This philosophical tradition has been revisited and operationalized in contemporary psychology by Carol Ryff (1989, 2013), who proposed a multidimensional model of psychological well-being. Her model includes six dimensions: self-acceptance, positive relationships with others, autonomy, environmental mastery, purpose in life, and personal growth. This broader and more humanistic concept of well-being goes beyond immediate pleasure and momentary affect, offering a deeper understanding of what it means to flourish. For this reason, it has been applied in the context of sports and physical activity (Durán, 2010; Puce et al., 2023; Trigueros et al., 2023), where individuals often face personal challenges and long-term goals that cannot be fully explained through the lens of hedonic or subjective well-being alone.

However, it should be noted that the concepts of psychological well-being and psychological discomfort are not two extreme points of the same dimension, since—as has been seen—the very lack of definition of psychological well- being, as well as the identification of psychological discomfort in sports with anxiety or stress, make it impossible to conceptualize it (Rodríguez-Fernández, 2009).

For many times those athletes who practice high-performance sports have been linked to mental health, supported by the concept of "mental toughness" or resilience (Connaughton et al., 2008). Athletes as maximum exponent of physical activity has been considered as "supermen", with some kind of "strong mentality" that no have place to the "common" psychological problems. But today, due to the cultural change that has emerged in high-performance sport, it can be openly expressed that high-performance athletes often suffer, feel sad, anxious and frustrated, just like the general population (Olmedilla & García-Mas, 2024).

So, with this conceptual complexity, what is known about the relationship be-tween physical activity, mental health and psychological well-being from a eudaimonic perspective?

Thus, and considering all the things expressed above, the main objective of this systematic review is to determine the state of the art regarding the relationships between mental health, psychological well-being -in its Eudaimonic conceptual framework- and the role played by physical activity on them. In order to gain a comprehensive view of the relationship between physical activity and psychological well-being, the term "physical activity" will be used in a broad sense, encompassing, of course, specific forms of physical activity, as well as sports.

Methodology

This review is framed on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines for data selection, collection, and analysis (Cajal et al., 2020; Page et al., 2021). The study was conducted following the ethical guidelines of the Institutional Ethics Review Committee of Shandong Sport University.

A focus group comprising experts in Physical Activity and Sports Sciences, including Sport Psychology, was convened from Andrés Bello University (Chile), the University of Valencia (Spain), and the University of the Balearic Islands (Spain). The objective of this process was to establish the databases, keywords, search timeframe, and inclusion and exclusion criteria for article selection.

As a result of this consensus-driven process, the Web of Science (WOS) and SCOPUS data-bases were selected due to their extensive indexing of high-quality journals.

These agreements allowed successive searches to be carried out in the selected databases, and using the combination of keywords that, together with the inclusion criteria, would yield the greatest number of articles recovered possible.

It should be noted that due to the particularities of each database when implementing the keyword search, the option to search for said keywords in WOS "topic" was selected. However, in the absence of this option in SCOPUS, the option "Title, Abstract or Keywords" was selected.

A 10-year time range was chosen because the increase in articles published in both WOS and SCOPUS occurred in 2017 (from 0 to 5 publications in SCOPUS and from 5 to 14 in WOS). This allowed us to capture the increase and the years preceding it.

1st Step: Identification

- Keywords suggested: "Mental Health" AND "Physical activity" AND "Psychological Wellbeing".
- Inclusion criteria: Last 10 years (2014-2024 included), English or Spanish language.
- Exclusion criteria: Opinion articles, Theoretical articles, Conference papers chapters of books, books, editorial letters, reviews and no full-text articles, not peer-reviewed, sample with disorders/pathologies.

2nd Step: Screening

After applying the inclusion and exclusion criteria to the search results obtained using the combination of keywords ("Physical activity" AND "Mental health," AND "Psychological Well-being") in each database, a total of 219 records were identified (130 from Web of Science and 89 from SCOPUS). Duplicate records were then removed (n = 53), followed by the exclusion of additional records (n = 21) that did

not meet the criteria upon further re-view. The exclusion category “other reasons” included one book and 20 review articles. At the end of this stage, the sample was reduced to 145 papers.

In the second phase, the relevance of the papers was assessed based on their title and abstract, prioritizing studies that directly addressed the relationship between physical activity, mental health, and psychological well-being. Notably, a preference was given to the eudaimonic conceptualization of “Psychological Well-being,” as opposed to “Subjective Well-being,” “Vitality,” or “Mental Well-being,” which are more closely related to positive emotions and hedonic experiences. Studies measuring psychological well-being indirectly through related constructs (e.g., absence of distress, negative affect, or stress reduction) were also excluded to maintain conceptual alignment with the eudaimonic framework.

Additionally, following the criteria previously established by the expert panel and focus group, the exclusion criteria were expanded to exclude clinical trials, as well as studies involving individuals with physical or mental disorders, pathologies, addictions, or treatments for such conditions.

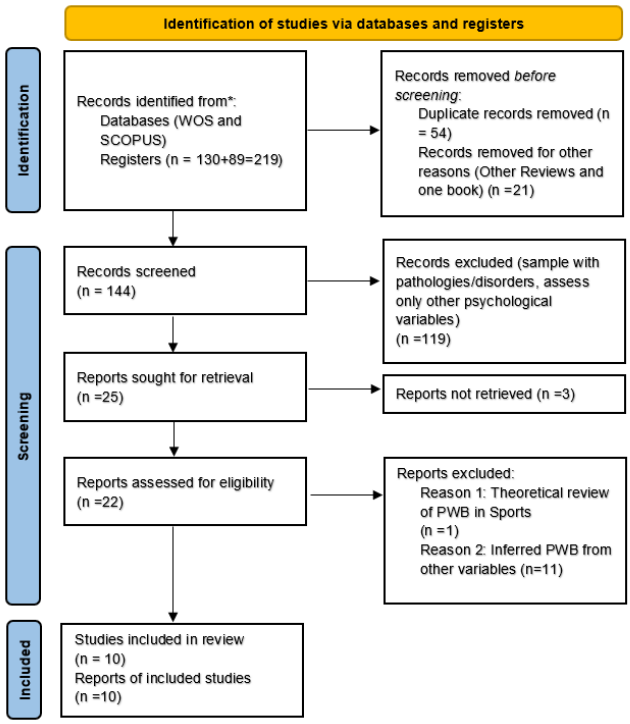
Also, records in which "Physical Activity" are not related in some way with "Psycho-logical wellbeing" and/or “Mental health” were excluded.

After reviewing the titles and abstracts of the remaining 145 papers, 120 were excluded based on two exclusion criteria. First, some studies mentioned the concept of well-being in the title but did not directly assess it; instead, they inferred it from other variables such as depression or anxiety, emphasizing the absence of pathology. Second, studies classified as clinical trials or those involving pathologies, physical or mental dis-orders, addiction issues, or related treatments were also excluded. The sample was reduced to 25 papers.

Of the remaining 25 articles, the full document could not be accessed for three of them.

After reading the remaining 22 articles in depth, 11 of them were excluded for inferring the Psychological Well-being construct through the measurement of other variables, and one article was also excluded for being eminently theoretical.

Figure 1. Flow diagram of the systematic review process.



3rd Stage: Table

The third step of this review is presented below, which was the elaboration of a table with a summary of studies included in the systematic review (Table 1). That could organize the relevant information of the selected articles for later analysis. The table shows the author(s), title of the article, methodology, type of sample (size, ages, gender, nationality, % men/women, mean age, age range), instruments used, psychological variables measured, name of the journal, results and conclusion.

Results

Most of the studies included in the review show a positive relationship between physical activity, mental health, and psychological well-being—or some of its dimensions according to Carol Ryff's multidimensional model (Ryff, 2017)—in various population groups, from children to older adults.

Considering the results (Table 1), it can be stated that the studies present consistent findings in terms of the psychological benefits of physical exercise, related to the reduction of stress, depression and anxiety in both children (Breslin et al., 2017), teenagers (González-Hernández et al., 2019) and adults (Sun & Lin, 2021), where physical activity has a protective role against stress and anxiety (Chen et al., 2021; Nakagawa et al., 2020). These findings are also consistent across different population groups such as university students (Bratuž et al., 2021), employees (Emerson et al., 2017; Valdesalici et al., 2024), and teachers (Fernández-García et al., 2024).

Furthermore, physical exercise has shown a positive impact on mental health during crisis situations such as the COVID-19 pandemic, by helping to maintain routines that reduce anxiety and depression levels, while also promoting positive mood states (Boudreau et al., 2022; Jacob et al., 2020; Nienhuis & Lesser, 2020).

Also, it was found in this context that not only was the frequency of physical activity important, but also its intensity, linking vigorous exercise with a greater impact on mental health (Nakagawa et al., 2020).

On the other hand, gender differences have been found, with women practicing less physical activity and presenting higher levels of anxiety and stress (Bratuž et al., 2021; Nienhuis & Lesser, 2020).

Regarding the concept of Psychological Well-being proposed by Ryff (1989), only five articles explicitly refer to its dimensions. In the study by Campos-Uscanga et al. (2022), which explored the relationship between lifestyle, body mass index (BMI), and psychological well-being in indigenous women, a negative correlation was found between BMI and Ryff's Self-Acceptance dimension. Notably, Self-Acceptance emerged as a stronger predictor of BMI than nutrition or exercise-related behaviors.

González-Hernandez et al. (2017) highlights how the dimensions of Self-acceptance, Personal Growth, and Life Purpose correlate positively with an active lifestyle. Furthermore, Self-acceptance and Life Purpose play a fundamental role in psychological well-being in adulthood.

In another study by González-Hernández et al. (2019) with adolescents, it was observed that adolescents who value physical activity show higher levels of psychological well-being. The dimensions of Self-Acceptance and Person-al Growth are related to regular physical activity.

It has also been observed that both children and older adults who practice physical activity perceive greater support and social inclusion respectively (Breslin et al., 2017; Sun & Lin, 2021).

Table 1. Summary of Studies Included in the Systematic Review about Psychological Wellbeing (PWB) and Physical Activity (PA)

Author (Year)	Title	Design	Sample	Physical Activity (PA)	Instrument and Variable	Main results
Breslin, et al. (2017)	Physical activity and wellbeing of 8–9-year-old children from social disadvantage: An all-Ireland approach to health	Quantitative: Cross-sectional study	Children (N=673, Ireland): 51.57% boys, 48.43% girls; Age M=8.7 (SD=0.52)	Not specified (measured in minutes)	Kidscreen-27; Health related quality of life Health Behavior School Children; PA	Children with ≥60 min/day of moderate-to-vigorous physical activity (PA) show better physical well-being (PWB), parental relationships, autonomy, social support, and school environment. Girls exhibit stronger benefits in parental

						relationships, autonomy, social support, and school environment. In high-risk disadvantaged settings, PA may mitigate mental health risks by enhancing PWB.
Campos-Uscanga et al. (2022)	Lifestyle, psychological well-being, and body mass index of indigenous women	Quantitative: cross-sectional study	Nursing students (N=149, Mexico): 100% women; Age M=20.4 (SD=1.7)	Not specified	Ryff's Psychological Wellbeing Scale; PWB Healthy Lifestyle Scale for University Students; Lifestyle Body mass index; Weight	Normal-weight women report higher self-acceptance and environmental mastery. Higher BMI negatively correlates with self-acceptance and life appreciation, while a healthy lifestyle positively associates with psychological well-being (PWB), including purpose in life and self-acceptance. Obesity interventions focusing solely on physical activity and diet may yield limited benefits; integrating psychosocial factors (e.g., life appreciation, self-acceptance) could enhance outcomes.
Chen et al. (2021)	Potential predictors of psychological wellbeing in elementary school students	Quantitative: cross-sectional study	Students (N=291; China); 57% boys, 42.96% girls; Age: M=9.7 (SD= 0.58)	Not specified	PE Metrics Assessment Rubrics; Manipulative skill competency Progressive Aerobic Cardiovascular Endurance Run Test; Cardiorespiratory Fitness D2 test of Attention; Attention Warwick–Edinburgh Mental Wellbeing Scale; PWB	Cardiorespiratory fitness was the unique predictor of children's psychological well-being (PWB). While soccer skills and cognitive functions showed no individual effects, their combination could predict PWB. These findings highlight fitness as the main factor for enhancing elementary students' psychological wellbeing.
Fernández-García et al. (2024)	Physical activity as a mediator of stress, anxiety and depression on well-being in physical education teachers	Quantitative: Cross-sectional study.	Teachers (N=4117, Spain); Gender not specified; Age M=32.7 (SD= 11.78)	Not specified (measured in minutes)	Depression, Anxiety and Stress Scale; Anxiety, Depression and Stress Ryff's Wellbeing Scale; PWB	Higher physical activity (PA) is associated with lower stress, anxiety, and depression, and greater psychological well-being (PWB). Stress and depression negatively correlate with PWB, with anxiety showing stronger negative effects in less active individuals. Notably, the depression-anxiety-stress triad demonstrates stronger associations with PWB in sedentary participants than active ones.
González-Hernández et al. (2019)	Perfectly Active Teenagers. When Does Physical Exercise Help Psychological Well-Being in Adolescents?	Quantitative: Cross-sectional study.	Adolescents, (N= 436, Spain); 67.43% boys, 32.56% girls; Age: M=16.8 (SD = 0.77)	Not specified (moderate or vigorous)	Multidimensional Perfection Scale; Perfectionism Ryff's Wellbeing Scale; PWB Global Physical Activity Questionnaire; PA	Adolescents who engage in vigorous exercise show greater commitment but also higher maladaptive perfectionism and lower psychological well-being (PWB). However, the subjective importance they place on physical activity (PA) positively relates to both adaptive and maladaptive perfectionism as well as PWB. Overall, vigorous exercise enhances physical fitness and PWB, while perceived PA importance serves as a stronger predictor of PWB

						than exercise frequency alone.
González-Hernández et al. (2017)	Psychological well-being, personality and physical activity. One lifestyle for the adult life	Quantitative: Cross-sectional study.	Adults (N=482, Spain); 43.98% men, 55.87% women; Age: M= 37.6 (SD=7.8)	Not specified (free exercise or guided classes)	TCI-R Questionnaire ; Persistance Ryff's Wellbeing Scale ; PWB	Persistence positively is associated with self-acceptance, autonomy, personal growth, and purpose in life. Physical activity (PA) frequency directly predicts self-acceptance and purpose, while its effect on autonomy is moderated by persistence (emerging only with low work persistence). Feeling active enhances autonomy and quality of life, which in turn promotes personal growth and purpose, whereas feeling strong shows paradoxical negative associations with these outcomes. These findings underscore persistence as a key mechanism through which PA enhances psychological well-being (PWB), with PA frequency serving as a particularly strong predictor of self-acceptance and purpose
Jacob et al. (2020)	The relationship between physical activity and mental health in a sample of the UK public: A cross-sectional study during the implementation of COVID-19 social distancing measures	Quantitative: Cross-sectional study.	Adults (N=902, United Kingdom); 63.8% women, 36.2% men Ages: 18-34= 31.6% 35–64= 50.1% ≥65= 18.3%	Not specified (measured in minutes)	BAI; Anxiety BDI; Depression Warwick-Edinburgh Mental Well-being Scale; PWB	PA is directly related to PWB. Moderate-to-vigorous PA correlates negatively with anxiety and depressive symptoms.
Murrin et al. (2023)	Does physical activity mediate the association between blue space and mental health? A cross-sectional study in Australia	Quantitative, self-report surveys	Adults (N=350, Australia); 70% women, 30% men; Age: M=38.7 (SD=14.92)	Not specified (frequency and duration)	Centre for Epidemiological Studies Depression Scale; Depression Generalized Anxiety Disorder, Anxiety PERMA Profile ; PWB International Physical Activity Questionnaire ; PA	PA partially mediates the link between proximity to blue spaces and PWB and mediates the link with inland waters. Also moderates the positive effect of blue spaces on PWB. Those who live closer to blue space -coast or inland- report higher levels of PWB and lower levels of depression and anxiety. Further, PA mediated these associations.
Nakagawa et al. (2020)	Regular moderate- to vigorous-intensity physical activity rather than walking is associated with enhanced cognitive functions and mental health in young adults	Quantitative: Cross-sectional design	Young adults (N=58, Japan); 41.38% men, 58.62% women; Age: M=22.4 (SD=2.40)	Not specified (Walking, Moderate or Vigorous)	International Physical Activity Questionnaire: PA Mindful Attention Awareness Scale; Cognitive functions Emotional Contagion Scale; Emotional regulation BIS/BAS; Behavioral inhibition and activation Brief Coping Orientation to Problems Experienced Inventory; Coping STAI; Anxiety BDI-II; Depression	High frequency of vigorous PA predicts active coping, greater autonomy, increased personal growth and less behavioral disengagement. High frequency of vigorous PA correlates negatively with State anxiety. Higher frequency and intensity of PA is associated with more mature psychological coping strategies, greater psychological development and PWB.

					Perceived Stress Scale; Stress Ryff's Psychological Wellbeing Scale; PWB	
Sun & Lin (2021)	Using sports participation as a lifeline to promote psychological well-being and happiness among older individuals in China: Mediating role of social capital dimensions	Quantitative, survey	Older adults (N= 310, China); 52,3% male, 47,7% female; Age: ≥50		Scale of happiness; Happiness Sports participation Ryff's Wellbeing Scale PWB Social Capital Scale; Social capital	Sports participation predicts PWB and happiness in older adults. Social capital (neighborhood connection, trust and security) significantly act as mediators.
Author (Year)	Title	Design	Sample	Physical Activity	Instrument and Variable	Main results
Breslin, et al. (2017)	Physical activity and wellbeing of 8–9-year-old children from social disadvantage: An all-Ireland approach to health	Quantitative: Cross-sectional study	Children (N=673, Ireland): 51.57% boys, 48.43% girls; Age M=8.7 (SD=0.52)	Not specified (measured in minutes)	Kidscreen-27; Health related quality of life Health Behavior School Children; PA	Children with ≥60 min/day of moderate-to-vigorous PA show better physical well-being, PWB, parental relationships, autonomy, social support, and school environment. Girls exhibit stronger benefits in parental relationships, autonomy, social support, and school environment. In high-risk disadvantaged settings, PA may mitigate mental health risks by enhancing PWB.
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						associations with PWB in sedentary participants.
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Jacob et al. (2020)	The relationship between physical activity and mental health in a sample of the UK public: A cross-sectional study during the implementation of COVID-19 social distancing measures	Quantitative: Cross-sectional study.	Adults (N=902, United Kingdom); 63.8% women, 36.2% men Ages: 18-34= 31.6% 35–64= 50.1% ≥65= 18.3%	Not specified (measured in minutes)	BAI; Anxiety BDI; Depression Warwick-Edinburgh Mental Well-being Scale; PWB	PA is directly related to PWB. Moderate-to-vigorous PA correlates negatively with anxiety and depressive symptoms.
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	functions and mental health in young adults			Emotional Contagion Scale; Emotional regulation BIS/BAS; Behavioral inhibition and activation Brief Coping Orientation to Problems Experienced Inventory; Coping STAI; Anxiety BDI-II; Depression Perceived Stress Scale; Stress Ryff's Psychological Wellbeing Scale; PWB	High frequency of vigorous PA correlates negatively with State anxiety. Higher frequency and intensity of PA is associated with more mature psychological coping strategies, greater psychological development and PWB.
Sun & Lin (2021)	Using sports participation as a lifeline to promote psychological well-being and happiness among older individuals in China: Mediating role of social capital dimensions	Quantitative, survey	Older adults (N= 310, China); 52,3% male, 47,7% female; Age: ≥50	Scale of happiness; Happiness Sports participation Ryff's Wellbeing Scale PWB Social Capital Scale; Social capital	PA participation predicts PWB and happiness in older adults. Social capital (neighborhood connection, trust and security) significantly act as mediators.

Note The referenced instruments include: Kidscreen-27 (Ravens-Sieberer et al., 2005); Health Behavior in School-aged Children (Currie et al., 2004); Ryff's Psychological Wellbeing Scale (Ryff, 1989; Díaz et al., 2006; Ryff & Keyes, 1995); Healthy Lifestyle Scale for University Students (Wang et al., 2012); Body Mass Index; PE Metrics Assessment Rubrics (National Association for Sport and Physical Education, 2010); Progressive Aerobic Cardiovascular Endurance Run test (The Cooper Institute, 2017); D2 Test of Attention (Brickenkamp & Zillmer, 1998); Warwick–Edinburgh Mental Wellbeing Scale (Tennant et al., 2007; Stewart-Brown et al., 2009); Depression, Anxiety and Stress Scale (Lovibond & Lovibond, 1995); Multidimensional Perfectionism Scale (Carrasco, Belloch, & Perpiñá, 2010); Global Physical Activity Questionnaire (World Health Organization, 2009); TCI-R Questionnaire (Cloninger, 1999); Beck Anxiety Inventory (Beck et al., 1988); Beck Depression Inventory (Beck et al., 1961, 1996); Center for Epidemiological Studies Depression Scale (Van de Velde, Levecque, & Bracke, 2009); Generalized Anxiety Disorder scale (Spitzer et al., 2006); PERMA Profile (Ryan et al., 2019); International Physical Activity Questionnaire (Craig et al., 2003; Research Committee, 2005); Mindful Attention Awareness Scale (Brown & Ryan, 2003); Emotional Contagion Scale (Doherty, 1997); Emotion Regulation Questionnaire (Gross & John, 2003); Brief COPE Inventory (Carver, 1997); Behavioral Inhibition and Activation System scales (Carver & White, 1994); State–Trait Anxiety Inventory (Spielberger et al., 1983); Perceived Stress Scale (Cohen et al., 1983); Scale of Happiness (Abdel-Khalek, 2006); Sports Participation Questionnaire (Gould, Moore, McGuire, & Stebbins, 2008); Social Capital Scale (Onyx & Bullen, 2000).

Discussion

This study examines the relationship between physical activity practice and eudaimonic psychological well-being through a systematic review, in the context of the growing visibility of mental health in high-performance sport in recent years.

Although the current WHO definition of Mental Health (WHO, 1946), explicitly includes aspects of psychological well-being such as contribution to the community -which fits with the Aristotelian idea of flourishing and life with a "telos"- or social aspects related with the Positive Relations dimension, or making decisions related with Autonomy, research in Sport and Physical Activity, continues to focus on assessing well-being through the absence of psychological pathology, considering the low volume of works that focus on psychological well-being from an educational perspective.

There is abundant literature and empirical evidence supporting the benefits of physical activity and sport for alleviating symptoms of depression, anxiety, and stress across various contexts (Dishman et al., 2021; Leguizamo et al., 2021; Stanton & Reaburn, 2014). However, it is now widely acknowledged that athletes are not exempt from mental health struggles and can suffer in ways comparable to the general population. Moreover, recent research has begun to clearly distinguish between the anxiety commonly associated with specific aspects or phases of sports competition and the manifestation of more severe, clinically relevant mental health symptoms (Olmedilla & García-Mas, 2024).

As Trainor & Bundon (Trainor & Bundon, 2023) suggest, the definition of well-being has been a widely used concept in physical activity and sport, but its definition and measurement are not al-ways clear. Sometimes it refers to subjective well-being (life satisfaction and happiness), other times it refers to

psychological well-being (self-realization, meaning in life, social integration). In this sense, these two conceptions of psychological well-being appear to be more closely connected than they might appear when examined conceptually. Various studies (Farid et al., 2022; Ibrahim et al., 2020) have already shown their relationship with various psychosocial variables, such as workplace commitment, engagement, or leader-ship.

The results of this systematic review seem to support the existence of this gap, as the number of articles linking eudaimonic psychological well-being with physical activity practice is scarce. The limited research using Ryff's eudaimonic model of well-being in sports is partly due to a lack of sport-specific measurement tools and a lack of conceptual clarity regarding well-being in the sports context. While Ryff's model has gained traction in general psychology, its application to sports has been slower, with researchers often using general well-being measures or focusing on single components rather than the full six-factor framework.

Analyzing well-being in sport and physical activity from this perspective allows to transcend the logic of isolated performance through a deeper look that takes into account the wholeness of human beings in different areas of development, such as sport. However, there are certain challenges to consider, such as:

Lack of Sport-Specific Instruments

Ryff's original Scales of Psychological Well-Being (SPWB) were not designed for the sport context. Adapting these scales or developing new sport-specific measures are necessary to accurately assess eudaimonic well-being in athletes (Kouali, Hall, and Pope, 2018).

Focus on Hedonic Well-being

Traditionally, research in sports has often focused on hedonic well-being (experiencing pleasure and avoiding pain), rather than eudaimonic well- being, which emphasizes personal growth, purpose, and meaningfulness.

Limited Use of the Full Model

Some studies have used Ryff's model but have focused on only one or a few of its six dimensions, rather than examining the interplay of all components. This can limit the understanding of the holistic nature of eudaimonic well-being.

The same is true when we analyze its factors, although, as discussed in the reviewed literature section, there are also studies that have linked the main dimensions of eudaimonic PWB (Self-acceptance, Life Purpose, and Personal Growth), thereby providing a deeper understanding of the person who practices physical activity. People who practice physical activity report improved perceptions of social support (Breslin et al., 2017; Sun & Lin, 2021); It improves self-acceptance, perceptions of personal growth (González-Hernández et al., 2019), and purpose in life (González-Hernández et al., 2017).

Furthermore, self-acceptance negatively correlates with being overweight (Campos-Uscanga et al., 2022). On the other hand, -although expected- purpose in life plays a fundamental role in the well-being of adults (Martela, Laitinen & Hakulinen, 2024).

It has also been observed that both children and older adults who practice physical activity perceive greater support and social inclusion respectively (Breslin et al., 2017; Sun & Lin, 2021).

Also, the findings of this systematic review suggest that higher levels of intensity, frequency and duration of physical activity improve the different dimensions of psychological wellbeing, the specific characteristics of physical activity are not well defined in all the works in this review.

In a current publication of Zhang et al (2025) moderate physical activity has been shown to have a greater impact on dimensions of psychological well-being (Personal Growth, Mastery domain; Positive relations, Life Purpose and self-acceptance) than vigorous physical activity (only improves Life Purpose, Self-acceptance and Positive relations) or light physical activity (any no significant association was found).

Thus, our results clearly indicate that this relationship seems to be an answer that could allow for stability in psychological well-being and mental health, but it does not cover - as indicated - the relationship with hedonic PWB. The Self-acceptance dimension as a quality of being understanding and compassionate with ourselves and our own mistakes, the ability to perceive these as necessary for Personal Growth and developing our maximum potential, as well as having a Life Purpose -to transcend-are all factors that help and collaborate with psychological well-being and will have more or less weight depending on the vital moment of the individual. As suggested by the work of González-Hernandez et al. (González-Hernández et al., 2017), the Life Purpose is going to be more relevant in adults than in young people who don't considered this question (who give much more relevance to the dimension of personal growth) (Romero-Carrasco et al., 2013), and it is in the crises derived from adulthood, that having a "north" helps us to set objectives, establish routines and ultimately, to act. Life Purpose, compared to hedonic life satisfaction, has even been directly linked to greater longevity (Martela et al., 2024).

Regarding hedonic —or subjective— well-being, recent findings (Lochbaum & Sisneros, 2024) have demonstrated significant associations with a mastery-oriented motivational climate, rather than an ego-oriented one. These climates are key constructs within Achievement Goal Theory (e.g., Ames & Archer, as cited in Ortiz-Marholz et al., 2016).This approach opens the door to future research on how to integrate eudaimonic perspective into physical activity programs to enhance long-term psychological well-being, as well as the relationship - which seems to be more complicated than it might initially appear - between the two concepts of wellbeing -hedonic and eudaimonic- and physical activity.

Conclusions

The research analyzed in this review confirms that physical activity is a key factor for psychological well-being at all stages of life.

Regarding the conception of psychological well-being from a Eudaimonic perspective, it is evident that despite being part of the most current definitions of international organizations such as the WHO and the APA, it remains understudied explicitly in research practice (Soren & Ryff, 2023). Of all the articles analyzed, only five explicitly refer to and evaluate the concept of Psychological Well-being coined by Ryff, and these papers also study the different dimensions of the PWB, as previously mentioned. The remaining articles refer to Psychological Well-being by evaluating variables in some way derived from or related to the dimensions proposed by Ryff, but which also have some similarity with the hedonic concept of PWB.

On the other hand, it is evident and corroborated by the findings of this review that a large part of the population does not comply with the minimum recommendations for physical activity of the WHO (Wicker & Frick, 2017), which has an impact on mental health and psychological well-being, with women being those who practice less physical activity and presenting greater anxiety and stress (Bruinvels et al., 2021; Matud et al., 2022). The results of this study, which focus on the dimensions closest to personal fulfillment, can help to more effectively design physical activity programs for the general population, in which the person's and athletes' environment, including coaches, psychologists, and sports institutions, plays a crucial role in their well-being by providing social support.

Although the relationship between physical exercise and sport and physical and psychological well-being is well known, why do we still have high rates of sedentary population? Undoubtedly, the explanation is multifactorial; however, for the purposes of this article, one of the proposals is to refine the concept of psychological well-being by associating it with a eudaimonic and stoic perspective.

Finally, the results of this systematic review support the idea that physical exercise acts as a "shield" for mental health and psychological well-being in its eudaimonic approach. However, questions arise regarding high-performance sport and its association with mental health issues, a topic that requires further research and developments. The same applies to the interesting and fairly unknown relationship between the two concepts of psychological well-being, the eudaimonic one that we have studied here, and the hedonic one, opening another line of research.

Limitations and Future research

This study has some limitations: among them, the intrinsic complexity of the concept of psychological well-being and its overlap with other concepts such as well-being or mental health make its study difficult.

Furthermore, the lack of specific tools for assessing psychological well-being in the field of sports or physical activity contributes to the limited number of studies found.

For future research, it would be interesting to delve deeper into the dimensions of psychological well-being from a eudaimonic perspective and its relationship with different physical activities and their levels of frequency, intensity, or duration.

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