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Combat Sports Participation, Depressive Symptoms and Mental Health: A Narrative Review

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Table of Contents

1. Abstract
2. Introduction
3. Material and Methods
4. Results
 - 4.1. General Mental Health Benefits of Combat Sports
 - 4.2. Depressive Symptoms in Elite Athletes
 - 4.3. Psychological Factors
 - 4.4. Head Trauma and Neuropsychiatric Outcomes
 - 4.5. Weight Cutting and Mood Disturbances
 - 4.6. Injury-Related Depressive Symptoms
5. Discussion
6. Conclusions
7. Disclosure
 - 7.1. Author Contributions
 - 7.2. Funding
 - 7.3. Institutional Review Board Statement
 - 7.4. Informed Consent Statement

7.5. Conflicts of Interest

7.6. Data Availability Statement

7.7. Acknowledgements

7.8. Declaration of the Use of Generative AI

References

1. Abstract

Background: Mental health disorders, including depression, anxiety, and mood disturbances, represent one of the most pressing public health challenges of the 21st century. Despite the availability of pharmacological and psychotherapeutic treatments, a significant proportion of patients do not achieve full remission, highlighting the urgent need for effective adjunct interventions. Physical activity has emerged as a promising non-pharmacological strategy, with growing evidence supporting its antidepressant and anxiolytic effects across diverse populations. Among the wide spectrum of physical activities, combat sports, including disciplines such as judo, boxing, taekwondo, MMA, and BJJ, occupy a unique position, combining high-intensity physical training with psychological discipline, emotional regulation, and strong social bonds, making them a particularly compelling area of inquiry in the context of mental health.

Aim: The aim of this narrative review was to provide a synthesis of current scientific evidence examining the relationship between combat sports participation and mental health outcomes including depressive symptoms, anxiety, mood states, and psychological well-being across diverse populations, age groups, and combat sport disciplines.

Material and Methods: A narrative literature search was conducted using PubMed, Google Scholar and ScienceDirect. Search terms included combinations of: combat sports, martial arts, boxing, MMA, judo, karate, taekwondo, BJJ, wrestling, depression, depressive symptoms, and mental health. Priority was given to systematic reviews, meta-analyses, randomized controlled trials, and longitudinal studies published between 2014 and 2026. A total of 37 sources were included in this narrative review.

Results: The reviewed evidence suggests that regular participation in combat sports is broadly associated with reduced depressive symptoms and improved mental health across children, adolescents, adults, and older adults. Judo and taekwondo demonstrate the most solid evidence base, while boxing shows particular promise as a therapeutic intervention in clinical populations. MMA and BJJ foster protective psychological mechanisms including resilience, self-control, and emotional

regulation. However, sport-specific risk factors, such as rapid weight loss, disordered eating, various injuries, competitive pressure, and head impact exposure, may counteract or moderate these benefits.

Conclusions: Combat sports participation shows consistent potential to positively influence a broad spectrum of mental health outcomes, including depressive symptoms, anxiety, mood states, resilience, and psychological well-being, across diverse age groups and populations. The magnitude of these benefits is moderated by training environment, discipline type, duration, and the appropriate management of sport-specific risks. To consolidate these findings and develop evidence-based clinical recommendations, future studies should employ rigorous methodologies, including randomized controlled trials and standardized mental health assessment tools, across a wider range of combat sport disciplines and clinical populations.

Keywords: combat sports, martial arts, depression, depressive symptoms, mental health, physical activity, athletes

2. Introduction

The global burden of mental health disorders has reached alarming proportions in recent decades, emerging as one of the defining public health crises of the 21st century. Depression alone affects an estimated 280 million people worldwide, ranking among the leading causes of years lived with disability and contributing disproportionately to global mortality through its association with suicide and chronic physical comorbidities [37]. Anxiety disorders, mood disturbances, post-traumatic stress conditions, and related psychological disorders collectively compound this burden, affecting individuals across all age groups, socioeconomic backgrounds, and geographic regions. The economic costs of mental health conditions are estimated to reach trillions of dollars annually on a global scale [37]. Despite substantial advances in pharmacological and psychotherapeutic approaches, treatment outcomes remain suboptimal for a considerable proportion of patients, and a significant number of individuals experience recurrent episodes despite ongoing management, underscoring the critical importance of developing effective, accessible, and evidence-based adjunct interventions [1, 12, 14].

In this context, physical activity and structured exercise have attracted growing scientific and clinical interest as non-pharmacological strategies for mental health promotion and disease management. Large-scale epidemiological evidence, including data from over 1.2 million individuals across the United States, has established solid associations between regular physical activity and significantly reduced burden of depression, anxiety, and psychological distress across diverse populations and age

groups [35]. These associations persist after adjustment for major confounders and are observed across a wide range of activity types, durations, and intensities. Intervention studies, including systematic reviews and network meta-analyses of randomized controlled trials, have further demonstrated that structured exercise programs can produce clinically meaningful reductions in depressive symptoms, with effect sizes in some analyses comparable to or exceeding those achieved by antidepressant medication and psychotherapy [14]. The mechanisms underlying these effects are likely multifactorial, encompassing both neurobiological and psychological pathways, including improvements in mood regulation, self-efficacy, mastery, and social connectedness [14, 21, 25].

Within the broad and heterogeneous category of physical activity, combat sports occupy a particularly distinctive position. Encompassing a diverse range of disciplines such as judo, boxing, taekwondo, mixed martial arts (MMA), Brazilian jiu-jitsu (BJJ), karate, and wrestling, combat sports are practiced by tens of millions of individuals worldwide across all age groups, from elite competitive athletes to recreational participants, older adults, and increasingly, therapeutic and clinical populations. Unlike many conventional exercise modalities which typically involve standardized, repetitive movement patterns in relatively controlled environments, combat sports are characterized by a uniquely complex and dynamic combination of high-intensity physical training, structured progressive skill acquisition, goal-oriented practice, psychological discipline, emotional self-regulation under conditions of physical and psychological stress, and strong interpersonal bonds forged within the training environment. These multidimensional characteristics suggest that combat sports may offer psychological benefits that extend well beyond those attributable to physical exertion alone, engaging cognitive, emotional, and social dimensions of human experience in ways that few other physical activities can replicate [1, 12, 21, 25].

Moreover, combat sports are increasingly being explored and implemented as therapeutic tools in clinical and community mental health settings. Non-contact boxing programs have been piloted with diverse psychiatric populations, including individuals with depression, schizophrenia, and PTSD, demonstrating significant reductions in symptom burden [22]. Taekwondo interventions have been evaluated in children, adolescents, and older adults in both community and clinical contexts [36]. Judo and BJJ are being examined in the context of social inclusion, psychological rehabilitation, and the development of emotional regulation skills [8, 26]. This growing therapeutic interest reflects a broader and evolving recognition that the structured, goal-oriented, progressive, and socially embedded nature of combat sports may make them particularly well-suited as complementary mental health interventions capable of engaging populations that may be resistant to or unable to access conventional therapeutic approaches.

However, combat sports participation is not without its psychological risks and adverse consequences. The inherent physicality of these disciplines exposes practitioners to a range of sport-specific stressors that may negatively affect mental health. Repetitive head impacts, common in full-contact disciplines such as boxing and MMA, have been associated with long-term neuropsychiatric sequelae including depression, mood dysregulation, and cognitive decline, particularly in retired athletes [9, 15, 33]. Weight management practices, including rapid weight loss, weight cycling, and disordered eating behaviors, very common in weight-class combat sports, have been consistently linked to significant mood disturbances, psychological burden, and symptoms consistent with depressive disorders [5, 16, 17, 18]. Musculoskeletal injuries, which occur at high rates across combat disciplines, represent an additional and frequently underappreciated risk factor for depressive symptoms, mediated by enforced inactivity, loss of athletic identity, and social isolation from the training environment [4]. Furthermore, elite-level competitive participation introduces a distinct constellation of psychological stressors including performance pressure, identity foreclosure, and career transition challenges that may substantially offset the protective psychological effects of training [2, 3, 13]. Recognizing and addressing these risks is therefore as important as harnessing the mental health benefits of combat sports, and both dimensions must be considered in any comprehensive evaluation of combat sports as a mental health intervention.

Despite this growing interest, the scientific literature on combat sports and mental health remains fragmented across disciplines, populations, measurement approaches, and outcome constructs. Existing reviews have tended to address broader well-being constructs such as general quality of life, self-esteem, or global psychological functioning, or have focused on specific combat disciplines in isolation, without integrating evidence across the full spectrum of combat sports or across the full range of mental health outcomes relevant to clinical practice [1, 12]. As a result, a comprehensive synthesis of the cumulative evidence base, one that addresses both the protective potential and the specific mental health risks associated with combat sports participation has been lacking.

The aim of this narrative review was therefore to provide a comprehensive, integrated synthesis of current scientific evidence examining the relationship between combat sports participation and mental health outcomes including depressive symptoms, anxiety, mood states, resilience, and psychological well-being across diverse populations, age groups, and combat sport disciplines. In doing so, this review sought to identify the mechanisms underlying both the benefits and the risks associated with combat sports participation, and to draw evidence-based conclusions with relevance for clinical practice, public health policy, athlete welfare, and future research priorities.

3. Material and Methods

A narrative literature review was conducted to identify and synthesize the available evidence regarding the relationship between participation in combat sports and martial arts and mental health outcomes, with particular emphasis on depressive symptoms and depression-related variables. A comprehensive search of electronic databases, including PubMed, Google Scholar, and ScienceDirect, was performed. The search strategy involved combinations of relevant keywords terms related to combat sports, martial arts, and psychological health. The literature search focused primarily on studies published between 2014 and 2026 in order to include recent evidence reflecting contemporary approaches to physical activity, sports psychology, and mental health research. Priority was given to studies with the highest levels of scientific evidence, including systematic reviews, meta-analyses, randomized controlled trials, and longitudinal studies. Additionally, relevant observational and cross-sectional studies were considered when they provided valuable insights into psychological outcomes associated with combat sport participation. Studies were selected based on their relevance to the research question, focusing on the potential influence of combat sports and martial arts training on depressive symptoms, emotional regulation, psychological well-being, stress management, and broader mental health outcomes. Particular attention was paid to research investigating possible mechanisms underlying these associations, including the role of regular physical activity, social interaction, self-discipline, perceived self-efficacy, and cognitive-emotional regulation. After screening the available literature and assessing methodological relevance, a total of 37 sources were included in this narrative review. The selected studies were analyzed qualitatively to summarize current knowledge, identify consistent findings, highlight areas of uncertainty, and discuss potential limitations within the existing evidence base.

4. Results

4.1. General mental health benefits of combat sports

The broadest evidence base supports a general positive association between combat sports participation and mental health outcomes across diverse populations and age groups. A systematic review encompassing multiple combat disciplines demonstrated consistent associations between regular practice and improved mental health, including reduced depressive symptoms, lower anxiety, and enhanced emotional regulation, although findings were heterogeneous across studies [1,12,14]. A meta-analysis of martial arts training reported a small but statistically significant positive effect on mental health outcomes, including mood and general well-being [12]. These findings are reinforced

by large-scale population data demonstrating that regular exercise is associated with significantly lower mental health burden across 1.2 million individuals, with team and recreational sports showing particularly strong effects [35]. The most comprehensive evidence for exercise as an antidepressant intervention comes from a network meta-analysis of randomized controlled trials, which demonstrated that structured exercise produces clinically meaningful reductions in depressive symptoms, with effect sizes comparable to pharmacotherapy and psychotherapy [14].

Combat sports appear to offer psychological benefits beyond those achievable through general exercise alone. A broad editorial synthesis emphasized that the multidimensional nature of combat sports combining physical intensity with psychological discipline, social cohesion, and goal-oriented skill acquisition positions them as particularly effective tools for mental health promotion [25]. Perceived health benefits documented among martial arts and combat sports practitioners include stress reduction, improved emotional wellbeing, enhanced self-awareness, and greater sense of purpose [21]. Experimental evidence further confirms that structured martial arts training produces measurable improvements in emotional control, attentional focus, and stress resilience [28]. Mind-body combat disciplines, such as Tai Chi, demonstrate that the meditative and attentional components embedded in certain combat practices contribute additional antidepressant effects beyond those achieved through non-mindful physical activity, with Tai Chi outperforming conventional exercise in reducing both depressive and anxiety symptoms [24].

Discipline-specific evidence adds further nuance to the general picture. For taekwondo, a dedicated meta-analysis found a significant antidepressant effect, particularly in interventions exceeding 12 weeks and in older adult populations [36]. Boxing has emerged as a particularly promising therapeutic modality: group-based, high-intensity non-contact boxing interventions have produced significant reductions in depressive symptoms, anxiety, and PTSD across diverse clinical populations, suggesting that boxing retains strong mental health benefits even outside competitive contexts [22]. For BJJ, self-control, resilience, and life satisfaction have been identified as strong predictors of mental health among practitioners [26]. Youth MMA athletes have demonstrated lower depression scores and higher resilience compared to non-athletic peers [30]. Two systematic reviews of Olympic combat sports in older adults consistently reported improvements in health-related quality of life and psychological well-being in middle-aged and older populations [27, 29].

4.2. Depressive symptoms in elite athletes

Despite the general mental health benefits associated with combat sports participation, elite athletes, including those competing in combat disciplines, demonstrate considerable rates of depressive symptoms that are frequently underestimated in both research and clinical practice. A systematic

review of depressive symptoms in high-performance athletes reported prevalence rates ranging from 4% to 68% depending on the population, measurement tool, and sport, reflecting substantial heterogeneity across studies [2]. A broader systematic review and meta-analysis of mental health symptoms and disorders in current and former elite athletes found that depression, anxiety, and sleep disturbances were among the most commonly reported conditions, with prevalence rates that in certain subgroups exceeded those observed in the general population [3].

The mental health of elite athletes is shaped by a complex and dynamic interaction of sport-specific stressors, personal vulnerabilities, and available support resources [13]. Factors consistently identified as risk factors for depressive symptoms in elite athletes include performance failure, competitive pressure, deselection, identity foreclosure, social isolation during intensive training camps, and the psychological demands of sustained elite-level competition [3, 13]. Career transitions such as early retirement or retirement itself, whether voluntary or forced, represent a particularly vulnerable period, associated with loss of athletic identity, disruption of social networks, and loss of structured routine, all of which may precipitate or exacerbate depressive symptoms [13]. These findings highlight that elite athletic participation does not mean immunity to depression and that the competitive environment may itself constitute an independent mental health risk factor requiring targeted institutional and clinical support.

4.3. Psychological factors

A consistent body of evidence identifies a range of psychological constructs fostered by combat sports participation that function as protective factors against depressive symptoms and broader mental health difficulties. Resilience, which is defined as the capacity to adapt positively in the face of adversity, has been identified as both a prerequisite and an outcome of systematic Olympic combat sports training, with athletes demonstrating significantly higher resilience profiles compared to non-athletic populations [7]. Psychological capital, encompassing hope, efficacy, resilience, and optimism, has been identified as a significant protective factor against sport anxiety and mood disturbances in collegiate judo athletes [32]. Self-control, emotional regulation, and life satisfaction have been documented as strong predictors of mental health among BJJ practitioners, suggesting that the psychological demands unique to grappling disciplines may cultivate particularly solid protective mechanisms [26].

The social and relational dimensions of combat sports training have emerged as significant mediators of psychological well-being. The coach-athlete relationship, peer social support, and psychological safety within the training environment have been identified as significant predictors of mental health in judo athletes, underscoring that the social architecture of combat sports training is as important as

its physical demands [31]. Personality characteristics observed in combat sport athletes - lower neuroticism and higher agreeableness compared to team sport athletes, may further contribute to their psychological resilience, though the directionality of this relationship remains unclear [20]. A systematic review of psychological factors in judo identified emotional regulation, motivation, and coping strategies as key mediators of well-being [8], while sport psychology research on MMA highlighted mental toughness, coping, and self-efficacy as central psychological constructs relevant to mental health in this discipline [10].

Importantly, the psychological benefits of combat sports participation appear to accumulate progressively with sustained engagement. Interventions of longer duration consistently produce stronger mental health outcomes, suggesting that psychological adaptation requires time and that short-term participation may not be sufficient to generate clinically meaningful effects [36].

4.4. Head trauma and neuropsychiatric outcomes

The neuropsychiatric consequences of repetitive head impact exposure represent a critical and clinically significant dimension of combat sports participation, particularly in full-contact disciplines such as boxing and MMA. Research examining neurological function in professional boxers has documented associations between sparring exposure and neurological impairment, raising concerns about the long-term brain health of combat sport athletes [9]. A study of retired professional male boxers found significant associations between depression symptomatology, daytime sleepiness, and impulsiveness, suggesting that neuropsychiatric sequelae of combat sports careers may persist and manifest across multiple domains in retirement [33]. A broader examination of the effects of repetitive head impact exposure on mental health following traumatic brain injury demonstrated that cumulative head impacts are associated with increased risk of depression, anxiety, and post-traumatic stress symptoms [15].

These findings are of particular concern given their temporal characteristics: neuropsychiatric consequences of head trauma in combat sports may manifest years or decades after active competition, meaning that studies of active athletes may substantially underestimate the long-term mental health risks of full-contact disciplines. This temporal dimension introduces an important ethical consideration in the recommendation of full-contact combat sports as mental health interventions and underscores the urgent need for longitudinal neuropsychological monitoring, evidence-based protective rule modifications, and athlete education regarding head impact risks across combat sport careers.

4.5. Weight cutting and mood disturbances

Weight management practices - rapid weight loss, weight cycling, and disordered eating, represent a pervasive and largely underaddressed source of psychological burden in weight-class combat sports. A systematic review of rapid weight loss and mood states in judo athletes found consistent evidence that acute caloric restriction and dehydration protocols are associated with significant mood deterioration, including increased tension, depression, anger, fatigue, and confusion [5]. A comprehensive review of 25 years of evidence on weight cycling in combat sports demonstrated that repeated cycles of rapid weight loss and regain carry substantial physiological and psychological costs, with mood disturbances and impaired psychological functioning among the most consistently reported consequences [16].

The psychological dimension of weight cutting extends beyond acute mood changes. A detailed examination of the psychology of weight cutting described how the experience of "getting small to feel big" reflects complex motivational and identity processes, with athletes frequently reporting shame, anxiety, obsessive preoccupation with food and weight, and depressive symptoms during cutting phases [17]. A prospective study found a high prevalence of disordered eating behaviors among both male and female combat sport competitors, with significant associations between disordered eating and rapid weight loss practices [18]. Monitoring of recovery state, training load, and mood states across a competitive training period in judo athletes demonstrated that mood disturbances were most pronounced during periods of highest training load and caloric restriction, confirming the multifactorial nature of pre-competition psychological burden [19]. Hormonal dysregulation resulting from competition and extreme weight management has been identified as an additional mediating mechanism, with significant alterations in cortisol and other stress hormones documented in striking combat sport athletes following competition [6].

4.6. Injury-related depressive symptoms

Physical injuries represent a significant and frequently underappreciated risk factor for depressive symptoms in combat sport athletes. A systematic review of the association between musculoskeletal injuries and depressive symptoms in athletes found consistent evidence that injury is associated with elevated rates of depression, mediated by enforced inactivity, loss of athletic identity, social isolation from the training environment, pain, and uncertainty regarding recovery and return to sport [4]. These mechanisms are particularly relevant in combat sports, where physical contact and injury risk are inherent features of both training and competition, and where the training environment itself may constitute a primary source of social support and psychological identity for practitioners.

The bidirectional nature of the injury-depression relationship adds further complexity: while injury may precipitate depressive symptoms, pre-existing depression and psychological distress have been associated with increased injury vulnerability, impaired recovery, and poorer rehabilitation outcomes [4]. This suggests that psychological screening and mental health support should be integrated into injury prevention and rehabilitation protocols in combat sports, rather than addressed exclusively in the post-injury phase. The broader mental health literature on elite athletes further emphasizes that injury-related depression is frequently underreported and undertreated, partly due to stigma, partly due to inadequate mental health infrastructure within sporting environments, and partly due to the normalization of pain and physical adversity within combat sport cultures [3, 13].

5. Discussion:

This narrative review synthesized current evidence on the relationship between combat sports participation and depressive symptoms across diverse populations. The overall findings suggest that regular engagement in combat sports is broadly associated with reduced depressive symptoms and improved mental health, although the strength and consistency of evidence varies across disciplines and population groups [1, 12, 25].

Combat sports represent a unique category of physical activity that combines intense physical training with psychological and social components. In the general population, regular exercise has been consistently associated with significantly lower mental health burden, regardless of activity type [35]. However, combat sports appear to offer additional psychological benefits beyond those achieved through general exercise alone, including goal-setting, discipline, mastery, and structured social bonding within training environments [1, 12, 21].

Among the disciplines reviewed, judo and taekwondo demonstrate the strongest evidence for a beneficial effect on depressive symptoms and general mental well-being. Regular participation in these sports has been associated with improved emotional regulation, enhanced psychological resilience, and reduced mood disturbances, particularly when training is conducted in a supportive environment characterized by positive coach-athlete relationships and strong social support [7, 8, 31, 36]. Interventions of longer duration appear to produce more consistent antidepressant effects [36].

Boxing has emerged as a particularly promising therapeutic tool. High-intensity, group-based non-contact boxing interventions have demonstrated significant reductions in depressive symptoms, anxiety, and PTSD across diverse clinical populations, suggesting that boxing retains strong

antidepressant potential even when stripped of its competitive element [22]. These findings position boxing not merely as a sport but as a viable adjunct therapeutic modality, particularly for individuals who do not respond well to conventional pharmacological treatment.

For MMA and BJJ, the evidence points to protective psychological mechanisms fostered by these disciplines, including self-control, resilience, emotional regulation, and life satisfaction, all of which are recognized buffers against depression [10, 23, 26, 30]. Youth practitioners of combat sports, including MMA, have shown lower depression scores and higher resilience compared to non-athletic peers, suggesting a potential preventive role for combat sports engagement from an early age [30].

Older adults represent another group that may particularly benefit from combat sports participation. Systematic evidence indicates that engagement in Olympic combat sports is associated with improved health-related quality of life, general health status, and psychological well-being in middle-aged and older populations, with direct implications for depression prevention in aging [27, 29].

Mind-body combat disciplines, such as Tai Chi, deserve separate consideration. Evidence suggests that mindful exercise outperforms non-mindful physical activity in reducing depressive and anxiety symptoms, indicating that the attentional focus and meditative components embedded in certain combat disciplines may contribute additional antidepressant effects beyond those achieved through physical exertion alone [24].

The psychological mechanisms underlying these effects are likely multifactorial. Neurobiologically, exercise promotes the release of endorphins, increases BDNF levels, regulates serotonin and dopamine activity, and reduces cortisol, all of which contribute to mood improvement [14]. Psychologically, combat sports foster self-efficacy, mastery, and resilience, while socially they provide a sense of belonging, structured routine, and peer support [7, 20, 21, 25]. These combined mechanisms may explain why combat sports appear particularly effective compared to less structured forms of physical activity.

However, the relationship between combat sports and mental health is not uniformly positive, and important risk factors must be acknowledged. Elite athletes show considerable rates of depressive symptoms related to performance pressure, injuries, and career transitions [2, 3, 13]. Injuries represent a particularly significant predictor of depressive symptoms in athletic populations, and combat sports carry an inherent injury risk that must be considered [4]. Furthermore, hormonal dysregulation following high-intensity competition may contribute to transient mood disturbances, particularly in

striking disciplines [6]. Weight management practices represent perhaps the most significant sport-specific risk factor for depression in combat sports. Rapid weight loss, weight cycling, and disordered eating have been consistently associated with significant mood disturbances, psychological burden, and deteriorating mental health [5, 16, 17, 18, 19]. These practices may counteract or even reverse the psychological benefits of training, particularly in the pre-competition period.

Long-term neurological risks must also be considered, particularly in full-contact disciplines. Cumulative head impact exposure has been associated with neurological deterioration and depressive symptomatology in retired combat sport athletes, highlighting that the mental health consequences of combat sports participation may extend well beyond the active career [9, 15, 33].

Taken together, the evidence suggests that combat sports participation has genuine antidepressant potential across the lifespan, provided that training is conducted in a supportive environment, weight management practices are healthy, and long-term neurological risks are mitigated. These findings have practical implications for clinicians, coaches, and health practitioners considering combat sports as part of a broader mental health intervention strategy.

6. Conclusions:

Combat sports participation exerts both protective and adverse effects on mental health, with depressive symptoms representing a central outcome across all dimensions examined. The relationship between combat sports and mental health is neither simple nor unidirectional, it is shaped by a complex interplay of discipline-specific characteristics, training context, competitive level, individual vulnerability, and sport-specific risk factors that must all be considered in any comprehensive clinical or public health evaluation. The protective potential of combat sports is substantial and supported by a growing body of evidence. Regular participation has been associated with meaningful reductions in depressive symptoms and anxiety, enhanced resilience, improved emotional regulation, and greater psychological well-being across populations spanning childhood through older age. These benefits appear mediated by neurobiological, psychological, and social mechanisms including improvements in mood regulation, self-contentment, mastery, and social life.

At the same time, adverse consequences must be acknowledged with equal seriousness. Elite-level engagement introduces psychological stressors that may offset the protective effects of training. Repetitive head impact exposure carries documented long-term neuropsychiatric risks that may manifest years after active participation. Weight management practices endemic to weight-class

combat sports represent a pervasive and modifiable source of psychological burden. Injuries add a further layer of vulnerability through enforced inactivity, loss of athletic identity, and social isolation. Training level, injury exposure, weight management practices, psychosocial environment, coach-athlete relationship quality and psychological safety play a crucial and modifiable role in determining whether participation results in net mental health benefit or harm. These factors must be systematically assessed and addressed by sports medicine professionals, coaches, mental health practitioners, and governing bodies as part of a comprehensive, athlete-centered approach to mental health in combat sports.

The findings support cautious integration of combat sports, particularly non-contact or recreational formats of boxing, judo, taekwondo, and BJJ, into broader mental health intervention frameworks. Future studies should prioritize longitudinal designs, clinical populations with diagnosed mental health conditions, standardized outcome measurement, and long-term follow-up periods sufficient to capture both protective effects and delayed neuropsychiatric risks. Only through methodologically solid research can the full mental health potential of combat sports be realized safely, ethically, and equitably across diverse populations.

7. Disclosure

7.1. Author Contributions

Conceptualization: [OK], [BK], [MK]

Methodology: [OK], [KP], [ML]

Software: [JG]

Check: [BK], [AS], [MK]

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Writing review and editing: [OK], [KP], [WK], [AS], [ML], [MK], [JG]

Visualization: [WK], [JG]

Supervision: [OK], [MK]

Project Administration: [OK]

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Not applicable.

7.5 Conflicts of Interest

The authors declare no conflict of interest

7.6 Data Availability Statement

No new datasets were generated or analyzed during this study. This narrative review is based exclusively on previously published studies identified through searches of PubMed, Google Scholar and ScienceDirect. All data supporting the findings of this review are contained within the cited publications, which are accessible through their respective publishers via the corresponding DOI links. Therefore, no additional data are available.

7.7 Acknowledgements

Not applicable.

7.8 Declaration of the use of generative AI and AI assisted technologies in the writing process

All AI tools were used strictly as assistive instruments under human supervision. The selection of studies, interpretation of findings, and all conclusions represent the sole intellectual contribution of the authors. AI was used to enhance efficiency in manuscript preparation and linguistic refinement, and did not replace human judgment at any stage of the research process.

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