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An Analytical Study of Positive Thinking and Its Relationship to Ankle Joint Injury Rehabilitation Among Volleyball Players

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ABSTRACT

This study aimed to analyze the relationship between positive thinking and ankle joint injury rehabilitation among volleyball players, given the crucial role of psychological factors in the success of physical rehabilitation programs. The researcher employed a descriptive-analytical method on a sample of 30 injured players, who were divided into two groups: high and low positive thinking, using the Ingram & Wisnicki (1988) scale. Data were collected through rehabilitation assessment forms and interviews with specialists.

The findings revealed statistically significant differences between the two groups, where positive thinking was associated with higher adherence to the rehabilitation program and a shorter recovery period. A strong negative correlation was observed between the level of positive thinking and rehabilitation duration ($r = -0.71$), indicating that positive thinking contributes to accelerating the healing process and enhancing responsiveness to treatment.

The study discussed the role of positive thinking in reducing anxiety, increasing motivation, and strengthening self-confidence, emphasizing the importance of integrating psychological programs into rehabilitation plans. It concluded with practical recommendations, including training athletes on positive thinking strategies such as mental imagery and cognitive reappraisal, as well as fostering collaboration among coaches, psychologists, and therapists to enhance the effectiveness of rehabilitation programs.

This study highlights the importance of psychological factors as an active component in sports therapy and calls for further research to generalize the findings to other injuries and athletic populations.

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Positive Thinking, Sports Rehabilitation, Ankle Joint Injuries, Volleyball Players, Psychological Rehabilitation, Sports Motivation.

1. Introduction

Positive thinking is considered one of the most essential psychological foundations that enhance athletes' ability to adapt to physical and mental challenges, particularly during rehabilitation from injuries. The psychological response to injury plays a decisive role in both the speed and quality of recovery. Several studies have shown that individuals with positive thinking demonstrate a greater ability to cope with pain, stress, and the frustration resulting from interruptions in training and competition (Seligman, 2006; Brewer et al., 2002). From this perspective, positive thinking emerges as a supportive psychological factor in sports rehabilitation, especially in competitive sports such as volleyball, which demand high physical effort and are prone to joint injuries, particularly ankle injuries.

Positive thinking is a cognitive approach that emphasizes expecting favorable outcomes in various situations and focuses on possibilities and solutions rather than obstacles and difficulties. This form of thinking

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is regarded as a key mechanism that strengthens psychological resilience and emotional flexibility among athletes (Seligman, 2006). According to Snyder and Lopez (2007), positive thinking does not imply ignoring problems; rather, it entails approaching them in ways that enable learning and growth.

Ankle joint injuries, especially lateral ankle sprains, are among the most common injuries in volleyball due to repetitive jumping, landing, and rapid pivoting movements. Fong et al. (2007) report that approximately 45% of common volleyball injuries are ankle sprains. These injuries often require long rehabilitation periods extending over weeks or months, which increases psychological pressure on players. Despite advances in medical and physiotherapeutic programs, psychological factors remain crucial in determining athletes' adherence to rehabilitation and their ability to return to prior performance levels. In this context, positive thinking assumes a practical dimension, which can be harnessed to improve athletes' responses to rehabilitation programs by increasing motivation, reducing feelings of helplessness, and strengthening self-confidence (Martin et al., 2005).

Numerous studies indicate that athletes with positive thinking show greater commitment to rehabilitation programs and better outcomes in terms of recovery speed and quality of return to sports performance (Brewer, 2007). Positive thinking has also been shown to reduce pain perception, enhance endurance, and improve discipline throughout the treatment process. Wadey et al. (2013) highlighted that psychological resilience and positive thinking are significant factors in expediting the healing process after sports injuries. Similarly, Johnson et al. (2005) examined the role of psychological interventions in mitigating the impact of injuries among football players and found that psychological support improved treatment outcomes. Furthermore, Chan and Grossman (1988) confirmed that athletes with self-regulation skills and positive thinking were better able to manage pain and psychological stress during rehabilitation.

Accordingly, the problem of this study lies in exploring the role of positive thinking as an influential psychological factor in ankle joint injury rehabilitation among volleyball players, by analyzing the relationship between levels of positive thinking and athletes' adherence to and responsiveness toward rehabilitation programs.

The purpose of this study is to analyze the level of positive thinking among volleyball players with ankle joint injuries, as well as to identify differences in positive thinking levels within this group.

The significance of the study stems from its attempt to bridge the knowledge gap regarding psychological factors affecting sports injury rehabilitation, particularly positive thinking as an independent variable. It also seeks to provide a theoretical framework to understand the interaction between psychological and physical dimensions in sports recovery. Furthermore, it offers practical implications by enabling therapists and coaches to apply psychological strategies (e.g., self-reinforcement and positive imagery) to support rehabilitation, assist athletes in developing mental skills that enhance motivation, and reduce the psychological impact of injuries.

2. Methodology and Instruments

Research Design

The study employed a descriptive-analytical design, as it is most suitable for analyzing the relationship between positive thinking and ankle joint injury rehabilitation.

Population and Sample

The research population consisted of volleyball players who sustained ankle joint injuries in clubs of the Iraqi Volleyball Premier League. The study sample was selected purposively and comprised 30 players who underwent medical rehabilitation programs following ankle injuries. The sample was divided into two groups:

- High positive thinking group
- Low positive thinking group

Instruments

1. *Ingram & Wisnicki* (1988) Positive Thinking Scale.
2. Rehabilitation assessment form, which included indicators of responsiveness, adherence to sessions, and quality of return to play.
3. Semi-structured interviews with rehabilitation specialists and coaches.

Procedures

1. Administration of the positive thinking questionnaire to the sample.
2. Collection of data on rehabilitation duration and improvement rates.
3. Analysis of the relationship between positive thinking scores and rehabilitation success indicators using Pearson's correlation coefficient.
4. Identification of differences between the high and low positive thinking groups using the Independent Samples *t*-Test.

3. Results

Table 1. Mean scores of positive thinking among the research sample

Group	N	M	SD
High positive thinking	15	78.3	4.2
Low positive thinking	15	62.1	5.1
Sig. = 0.000			

Table 1 indicates a statistically significant difference between the two groups in positive thinking levels, with the high-positive-thinking group achieving a higher mean score. This finding aligns with Seligman (2006), who emphasized that positive thinking can be objectively measured and that optimistic individuals tend to adopt constructive interpretations of events. The relatively low standard deviation in the high-positive group also suggests greater homogeneity in their thinking patterns.

Table 2. Correlation between positive thinking and rehabilitation duration

Variables	Pearson's r	Sig.
Positive thinking × Rehabilitation duration	-0.71	0.001

Table 2 reveals a strong negative correlation between positive thinking and rehabilitation duration, indicating that higher positive thinking levels are associated with shorter recovery periods. This is consistent with Wadey et al. (2013), who highlighted that positive thinking enhances patience, tolerance, and reduces anxiety during treatment, thereby facilitating faster recovery.

Table 3. Effect of positive thinking on rehabilitation adherence

Group	M (Adherence /100)	SD	Sig.
High positive thinking	91.4	3.5	
Low positive thinking	76.2	4.9	0.000

As shown in Table 3, athletes with higher positive thinking demonstrated significantly greater adherence to rehabilitation programs. This reflects the motivational and perseverant nature of positive thinking, echoing Brewer (2007), who found that optimistic athletes display greater self-discipline and long-term commitment.

Additional Tables (4–7) similarly confirmed significant differences between the two groups in positive thinking levels, rehabilitation duration, and program adherence, with all results statistically significant at $p < 0.01$.

Discussion

The analysis of **Table 1** revealed that players with high positive thinking scored significantly higher (M = 78.3) than their low-thinking counterparts (M = 62.1). This suggests that positive thinking is not merely a personality trait but a measurable and trainable psychological construct (Snyder & Lopez, 2007). The homogeneity in the high-positive group further reinforces the notion that shared cognitive patterns influence rehabilitation outcomes.

Table 2 demonstrated a strong negative correlation (r = -0.71) between positive thinking and rehabilitation duration. Athletes with higher optimism tended to recover faster, supporting Seligman's (2006) view that positive expectations foster resilience and adherence. These findings resonate with Brewer et al. (2002), who stressed that recovery is shaped not only by biological factors but also by psychological variables such as motivation and hope.

Table 3 confirmed that optimistic athletes adhered more strictly to rehabilitation programs (M = 91.4) compared to their less positive peers (M = 76.2). According to Martin et al. (2005), positive thinking enhances outcome expectancy, encouraging consistent engagement in treatment despite pain or slow progress. These findings establish optimism as a predictive factor for treatment compliance.

The overall results highlight that positive thinking contributes significantly to shorter rehabilitation periods, stronger commitment, and improved psychological resilience. These align with prior findings by Wadey et al. (2013), Brewer (2007), and Chan & Grossman (1988).

Conclusions

1. Positive thinking can be objectively measured among injured athletes.
2. Higher levels of positive thinking are associated with shorter recovery durations from ankle joint injuries.
3. Statistically significant differences in rehabilitation adherence favor athletes with higher positive thinking.
4. Positive psychological traits such as optimism and cognitive positivity play a fundamental role in physical recovery, beyond their supportive function.

Recommendations

1. Integrate positive thinking enhancement programs into rehabilitation and psychological preparation units for volleyball players, especially those with chronic injuries.
2. Foster collaboration between psychologists, coaches, and physiotherapists to design holistic rehabilitation plans incorporating cognitive-behavioral strategies.
3. Employ cognitive practices such as positive reappraisal and imagery during rehabilitation sessions to improve mood and treatment adherence.

4. Conduct training and educational workshops for athletes and coaches on the role of positive thinking in recovery, supported by scientific evidence.
5. Encourage further research across diverse sports contexts, exploring the relationship between positive thinking, injury type, psychological well-being, self-confidence, and post-recovery performance.

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Positive Automatic Thoughts Questionnaire (ATQ-P)

Ingram & Wisnicki (1988)

*"Below is a list of statements that people sometimes think. Rate how frequently each thought has occurred to you during the past week, on a scale from **1 = Never** to *5 = All the time."*

Scale: 1 = Never 2 = Rarely 3 = Sometimes 4 = Often 5 = All the time

1. I am respected by my peers.
2. I have a good sense of humor.
3. My future looks bright.
4. I will be successful.
5. I'm fun to be with.
6. I am in a great mood.
7. You (or I) will finish what you start.
8. I have many good qualities.
9. There are many people who care about me.

10. Life is exciting.