



Sports motivation in Chilean rugby players: impact of occupational status

Motivación deportiva en rugbistas chilenos: impacto del estado ocupacional

Authors

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Abstract

Introduction: Sports motivation plays a key role in long-term adherence and athletes' commitment. In the context of rugby, intrinsic and extrinsic motivation may vary depending on individual factors such as occupational status.

Objective: To examine the relationship between motivation dimensions and sports adherence in Chilean rugby players, considering occupational status as a moderating factor.

Methods: A cross-sectional study was conducted with 280 rugby players from 12 regions of Chile. The Sport Motivation Scale (SMS-28) was used to evaluate intrinsic motivation, extrinsic motivation, and amotivation. Data were analyzed using descriptive statistics, ANOVA, and Pearson correlations. **Results:** Intrinsic motivation for experiencing sensations had the highest average score, followed by intrinsic motivation for achieving things. Identified regulation was significantly higher among students and workers compared to unemployed participants ($p = 0.050$). Introjected regulation showed significant differences across occupational status ($p = 0.001$), with higher levels among workers. Amotivation was negatively associated with sports participation, although no significant differences were observed between occupational groups ($p = 0.419$). **Conclusions:** The findings highlight the importance of fostering intrinsic motivation to sustain sports participation in rugby players. Additionally, strengthening identified regulation may improve commitment, particularly among unemployed players. Reducing amotivation is crucial to prevent sports dropout.

Keywords

Motivation; occupational status; rugby; sports adherence; intrinsic motivation.

Resumen

Introducción: La motivación deportiva desempeña un papel clave en la adherencia a largo plazo en el deporte y en el compromiso de los atletas. En el contexto del rugby, la motivación intrínseca y extrínseca pueden variar según factores individuales, como el estado ocupacional.

Objetivo: Examinar la relación entre las dimensiones de la motivación y la adherencia deportiva en rugbistas chilenos, considerando el estado ocupacional como un factor moderador.

Metodología: Se realizó un estudio transversal con 280 rugbistas de 12 regiones de Chile. Se utilizó la Escala de Motivación Deportiva (SMS-28) para evaluar la motivación intrínseca, extrínseca y la desmotivación. Los datos se analizaron mediante estadísticas descriptivas, ANOVA y correlaciones de Pearson.

Resultados: La motivación intrínseca para experimentar sensaciones obtuvo el puntaje promedio más alto, seguida de la motivación intrínseca para lograr cosas. La regulación identificada fue significativamente mayor en estudiantes y trabajadores comparados con desempleados ($p = 0.050$). La regulación introyectada mostró diferencias significativas según el estado ocupacional ($p = 0.000$), con niveles más altos entre trabajadores. La desmotivación se asoció negativamente con la participación deportiva, aunque no se observaron diferencias significativas entre grupos ocupacionales ($p = 0.419$).

Conclusiones: Los resultados subrayan la importancia de fomentar la motivación intrínseca para sostener la participación deportiva en jugadores de rugby. Además, fortalecer la regulación identificada puede mejorar el compromiso, especialmente en jugadores desempleados. Reducir la desmotivación es esencial para prevenir el abandono deportivo.

Palabras clave

Adherencia deportiva; estado ocupacional; motivación; motivación intrínseca; rugby.

Introduction

The role of motivation in sports practice has been extensively studied, revealing its importance for both initiation and continuity in sports (Vallerand, 2021; Weinberg & Gould, 2023). The Self-Determination Theory (SDT), proposed by Deci and Ryan (1985), has been one of the most influential frameworks in understanding human motivation across various contexts, including sports (Deci & Ryan, 1985). This theory distinguishes between intrinsic motivation, extrinsic motivation, and amotivation, stating that intrinsically motivated individuals engage in activities for inherent pleasure and satisfaction, while extrinsically motivated individuals do so due to external rewards or pressures (R. Ryan & E. L. Deci, 2000).

Intrinsic motivation is particularly important for long-term commitment to sports. Athletes with intrinsic motivation tend to experience greater satisfaction and enjoyment in their practice, enabling them to persist even when facing challenges (Ntoumanis, 2001; R. Ryan & E. L. Deci, 2000; Vallerand et al., 2008). This type of motivation has been linked to higher performance levels and psychological well-being in endurance and high-competition sports, such as rugby (Duda & Balaguer, 2007; Martens & Webber, 2002; D. L. Pelletier et al., 1995).

In contrast, extrinsic motivation is driven by external factors, such as the pursuit of rewards or avoidance of punishment (R. M. Ryan & E. L. Deci, 2000; Vallerand, 1989). While effective during the initial stages of athletic development, studies suggest its impact on long-term adherence is limited, especially if it does not evolve into a more internalized form of motivation (Ntoumanis, 2001; Vallerand, 2021). Additionally, athletes who rely heavily on extrinsic motivation are more likely to experience amotivation, characterized by a lack of purpose or interest in the activity (L. G. Pelletier et al., 1995; Pelletier et al., 1997).

Rugby is a sport that demands high physical and mental capacity, and the challenges of training and competition can significantly influence players' motivation (Bekiari, 2017; Martens & Webber, 2002). Previous studies have highlighted that rugby players' motivation can be affected by factors such as age, competition level, and occupational status (Idriss et al., 2022; Sajid et al., 2020; Vega-Díaz et al., 2024). In particular, relational status and academic life have been identified as factors that could influence motivation levels, as they affect players' available time and ability to manage the emotional and psychological demands associated with sports (Amorose & Horn, 2000).

While various studies have explored motivational dynamics in different sports, few have specifically examined how occupational status influences athletes' motivation (González Fernández et al., 2020; Ryan et al., 2010). For instance, Brière et al. (1995) developed and validated the Sport Motivation Scale (SMS), which has been used extensively to measure different forms of motivation in sports (Brière et al., 1995). This scale has been validated in diverse cultural and sports contexts, including its adaptation to rugby (Castrillón Rendón et al.; L. G. Pelletier et al., 1995; Zurita & Walle, 2019).

Evidence suggests that athletes with more years of experience tend to show decreased intrinsic motivation to learn new things, while younger or less experienced players are often more intrinsically motivated to explore and overcome challenges (Balaguer et al., 2011; Granero-Gallegos & Baena-Extremuera, 2013; Ntoumanis, 2001). Moreover, training frequency also appears related to motivation levels, with studies indicating that a higher number of training days can lead to increased amotivation if players do not receive adequate support to manage the stress associated with the sport (Mezuk et al., 2017; Pulido et al., 2017).

This study aims to identify the level of motivation in Chilean rugby players based on their occupational status, exploring the relationships between factors such as years of experience and training days with different motivational dimensions. The SMS will be used to accurately measure both intrinsic and extrinsic motivation, providing a detailed understanding of the motivational dynamics influencing rugby players' performance (L. G. Pelletier et al., 1995; Vallerand, 1989). This research hopes to contribute to the existing literature and offer practical recommendations to improve motivation and performance in rugby.

Method

This is a descriptive cross-sectional study aimed at analyzing the motivation levels of Chilean rugby players. The sample consisted of 280 Chilean rugby players (92.5% men and 7.5% women) from 12 regions of Chile, providing a diverse representation of the country. The main regions represented in the sample were Valparaíso (50.7%), Santiago (24.6%), and Antofagasta (6.8%), with smaller representations from other regions such as Maule (4.6%), Biobío (3.9%), Los Lagos (3.6%), Rancagua (2.5%), Tarapacá (0.7%), Coquimbo (0.7%), La Araucanía (0.7%), Arica (0.4%), Los Ríos (0.4%), and Aysén (0.4%).

Participants

The participants' age ranged from 18 to 52 years, with a mean age of 29.98 ± 11.4 years, indicating considerable variability in the age distribution of the sample.

Participants were required to meet the following criteria: (1) being active members of a rugby club; (2) regularly participating in training sessions during 2021; and (3) providing informed consent to participate in the study.

This study employed a cross-sectional design, allowing data collection from participants at a single point in time. This approach is suitable for examining associations between demographic characteristics and motivation levels among rugby players during the study period.

Procedure

The data collection process began with the distribution of invitation letters to rugby teams affiliated with the Chilean Rugby Federation, explaining the study's objectives and scope. Once favorable responses were received, teams were asked to provide a list of athletes along with their contact information to proceed with the recruitment phase. Subsequently, an individual email was sent to each participant, inviting them to voluntarily participate in the research.

The email included a link to the informed consent form as well as the online questionnaire, which covered sociodemographic variables and the Sport Motivation Scale (SMS-28). Data collection was conducted between May and June 2021 using a non-probabilistic convenience sampling method, yielding a total of 280 complete responses. All participants signed the informed consent form and completed the questionnaire virtually, ensuring data protection and the voluntariness of their participation. To maintain confidentiality, all data were anonymized and stored securely, accessible only to the research team for analysis.

Instrument

The instrument used in this study was the Sport Motivation Scale (SMS-28), initially developed and validated in French by Brière et al. (1995). This scale measures various forms of motivation proposed by Deci and Ryan's Self-Determination Theory (1985). Pelletier et al. (1995) later translated and validated the scale into English, naming it the Sport Motivation Scale (SMS-28). It has since been applied in various contexts, including Chile, as demonstrated by recent studies (Giakoni-Ramírez et al., 2022). The reliability and validity of these translations have been extensively evaluated, establishing the SMS-28 as one of the most widely used tools for measuring motivation in sports contexts (Bara Filho et al., 2011; Bayyat et al., 2016; Candela et al., 2014; Ntoumanis, 2001).

The Sports Motivation Scale (SMS-28)

The SMS-28 consists of seven subscales, each comprising four items designed to measure three main types of motivation: Intrinsic Motivation, Extrinsic Motivation, and Amotivation. Intrinsic motivation is divided into three subscales: to know (participating for the pleasure of learning), to accomplish (participating for the satisfaction of achieving goals), and to experience stimulation (participating for the pleasure of stimulating sensations). Extrinsic motivation is reflected in three subscales: identified regulation (personal growth), introjected regulation (internal pressure to stay in shape), and external regulation (praise or avoidance of negative consequences). Finally, the scale measures amotivation, or the lack of motivation to continue in sports practice (Deci & Ryan, 1985; Ntoumanis, 2001). Responses are scored on a 7-point Likert scale ranging from (1) "does not correspond at all" to (7) "corresponds exactly."



Data Analysis

The data analysis was conducted using the Statistical Package for the Social Sciences (SPSS v27.0). Descriptive statistics, including means and standard deviations, were calculated to describe variables related to motivation among Chilean rugby players, such as intrinsic motivation, extrinsic motivation, and amotivation, across the different dimensions evaluated by the Sport Motivation Scale (Lee & Lim, 2013).

The internal reliability of the instrument was assessed using Cronbach's Alpha coefficient, which yielded a value of $\alpha = 0.891$, indicating a high level of internal consistency and supporting the instrument's suitability for research purposes in this study.

An analysis of variance (ANOVA) was used to examine differences in motivation levels among rugby players based on their occupational status (students, workers, and unemployed). This analysis identified significant differences in extrinsic motivation subscales, particularly in identified regulation ($p = 0.050$) and introjected regulation ($p = 0.000$), across the occupational groups.

Additionally, Pearson's correlation test was applied to explore relationships between the different dimensions of intrinsic and extrinsic motivation, as well as amotivation. The results indicated significant correlations among the subscales of intrinsic motivation to know, accomplish, and experience ($p < 0.01$), as well as between extrinsic motivation subscales and amotivation factors ($p < 0.05$). These findings suggest a significant interrelationship between the different types of motivation among rugby players.

Results

The sample for this study consisted of 280 Chilean rugby players, with a distribution of 92.5% men and 7.5% women. Participants' ages ranged from 18 to 52 years ($M = 29.98$, $SD = 11.4$). Regarding motivation variables, the means and standard deviations calculated for the subscales of the Sport Motivation Scale (SMS-28) indicated that intrinsic motivation to experience sensations had the highest average ($M = 6.373$, $SD = 0.282$), followed by intrinsic motivation to accomplish ($M = 6.046$, $SD = 0.229$). On the other hand, extrinsic motivation by external regulation showed the lowest mean ($M = 3.962$, $SD = 0.718$), while amotivation had a mean of ($M = 5.772$, $SD = 1.164$).

The analysis of variance (ANOVA) revealed significant differences in motivation subscales according to participants' occupational status. Specifically, significant differences were observed in extrinsic motivation - identified regulation ($p = 0.050$) and extrinsic motivation - introjected regulation ($p = 0.000$). Unemployed participants showed lower levels of extrinsic motivation compared to students and workers, with the lowest means in identified regulation ($M = 4.188$) and introjected regulation ($M = 3.250$). Workers presented the highest mean in introjected regulation ($M = 5.333$). However, no significant differences were found between groups in intrinsic motivation subscales or amotivation ($p > 0.05$).

Table 1. Descriptive Statistics and Internal Consistency (Cronbach's Alpha) of the Sport Motivation Scale (SMS-28) Subscales

Subscale	Mean (M)	Standard Deviation (SD)	Cronbach's Alpha (α)
Intrinsic motivation to know	5.932	0.482	0.850
Intrinsic motivation to accomplish	6.046	0.229	0.847
Intrinsic motivation to experience	6.373	0.282	0.728
Extrinsic motivation - identified regulation	5.445	1.529	0.713
Extrinsic motivation - introjected regulation	5.044	1.343	0.762
Extrinsic motivation - external regulation	3.962	0.718	0.782
Amotivation	5.772	1.164	0.728

Table 1 presents the means, standard deviations, and Cronbach's Alpha values for the different subscales of the Sport Motivation Scale (SMS-28) used in this study. The Cronbach's Alpha values suggest that the questionnaire's subscales have adequate internal reliability, with values ranging from 0.713 to 0.850. The intrinsic motivation subscales exhibit higher internal consistency compared to the extrinsic motivation and amotivation subscales.

Table 2. Descriptive Statistics and ANOVA of Motivation Subscales by Occupational Status

Variable	Mean	SD	Mean	SD	Mean	SD	p
Intrinsic motivation - to know	5.904	11.257	5.976	11.704	4.625	11.087	0.100
Intrinsic motivation - to accomplish	6.060	10.923	6.059	11.488	4.938	14.631	0.236
Intrinsic motivation - to experience	6.326	0.7939	6.392	0.8026	6.750	0.2041	0.574
Extrinsic motivation - identified regulation	5.344	11.735	5.532	12.392	4.188	0.9656	0.050
Extrinsic motivation - introjected regulation	4.656	15.011	5.333	13.946	3.250	14.860	0.000
Extrinsic motivation - external regulation	3.901	14.903	4.045	17.489	2.125	0.7773	0.137
Amotivation	5.869	11.954	5.712	14.243	6.063	15.462	0.419

The Pearson correlation analysis revealed significant relationships between the motivation subscales. The strongest correlations were found among the intrinsic motivation subscales: Intrinsic Motivation to Know showed a significant positive correlation with Intrinsic Motivation to Accomplish ($r = 0.809$, $p < 0.01$) and with Intrinsic Motivation to Experience ($r = 0.551$, $p < 0.01$). Similarly, the extrinsic motivation subscales also demonstrated significant correlations, particularly between identified regulation and introjected regulation ($r = 0.545$, $p < 0.01$). Regarding amotivation, a significant negative correlation was found with extrinsic motivation - external regulation ($r = -0.180$, $p < 0.01$).

Table 3. Correlation Matrix between Subscales of the Sport Motivation Scale (SMS-28)

	1	3	6	7	8	9	10	11	12
1. Training days	1	0.032*	0.048*	0.077	0.095	-0.091	-0.064	-0.034*	.186
3. Years of practice		1	-.122	-0.105	0.028*	0.016*	0.093	0.092	.146
6. Mean Intrinsic Motivation to Know			1	.809	.551	.450	.385	.161	0.109
7. Mean Intrinsic Motivation to Accomplish				1	.605	.535	.435	.242	0.114
8. Mean Intrinsic Motivation to Experience					1	.353	.282	0.095	.243
9. Mean Extrinsic Motivation Identified Regulation						1	.545	.514	-0.058
10. Mean Extrinsic Motivation Introjected Regulation							1	.598	-.119
11. Mean Extrinsic Motivation External Regulation								1	-.180
12. Mean Amotivation									1

(*) Correlation is significant at the 0.05 level (two-tailed).

Discussion

The present study aimed to examine the differences in intrinsic, extrinsic, and amotivation levels among Chilean rugby players based on their occupational status. Additionally, it sought to identify the relationships between various motivational dimensions and their implications for athletes' sports behavior.

In line with these objectives, the results are consistent with the Self-Determination Theory (SDT), which posits that different types of motivation have a differential impact on sports outcomes. In this study, Chilean rugby players exhibited high levels of intrinsic motivation, particularly in the subscale of motivation to experience sensations (Table 1: $M = 6.373$, $SD = 0.282$). This finding suggests that many players are driven by the pleasure of sensory experiences and the excitement derived from rugby, reinforcing the idea that more self-determined forms of motivation are associated with greater persistence in sports practice, as observed in previous studies (Kovács et al., 2022; Vlachopoulos et al., 2000).

In line with prior studies in competitive sports, we observed that extrinsic motivation identified regulation was positively associated with sports participation (Table 1: $M = 5.445$, $SD = 1.529$). However, unlike earlier research where extrinsic motivation was mainly associated with short-term behaviors or participation instability (Pelletier et al., 1995), in our study, this form of motivation also appears to be positively related to sustained sports behavior among Chilean rugby players.

This finding aligns with the work of Rodrigues et al. (2020), who found that autonomous motivation, particularly identified regulation, had a significant positive effect on sports persistence ($\beta = 0.35$, $p < 0.001$). Similarly to their study, where autonomous motivation predicted enjoyment and adherence to exercise, our results suggest that, in the context of competitive rugby, identified regulation may play a crucial role in fostering continuity and enjoyment, providing a more positive and sustained sports experience (Rodrigues et al., 2020).



Our findings demonstrate that the satisfaction of basic psychological needs, particularly autonomy and competence, is positively related to greater adherence to sports among Chilean rugby players. Players reporting high levels of intrinsic motivation to accomplish (Table 1: $M = 6.046$, $SD = 0.229$) showed greater continued participation in sports, suggesting that their sense of competence and achievement is linked to greater persistence in sports practice.

This finding is consistent with the study by Kang et al. (2020), who found that autonomy ($OR = 4.58$, $p < 0.01$) and competence ($OR = 1.91$, $p < 0.05$) are significant predictors of exercise adherence during the first six months of sports practice. In the context of competitive rugby, participants with a higher perception of competence and autonomy, as reflected in their intrinsic motivation to accomplish, show a similar tendency toward greater adherence and long-term commitment to the sport (Kang et al., 2020).

Regarding extrinsic motivation external regulation although this form of motivation showed lower levels compared to other forms of extrinsic motivation, its relationship with sports participation was not significant in this study (Table 1: $p = 0.137$). This result is consistent with findings from a study conducted among university students in Spain, which reported that external regulation had a weak and non-significant correlation with the number of hours dedicated to physical activity ($r = -0.019$). These findings suggest that, both among university students and competitive rugby players, external regulation may not play a crucial role in promoting long-term sports participation. Instead, more self-determined forms of motivation, such as intrinsic motivation and identified regulation, appear to have a greater impact on sustaining participation in physical activities across different contexts and populations (Sáez et al., 2021).

By incorporating this comparison, we highlight that while external regulation is often present, it may not be sufficient to foster consistent engagement in sports activities.

Finally, the results showed that amotivation was significantly associated with lower sports participation, although no significant differences were found between occupational groups for this variable (Table 1: $p = 0.419$). Rugby players with higher levels of amotivation ($M = 6.063$, $SD = 1.5462$ among unemployed participants) were more likely to experience emotional disengagement from rugby.

This finding is consistent with the results obtained in a study conducted in Serbia, which included 383 young athletes and found that those with high levels of amotivation were more likely to drop out of sports ($r = 0.42$, $p < 0.001$). In that study, amotivation was significantly related to perceptions of incompetence and lack of enjoyment, leading to emotional disengagement similar to that observed in our rugby players (Trbojević & Petrović, 2021).

Practical implications

The findings of this study have significant implications for sports management and rugby training. Firstly, the results on intrinsic motivation highlight the importance of creating a training environment that fosters enjoyment and personal satisfaction for athletes. Promoting intrinsic motivation, particularly focused on the pleasure of experiencing sensations and achieving goals, can enhance long-term adherence to the sport. On the other hand, the positive relationship between extrinsic motivation identified regulation and participation suggests that coaches should work on strengthening players' sense of purpose, helping them see how their participation in rugby contributes to their personal growth and the development of important skills. In contrast, the low levels of external regulation and its lack of impact on participation underscore the need to avoid strategies based solely on external rewards, such as praise or sanctions, as these may be insufficient to foster sustained engagement.

Limitations and future research

This study presents several limitations that should be considered when interpreting the results. First, the cross-sectional nature of the study prevents the evaluation of changes in motivation over time, limiting our understanding of how different types of motivation evolve with athletes' experiences. Future research could employ a longitudinal design to explore how motivation fluctuates throughout sports seasons and how it affects long-term performance and adherence. Additionally, the sample being limited to Chilean rugby players restricts the generalization of the findings to other cultural and sports contexts. Comparative studies in different countries and sports would be valuable to determine whether the motivational patterns observed in this study are consistent across other populations. Finally, it is suggested

to include other psychological variables (e.g., life satisfaction and emotional well-being) that could interact with motivation levels and provide a more comprehensive understanding of athletes' behavior. It is also important to acknowledge that the use of self-administered questionnaires may introduce response biases. However, to mitigate this limitation, participants received personalized emails explaining the study objectives and ensuring confidentiality, which aimed to enhance response accuracy and reliability.

Applications for rugby programs

Based on the findings, rugby programs should focus on promoting an environment that supports the development of intrinsic motivation. This can be achieved by allowing players to set and pursue their own goals within the sport, enhancing their sense of competence and autonomy, which are essential elements for a stronger emotional connection to rugby. Additionally, psychological support programs are recommended to address amotivation, particularly among players who experience high levels of emotional disengagement, such as unemployed participants in this study. This could include personalized counseling sessions or workshops to strengthen the sense of achievement and enjoyment in the sport. At the organizational level, coaches and sports managers should design motivational interventions that promote identified regulation by highlighting the broader personal and social benefits of rugby beyond immediate external rewards.

Conclusions

In conclusion, this study highlights the importance of intrinsic motivation and identified regulation as key factors in rugby adherence among Chilean rugby players, suggesting that fostering an environment that promotes personal enjoyment and individual growth can enhance long-term sports commitment. The findings also underscore the limited effectiveness of external regulation in sustained participation and the need to address amotivation to prevent sports dropout.

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