



Examining Personal, Social, and Environmental Influences on USA Rugby Players: A Socio-Ecological Approach

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Introduction

- In the United States, sports participation has been slowly rising in recent years, rebounding from the COVID pandemic (Sports & Fitness Industry Association, 2023).
- However, retention rates in athletic have been identified as a significant issue facing sports in the United States. (McElveen & Ibele, 2019).
- Within the sport of rugby, previous research has identified low levels of socialization as a key factor in individual's likelihood to exit the sport (McCann, 2015).
- In addition, many scholars have focused on injury-related barriers among contact sport players (e.g., rugby athletes).
- Purpose of study: To better understand how personal, social, and environmental factors influence retention rates in sport.

Theoretical Framework

- The Socio-Ecological Model (SEM) was used as the theoretical framework for examining USA Rugby retention.
- Individual level: Includes personal characteristics such as gender, education, income, and perceived competence.
- Social level: Focuses on interpersonal and community influences, including fit within rugby culture and sense of community.
- Environmental level: Considers structural factors like proximity to rugby facilities, which impact accessibility and sustained participation.
- Previous research using SEM has found that individual factors such as perceived competence, motivation, and enjoyment are significant predictors of sustained sport participation, particularly in team sports (Eime et al., 2013; Hu et al., 2021).
- Studies have also shown that social and environmental factors, such as peer support, cultural fit, and access to facilities, play a critical role in maintaining participation in sports like rugby (Casey et al., 2009; Eime et al., 2015).

Methodology

Data Source

- Secondary data were used from the Recruit and Retention Study in partnership with USA Rugby (Green & Chalip, 2015)
- Leavers N=816 (73.5% male; n = 568, 26.5% female, n=211)
- Independent variables: 7 individual-level, 3 social-level, and 1 environmental-level variables were used

Data Analysis

- linear regression analysis was conducted to examine predictors of participants' intention to play rugby again.
- Dependent variable: intention to play again 'no' (n=249), 'maybe' (n=240) and 'yes' (n=326).

Results of Hierarchical Regression Analysis

		Intention to Play Again			
		Standardized Coefficients (Beta)			
		Step 1	Step 2	Step 3	
Personal Factors	Gender (male=0)	-0.17	-0.30	-0.39	
	\$20k-\$39,999 (<\$20k = 0)	.026	.025	.024	
	\$40k-\$59,999 (<\$20k = 0)	.014	.015	.008	
	\$60,000-\$79,999 (<\$20k = 0)	-.034	-.025	-.027	
	\$80,000-\$99,999 (<\$20k = 0)	-.056	-.048	-.042	
	\$100k-\$120k (<\$20k = 0)	-.161**	-.157**	-.146**	
	>\$120,000 (<\$20k = 0)	-.163*	-.144*	-.128*	
	Vocational/Technical School (High School = 0)	.016	.006	.018	
	Some College (High School = 0)	.096	.088	.097	
	Bachelor's Degree (High School = 0)	.113	.099	.133	
	Master's Degree (High School = 0)	.031	.026	.050	
	Doctoral Degree (High School = 0)	-.045	-.055	-.048	
	Professional Degree (High School = 0)	-.057	-.064	-.045	
Other Education (High School = 0)	.001	.004	.010		
Social Factors	Perceived Competence	-.056	-.027	-.027	
	Personal Identification	-.011	-.017	-.017	
	Social Identification	.094*	.106*	.109*	
	Commitment	-.073	-.044	-.038	
	Tradition		-.142***	-.126***	
	Sense of Community		-.046	-.042	
	Subculture Fit		.044	.035	
	Environmental Factors	10-30 Mins (<10 mins = 0)		-.061	.106*
		31 Mins - < 1 Hr (<10 mins = 0)		-.026	.062
		1 Hr - 2 Hr (<10 minutes = 0)			.156***
		>2 Hours (<10 minutes = 0)			.101**
		F	3.889	5.676	5.042
		R ²	.083***	.102***	.125***
ΔR ²		.083	.020	.023	

Note: *p < .05, **p < .01, ***p < .001

Results

- Three linear regression models were run for this study.
- Model 1: included only personal-level factors
 - $F(18, 777) = 3.886, p < .001$
- Model 2: included personal-level and social-level factors
 - $F(3, 774) = 5.676, p < .001$
- Model 3: included all factors (personal, social, and environmental)
 - $F(4, 770) = 5.042, p < .001$
 - This final model explained 12.5% of the variance in intention to return.

Personal-Level Factors and Intention to Play Again

- Gender: Gender was not found to be a statistically significant predictor.
- Income: Participants earning \$100,000 - \$120,000 were less likely to report intention to return than those who made <\$20,000 ($\beta = -.146, p < .01$).
- Social identification: Higher social identification with rugby was associated with being more likely to play again ($\beta = .109, p < .05$).

Social-Level Factors and Intention to Play Again

- Family tradition: this was a statistically significant negative effect on intention to play ($\beta = -.126, p < .001$).

Environmental factors and Intention to Play Again

- ($\beta = .101, p < .01$) Distance: living more than 10 minutes but less than 30 minutes from the rugby club increased intention to play again, compared to living less than 10 minutes away.

Discussion & Conclusion

- This study supports using a mix of personal, social, and environmental factors to understand intention to continue playing rugby.
- **Personal-level factors:** Higher income was associated with decreased intent to return.
 - This may reflect increased concern over injury or professional demands.
 - Having a "tradition" of rugby participation in your family might also decrease participation if someone sees a loved one suffer from an injury.
- **Social-level factors:** Strongly linked to higher intention to return.
 - A sense of community and being known as a rugby player contributed positively to continued participation.
- **Environmental-level factors:** Revealed that players living farther from clubs reported higher intent to return.
 - This suggests a strong level of dedication amongst participants.
 - USA Rugby should still aim to increase accessibility by developing more clubs in high-density areas.
- Further research should explore how levels of player dedication, as moderating variables, might influence their intention to play again.
- It would also be valuable to examine whether these trends are consistent across contact vs. non-contact sports.