Enjoyment and behavioral intention predict organized youth sport participation and dropout

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Abstract
Background: Dropout from organized youth sport has significant adverse health implications. Enjoyment and behavioral intentions have consistently been linked with participation and dropout; however, few studies have investigated these links using a prospective design. This study explored whether enjoyment and intentions to continue predicted dropout behavior at 1-year follow-up. Methods: Questionnaires were completed by 327 regular sport participants (mean age = 13.01 y at baseline). After 1 year, 247 individuals (75.5%) continued participating in their main sport and 26 individuals (8%) dropped out. A hierarchical logistic regression model estimated the probability of dropout. In step 1, the following covariates were included: age, sex, competition level, perceived competence, parental support, coach-athlete relationship, friendship quality, and peer acceptance. In step 2, enjoyment and intentions to continue were included. Results: Step 1 indicated that age, parental support, coach-athlete relationship quality, and peer acceptance were significantly associated with dropout. Step 2 explained further variance in dropout, with both enjoyment and intentions inversely associated with dropout. Peer acceptance was the only covariate to remain significantly associated with dropout in step 2. Conclusions: Findings support the use of enjoyment and behavioral intentions as indicators of sport participation/dropout behavior and may aid the development of interventions aimed at preventing future dropout.

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Enjoyment and Intentions as Predictors of Dropout

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Abstract

Background

Dropout from organized youth sport has significant adverse health implications. Enjoyment and behavioral intentions have consistently been linked with participation and dropout; however few studies have investigated these links using a prospective design. This study explored whether enjoyment and intentions to continue predicted dropout behavior at one-year follow-up.

Methods

Questionnaires were completed by 327 regular sports participants ($M_{age}=13.01$ years at baseline). After one-year, 247 individuals (75.5%) continued participating in their main sport and 26 individuals (8%) dropped out. A hierarchical logistic regression model estimated the probability of dropout. In step 1, the following covariates were included: age, sex, competition level, perceived competence, parental support, coach-athlete relationship, friendship quality, and peer acceptance. In step 2, enjoyment and intentions to continue were included.

Results

Step 1 indicated that age, parental support, coach-athlete relationship quality, and peer acceptance were significantly associated with dropout. Step 2 explained further variance in dropout, with both enjoyment and intentions inversely associated with dropout. Peer acceptance was the only covariate to remain significantly associated with dropout in step 2.

Conclusions

Findings support the use of enjoyment and behavioral intentions as indicators of sport participation/dropout behavior and may aid the development of interventions aimed at preventing future dropout.
Enjoyment and Intentions as Predictors of Dropout

Organized sport is globally one of the most popular types of physical activity among youth, \(^1\) and has many immediate and long-term benefits across multiple domains (e.g., physical, psychosocial, financial). \(^2\) However, dropout from youth sport remains a major issue during adolescence, \(^3\) and predicts adverse outcomes (relative to continued participation in sport) including decreased mental health and well-being. \(^4,5\) Despite this, research exploring dropout is scarce and more studies are needed to better understand and prevent dropout.

Methodological challenges to researching sport dropout include the need for longitudinal designs with large samples that can be followed prospectively to identify individuals who drop out. This is particularly difficult when recruiting through sports clubs, as individuals who continue participating but change to another club (e.g., at a higher competition level) may be incorrectly classed as having dropped out of the sport completely. Thus, few prospective studies have been conducted, and most studies have been retrospective or have used proxy measures of dropout based on commonly identified reasons for withdrawal. \(^3,6\) Two frequently used proxy measures are enjoyment and behavioral intentions (e.g., \(^7,8\)), but the validity of these as predictors of participation and dropout behavior over time are not known. In this paper, we investigate whether enjoyment and behavioral intentions translate into sport participation behavior and can therefore be used as valid indicators within youth sport research.

Enjoyment in youth sport is considered the greatest predictor of commitment and lack of enjoyment is the most frequently cited predictor of dropout. \(^6,9\) Theories such as the Fun Integration Theory (FIT), \(^9\) provide a framework for understanding the determinants of enjoyment (or fun). For example, FIT proposes 81 determinants important to youth sport participation, which reflect 11 distinct dimensions and four fundamental underlying tenets:
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social fundamentals (includes team friendships, team rituals, and positive team dynamics),

internal fundamentals (includes learning and improving, trying hard, and mental bonuses),

external fundamentals (includes positive coaching, game time support, and swag), and

contextual fundamentals (includes practices and games). Many studies support the link

between enjoyment and sport participation; however the relationship has typically been

investigated retrospectively, where participants recalled their reasons for dropout after it had

occurred. Although time- and cost-efficient, these retrospective approaches are likely to be

inaccurate, biased (e.g., recall bias), and provide only partial insight into the temporal

associations between variables. Prospective studies examining the temporal associations

between enjoyment and dropout are limited. One available study reported a non-significant

association, but this study could not distinguish between individuals who dropped out of the

sport completely or continued participating at another club. The study therefore assessed

team-specific dropout, rather than sport-specific or complete dropout. Prospective research

that follows individuals who may discontinue playing for one club/sport but continue

participating for another club/different sport is needed to clarify whether enjoyment is a valid

predictor of sport participation in these instances.

In contrast to the FIT, the Theory of Planned Behavior (TPB) focuses on cognitive

antecedents of behavior. TPB centers on an individual’s behavioral intentions which are

determined by their attitude toward the behavior, subjective norms, and perceived behavioral

control. Consistent with the TPB, intentions have been shown to be powerful predictors of

behavior in physical activity contexts and thus are used as indicators of future sports

participation behavior. A small number of prospective studies found that intentions

predict dropout behavior in youth sport, however these studies focused on only one sport.

Further research is needed to determine whether these findings generalize across a range of

sports to support the use of behavioral intentions as a valid and reliable indicator within youth
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sport research. Furthermore, the studies did not consider enjoyment, and it would be valuable to compare how both affective and cognitive factors relate to dropout behavior.

The present study therefore examines whether enjoyment and behavioral intentions predict dropout behavior at one-year follow-up. Previous research indicates that the decision to dropout is complex and influenced by a number of factors in addition to behavioral intentions and enjoyment. For example, research suggests that dropout is particularly evident in females as they progress through adolescence, so age and sex are important factors to consider. Additionally, dropout may differ between recreational and competitive sport environments. Perceived competence is also considered a key determinant of youth physical activity with a recent systematic review by Crane and Temple indicating that a lack of perceived competence was the second most common intrapersonal variable associated with dropout. Crane and Temple further identified relationships with parents, coaches, and peers as prominent interpersonal predictors of dropout. This is supported by other research linking perceptions of parental support, quality coach-athlete relationships, peer acceptance, and quality friendships with commitment and continued participation.

We therefore hypothesize that age, sex, competition level, perceived competence, parental support, coach-athlete relationship quality, peer acceptance, and friendship quality will be associated with sport participation behavior. However, given lack of enjoyment is the most frequently cited reason for dropout, and behavioral intentions are powerful predictors of behavior in physical activity contexts, we expect enjoyment and behavioral intentions will predict continued participation/dropout over and above these variables. It is expected that individuals reporting greater enjoyment and a greater intention to continue in their sport will be more likely to continue participation and less likely to drop out.

Method

Participants and Procedure
A total of 327 regular sport participants (i.e., reported participation in organized sport at least once per week for at least three months or an entire season over the past year) aged between 11 and 15 years ($M_{age}$ = 13.03; 77 males, 250 females) were recruited from two private schools in Sydney, New South Wales, Australia. Participants responded to a battery of questionnaires (approx. 15-20 minutes) assessing sports participation, enjoyment, intention to continue, perceived competence, and perceptions of key social relationships during their regular Physical Education lesson (Time 1). Participants completed the same questionnaires one-year later (Time 2), with additional sport participation/dropout questions.

**Measures**

**Enjoyment.** The Enjoyment subscale from the Sport Commitment Model was used to measure participants’ levels of enjoyment in their main sport. Participants responded to four items (e.g., “Do you enjoy playing your main sport?”) on a 5-point scale ranging from 1 (not at all) to 5 (very much). The scale’s validity and reliability has been supported in comparable populations. Cronbach’s alpha in the current study was $\alpha = .96$.

**Intention to Continue.** One item was designed to measure the participant’s intention to continue in their sport (“I intend to participate in my main sport next season”). Participants responded on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

**Dropout.** Participants were asked to nominate their main sport at Time 1 and Time 2. If participants reported sports participation at Time 2, they were asked whether their current main sport was their main sport at Time 1. Participants who responded “no” then reported whether they discontinued participating in their Time 1 main sport completely, or they continued participating in their Time 1 main sport as a secondary sport.

**Covariates.** Participants’ age, sex, level of competition, perceptions of competence, parental support, coach-athlete relationship quality, friendship quality, and peer acceptance were included as covariates. Participants reported the competition level of their main sport as
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either basic (e.g., local club), advanced (e.g., regional representation), pre-elite (e.g., state
representation), or elite (e.g., national representation). Perceived competence was assessed
using the Athletic Competence subscale of the Self-Perception Profile for Children (α =
.78). Parental support was assessed using the Perceived Parental Support Scale (α = .78). Quality of the coach-athlete relationship was assessed using the Coach-Athlete Relationship
Questionnaire (α = .94). Perceived friendship quality was assessed using the Sport
Friendship Quality Scale (α = .90). Peer acceptance was assessed using the Social subscale
of the Self-Perception Profile for Children (α = .82).

Data Analysis Plan

For all variables, distributions were inspected and no data were removed. T-tests then examined differences between individuals who reported continued participation in their main sport and individuals who dropped out of their main sport. Hierarchical logistic regression models examined the association of Time 1 predictors with Time 2 dropout. In step 1, we modelled the covariates (age, sex, competition level, perceived competence, parental support, coach-athlete relationship quality, friendship quality, and peer acceptance) as predictors of drop out. In step 2, we added enjoyment and intention to continue. All analyses were performed using IBM SPSS statistics software (version 21).

Results

Descriptive statistics

At one-year follow-up, data were available from 273 sports participants (62 males, 211 females) aged 11 to 15 years at baseline ($M_{age} = 13.01, SD = .83$); the retention rate was 83.5%. At Time 2, 247 (90%; 54 males, 193 females; $M_{age} = 13.04$ years) continued participation (reported the same main sport at Time 1 and Time 2 or reported a new main sport at Time 2 and continued participating in their Time 1 sport as a secondary sport), whereas 26 (10%; 8 males, 18 females; $M_{age} = 12.73$ years) had dropped out (reported
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On average, participants who continued participation had participated in their main sport for 5.44 years \((SD = 3.01)\), mostly participated in team sports \((n = 153, 61\%)\), and predominately at a basic competition level \((n = 134, 54.3\%)\). Participants who dropped out had participated in their sport for an average of 3.23 years \((SD = 2.28)\) and mostly dropped out of team sports \((n = 14, 53.8\%)\) at a basic competition level \((n = 19, 73\%)\). Descriptive statistics for the study variables are presented in Table 1. Independent samples \(t\) test indicated individuals who dropped out of their main sport differed significantly from those who continued participation on the main study variables.

Hierarchical Logistic Regression

The results from the hierarchical logistic regression are presented in Table 2. Although all variables were correlated (Pearson’s \(r\) ranged from .16 - .58), collinearity diagnostics were computed and indicated no evidence of multicollinearity (minimum tolerance = .52; maximum variance inflation factor = 1.93). Step 1 indicated that age, parental support, coach-athlete relationship quality, and peer acceptance significantly predicted dropout behavior. With the additional inclusion of enjoyment and intention to continue, Step 2 had an improved overall model fit, a greater Nagelkerke R\(^2\) value, and a higher percentage of correct predictions. Step 2 indicated that greater enjoyment \((OR = .82; 95\% CI, .67 - .99)\) and intention to continue \((OR = .41; CI, .22 - .75)\) were inversely associated with dropout. Peer acceptance was the only covariate that remained significantly associated with dropout in the presence of intentions and enjoyment.

Discussion

The current study investigated whether enjoyment and behavioral intentions to continue in youth sport predicted participation and dropout behavior at one-year follow-up. As expected, after taking into account age, sex, competitive level, parental support, coach-athlete relationship quality, friendship quality, and peer acceptance, enjoyment and
behavioral intentions to continue were associated with a reduced likelihood of dropout. Therefore, as enjoyment and behavioral intentions to continue increase, the risk of dropout decreases. This suggests that in youth sport contexts where lifelong participation is a goal, youth sport stakeholders should prioritize enjoyment over other outcomes such as winning.

The present study is the first to link levels of enjoyment with participation and dropout behavior using a prospective design following individuals across clubs and sports, and addresses an important methodological gap in the literature. For example, previous research that recruited through soccer clubs, and could not follow individuals who changed to a club not involved in the study, found enjoyment did not predict team-specific dropout. However, the present results support findings of retrospective research and use of enjoyment as a proxy measure of sport-specific dropout. The results also support the use of behavioral intentions as proxy measures within cross-sectional research, and corroborate the findings of other prospective research that investigated the link between intentions and dropout in a single sport. Together, findings provide evidence of both affective and cognitive antecedents of dropout behavior, as proposed by the FIT and the TPB.

Although not a central aim of the study, peer acceptance was also associated with dropout behavior. The importance of peer acceptance for enjoyment and sustained participation is consistent with the FIT as three out of the eleven dimensions of fun (positive team dynamics, team friendships, team rituals) relate to peer relationships, with positive team dynamics rated the highest importance of any dimension. Given friendship quality focuses on relationships with one close friend in sport, the team/group focus of these social fun-dimensions may explain why it was not a significant predictor of dropout. Similarly, although the game time support dimension contains fun-determinants related to parents, these do not clearly map onto the items within the parental support scale. Additionally, previous research found positive peer relationships predicted continued participation when perceived mother
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relationship quality was low, suggesting parents may be less influential than peers in this context.\(^{11}\) Although the FIT identifies positive coaching as another important fun-dimension, the present study examined player perceptions alone, which may indicate that parents and coaches place more emphasis on the role of the coach than players. Chan, Lonsdale, and Fung further highlighted the influential role of peers during adolescence as they were found to be more important for athlete enjoyment and effort than parents and coaches.\(^{28}\)

The present findings could inform interventions aimed at preventing dropout by identifying at risk individuals based on enjoyment and future intentions, exploring the factors contributing to their reduced enjoyment levels and/or future intentions, and providing support or alternative options. For example, consistent with the FIT, where perceived competence is low, providing options such as skill development programs where individuals are taught new skills while being challenged to improve and learn from mistakes may aid competence development and in turn foster enjoyment and sustained participation.\(^9\) Similarly, if reduced levels of enjoyment and intention to continue reflect difficulties surrounding peer relationships, coaches or organizers might introduce team building activities or outings which can encourage the development of friendships and positive team dynamics. Furthermore, given the significant value of sport participation for long-term health and development,\(^2,4\) individuals could be encouraged to sample other sports that they might enjoy as sport-specific dropout may be a more positive outcome than withdrawal from all sport. The findings also have implications for future research as they support the use of enjoyment and intentions as indicators of future sport participation behavior when prospective designs are not feasible.

Limitations of the current study include the small number of individuals who dropped out (although the sample size was sufficient to observe small to moderate effects), the low percentage of males, and the high socioeconomic status of participants (i.e., students from private high schools); these factors limit the generalizability of findings. The high
socioeconomic status is particularly important because socioeconomic status is inversely associated with dropout; this may partially explain the low dropout rate observed in this study. Future research should measure and control for SES, use larger sample sizes from a range of socioeconomic positions, and include similar proportions of males and females.

Other study limitations include the high levels of enjoyment and intention to continue reported by the sample which may indicate a ceiling effect. Although past research supports the use of single item measures, additional items measuring intention to dropout may have allowed a clearer distinction between individuals who dropped out or continued participation.

Further, the social measures focused on specific and positive aspects of relationships. Future research might include broader measures or measures that look at negative influences, such as parental, coach, and peer pressure. Additionally, the present research only investigated sport-specific dropout. Research with larger sample sizes should investigate whether differences exist between individuals who dropped out completely and those who dropped out of their main sport to participate in a different sport. Research might also benefit from having participants report their reasons for dropout as there are many factors that could influence their decision, such as work and study commitments or injuries.

The present research found support for the use of enjoyment and intentions as predictors of participation and dropout behavior in organized youth sport. After taking into account relevant covariates, enjoyment and intention to continue were found to significantly predict sport participation behavior. Findings support previous research using enjoyment and intentions as proxy measures of future sport participation behavior. Additionally, findings justify future research and intervention strategies that target enjoyment and behavioral intentions to prevent dropout. Sport organizations and coaches should aim to establish enjoyable and supportive environments whilst monitoring sports participants’ enjoyment levels and future intentions throughout the season.
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References


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Table 1

Descriptive Statistics

<table>
<thead>
<tr>
<th>Scale</th>
<th>Discontinued Participation (n = 26)</th>
<th>Continued Participation (n = 247)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Enjoyment</td>
<td>3.75&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.09</td>
</tr>
<tr>
<td>Intention to Continue</td>
<td>3.54&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.24</td>
</tr>
<tr>
<td>Perceived Competence</td>
<td>2.42&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.65</td>
</tr>
<tr>
<td>Parental Support</td>
<td>3.86&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.82</td>
</tr>
<tr>
<td>Coach-Athlete Relationship Quality</td>
<td>4.73&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.24</td>
</tr>
<tr>
<td>Friendship Quality</td>
<td>3.86&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.64</td>
</tr>
<tr>
<td>Peer Acceptance</td>
<td>2.53&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.45</td>
</tr>
</tbody>
</table>

Note. Means in the same row with the different superscripts are significantly different from each other at *p* < .05.

Table 2.

Hierarchical Logistic Regression Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Step 1</th>
<th>Step 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
</tr>
<tr>
<td></td>
<td>(95% CI)</td>
<td>(95% CI)</td>
</tr>
<tr>
<td>Constant</td>
<td>16.97</td>
<td>5.03</td>
</tr>
<tr>
<td>Age</td>
<td>-.73&lt;sup&gt;*&lt;/sup&gt;</td>
<td>.31 .48 (.26-.88)</td>
</tr>
<tr>
<td>Sex</td>
<td>-.69</td>
<td>.55</td>
</tr>
<tr>
<td>Level</td>
<td>-.14</td>
<td>.28</td>
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<tr>
<td>Perceived Competence</td>
<td>-.07</td>
<td>.07</td>
</tr>
<tr>
<td>Parental Support</td>
<td>-.16&lt;sup&gt;*&lt;/sup&gt;</td>
<td>.08 .85 (.73-1.00)</td>
</tr>
<tr>
<td>Coach-athlete relationship quality</td>
<td>-.06&lt;sup&gt;**&lt;/sup&gt;</td>
<td>.02 .94 (.90-.97)</td>
</tr>
<tr>
<td>Friendship Quality</td>
<td>.01</td>
<td>.02</td>
</tr>
<tr>
<td>Peer Acceptance</td>
<td>-.14&lt;sup&gt;*&lt;/sup&gt;</td>
<td>.07 .87 (.76-.99)</td>
</tr>
<tr>
<td>Enjoyment</td>
<td>-.20&lt;sup&gt;*&lt;/sup&gt;</td>
<td>.10 .82 (.67-.99)</td>
</tr>
<tr>
<td>Intention</td>
<td>-.90&lt;sup&gt;**&lt;/sup&gt;</td>
<td>.31 .41 (.22-.75)</td>
</tr>
<tr>
<td>-2 Log likelihood</td>
<td>133.67</td>
<td></td>
</tr>
<tr>
<td>Model Chi-Square</td>
<td>37.03, df = 8, <em>p</em> &lt; .001</td>
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</tr>
<tr>
<td>Nagelkerke R&lt;sup&gt;2&lt;/sup&gt;</td>
<td>.274</td>
<td></td>
</tr>
<tr>
<td>Classification</td>
<td>90.7%</td>
<td></td>
</tr>
<tr>
<td>Accuracy</td>
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<td></td>
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</table>

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