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Community Size in Youth Sport Settings: Examining Developmental Assets and Sport Withdrawal

Grosseurs des collectivités et contextes sportifs des jeunes : Étude des atouts développementaux et retrait du sport

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Despite the popularity of youth sport programs, little research has examined the psychosocial benefits assumed to stem from involvement. Some studies suggest birthplace influences the development of elite athletes, but little work has examined other influences of community contexts. The purpose of this study was to examine relationships between young athletes' community size, developmental assets, and sport involvement. Current and recently withdrawn competitive swimmers (N = 181) completed the Developmental Assets Profile (Search Institute, 2004). Athletes from smaller cities had significantly higher developmental asset scores for support, commitment to learning, and boundaries/expectations. Further, community size was a significant predictor of withdrawal. Findings suggest community context should be given additional attention in youth sport literature.

Malgré la popularité des programmes sportifs pour les jeunes, peu d'études examinent les bienfaits psychosociaux associés à la participation. Parmi celles menées, certaines portent à croire que le lieu de naissance pourrait avoir une incidence sur le développement des athlètes d'élite. Par contre, peu de travaux se sont intéressés aux autres influences des contextes communautaires. Cette étude examine les liens entre la grosseur de la collectivité où habitent les jeunes athlètes, les atouts développementaux et la participation sportive. Les auteurs ont demandé à des nageurs compétitifs actifs ou et ayant récemment abandonné le sport (N = 181) de répondre à un questionnaire pour déterminer le profil des atouts développementaux (Search Institute, 2004). En ce qui a trait aux atouts développementaux, les athlètes habitant ces villes ont obtenu des cotes nettement supérieures en ce quant au niveau d'appui, à l'engagement à apprendre et aux attentes et limites. En outre, la grosseur de la collectivité semble constituer une

importante variable explicative d'abandon du sport. Ces résultats portent à croire que la documentation sportive axée sur les jeunes devrait s'intéresser davantage au contexte communautaire.

Introduction

Millions of children and youth worldwide participate in sports programs (De Knop, Engström, & Skirstad, 1996), with participation in organized sport often considered integral to development. However, little research has systematically examined the psychosocial benefits and life skills development assumed to stem from involvement in structured sport activities (Petitpas, Cornelius, Van Raalte, & Jones, 2005). Evidence also suggests that some participants actually report negative experiences in sport (Fraser-Thomas & Côté, 2009; Hansen, Larson, & Dworkin, 2003). Further, it has been suggested that negative sport experiences may contribute to high dropout rates during adolescence (Weiss & Williams, 2004), and for several decades, sport psychologists have identified youth sport dropout as an area of concern (Gould, Feltz, Horn, & Weiss, 1982).

Recent research in sport and developmental psychology has suggested that program context plays an important role in determining whether youth experience positive outcomes as a result of their sport involvement. The National Research Council and Institute of Medicine (NRCIM, 2002) recommends that youth programs foster physical and psychological safety, clear and consistent structure, supportive relationships, opportunities to belong, positive social norms, support for efficacy and mattering, opportunities for skill building, and integration of family, school, and community efforts. Mahoney and colleagues (Mahoney, Larson, Eccles, & Lord, 2005) suggest that situational factors such as human and material resources (e.g., staff training, staff turnaround) influence programs' overall success, while Hellison (1993) argues smaller groups or clubs, a low child to staff ratio, and supportive parents are most important when trying to facilitate positive youth development. Collectively, this work highlights that the context in which a sporting activity takes place can impact athletes' experiences.

In addition, many school and community organizations across the country (e.g., YMCA Canada, Thrive) have recently embraced the Search Institute's (2010) Developmental Assets framework as a means to facilitate positive development among youth. The framework is built on the foundation of individual potential, meaningful relationships, and ongoing learning and outlines 40 personal attributes classified in four external (i.e., support, empowerment, boundaries and expectations, constructive use of time) and four internal (commitment to learning, positive values, social competencies, positive identity) categories. These assets have been commonly termed the 'building blocks of human development', as their facilitation has consistently been found to play a protective, enhancement, and resiliency role in youth development (Benson, 1997). Despite this, little research has examined the development of these assets in sport settings.

Beyond the limited body of research that has examined the measures of context outlined above, community size has emerged as an area of inquiry with implications as a potential indicator of optimal development for young athletes. Numerous studies have highlighted an association between smaller community size and elite athlete development (Carlson, 1988; Côté, MacDonald, Baker, & Abernethy, 2006; Curtis & Birch, 1987; MacDonald, Cheung, Abernethy, &

Côté, 2009). For example, research examining Canadian and American athletes from the National Hockey League, National Basketball Association, Major League Baseball, National Football League, and Professional Golfer's Association shows a birthplace bias towards smaller cities, with over-representation of professional athletes in cities of less than 500,000 and under-representation in cities of 500,000 and over (Côté et al., 2006; MacDonald et al., 2009). A variety of explanations have been proposed to account for the 'birthplace effect', which include better quantity and quality of play and practice (i.e., increased access to space and infrastructure, more unstructured play, opportunities to sample, opportunities to play with different age groups), and better psychosocial environments (i.e., more supportive relationships, more intimacy, less prevalence of team selection, less conflict with peers) (see Côté, Baker, & Abernethy, 2007 for a review).

To date, research on birthplace effect has focused on sport performance outcomes (i.e., elite, professional, Olympic status) rather than other psychosocial measures of optimal youth development such as developmental attributes and continued engagement. As such, the purpose of this study was (a) to examine the developmental assets of adolescent athletes from small and large communities, and (b) to determine if a relationship exists between community size and adolescent sport dropout.

Method

Participants

Participants included current (N = 92) and recently withdrawn (N = 89) highly-invested adolescent competitive swimmers (i.e., engaged in a minimum of 10 hours of training per week). Swimmers were 12 to 19 years of age (M = 15.6, SD = 1.8), had 1 to 13 years of competitive swimming experience (M = 4.9, SD = 2.8), and competed at regional, provincial, and national levels. More females participated than males (N = 126 *versus* N = 55); however, this imbalance is representative of age group swimming in Canada (Swim Ontario, 2005). A two-year window since dropout was set as criteria to maintain consistency in the time period at which all participants were involved in swimming. T-tests and Mann-Whitney U tests indicated no significant differences between dropout and engaged athletes on demographic variables of age, gender, competition level, and community size.

Procedure

Participants were recruited from competitive swimming programs in different sized communities across Ontario and Nova Scotia, Canada. Given the challenges associated with recruiting dropout athletes (defined for the purpose of this study as athletes who were currently completely withdrawn from any competitive swimming program), the primary researcher developed an extensive list of potential participants through the assistance of head coaches, club managers, and personal contacts; dropouts were in turn mailed surveys and consent forms. Engaged swimmers were recruited in a similar manner, but given packages at swim practices or meets. Return rate was higher for dropouts than engaged athletes (i.e. 59% versus 32%) likely due in part to differences in distribution methods. Demographic information (i.e., age, gender, level, community of residence) was collected in the first part of the survey. Census data

from Statistics Canada (2001) was collected to operationalize the community size variable. Given considerable range of community sizes (i.e., 15,605 to 4,682,897) this variable was best represented dichotomously based on past Canadian and American research (i.e., Côté et al., 2006), using a cut off of 500,000 to distinguish participants from small (< 500,000; $N = 73$) and large (> 500,000; $N = 108$) communities. Information on developmental assets in each of the eight categories was collected through The Developmental Assets Profile (DAP; Search Institute, 2004). Samples from the 58-item questionnaire include: "I seek advice from my parents", "I care about school", "I resist bad influences", and "I overcome challenges in positive ways". Respondents rated the relevance of each statement on a four point scale (i.e., not at all or rarely = 0 to extremely or almost always = 3). Participants could score a maximum of 30 in each asset category; a total asset score was also created by summing swimmers' scores in the eight asset categories (i.e., total score out of 240). The validity and reliability of the DAP has been assured through field tests with 1,300 students in grades 6 to 12 (Search Institute, 2004).

Analyses

Pearson product-moment correlations were performed to consider the relationships among study variables. No evidence of multicollinearity was found (cutoff of $r = .80$). To address the first research question, a MANOVA was conducted to examine differences between adolescent swimmers from small and large communities in the eight developmental asset categories. Covariates of age, gender, and dropout/engaged status were included in the model. To address the second research question, a binary logistic regression was conducted to determine the influence of age, gender, developmental assets, and community size on the likelihood of dropping out or staying engaged in sport.

Results

Differences in developmental assets between swimmers from small and large communities are presented in Table 1. After controlling for age, gender, and dropout/engaged status, athletes from small communities scored significantly higher than athletes from large communities in three asset categories: support ($M = 25.2$ versus $M = 22.9$, $p < .01$) boundaries and expectations ($M = 25.0$ versus $M = 23.2$, $p < .01$), and commitment to learning ($M = 24.8$ versus $M = 22.6$, $p < .001$). In addition, differences between groups approached significance in the positive identity category ($M = 23.0$ versus $M = 21.2$, $p = .067$).

Table 1
MANOVA Examining Differences Between Athletes from Small and Large Communities

Asset Category	Small Communities		Large Communities	
	M	*(SD)*	M	*(SD)*
Support	25.2	*(4.0)*	22.9	*(4.5)**
Empowerment	25.2	*(3.9)*	24.3	*(4.1)*
Boundaries and expectations	25.0	*(4.4)*	23.2	*(4.0)**
Constructive use of time	19.0	*(5.4)*	19.2	*(5.7)*
Commitment to learning	24.8	*(3.7)*	22.6	*(5.1)**
Positive values	22.7	*(4.1)*	22.0	*(4.0)*
Social competencies	23.7	*(4.4)*	23.2	*(3.8)*
Positive identity	23.0	*(5.1)*	21.2	*(5.1)*

Note. Maximum score in each category is 30, * $p < .01$

Results from the logistic regression demonstrate that the full model containing all predictors was statistically significant, χ^2 (4, 181) = 41.22, $p < .001$, indicating that the model was able to distinguish between athletes that dropped out or stayed engaged in sport. The model explained between 20.8% (Cox and Snell R square) and 27.7% (Nagelkerke R square) of the variance in dropout rate, and correctly classified 67.2% of cases. As shown in Table 2, only two of the independent variables made a unique contribution to the model (age and community size). Because the odds ratios for age and community size were less than 1, we chose to reverse these to aid interpretation (i.e., 1 divided by the value). The strongest predictor of dropout was community size, recording an odds ratio of 4.74. This indicates that athletes who dropped out were almost 5 times more likely to come from bigger cities, when all other factors in the model were controlled. The odds ratio of 1.5 for age showed that as adolescent athletes aged, they were more likely to dropout.

Table 2
Logistic Regression Predicting Likelihood of Dropping out of Sport

	B	S.E.	Wald	df	*P*	Odds Ratio	95% C.I. for Odds Ratio	
							Lower	Upper
Age	-.41	.11	13.65	1	.00	1.50*	1.21	1.86*
Gender	.57	.38	2.25	1	.13	1.78	.84	3.73
Assets	.01	.01	1.01	1	.31	1.01	.99	1.02
Community Size	-1.56	.37	17.45	1	.00	4.74*	2.29	9.09*

Note. Variable odds ratios and CIs reversed coded.

Discussion

Adolescent swimmers from communities of less than 500,000 had significantly higher developmental asset scores than adolescent swimmers from larger cities in the categories of support, boundaries and expectations, and commitment to learning. Differences in support are consistent with past suggestions that smaller communities may offer more psychosocially supportive environments that are more intimate. In particular, sport programs in smaller communities may offer more opportunities for relationship development with coaches, parents, and peers, a greater sense of belonging, and a better integration of the program within the community (Côté et al., 2007; MacDonald et al., 2009; NRCIM, 2002). Support and competence have both been linked to motivation and commitment in sport (Côté, 1999; Weiss, Ebbeck, & Horn, 1997), which partially explains further differences between adolescents from small and large communities related to boundaries and expectations and commitment to learning.

Differences also approached significance in the positive identity category; this could be explained by the 'big fish, little pond effect' (Chanal, Marsh, Sarrazin, & Bois, 2005; Marsh, 1987). Originally found in academic settings, but more recently extended to sport settings, this effect suggests an athlete will have a different self-concept depending on his or her group of comparison. Specifically, talented athletes in smaller communities are likely to have a heightened self-concept compared to athletes of similar abilities in larger communities, since their measure of comparison is different (i.e., 'big fish in little pond' versus 'little fish in a big pond').

A unique contribution of this study was the finding that the odds of dropping out of swimming increased significantly for adolescent athletes that practiced their sport in big cities. There are a variety of possible explanations for this finding. First, given that dropout has been associated with a number of negative experiences and outcomes (e.g., lack of playing time, poor coach relations; see Weiss & Williams, 2004 for a review) sport contexts in larger communities may be more likely to foster these negative experiences and outcomes. Second, past work suggesting that a mastery motivational climate is associated with less comparison between athletes (Smith, Smoll, & Cumming, 2007) may help to

explain this finding. Specifically, sport programs in smaller communities may be more recreational and may focus more on skill and personal goals (i.e., mastery climate), while programs in larger cities may be more elite focused and reward performance (i.e., performance climate). Finally, the 'big fish little pond effect' (Marsh, 1987; Chanal et al., 2005) suggests that because youth from larger communities may have lower self-concepts than youth from smaller communities, they may be more likely to withdraw from sport. Also of interest is the finding that age was a significant predictor of dropout among adolescent athletes. As youth got older, (within the age range of 12 to 19) the odds of dropping out of competitive swimming increased significantly. This finding is consistent with past work highlighting that dropout rates increase in adolescence (Petlichkoff, 1996; Weiss & Williams, 2004).

Collectively, these results suggest that the 'birthplace effect', to date studied only in the context of elite athlete development (Carlson, 1988; Côté et al., 2006; Curtis & Birch, 1987; MacDonald et al., 2009), can also be extended to broader issues of personal development and dropout in young athletes. Specifically, smaller communities are not only more likely to produce elite athletes, but are also more likely to develop "well-rounded" adolescents that are more likely to stay involved in sport. As such, sport programmers and coaches have much to learn from sport programs in smaller communities; however, there is clearly a need for future research focused on what specifically it is about smaller communities that fosters positive outcomes related to performance, personal attributes, and persistence.

While past 'birthplace effect' research has focused primarily on factors related to the practice and play opportunities provided to athletes in smaller and larger communities (Côté et al., 2007), this study highlights additional attention is warranted to examine the more subtle psychosocial differences between programs in smaller and larger communities (i.e., intimacy, relationships building, motivational climate, competitive focus, 'big fish little pond' effect). Investigations should begin by tapping into specific mechanisms surrounding program context, such as program structures and designs, philosophies and mission statements, coach training and evaluation, and program and practice implementation strategies. Research on personal development and commitment may also need to extend beyond the programming level, to examine factors within the broader community context such as school programming, natural environments, and leisure time use (i.e., involvement in other activities, employment opportunities), given these community-level factors have been suggested to influence expertise development and dropout (Côté et al., 2006; MacDonald et al, 2009; Weiss & Williams, 2004). Such investigations will likely need to rely on a variety of innovative methodologies (e.g., document analysis, participant observation, coach and athlete journals) to capture a comprehensive understanding of how sport contexts within different sized communities may be fostering different outcomes. Finally, future studies should also aim to extend generalizability of current and past findings, by examining whether the 'birthplace effect' holds across age gender, country, and culture, for different sport types (i.e., individual and team) and different program types.

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