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Barriers and supports for female coaches: an ecological model

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A vast amount of literature exists pertaining to female coaches at all levels of competition from around the globe. Within this article, using Bronfenbrenner's ecological systems theory, the complex and multidimensional barriers that affect, impede or prevent females from seeking or remaining in coaching positions, in addition to factors that support and facilitate career advancement and retention, are summarized. Barriers and supports represented in the literature are organized from most proximal (individual) to most distal (socio-cultural) to the coach. We conclude by identifying gaps in the research. The model can be used as a reflective heuristic to educate about the numerous dynamic organizational and societal barriers and supports engaged with by female coaches. In doing so, productive coping strategies can be learned and solutions and policy changes generated in order to increase opportunities for female coaches and make the environment within which they work increasingly inclusive, positive and supportive.

Keywords: women; coaching science; social ecological model; sport

Introduction

Female coaches are a statistical minority in nearly all sports, at all levels, across the globe (Acosta & Carpenter, 2012; Division for the Advancement of Women of the United Nations Secretariat, 2008; Robertson, 2010). In the USA, this phenomenon exists despite record numbers of female sport participants, primarily due to the passage of the landmark federal legislation Title IX nearly 40 years ago. Here, although the number of collegiate female athletes increased from about 16,000 in 1972 to 180,000 in 2012, female head coaches of female intercollegiate teams decreased from 90% to 42.9% during the same time frame, while females coaching males remained uncommon and stable (~2–3%) (Acosta & Carpenter, 2012). Acosta and Carpenter report female coaches currently comprise 20% of all head coaches for athletes of both genders. Data from the interscholastic and youth levels are no better. LaVoi (2009) reported that in one Midwestern state, females infrequently occupied the head coach position for interscholastic sports (17.3%) and private youth soccer club teams (15.1%), in addition to being assigned more frequently to coach less competitive, less visible teams, and seldom coach boys.

For non-White women, a pattern of drastic under-representation as intercollegiate head coaches exists. Based on the data in the *2010 Racial and Gender Report Card: College Sport* (Lapchick, Hoff & Kaiser, 2010), African American men and women hold 7.2% of

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head coaching positions for National Collegiate Athletic Association (NCAA) D-I (large land grant institutions that award athletic scholarships) women's teams, a number that declines for D-II (4.8%) and D-III (3.9%) (small, mostly liberal arts institutions that do not grant athletic scholarships). Latinos and Asians occupy a similarly small percentage (2.9–1.3%) of all head coaching positions for women's teams. Similarly, the percentage of African American female head coaches in women's basketball (11.4%) is disproportionate to the percentage of African American female athletes who play basketball (51.5%) (Lapchick et al., 2010). National data for race and gender at the interscholastic and youth levels are currently unavailable.

In Canada, the gendered statistics and patterns are similar – male coaches outnumber females, females rarely coach males, the proportion of female coaches decreases within higher competitive levels, with females most often coaching 'feminine' sports (i.e. synchronized swimming, gymnastics) (Demers, 2009; Reade, Rodgers, & Norman, 2009; Robertson, 2010). North American data are not unique; researchers from around the world consistently indicate women are under-represented in coaching, especially at the highest competitive levels (Division for the Advancement of Women of the United Nations Secretariat, 2008; Fasting & Pfister, 2001). In the UK (Norman, 2008) and New Zealand (Leberman & Palmer, 2009), less than a quarter of all coaches are women and very few are appointed to coach the most elite teams.

The importance of having females represented in positions of power in sport, particularly as coaches, has been argued by many researchers (Acosta & Carpenter, 2012; Dixon, Warner, & Bruening, 2008; Everhart & Chelladurai, 1998; Hums, Bower, & Grappendorf, 2007; LaVoi, 2009; Marshall, 2001; Messner & Bozada-Deas, 2009). A dearth of female role models in visible positions can lead to many unfavourable outcomes for girls and women, including devaluation of abilities and self-perceptions (Lockwood, 2006), failure to realize sport career aspirations and potential (Hums et al., 2007), and an inability to challenge or resist negative stereotypes regarding gender and leadership. Based on the data, female athletes who were coached by males are less likely to pursue a career in coaching than females coached by females (Everhart & Chelladurai, 1998). In short, same-sex role models inspire others to pursue and emulate similar achievements (Lockwood, 2006), and can provide insight and advice for how to navigate a sometimes difficult environment.

Also well documented are the detrimental mental and physical health outcomes and career implications that female coaches often endure and experience as a result of their minority status in the workplace. These outcomes include, for example, alienation, feeling highly visible and subjected to scrutiny, having to over-perform to gain credibility, feeling pressure to conform to organizational norms, and enduring increased risk for gender discrimination in the forms of sexual harassment, wage inequities, and limited opportunities for promotion (Hatzenbuehler, 2009; Kanter, 1977a).

The overarching goal of this paper is to synthesize and summarize in model form the multitude of research on female coaches conducted over three decades. We seek to highlight both the complex and multidimensional barriers that affect, impede or prevent females from seeking or remaining in coaching positions, and the factors that help make coaching easier for females and facilitate career advancement and retention. In this paper, we also answer Abraham and Collins' (2011) call to 'cull' the coaching science literature that they argue is overdue. As sport sociologist Michael Messner writes, in the present paper we hope to 'point to the constraints, prejudices, and unique problems that women coaches face ... women coaches just aren't competing on a level playing field with the men' (2009, p. 52).

Many researchers have summarized in part and parcel this vast literature or highlighted works of some scholars. We seek to provide an inclusive and representative summary of the literature to the best of our abilities. To accomplish this, we employ Bronfenbrenner's ecological systems theory (EST) (1977, 1979, 1993), a model specifying that human development and experience is influenced by a variety of proximally located individual, interpersonal, organizational and socio-cultural environmental systems. A seminal theory, EST assists researchers who study human beings and their environments, and aids the organization of a diverse body of literature into a comprehensive understanding of a gender-related phenomenon: the statistical minority of female coaches. The purpose of this paper, then, is to capture the complexity, breadth, and depth of research pertaining to female coaches, thus organizing and highlighting the barriers and supports (or enablers) that may assist or impede the development and number of female coaches at all levels.

Application of the ecological systems model to female coaches

Models derived from the ecological systems theory are commonly used to examine and understand child development (Bronfenbrenner, 1977). In physical activity contexts, the ecological model forwards understanding of health-related behaviours (Richard, Gauvin, & Raine, 2011; Sallis, Owen, & Fisher, 2008) and children's physical inactivity during (Stanley, Boshoff, & Dollman, 2012) and after (Thul & LaVoi, 2011; Zhang, Solomon, Gao, & Kosma, 2012) school hours. Coaching is an inherently social process (Cassidy, Jones, & Potrac, 2004), and ecological models can be employed to assist in understanding the role of the coach both in the development of athlete expertise (Ollis & Sproule, 2007) and of a coaching philosophy (Renshaw, Davids, Shuttleworth, & Chow, 2009).

The ecological systems theory (EST) was chosen over other models to organize the literature on female coaches for a variety of reasons. Foremost, EST is a comprehensive developmental model. A coach is nested within a system of relationships and structures, and the EST model captures the complexity of multiple dynamic influences as each layer of the environment asserts a powerful impact upon the developmental trajectory of a coach, both personally and professionally. For coaches, barriers and supports are ever-changing over the life course. EST facilitates understanding the continuity and change of influential temporal factors such as duration and exposure of environmental affects over the life course. It can also shed light on issues of self-selection into and out of environments (Winkel, Saegert, & Evans, 2009) so that strategies and policies can be developed and broadened.

No model is without critique. Consequently, while EST broadens perspectives, it is limited in providing guidance on how to experimentally test interactions across levels due the large number of variables involved, many of which cannot be manipulated easily for control conditions (i.e. policy changes, gender stereotypes) (Sallis et al., 2008). However, an ecological perspective helps remove blaming the individual (e.g. women just don't want to coach) (Sallis et al., 2008) by qualitatively identifying constructs and processes (i.e. direct, moderator, mediator) (Winkel et al., 2009) that shape behaviour and career trajectories. Additionally, due to its comprehensiveness, an ecological approach can be useful in mobilizing community assets, fostering collaboration and partnerships, and empowering community members (Richard et al., 2011). For these reasons, EST was chosen over competing models.

Bronfenbrenner (1977) identified four levels in the EST social-ecological model that influence human experience and behaviour. Modifications to Bronfenbrenner's original work by Sallis and colleagues (2008) improve utility and application of the model in physical activity contexts, and this modified version is presented in Figure 1.

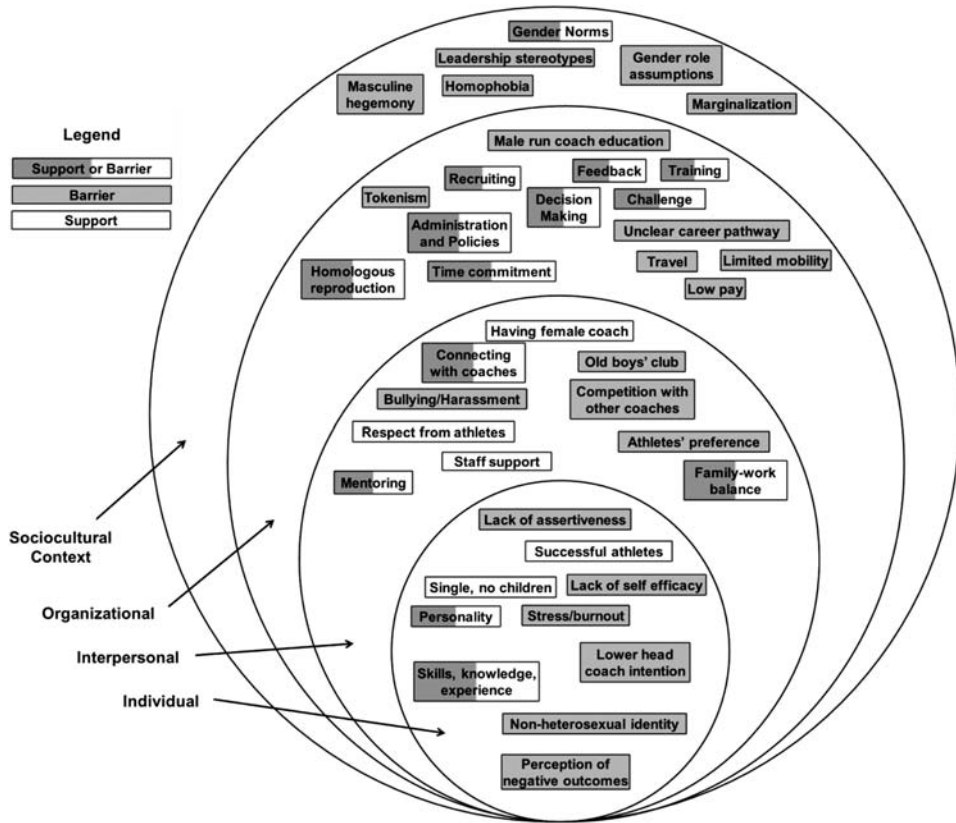


Figure 1. An ecological model of barriers and supports for female coaches.

The first, most proximal level, *the individual/intrapersonal level*, includes personal, biological and psychological factors such as cognition, emotions, beliefs, values, expertise and personality of the individual. For example, an individual barrier here might be a lack of self-efficacy, meaning a coach doesn't believe she is competent enough to coach. The next less proximal level, *the interpersonal level*, is comprised of social-relational influences such as colleagues, a significant other, friends and parents. Settings immediate to the individual including home, school or the workplace are also included in this level. An example of an interpersonal barrier could include a lack of support at home from a significant other. The third level, *the organizational/structural level*, is defined by organizational policies, job descriptions, professional practices, use of space, and opportunities (or lack thereof). For example, the travel required of a coach for recruiting and competitions may interfere with family caretaking responsibilities (indicating a dynamic interplay with interpersonal level), and lead some women to choose between coaching and parenting. The fourth, and most distal, level is the *socio-cultural level*, which encompasses norms and cultural systems that indirectly affect female coaches. For example, gender stereotypes associated with traditional femininity and leadership may affect how an individual female behaves within the coaching role. All levels are not mutually exclusive and intersect in multiple and dynamic ways.

Organizing the barriers and the supports related to female coaches coherently within a social-ecological model has potential to create social and personal change in a variety of

ways. First, a comprehensive model helps researchers identify gaps in existing literature. Second, a complex understanding can facilitate collaborative partnerships, strategy and policy development to address the scarce numbers of female coaches. Third, the model helps illuminate that individuals operate in multiple environments that radiate and influence each other; therefore, recruitment and retention of female coaches must be approached with the same complexity. Fourth, for each coach, personal leverage points exist that vitally influence health, well-being, and valence of experience. Locating leverage points within the model may help prevent coach burnout, improve physical and mental health in and through a career trajectory, and help check attrition. Fifth, the model can be used as a heuristic to mobilize and educate coaches and stakeholders about the numerous dynamic socio-organizational barriers and supports so that productive coping strategies can be learned and solutions generated. Application of coaching science that holds most promise for improving praxis and understanding of the social complexities of coaching, resides in illuminating the political and sociological/social stances (Abraham & Collins, 2011). This project is a point on the journey to illuminate these complexities in the hope of creating change.

Methodology

The research design for this project was modelled on similar literature reviews in sport and physical education (Greendorfer & Rubinson, 1997; Lenskyj, 1997; Silverman & Skonie, 1997) and coaching science (Gilbert, 2002; Gilbert & Trudel, 2004). Unlike Gilbert and Trudel's exhaustive review of coaching science, the goal here was to provide a purposeful, detailed, descriptive and representative picture of the barriers and supports for female coaches in the literature. We invite colleagues to expand, extend and critique this model with additional and emerging research. In that sense, we view the model as a collective, working one that will inform, guide and drive future research, interventions and change efforts. We conducted our review in two phases.

In Phase I, searches delimited to English language publications, using the keywords 'gender', 'female' or 'woman', 'coaching', 'coach', and 'sport coach' were input into the computerized databases of SPORTDiscus, PsychINFO, ERIC and the Physical Education Index. Given prior indication that coaching research emerged in the early 1970s (Gilbert, 2002), coupled with growing concern about female coaches after the passage of Title IX in 1972, we limited the search timeframe to 1975–2011. Papers in scientific peer-reviewed journals, reports and research-based edited books were included. Gilbert and Trudel (2004) outline valid reasons for excluding doctoral dissertations, masters' theses, conference proceedings and popular press books – these types of sources were similarly excluded for the purpose of this paper. Studies varied in size and design from qualitative studies with a small number of participants to large survey-based quantitative studies. In Phase II, sources more pertinent to this study ($n = 251$) identified by the search were acquired. Abstracts of these citations were subsequently read and, if necessary, a more in-depth reading of the source was conducted. Sources that included female coaches but did not specifically discuss supports or barriers in relation to them, or sources that did not have female coaches as a primary focus, were excluded ($n = 167$) by consensus of both authors. The remaining sources ($n = 83$) included peer-reviewed articles ($n = 74$), books/book chapters ($n = 7$), and seminal reports ($n = 2$) which were put into a working reference list.

All texts were thoroughly read and reviewed. The findings related to barriers and supports were then placed within the four levels of the ecological model in theoretically consistent ways using a coding sheet. Barriers were operationalized as factors that

constrained, impeded or prevented females from seeking or remaining in coaching positions, made coaching careers difficult to negotiate, and contributed to coaches quitting the profession. Supports were operationalized as factors that helped initiate, sustain, retain and/or advance a coaching career.

Reliability

Similar to the process used by Gilbert and Trudel (2004), three aspects of reliability were addressed: (1) article inclusion, (2) coder training, and (3) model coding. Article inclusion (primary focus on female coaches, barriers/support, English, 1975–2011) was agreed upon and addressed by both authors in Phase II. To ensure coding accuracy, the primary coder was trained by an expert in structural coding and ecological systems theory. A random sample of 10% of the articles ($n = 8$) were coded by both authors. Inter-coder reliability met an acceptable level (88%). Discrepancies were discussed until agreement was reached and consensus was obtained. The subsequent remaining sources were coded by one author. The co-author reviewed each ecological placement and each barrier and support. Again, where discrepancies were found to exist, they were collectively discussed to consensus, resulting in minor modifications.

The ecological systems model and female coaches

Barriers and supports for female coaches

The following section summarizes the barriers and supports experienced and reported by female coaches at each level of the ecological model. While each barrier or support was deductively placed in one level of the ecological model in theoretically consistent ways, such placements we realize are arguable. However, the ecological model inherently denotes and represents the complex, dynamic interplay between factors within and between all ecological levels. For example, individual agency and interpersonal relationships are influenced by social structures and systems around them. We start with a review of the most proximal level to the coach and progress systematically to the level most distal to the coach. Figure 1, therefore, is an accessible summarized visual representation of the ecological barriers and supports discussed herein.

Individual level

Supports

Female coaches cited interest in a coaching career, the stimulation of the job, and the continuation of involvement in sport as reasons for pursuing and staying in a coaching career (Demers, 2009; Dixon et al., 2008; Weiss, Barber, Sisley, & Ebbeck, 1991; Weiss & Stevens, 1993). For youth sport mother-coaches, the opportunity to spend quality time with children, be a role model, and help their child(ren) develop ‘positive life skills’ contributed to a desire to coach (Leberman & LaVoi, 2011). Furthermore, skills and sports knowledge acquired as an athlete, through educational means or through coaching experiences were found to support female coaches, and helped them to feel confident and persevere (Demers, 2009; Inglis, Danylchuk, & Pastore, 2000; Messner, 2009; Weiss et al., 1991; West, Green, Brackenridge, & Woodward, 2001). Youth sport mother-coaches also cited possession of ‘kids-knowledge’ (Messner, 2009, p. 19) and transference of mothering skills such as patience, positivity and encouragement as helping their perceived coaching effectiveness (Leberman & LaVoi, 2011).

Female coaches compared to male coaching peers were more likely to have earned an undergraduate degree or higher, and accrued elite level competitive experience (Reade et al., 2009). It was also found that females who have time management skills (Bruening & Dixon, 2007), communication skills (Weiss et al., 1991), and work-mother-coach balance (Leberman & LaVoi, 2011) possess valuable supports. Additionally, factors such as being single and not having children made negotiating work–family balance easier and buttressed women’s persistence to coach (Demers, 2009; Reade et al., 2009). Performance success of the team or athletes, often attributed to the coach, also helped advance a female’s coaching career and was found to bolster confidence both at the individual and organizational levels (Robertson, 2007; West et al., 2001).

Barriers

Given that females occupy a minority of coaching positions at all levels, being of the female sex – an immutable and inherent variable – is often a barrier for women who coach or want to coach. Self-perceptions of female coaches often act as a barrier, as some women have low self-efficacy, low perceived confidence and competence, and generally believe they are not qualified for the position, even when they possess a high degree of athletic and coaching capital (Kilty, 2006; LaVoi & Becker, 2007; Weiss et al., 1991). For example, elite level female coaches with extensive experience indicated they would not apply for a job unless they had all of the required accreditations, while male coaches did not hesitate to apply if they had experience they thought could make up for a lack of accreditation through experience (Greenhill, Auld, Cuskelly, & Hooper, 2009). While experience, skills and knowledge were supports for some coaches, females who believed they lacked athletic or coaching experience, knowledge, sports or management skills, perceived these factors as barriers (Demers, 2004, 2009; Hasbrook, 1988; Marshall, 2001; Messner, 2009; Weiss et al., 1991). Barriers also encompassed perceived lack of assertiveness (Allen & Shaw, 2009; Kilty, 2006) and enactment of a leadership style not congruent with an expected style (Kerr & Marshall, 2007; Shaw, 2007; Weiss et al., 1991).

Coach perceptions of the requirements to perform the job optimally, as well as possible negative outcomes for choosing to be a coach, emerged as barriers. Females cited the overall time commitment required for the job (Demers, 2009; Weiss et al., 1991; Weiss & Stevens, 1993; Wilson, 2007), time required to connect with other coaches (Allen & Shaw, 2009), and travel time required for games and recruiting (Hasbrook, 1988; Wilson, 2007) as further common obstacles. Elite level coaches reported the time demands of coaching greatly strained their personal lives and that family responsibilities negatively affected career trajectories and development (Greenhill et al., 2009). In a study conducted by Reade et al. (2009), compared to male coaches, females were found to occupy a greater proportion of coaching jobs with irregular time commitments (i.e. part-time, volunteer), and were significantly less likely to have full-time coaching positions.

Other barriers on the individual level included negative perceptions of pursuing or staying in a coaching career, such as feeling underpaid and undervalued (Greenhill et al., 2009), limited upward career mobility (Cunningham & Sagas, 2002; Knoppers, Meyer, Ewing, & Forrest, 1991), and a lack of challenge (Knoppers et al., 1991). Relatedly, some females perceived fewer positive outcomes would accrue when moving from assistant to head coach (Cunningham, Doherty, & Gregg, 2007; Cunningham, Sagas, & Ashley, 2003; Sagas, Cunningham, & Pastore, 2006; Sagas, Paetzold, & Ashley, 2005). For some coaches, the stress or burnout (Bradford & Keshock, 2009; Bruening & Dixon, 2007; Kelley, 1994; Marshall, 2001; Weiss & Stevens, 1993), the perceived need for perfectionism

(Kilty, 2006), and/or the need to hide aspects of one's identity, such as sexual orientation (Kauer, 2009; Kerr, 2009; Wilson, 2007), were also barriers. Likely due in part to the perception of a plethora of barriers, compared to male coaches, females stated that they had less intention to become a head coach (Sagas & Cunningham, 2005).

Interpersonal level

Supports

In general, support from any social agent is facilitative of a female's coaching career. Specifically, support from and developing a sense of relatedness with coaching colleagues was often cited as beneficial and critical to the quality of the coaching experience – especially coupled with opportunities to receive feedback from other coaches (Allen & Shaw, 2009). Female coaches cited having an informal network of other female coaches (i.e. a 'Girls' Club') helped many persist in their career (Allen & Shaw, 2009; Greenhill et al., 2009; Knoppers, Meyer, Ewing, & Forrest, 1993; West et al., 2001), while long-term mentoring from males was also identified as helpful (Avery, Tonidandel & Phillips, 2008). Messner (2009) called the process of male recruitment, support and mentoring of female coaches 'gender sponsorship', which aided development of confidence and knowledge. Support from assistant coaches or other staff was similarly cited as being helpful (Bruening & Dixon, 2008; Robertson, 2007).

Interactions with and respect from athletes (Weiss et al., 1991), and preference for a female coach by female athletes (Fasting & Pfister, 2001; Medwechuk & Crossman, 1994) supported female coaches generally. Having support from a partner or spouse, peers and friends was given in several studies as helpful (Bruening & Dixon, 2007, 2008; Demers, 2004; Robertson, 2007; Thorngren, 1990; Weiss et al., 1991; Wilson, 2007). Encouragement from parents was additionally very important as some coaches interpreted parental support as meaning that coaching was considered a 'normal' career (Dixon et al., 2008). Although many female athletes professed to prefer male coaches, having a female coach increased the likelihood that such athletes would consider coaching as a subsequent viable career option (DiBrezzo, Lirgg, & Smith, 1994; Everhart & Chelladurai, 1998).

Barriers

Many researchers have identified interpersonal barriers for female coaches, comprised in part by a general perceived lack of support from social agents or negative interactions. For example, for women with a family, a lack of encouragement and/or cooperation from a spouse or partner was often cited in this respect (Thorngren, 1990). The barrier most commonly mentioned by coaches across all competitive levels was balancing work and family (Bruening & Dixon, 2007; Demers, 2004; Dixon & Bruening, 2007; Greenhill et al., 2009; Kerr & Marshall, 2007; Kilty, 2006; Knoppers, 1987; Leberman & LaVoi, 2011; Marshall, 2001; Pastore, 1991; Weiss & Stevens, 1993; Wilson, 2007). For youth sport female coaches who worked outside the home and who were usually volunteers, a negotiation of the work–mother–coach role triad proved challenging, and inhibited many from considering and accepting a more committed coaching position (Leberman & LaVoi, 2011).

Outside of family-related barriers, lack of support or engagement from colleagues were given as significant obstacles to overcome by female coaches. Isolation from other coaches (Allen & Shaw, 2009; Kerr, 2009; Knoppers et al., 1993; Thorngren, 1990; Weiss et al., 1991) also contributed to a perceived lack of support by fellow coaches. Many female coaches then felt that having an informal or formal mentor relationship would be helpful but

very few reported actually securing a mentor (male or female) or being a part of a girls' network (Allen & Shaw, 2009; Greenhill et al., 2009). Over 20 years ago, West & Brackenridge (1990) reported a 'Girl's Club' network as 'non-existent' – a phenomenon that still appears to be the case. Consequently, the existence and strength of Old Boys' Clubs was one of the most frequently cited barriers by female coaches (Allen & Shaw, 2009; Demers, 2004; Greenhill et al., 2009; Kerr & Marshall, 2007; Knoppers, 1987; Knoppers et al., 1991; Marshall, 2001; Messner, 2009; Shaw & Allen, 2009; Theberge, 1993; West et al., 2001). Subsequently, the female youth sport coaches in Messner's study (2009) reported often feeling excluded by male colleagues. In addition, female assistant coaches believed that short-term mentoring by a male head coach (Avery et al., 2008), a lack of female mentors (Kilty, 2006), and overall lack of female role models for emerging coaches (Reade et al., 2009) led to fewer career opportunities and a lack of upward mobility for them.

The quality of interpersonal interactions was also seen as a deterrent. Many felt competition between coaches for a limited number of jobs decreased the likelihood of females securing a coaching position (Allen & Shaw, 2009). In this respect, some coaches also reported bullying and harassment from other coaches (Kerr, 2009; Messner, 2009). Furthermore, many youth sport female coaches felt male colleagues, parents and referees placed them under constant scrutiny, often challenged their authority, intimidated them through use of loud voices, and talked and behaved in sexist ways. This unsurprisingly made many female coaches feel 'unwelcome, not taken seriously, and even humiliated' (Messner, 2009, p. 68). Similarly, Norman (2011, p. 14) reported female coaches at a range of performance levels were routinely 'exposed to sexist and homophobic language and belittling experiences', mostly from White male colleagues.

Negative interactions with athletes was also given as a barrier, which included a lack of respect for female coaches (Weiss et al., 1991) and an open preference for male coaches (Griffin, 1998; LeDrew & Zimmerman, 1994; Leung, 2002; Medwechuk & Crossman, 1994; Norman, 2011; Parkhouse & Williams, 1986; Theberge, 1993; Wilson, 2007). It appears as if the preference for male coaches is a more contemporary development, as Whitaker and Molstad (1985, p. 562) found 'no significant expression of preference regarding gender of coach' at both the high school and college level. Yet, 10 years later, Griffin (1998, p. 84) argued that this preference (among athletes for a male coach) reflected a 'lethal mix of sexism and homophobia'. Messner asserts:

These informal interactions that women coaches experience – mostly with male coaches – are the building blocks of the glass ceiling that limits the numbers of women coaches, especially in the older kids' teams. (2009, p. 67)

Scholars often use the 'glass ceiling' as an evocative metaphor for organizational and structural barriers, and forms of discrimination women face in the workplace (Barreto, Ryan, & Schmitt, 2009). Yet, other scholars prefer the term 'labyrinth' to further illuminate the complex interplay of barriers (Eagly & Carli, 2007). Based on the literature outlined thus far, we feel the labyrinth metaphor is more accurate in describing the often unknown and unforeseen barriers females face in pursuing and remaining in a coaching career.

Organizational/structural level

Supports

The organizational/structural level is characterized by fewer supports than levels more proximal to the female coach. Nevertheless, a variety of organizational supports from respective departmental levels were perceived as facilitative (Bruening & Dixon, 2008;

Robertson, 2007). Specifically, organizations that tended to be the most successful in hiring and retaining female coaches had recruiting strategies aimed specifically at females (Demers, 2009), flexible hours (Bruening & Dixon, 2007; Robertson, 2007), and family-friendly policies (Allen & Shaw, 2009; Bruening & Dixon, 2007, 2008; Robertson, 2007; Shaw & Allen, 2009; Wilson, 2007). Organizations that created a climate supportive of family commitments (Allen & Shaw, 2009) and had family-friendly policies that covered childcare costs, that compensated for family members or babysitters to accompany the coach on road trips, and provided paid maternity leave, were (unsurprisingly perhaps) more likely to attract and retain high-level female coaches (Robertson, 2007).

Mothers of youth athletes indicated that more females would coach if youth sport organizations actively recruited and invited females to coach, convinced women that mothering skills translated to coaching, and included a co-coaching option so commitment and time could be reduced (Leberman & LaVoi, 2011). In addition, organizations that recognized coach efforts and provided financial assistance for professional development (Allen & Shaw, 2009), especially female-only coach education run by females (Demers, 2009), and offered proactive direct feedback and recognition about coaching performance (Allen & Shaw, 2009; Inglis et al., 2000; Knoppers et al., 1991), participatory decision making (Inglis et al., 2000), and mentoring opportunities (Inglis et al., 2000; Werthner, 2005) were also found to be appealing to potential and veteran female coaches. Finally, an organizational structure that included a female in a position of power increased the likelihood a female coach would be hired (Acosta & Carpenter, 2012; Greenhill et al., 2009; Sagas, Cunningham, & Teed, 2006).

Barriers

Barriers outnumbered supports at the organizational/structural level as, in general, the male-dominated and masculine nature of sport spaces often made women 'feel like intruders' (Messner, 2009). The absence of the supports mentioned (reflexively in some cases), not surprisingly, were also perceived as barriers. For example, coach education run by men discouraged many potential female coaches from partaking in them and coaching per se (Demers, 2009). Relatedly, further organizational barriers for female coaches included a lack of opportunity for formal training and development (Allen & Shaw, 2009; Shaw & Allen, 2009), time off and/or compensation for attending courses (Greenhill et al., 2009), a deficiency of structured and available mentoring opportunities (Allen & Shaw, 2009; Kerr & Marshall, 2007; Kilty, 2006), and a lack of family-friendly policies (Kerr & Marshall, 2007; Robertson, 2007). Additionally, many women reported disinterest in coaching or pursuing upward mobility because of limited incentives and low pay (Demers, 2004; Kerr & Marshall, 2007; Knoppers et al., 1991; Marshall, 2001; Werthner, 2005) coupled with the instability of the job (Kerr & Marshall, 2007).

Philosophical differences around organizational policies, processes or values posed barriers for some coaches (Knoppers et al., 1991), such as an overemphasis on winning by the organization (Demers, 2004; Weiss et al., 1991). Many female coaches perceived limited opportunities to affect change or give input that influenced decision making or policy development (Allen & Shaw, 2009; Bruening & Dixon, 2007; Inglis et al., 2000; Knoppers, 1987). A lack of bidirectional communication – between coach and organization or administration – pertaining to nearly all subject matter appeared to be a further limitation for job satisfaction and efficiency. While some female coaches felt constrained in terms of not being able to provide organizational input, many also felt they did not receive any constructive feedback, guidance, direction or assistance from organizations pertaining to

role clarity or the administrative tasks coaches were expected to take on (Allen & Shaw, 2009; Weiss et al., 1991; Weiss & Stevens, 1993). When coaches did something well, they reported seldom receiving any positive feedback or recognition, which in turn undermined their intrinsic motivation for coaching (Allen & Shaw, 2009; Greenhill et al., 2009; Knoppers, 1987; Inglis et al., 2000; Thorngren, 1990).

Many coaches felt organizational recruitment, hiring and retention efforts did not support female coaches. Coaches at all levels perceived that administrators thought female coaches were less competent than male counterparts and, therefore, were reluctant to hire women (Demers, 2004; Hasbrook, 1988; Kamphoff, 2008; Kilty, 2006; Knoppers, 1987; Knoppers et al., 1991; Theberge, 1993; Thorngren, 1990). In her line of research, Norman (2010a, 2010b, 2011) consistently documented the systematic undervaluing of female coaches' skills, exclusion from elite positions, and not being taken seriously when in top positions. Some researchers uncovered that indeed many organizational recruitment and hiring methods appear to discriminate against women (Greenhill et al., 2009; Hasbrook, 1988; Kerr & Marshall, 2007; Marshall, 2001).

In many instances, female coaches reported and data supported the occurrence of homologous reproduction – the process by which the dominant group systematically reproduces itself by the hiring and promoting of others similar to them (Kanter, 1977a). It is well documented that males occupy a majority of positions of power in all sports at all levels, a fact that is problematic regarding the hiring of female coaches. In many studies, researchers have reported homologous reproduction whereby male administrators hired male coaches more frequently than female coaches (Kilty, 2006; Knoppers et al., 1991; Reade et al., 2009; Sagas et al., 2006; Stangl & Kane, 1991). Occupational sex segregation in the forms of marginalization and tokenism also constrained many female coaches.

Marginalization occurs when a group of people are denied access to, not allowed to participate in, or have limited access to some part of society or are not granted opportunities for development (Allison, 2000; Kanter, 1977b). Tokenism, according to Kanter (1977b), is when a group of individuals – such as female coaches – comprise less than 15% of the population. Tokenism and the marginalization of female coaches has been uncovered by US researchers at the youth sport (LaVoi, 2009), interscholastic (Kane & Stangl, 1991), and intercollegiate sporting levels (Sagas et al., 2006). Female coaches often experience marginalization through occupational sex segregation by being consigned to coach younger age groups, less competitive recreational levels, or less prestigious sports, or being assigned less visible roles (i.e. team manager versus head coach) (LaVoi, 2009; Messner, 2009; Reade et al., 2009). Similar to the USA, where although very few women coach males at any competitive level ($\sim \leq 2-3\%$), opportunities for males to coach females has risen dramatically (Acosta & Carpenter, 2012), in Canada, Reade and colleagues (2009) reported that males are afforded more and higher quality coaching opportunities than are females.

Based on the data, it is clear males dominate the formal organizational structure of sport. However, Messner (2009) argued the informal structure or 'how things *really* work' – the 'unwritten rules' and 'secret language' – is also controlled by males and is perhaps more important in helping female coaches survive and thrive. At the intercollegiate level, females who had left coaching cited that the gender hierarchy of intercollegiate athletics influenced their departure (Kamphoff, 2010). In addition to gendered discriminatory organizational practices, many female coaches also experienced racial or sexual discrimination, which was often ignored by the organization (Cunningham & Sagas, 2003; Greenhill et al., 2009; Kamphoff, 2008; Kerr, 2009; Kerr & Marshall, 2007). Similarly, Black female coaches report role limitations to 'designated recruiting' positions making them feel like tokens (Borland & Bruening, 2010), and limiting career ascendancy. In summary, organizational

and structural policies, practices and systems appear to support and sustain male coaches while simultaneously marginalizing women.

Socio-cultural level

Supports

The only (and arguably tentative) support for female coaches at the *socio-cultural level* was related to gender ideology. The research here indicated that many believe women are more effective coaching children and at lower levels of competition due to their inherent caring and nurturing demeanour, described previously as ‘kids-knowledge’ (Messner, 2009). Therefore, a greater proportion of coaching opportunities may exist for women to coach at recreational, ‘less serious’ levels, especially in traditionally feminine sports such as figure skating and gymnastics. A recent study of female coaches at a variety of performance levels, however, alluded to social change: participants believed discriminatory gender ideologies were changing, inclusion was increasingly valued, and discriminative views were in the minority (Norman, 2011). Nevertheless, as reported in the organizational/structural level, the marginalization of female coaches inhibits upward mobility and limits career trajectories (LaVoi, 2009; Reade et al., 2009); a tendency compounded by entrenched gender ideologies about female coaches.

Barriers

The socio-cultural barriers for female coaches are primarily related to dominant gender ideologies and stereotypes. Dominant ideologies and the ‘association of authority with men underpins the patriarchal control of sport and coaching’, which subsequently serves to ‘repress resistance and oppress diversity’ (Norman, 2011, p. 11). Therefore, the societal and cultural value placed on men’s sports and males as superior coaches and athletes impacts upon women’s opportunities both as participants and leaders in sport. Thus, androcentric belief systems construct effective coaches as individuals who display and embrace masculine traits (Burke & Hallinan, 2006; Demers, 2004; Dixon & Bruening, 2007; Kamphoff, 2008; Kerr & Marshall, 2007; Kilty, 2006; Knoppers, 1987; Mercier & Werthner, 2001; Shaw, 2007). This ideological terrain unarguably dissuades some females from pursuing or remaining in coaching – both at the conscious and unconscious levels. Promoting White heterosexual masculinity as the norm for the coaching profession serves to ideologically marginalize anyone not in that demographic category (Norman, 2011).

Conversely, and as mentioned previously, female coaches who possess ‘kids-knowledge’ are perceived to be effective youth sport coaches. This arbitrary and socially constructed belief reinforces traditional and essentialist gender norms, and fails to challenge the existing male-dominated structure of sport. Female coaches, like other females in positions of power in sport, confront a complex double bind (LaVoi, Buysse, Maxwell, & Kane, 2007), and are left to negotiate conformance to feminine norms while simultaneously demonstrating competence by exhibiting male/masculine behaviours that society upholds as coaching effectiveness.

Many scholars have argued that traditional gender roles that continue to subordinate and marginalize women, coupled with the higher value placed on men’s sport, are maintained through masculine hegemony (Burke & Hallinan, 2006; Hasbrook, 1988; Kane, 1995; Messner & Bozada-Deas, 2009; Norman, 2011; Sagas et al., 2006; Theberge, 1993; West et al., 2001). At the foundation of hegemonic masculinity lie the gender ideologies of sexism, heterosexism and homophobia, with the subsequent less-than-favourable environment for

sexual minority groups in sporting contexts having been widely documented (Anderson, 2005; Clarke, 1998; Greendorfer & Rubinson, 1997; Griffin, 1998; Hekma, 1998; Iannotta & Kane, 2002; Jones & McCarthy, 2010; Krane, 1997; Lenskyj, 1997; Price & Parker, 2003). Unsurprisingly, female coaches often cite the homophobic climate of sport as the strongest deterrent for entering or remaining in the profession (Cunningham & Sagas, 2003; Griffin, 1998; Kamphoff, 2008; Kauer, 2009; Kerr, 2009; Kilty, 2006; Norman, 2011; Sartore & Cunningham, 2009; Thorngren, 1990). Homophobia affects all females regardless of sexual identity, but females who identify as lesbian report a wider variety of homophobic experiences. In this respect, Norman (2011, p. 13) argues that homophobia helps ‘initiate and sustain unequal power relations between lesbians and dominant social groups . . . and ensures that the status quo of the sporting and coaching culture is upheld’. Lesbian coaches then endure the multiple oppressions of sexism and homophobia, which often make the work environment uncertain, unpleasant, and sometimes hostile.

While lesbian coaches face a ‘double jeopardy’, non-White women face a different axis of oppression; one that includes racism and sexism (notwithstanding, non-White lesbians possibly face a triple threat). Only a handful of researchers have examined race and gender together in the coaching literature, resulting in the erasure and silencing of the lived experiences of non-White women coaches (Borland & Bruening, 2010; Bruening, 2005). From the literature it is clear that Black or non-White women face the same barriers as White peers. However, the marginalization here is amplified due to institutionalized racism, racist beliefs and stereotypes, in addition to a lack of access to the existing administrator and head coach recruiting networks (Brooks & Althouse, 2000). Given that a majority of individuals in positions of power are White men, non-White women possess fewer opportunities to enter the arena due to homologous reproduction. Black women report consistently having to downplay their race, gender and sexuality to fit ascribed social roles and norms in collegiate sport (Borland & Bruening, 2010).

Conclusion

In this paper an ecological model of representative barriers and supports for females in sport coaching was presented. The model is based on Bronfenbrenner’s ecological systems theory (1977, 1979, 1993) – a model specifying that human development and experience is influenced by a variety of proximally located individual, interpersonal, organizational, and socio-cultural environmental systems. The model in this instance helped to organize the vast literature into a comprehensive understanding of a gender-related phenomenon – the statistical minority of female coaches.

A few notable patterns and gaps emerged from the analysis of the literature. First, the majority of researchers have studied high-level, elite or intercollegiate (US) female coaches. Given that the critical mass of sport participants and coaches are found at the youth and interscholastic levels, the research by competitive level is disproportionate. Attention to coaches who work at these lower competitive levels is, therefore, warranted. Second, most of the work on female coaches did not employ a framework of intersectionality – simultaneously examining and interrogating race, gender, class and sexual orientation. Borland and Bruening (2010) recently pointed out in their paper on Black female coaches in women’s basketball, that race and gender are usually studied separately; a disconnection which ignores the complexities, experiences and voices of women with multiple social identities. Furthermore, social class or socioeconomic status as a barrier or support for female coaches was nonexistent in the literature. Examining female coaches from a lens of

intersectionality, then, could add to the literature and, as McDonald and Birrell (1999) argue, can help reveal the dynamics of power in terms of who is obscured.

A further clear pattern within the analysis was that far more barriers than supports were identified and reported at each ecological level. This is not to say supports don't exist, but that research has focused far more on problems, issues and barriers. In addition, it may be far easier for coaches to reflect on barriers and what is going wrong, rather than to identify what is working and going right. By analysing the literature over time, it is clear that while some barriers have changed or shifted, many have remained remarkably stable or grown stronger and more prevalent. Barriers increasingly outnumbered supports as the analysis moved more distally from the individual to the socio-cultural level. A worrying finding was that only one socio-cultural support was identified in the literature. Many scholars have argued socio-cultural and organizational barriers persist in part because the androcentric patriarchal nature of sport has been widely critiqued but remains unchallenged and intact (Shaw, 2007; Werthner, Culver & Mercier, 2010).

The perception of difficulty and challenge to create change may be why most efforts to increase the numbers of female coaches typically focus on the more proximal individual and interpersonal levels. Many groups and organizations are currently trying to 'shift the needle', and increase the number of female coaches by focusing on improving knowledge, skills and confidence (individual level), developing a support system (interpersonal), and by creating a New/Old Girls network (interpersonal and organizational levels). As the leader in initiatives for females in coaching, the Canadian Association for the Advancement of Women in Sport (CAAWS) has an extensive Women and Leadership Program, and an online network through which female coaches can 'build their skills, connect, share ideas, discuss issues, find solutions, and take action' (CAAWS, 2012). In addition, the Coaching Association of Canada (CAC) also hosts a Women in Coaching program, a national campaign aimed to increase the number of coaching opportunities for women at all levels of sport (CAC, 2012).

In the USA, the newly formed Alliance of Women Coaches (AWC), coupled with the NCAA Women Coaches Academy, are two groups attempting to secure change at the collegiate level by offering educational workshops, network development and continued support through an online community. The goal of the AWC is to provide 'ongoing support to women in the coaching profession through career development programs as well as to increase the number of women coaches at all levels in all sports' (AWC, 2012). Furthermore, the Black Coaches and Administrators (BCA, 2012) and the Black Women in Sport Foundation (2012) similarly both offer networking opportunities and workshops to assist Black females to enter coaching or develop coaching skills.

The groups highlighted above are examples of 'communities of practice' (Culver & Trudel, 2008) that provide supports and reduce barriers for female coaches at all levels of the ecological model, except perhaps at the socio-cultural. Communities of practice are powerful because a framework of knowing is created where those in the community know where 'to go for help and how to give help to others' (Culver & Trudel, 2008, p. 3). The ethos within such communities is to bring new knowledge to the group, share, support, and add to the collective (Lemyre, Trudel, & Durand-Bush, 2007). Feeling connected, valued, known, needed and cared about is a central human need (Ryan & Deci, 2000), and being a member of an autonomy-supportive social environment can lead to heightened well-being, enjoyment and satisfaction for coaches (Allen & Shaw, 2009).

Some countries are attempting to address inequalities by building new elements of support into the organizational structure. For example, in 2010, the UK Athletics (UKA) association formed a Women in Coaching Advisory Committee. In 2002, the Australian

Sports Commission in partnership with Australian Government Office for Women identified the promotion of women in leadership roles in sport as a key priority, which resulted in Sport Leadership Grants and Scholarships for Women. It appears then as if a handful of national and sport-specific governing bodies around the globe are increasingly developing and providing supports for female coaches. Feeling supported may help coaches feel less isolated and more empowered. Sharing knowledge and experiences provides insight that female coaches are not alone in experiencing sexism, homophobia or discrimination and could provide strength or impetus to fight back, resist or challenge people or organizations that perpetuate inequality. New knowledge may also help prevent or reduce the likelihood of placing blame on self-deficiencies or a re-doubling of efforts to succeed – practices that increase the likelihood of reduced quality of work and life, burnout and attrition. Theberge (1993) cautions females that working harder to outperform male colleagues or to prove one's self is a futile exercise because it places the burden on the individual female, does not change the patriarchal structure of sport or socio-cultural norms of coaching, and fails to challenge or erode the belief in the 'natural' superiority and abilities of men.

Employing only individual-centred strategies is limited for a variety of reasons. First, Shaw (2007) and others (see Roberston, 2010) argue that focusing solely on increasing the number of female coaches without addressing or also changing the gendered nature and inhospitable climate of sport will have little long-term effect. Second, a focus on the lack of female coaches 'can only offer a thinly veiled language through which to extend judgments of responsibility, blame and morality' (Saguy & Riley, 2005, p. 871), which can reinforce inequalities and further oppress the minority group. Third, a sole focus on the individual level – female coaches' choices, lack of interest, or comparatively low self-perceptions – fails to acknowledge that choices, expectations, effort, interest and enjoyment are also shaped by cultural values and the social and physical environments in which women live and work (LaVoi & Wiese-Bjornstal, 2007; Messner, 2009). Fourth, an individual emphasis also averts the focus on collective responsibility, which can result in publicly funded and supported programmes for female coaches (McDermott, 2007). Therefore, initiatives to increase the number of female coaches should address multiple levels of the model. Previous research using social ecological models suggests that environmental factors can directly affect behaviour, indicating that interventions at one point in the model can impact other levels (Spence & Lee, 2003).

In a recent article critiquing the limitations of positive youth development from a sport psychology perspective, which primarily focuses on individual change (i.e. building assets, skills and strengths), Jay Coakley (2011) argued that youth development should also include capacities that help individuals raise critical awareness resulting in social action. Following Coakley's (2011) suggestion of utilizing a youth organizing model, educational efforts should include components that help female coaches work *in collaboration* with others to effect social change at the local, community and organizational levels, and to raise personal awareness of power relations and how such relations affect individual lives (Christens & Dolan, 2011). For example, including segments on sexism, racism and homophobia in coach education may help female coaches work together to resist and challenge these insidious elements.

While the limitations of a 'by the numbers' report of female coaches have been illuminated, tracking and documenting does provide evidence of the issue and affords an important baseline to record change and evaluate interventions. The most notable research in this regard is the longitudinal study of Vivian Acosta and Jean Carpenter who have documented the percentage of female coaches in US intercollegiate sport for 35 years

(Acosta & Carpenter, 2012). Currently, researchers affiliated with the Tucker Center for Research on Girls & Women in Sport are analysing the first wave of data that will provide a similar baseline for assessing progress (or lack thereof) for females in positions of power at the high-school level, including coaches (Kamphoff & LaVoi, 2011). Another effort to document and promote change is the Sydney Scoreboard, a legacy of the 5th International Working Group of Women in Sport; a project aimed at increasing the number of women on the boards/management committees of all sport organizations at international, national, regional and local levels. While not specific to tracking female coaches worldwide, increasing the number of women in decision-making positions can lead to the augmented hiring of female coaches.

Application

To draw from sport sociology scholars, ‘analysis without the potential to enact social change is an empty project’ (McDonald & Birrell, 1999, p. 295), as coaching is not unproblematic, but an arena for struggle (Potrac & Jones, 2009). Thus, we believe the potential applications of this paper are numerous. First, the model can help develop the reflective practice of female coaches, thus assisting them to identify the norms, assumptions and social structures which impact their daily lives. Second, the model should be shared with individuals in decision-making positions so they can work to provide policies, tools and support for female coaches and strive to create a positive climate of tolerance, inclusivity and respect. Third, it can be used to empower and educate male coaches to create change by actively supporting and mentoring females as well as resisting and challenging outdated stereotypes that affect interpersonal interactions. Fourth, the model can provide information to help stakeholders resist hegemony and refrain from blaming women and perpetuating myths about the lack of female coaches as ‘just the way it is’. Fifth, it can also provide a starting place to help stakeholders take personal responsibility to create change in a sphere of influence, and work toward broader structural and social change. Sixth, it may help in identifying unique barriers (and develop supports) for coaches at different competitive levels and for coaches experiencing critical windows across the developmental trajectory of a coaching career (e.g. entering coaching, burnout, getting married, having children, changing jobs from assistant to head coach, coming out). Finally, the model can help stakeholders identify additional gaps in the literature, stimulate discussion and research, generate strategies that move the current structure toward increased equality, help develop social networks, create a more positive environment, and shift societal norms – efforts that may increase the number, and improve the experiences, of female coaches.

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