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Applying in life the skills learned in sport: A grounded theory

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A B S T R A C T

Objectives: The life skills process (i.e., sport to life) involves three interrelated stages: (a) life skills learning in sport, (b) life skills transfer, and (c) life skills application in at least one life domain beyond sport (Pierce, Gould, & Camiré, 2017). The purpose of the study was to examine how athletes apply in life the skills learned or refined in sport in order to develop new theoretical explanations for the third stage of the life skills process (i.e., application).

Design: A grounded theory methodology (Corbin & Strauss, 2015).

Method: Data collection occurred over 10 months, involving interviews, chronological charts, timelines, and journals with university intramural athletes (n = 13). Social agents (n = 29) playing key roles in the athletes' lives (e.g., parents, partners, work colleagues) were theoretically sampled and interviewed.

Data analysis: Data analysis involved an iterative process of open coding, axial coding, and theoretical integration.

Results: The substantive grounded theory is constructed on the core category of "mutually beneficial person-context regulations". Within the theory, skill application is framed as an ongoing process that involves four steps (a) decision-making, (b) application, (c) appraisal, and (d) adaptation.

Conclusions: The substantive grounded theory puts forth theoretical explanations as to how athletes apply in their everyday lives the skills they deem to have learned in sport.

1. Introduction

The Positive Youth Development (PYD) framework is a strength-based approach to development that focuses on promoting strengths and views youth as having resources to be developed rather than problems to be fixed (Lerner, Almerigi, Theokas, & Lerner, 2005). In the past two decades, PYD has been the preeminent approach used to research youth development through sport (Holt, 2016). Sport is recognized as a context that, when appropriately structured, can offer experiences conducive to PYD and the learning of psychosocial skills that prepare youth to function as productive members of society. In the sport psychology literature, such psychosocial skills are referred to as life skills, defined as personal assets (e.g., emotional control, goal-setting) that can be learned/refined in sport and then enable individuals to succeed in different life domains (Gould & Carson, 2008). The life skills process (i.e., sport to life) involves three interrelated stages: (a) life skills learning in sport, (b) life skills transfer, and (c) life skills application in at least one life domain beyond sport. Pierce et al. (2017, p. 194) defined the life skills process as:

> The ongoing process by which an individual further develops or learns and internalises a personal asset (i.e., psychosocial skill, knowledge, disposition, identity construction, or transformation) in sport and then experiences personal change through the application of the asset in one or more life domains beyond the context where it was originally learned.

Four notions from Pierce et al.'s (2017) definition must be considered. First, life skills transfer represents the intermediary process linking the learning or refinement of a life skill in sport to the subsequent application of such skill in at least one context beyond sport. Second, the athlete is always at the center of the transfer process as he/she moves from one life context to another. Third, learning is framed to encompass skill acquisition and/or skill refinement. Fourth, the application context refers to any setting beyond sport where the life skill is applied.

1.1. Life skills learning in sport

Over the past 15 years, life skills learning in sport has received much attention (Gould & Carson, 2008; Holt et al., 2017). Studies have drawn associations between sport participation and the learning of life skills such as leadership, goal-setting, communication, and emotional regulation (Johnston, Harwood, & Minniti, 2013; Jones & Lavallee, 2009). Research has also found that the particular features of sport (e.g., demands for hard work, competition, social aspects) expose youth to lived experiences that can lead to life skills learning (Camiré & Kendellen, 2016; Holt et al., 2017). Taking a closer look at the social aspects, youth's interactions with key social agents in sport (e.g., coaches, parents, peers) have been found to play a significant role in the learning of

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life skills (Gould & Carson, 2008; Holt et al., 2017). Previous research has found that athletes believed that they acquired life skills in sport as a function of (a) coaches using deliberate strategies, (b) parents reinforcing life skills at home, and (c) interacting with peers in a positive manner (Holt, Tamminen, Tink, & Black, 2009). However, the sample in Holt et al.'s (2009) study was mainly comprised of white middle-class young adults from two-parent households, meaning that the findings may not necessarily be representative of the experiences of athletes from other cultural and socioeconomic backgrounds and/or athletes with less support from external assets.

1.2. The intermediary transfer process

Several studies have found support for the perceived transfer of life skills from sport to at least one context beyond sport (Allen, Rhind, & Koshy, 2015; Chinkov & Holt, 2016; Kendellen & Camiré, 2017). For example, Allen et al. (2015) explored the perceived facilitators/barriers to life skills transfer from sport to the classroom with underachieving 12–13 year old boys. The participants described how reflecting with their peers on transfer experiences increased their awareness of how to use life skills beyond sport. However, the lack of opportunities provided by teachers to apply skills in the classroom was perceived as a barrier impeding the transfer process. Chinkov and Holt (2016) interviewed Brazilian jiu-jitsu athletes between 19 and 54 years of age who stated having learned the life skills of respect, perseverance, self-confidence, and healthy habits in sport and that these skills were believed to have transferred and have meaning in their lives away from sport (e.g., work, family). The combination of the head instructor's personal qualities, peer support, and the values salient to Brazilian jiu-jitsu created a climate that allowed adults at different stages of their lives to be active agents in their own learning and transfer of life skills. Looking more closely at the role of social agents in the life skills transfer process, most studies in the sport psychology literature have focused on coaches and the strategies they use to promote transfer (Camiré, Trudel, & Forneris, 2012; Gould, Collins, Lauer, & Chung, 2007; Whitley, Massey, & Leonetti, 2016). To date, minimal research has examined key social agents outside of sport (e.g., work colleagues, classmates) and the role they play in influencing how athletes apply their life skills in contexts extending beyond sport. Studies that explore the roles of diverse social agents may offer new insights into how and why life skills learned in sport transfer and are applied beyond sport. Overall, the past literature provides some initial empirical evidence that sport participation is associated with the learning and transfer of life skills.

1.3. Models of life skills transfer

Several models have been created to conceptualize life skills transfer. Some models have focused on how transfer occurs within sport-based development programs (Hodge, Danish, & Martin, 2013; Jacobs & Wright, 2018; Lee & Martinek, 2013) while others have conceptualized life skills transfer in the general sport context (Bradley & Conway, 2016; Pierce et al., 2017). These models have advanced our understanding of life skills transfer by accounting for essential mechanisms influencing this intermediary process, including basic psychological needs satisfaction (Hodge et al., 2013), awareness of transfer opportunities (Pierce et al., 2017), perceived meaningfulness of transfer (Jacobs & Wright, 2018), and support for transfer (Lee & Martinek, 2013). However, in general, these models are limited in their explanatory power for life skills application, or more specifically the cognitive and behavioral processes enacted within/by the individual once transfer has occurred and a skill deemed to have been learned in sport is applied in at least one context extending beyond sport. For example, some models (i.e., Bradley & Conway, 2016; Pierce et al., 2017) acknowledge that life skills transfer can lead to positive or negative outcomes in life, but few details are offered beyond this dichotomy. In fact, Pierce et al. (2017) recognized the limits of their model in explaining transfer outcomes (i.e., life skills application) and indicated that "to holistically understand life skills transfer, future research must explore in greater depth how the individual learner interacts with his/her learning and transfer contexts" (p. 205). Thus, the purpose of the study was to examine how athletes apply in life the skills learned or refined in sport in order to develop new theoretical explanations for the third stage of the life skills process (i.e., application). Two research questions guided the study: (a) What life skills do athletes believe they learned in sport? and (b) How do athletes apply in life the skills they believe they originally learned in sport? Specifically, the study employed a grounded theory methodology (Corbin & Strauss, 2015).

2. Method

2.1. Athletes' conscious appraisal of their life skills transfer experiences

It is acknowledged that the life skills transfer process undoubtedly often occurs outside of the realm of consciousness. In such cases, life skills transfer ensues without athletes being aware that (a) a life skill was originally learned/refined in sport and (b) that same life skill was then applied beyond sport. Such life skills transfer experiences, occurring in relatively unquestioned fashion, refer to what Dewey termed *habit* (Morgan, 2014). Unfortunately, from a qualitative research perspective, athletes' unconscious or implicit life skills transfer experiences could not be accessed empirically in the present study. In consideration of this notion, the study focused on documenting athletes' *conscious* thoughts about their life skills transfer experiences, which is consistent with Dewey's concept of *inquiry* as a process of conscious and thoughtful reflection (Morgan, 2014). Thus, the grounded theory is built on athletes making sense of their lived experiences and consciously linking the learning of a life skill in sport to the subsequent application of that same skill in a life domain beyond sport.

2.2. Grounded theory methodology

In light of the decision to focus on explaining how athletes consciously apply in life the skills they believe they learned in sport, a grounded theory methodology was deemed an appropriate methodological choice for the current study. According to Holt (2016), grounded theory is a particularly useful methodology when there is little preexisting theory on a certain process or when existing theories do not adequately capture the complexity of the process. Given that existing models of life skills transfer in sport psychology do not account in great detail for what occurs after transfer (i.e., life skills application), using a grounded theory methodology has the potential to advance the literature by offering new theoretical insights and explanations.

Particularly, a Straussian grounded theory approach (Corbin & Strauss, 2015) was selected as being congruent with the lead researcher's pragmatic philosophical perspective. From a pragmatic lens, it is assumed that knowledge is created through individuals' everyday actions and interactions over time (Dewey, 1938). Such actions and interactions are often unpredictable, contingent, and based on the subjective meanings individuals give to those events. Each individual ascribes meaning to events and constructs knowledge in light of his/her biography and the social contexts in which he/she is socialized (Morgan, 2014). Consistent with the pragmatic perspective, the substantive grounded theory developed in the present study has been built to explain the shared elements of multiple participants' experiences of life skills learning and application in sport. Creating new theoretical explanations for the third stage of the life skills process (i.e., application) may provide practical information for youth sport leaders looking to better understand how the transfer of life skills from sport to life occurs, which is consistent with pragmatic tenants stipulating that knowledge should be useful in practice.

Existing theories and models were used as sensitizing concepts

(Corbin & Strauss, 2015). Sensitivity refers to "having insights as well as being tuned in to and being able to pick up on relevant issues, events, and happenings during data collection and analysis of data" (p. 78). In the current study, the lead researcher was sensitive to relational developmental systems theory (Overton, 2013), the transformation or reconstruction lens (Hager & Hodkinson, 2009), and the definition and model of life skills transfer (Pierce et al., 2017).

2.3. Sampling and participants

Sampling in grounded theory begins by recruiting individuals presumed to be able to provide detailed insights in relation to the study questions (Corbin & Strauss, 2015). The researcher was sensitive to the notion that the individual learner should be positioned at the center of the life skills process (Pierce et al., 2017) and thus exploring athletes' life skills learning experiences in sport (i.e., research question one) was the logical first step. Initially, following institutional ethical approval, purposeful sampling (Sparkes & Smith, 2014) was used to recruit athletes actively involved in sport. These athletes were recruited at the researcher's university, through the intramural sport program, which offers sports throughout the academic year. The researcher emailed an invitation letter to athletes asking them to take part in the study. Athletes who responded to the researcher's email were included as participants. This procedure resulted in 13 athlete participants involved in volleyball, basketball, soccer, and ice hockey.

The 13 athletes (7 males, 6 females) were between the ages of 18 and 24 (M_{age} = 21.77; SD = 2.2), reported participating in organized sport for nine to 19 years (M = 15; SD = 2.83), and stated playing between two to 14 sports (M = 6.69; SD = 3.17) over their lifetime. At the start of data collection, 11 athletes were full-time university students while two others worked full-time. Please see Table 1 for additional athlete demographic information.

There were six phases of data collection. Phases one and two coincided with research question one and were used to collect data on athletes' sport participation history and perceived life skills learning experiences in sport. Since life skills transfer is an intermediary process linking (a) life skills learning in sport to (b) life skills application beyond sport, there was first a need to document athletes' experiences in sport, and the life skills they believed they learned during these sport experiences, before examining the application of such skills outside of sport. To do this, in phase one, athletes were interviewed and asked to broadly speak to their lifetime experiences in sport across their childhood, adolescence, and early adulthood. Using the interview data, the researcher created a history of sport participation chart for each participant. This chart was individually shared with each participant, with he/she asked to add, remove, or modify details in order to comprehensively capture, to the best of his/her knowledge, his/her lifetime experiences in sport. Once completed by the participant, the chart was returned to the researcher who, in analyzing the interview and chart data concurrently, identified the need to sample concepts related to the processes by which life skills were learned in sport.

In phase two, athletes from phase one were sampled again and asked to graphically plot on a timeline, created from the interview and chart data, their perceived life skills learning experiences in sport as they unfolded over time. Timelining (Sparkes & Smith, 2014) was used as a preferred tool enabling athletes to accurately detail *what* life skills they believed they learned in sport, *when* they believed such skills were learned, and *who* influenced such learning. The timeline data were analyzed, the findings of which led to the identification of the need to start addressing, in the next phase of data collection, research question two (i.e., How do athletes apply in life the skills they believe they originally learned in sport?) by sampling concepts related to the application of life skills in contexts extending beyond sport.

In phase three, a second interview was conducted with each athlete to debrief his/her timeline content and delve into his/her experiences applying life skills in contexts extending beyond sport. The timeline findings were used to create the questions asked in the second interview, which was customized for each athlete based on the specific life skills he/she had reported learning in sport. Analysis of the second interview data revealed the need to sample specific concepts related to athletes' current/ongoing life skills application experiences.

In phase four, athletes engaged in journaling over a 3-month period to document their ongoing experiences applying in their everyday lives the skills they deemed to have learned in sport. Analysis of the data from the second interviews and the journals highlighted the most prominent contexts in which athletes reported applying their life skills. Such findings led to the identification of the need to theoretically sample social agents within these prominent application contexts who could offer multiple viewpoints on athletes' life skills application experiences.

In phase five, each athlete was asked to nominate, by providing the researcher with name and contact information, between one and three social agents of choice whom he/she believed could speak to his/her behavior (i.e., life skills application) within the prominent application contexts previously identified. This procedure led to a total of 29 social agents (9 males, 20 females) aged 19–58 years (M_{age} = 31; SD = 13.4) who voluntarily agreed to be interviewed. Social agents were either a work colleague (n = 4), work supervisor (n = 2), friend (n = 5), roommate (n = 4), classmate (n = 4), parent (n = 8), or partner (n = 2). Athletes had either one (n = 3), two (n = 4), or three (n = 6) of their social agent(s) take part in the study.

Social agent interviews were not intended to verify/confirm athletes' accounts of life skills application but rather were conducted to access alternative perspectives of athletes' behaviors within application contexts. For example, one athlete discussed applying leadership in his full-time job, a skill he believed having learned in sport. This athlete's work supervisor was thus theoretically sampled. In interview, the work supervisor was not asked to discuss the athlete's leadership abilities

Table 1
Athlete demographic information.

Athlete	Gender	Age (Years)	Occupation	Degree	Specialization	Sport Experience (Years)	Social Agents Sampled
1	Female	23	Public Servant	Bachelor	Fine Arts	12	Work Colleague, Roommate, Parent
2	Female	23	Student	Bachelor	Education	15	Classmate, Work Colleague, Parent
3	Female	18	Student	Bachelor	Chemistry	14	Parent, Friend
4	Male	24	Student	Doctorate	Business	17	Partner
5	Female	23	Student	Master's	Public Administration	18	Work Colleague, Roommate
6	Female	19	Student	Bachelor	Social Science	17	Classmate, Work Colleague, Parent
7	Male	21	Student	Bachelor	Engineering	13	Classmate, Friend
8	Male	24	Software Engineer	Bachelor	Engineering	14	Work Supervisor, Partner, Friend
9	Male	23	Student	Juris Doctor	Common Law	17	Classmate, Parent, Work Supervisor
10	Female	22	Student	Bachelor	Psychology	19	Parent, Roommate
11	Male	18	Student	Bachelor	Business	13	Parent
12	Male	24	Student	Bachelor	Communication	9	Parent
13	Male	21	Student	Bachelor	Biotechnology	17	Two Friends, Roommate

(i.e., a leading question that could prompt a socially desirable response), but rather to speak more broadly to the athlete's general behavior and performance at work. Social agent data offered rich insights into the people and events deemed to influence life skills application directly in application contexts. Analysis of social agent data identified the need to sample further concepts on athletes' life skills application experiences.

In phase six, based on the findings of the social agent interviews, a third and final interview was conducted with each athlete participant. The interview focused on having athletes speak to the people, events, and circumstances they deemed most significant in influencing their application in life of skills originally learned in sport.

2.4. Data collection

Data collection occurred from September 2016 to June 2017. At the onset of interviews, participants were provided an overview of the study, procedures for confidentiality, and voluntary nature of participation. All participants provided informed consent. Four methods of data collection were employed: (a) interviews, (b) charts, (c) timelines, and (d) journals.

Interviews. The lead researcher conducted 67 individual semi-structured interviews (38 athlete interviews, 29 social agent interviews) which were audio-recorded and transcribed verbatim. All interviews occurred at a time convenient to the participants. Twelve of the 13 athlete participants were interviewed at three time points. One athlete completed two interviews but did not wish to be interviewed a third time (this athlete was retained in the final sample). The multiple interview approach helped elicit rich data by deepening participant rapport and complementing/extending insights gleaned from other sources of data during the study's six phases (Smith & Sparkes, 2016). Each of the first (M = 102 min; SD = 11.48), second (M = 101 min; SD = 20.15), and third (M = 62 min; SD = 9.42) athlete interviews were conducted in person, except for a third interview that was completed over Skype as the athlete in question had returned home (i.e., in another city outside the researcher's institution) after the school year. Regarding the in-person interviews, 64 interviews were conducted in a research office located at the university and the remaining two interviews took place at a coffee shop as per the participant's request.

Interviews with social agents (n = 29) lasted on average 31 min (SD = 4.85) and took place in-person (n = 16), over the phone (n = 12), or on Skype (n = 1). In-person interviews were conducted in a private research office located at the university (n = 7), a public setting (n = 7), or at the participant's workplace (n = 2). Phone and Skype interviews were necessary as many of the social agents sampled did not live in the same city or province as the lead researcher. The social agent interviews complemented the athlete-generated data and engendered rich and varied descriptions of the life skills application process, which facilitated the construction of robust theoretical explanations.

Charts. The chart provided a detailed summary of each athlete's history of sport participation. For each sport season played, athletes documented (a) age, (b) season duration, (c) context (i.e., school, club), (d) level (i.e., recreational, competitive), (e) intensity (i.e., number of practices/games a week), and (f) attendance frequency (i.e., always, sometimes, rarely).

Timelines. Timelining (Sheridan, Chamberlain, & Dupuis, 2011; Sparkes & Smith, 2014) was used to facilitate athletes' reflection on perceived life skills learning experiences in sport. Based on their sport participation history that was charted in the previous phase, athletes were asked to plot on their timeline their perceived life skills learning experiences over time. As part of the plotting, athletes were asked to attach descriptions to situate and contextualize their experiences, which were used to prompt discussion in the second interview. These experiences were recorded onto standard chart sheets (24 inches wide by 36 inches long). Time was plotted horizontally and life skills learned were plotted vertically. In total, 46 chart sheets were obtained. Athletes reported taking approximately two hours to complete their timeline activity.

Journals. Solicited journaling (Meth, 2017) was used over a 3-month period to have athletes record their ongoing experiences applying in life the skills they believed they learned in sport. Three guiding questions were suggested for completing a journal entry: (a) Where did I apply this particular life skill that I learned in sport? (b) Who was around me when I applied this life skill? and (c) How did I apply this life skill? Meth (2017) highlighted how solicited journaling gives participants the time and space necessary to gather their thoughts and elaborate on events they deem meaningful. In the current study, solicited journaling facilitated the gathering of rich in-the-moment data, providing athletes opportunities to construct detailed descriptions of their thoughts and feelings related to their experiences of applying life skills. Twelve athletes submitted their journal entries through a Facebook application (i.e., private discussion page accessible only by the researcher) while one athlete used Google Docs. A total of 69 journal entries were collected, with each athlete writing three to eight entries (M = 5.31).

2.5. Data analysis

Data were uploaded to NVivo to assist with data management. In line with Straussian grounded theory, data analysis began as soon as the first data were collected and continued in an iterative manner throughout the study to ensure interplay between data collection and analysis (Corbin & Strauss, 2015). Analysis involved three coding techniques: (a) open, (b) axial, and (c) theoretical integration. Open coding involved carefully reading each piece of datum to ensure familiarity with participants' experiences. The raw data were then assigned conceptual names (i.e., concepts) delineated by their properties and dimensions. In axial coding, the data from open coding were reassembled by grouping concepts with a common meaning into categories. Axial coding was used to describe the links and explain the relationships between categories. Once the relationships between categories were established, the core category (i.e., preeminent category linking all of the other categories together and has the greatest explanatory value) was identified.

Theoretical integration was used to link categories around the core category, add depth to less developed categories, and refine the evolving theory. During integration, categories were linked to the core category through statements of relationship explaining the what, why, where, and how of life skills application (i.e., creation of the main postulates). Coding at this level exposed the need to interview athletes for a third time to saturate the categories of life skills application. Following the third interviews (i.e., phase six), it was judged that an adequate level of theoretical saturation (Corbin & Strauss, 2015) had been achieved given that the substantive grounded theory had wholly developed categories in terms of their properties and dimensions. Specifically, the substantive grounded theory provided explanations for how the intramural sport athletes believed they (a) learned life skills in sport and (b) applied their life skills in at least one domain outside of sport. Moreover, the nature of relationships between categories and concepts was explained (e.g., link between an athlete's application decision and his/her personal assets).

Constant comparison (Glaser & Strauss, 1967) was used to ensure the raw data 'fit' the phenomena they represented. Initially, each new piece of raw extract was compared against previously collected data. As analysis progressed, the comparisons became more theoretical and occurred between concepts, categories, and the literature. Memos were used to document analytical thoughts (e.g., possible categorical relationships) and ideas for theoretical sampling. Diagrams were used to think conceptually about the data and interrelationships among concepts.

Prior to conducting the study, a literature review on life skills was performed as part of the lead researcher's study proposal. Consistent

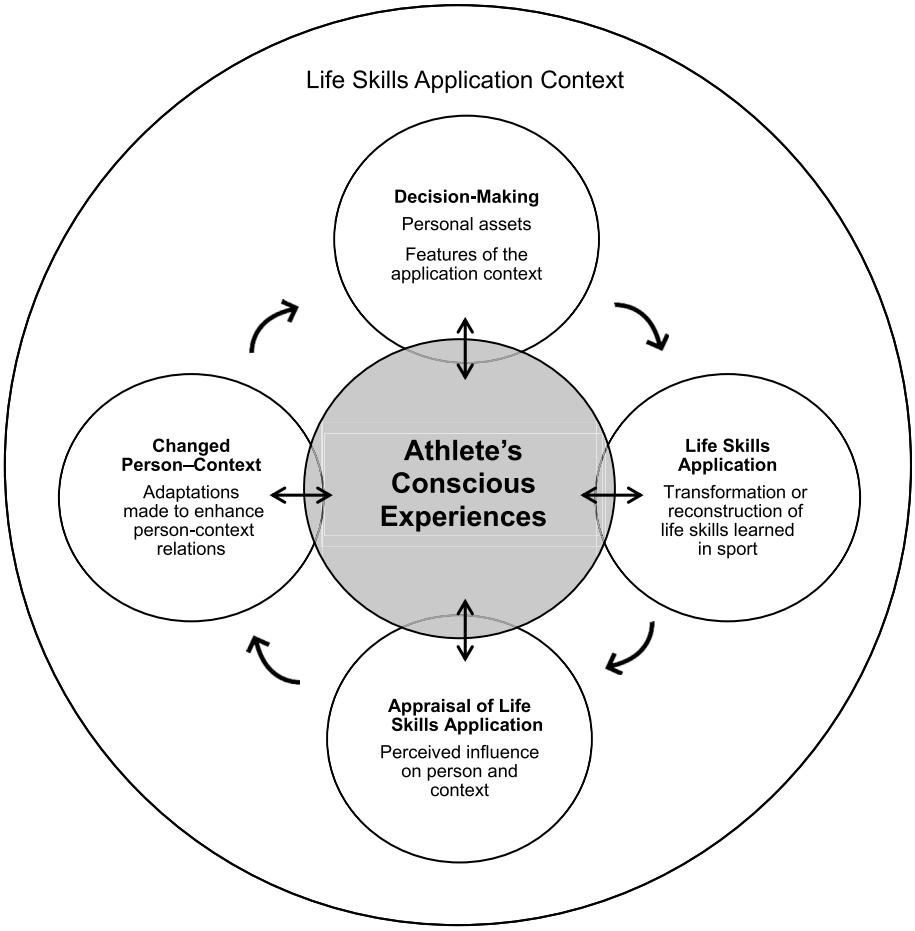

Figure 1. Grounded theory of life skills application.

with Holt (2016), this review was used to identify whether life skills learning and transfer theories already existed and develop research questions. In the late phases of collection and analysis, a delayed literature review was conducted to preserve theoretical sensitivity and examine theory coherence.

2.6. Study quality

The techniques pertaining to Straussian grounded theory were followed and implemented (Corbin & Strauss, 2015). The lead researcher kept a journal to record her thoughts on research activities. The substantive grounded theory can be evaluated using Glaser and Strauss' (1967) quality criteria of fit, relevance, work, and modifiability. Constant comparison ensured that emerging concepts and categories 'fit' within the data set. To address relevance, athletes were provided with the grounded theory model and its postulates, commenting on whether they could locate their experiences of life skills application within the theory. For work, three sport psychology researchers gave feedback on the coherence of the grounded theory model and its postulates, commenting on the extent to which they explained how life skills application may 'work' in sport psychology research and practice. Finally, the grounded theory has been developed with openness to 'modification' as new insights from empirical research arise.

In complement to grounded theory quality markers, contemporary indicators of quality within qualitative research were also acknowledged. The second author acted as a critical friend (Smith & McGannon, 2018) throughout the analytical process by encouraging reflection on the construction of concepts and categories, challenging explanatory statements of relationship, and providing regular feedback during the mapping of the theoretical model. Moreover, the substantive grounded theory is positioned as potentially offering analytical generalizability (Smith, 2018), if readers judge that the explanations of the life skills application process are meaningful to researchers and produce new theoretical understandings.

3. Results

The present study led to the creation of a substantive grounded theory of life skills application, based on skills consciously believed to have been learned in sport. The core category and postulates are explained using the singular form of *athlete* to highlight how the individual is at the center of his/her life skills application process. In the quotes presented, acronyms are used to protect the participants' identity (e.g., Athlete 4 = A4; Social Agent 6 = SA6).

3.1. Core category: mutually beneficial person-context regulations

The grounded theory is built on the core category of "mutually beneficial person-context regulations", which describes the process by which the athlete regulates the application of a life skill learned in sport in ways that benefit the self and the context in which he/she is engaged in.

3.2. Overview of the substantive grounded theory of life skills application

Within the grounded theory, life skills application is framed as an ongoing process of (a) decision-making, (b) application, (c) appraisal, and (d) adaptation. The athlete consciously considers many factors in deciding to apply a life skill and once it has been applied, he/she appraises his/her application attempt, resulting in a changed person-

context. As a result of experiencing an application cycle, the athlete gains new knowledge which, if needed, can be used to adapt his/her future behavior to better meet the needs of the application context. The changed person-context influences the athlete's decision-making process if/when new life skills application opportunities are presented. Applying in life the skills learned in sport is thus framed as an evolving cyclical process that occurs over time and does not have a definitive end point. The bidirectional arrows (↔) in the model represent the constant person-context interactions experienced by the athlete as he/she engages in life skills application. Please see Figure 1 for a visual of the grounded theory model.

3.3. Description of the categories

Athlete participants reported learning many intrapersonal (e.g., emotional regulation) and interpersonal (e.g., teamwork) skills through sport. Athletes also mentioned how sport participation fostered new knowledge (e.g., using sport as a stress relief), molded dispositions (e.g., competitiveness), and influenced identity constructions (e.g., forging an athletic identity). Application contexts refer to the settings in which athletes reported applying the life skills they believe they learned in sport, the most prominent being school, work, and in relationships.

Decision-making. Within the grounded theory, it is postulated that when an athlete finds himself/herself in a context beyond sport, he/she may be presented with opportunities to apply particular life skills, some of which learned/refined in sport. At this point, the athlete can decide to move forward and formulate an intention to apply a life skill. The findings provided evidence that the intent to apply was a process that did occur consciously (i.e., athletes who were aware of the reasons why they intended to apply a life skill). Specifically, the findings indicated how athletes' conscious decisions to apply life skills were shaped by (a) their personal assets and (b) their interactions with the features of the application context.

The findings showed that athletes entered application contexts with existing personal assets and previous life experiences, all of which interacted to influence their decision to apply in life a skill believed to have been learned in sport. Internal (i.e., awareness of existing life skills, confidence in applying life skills) and external (i.e., social agents) assets were shown to both shape athletes' decisions. The findings also showed how athletes frequently decided to apply a life skill learned in sport when they felt that application would benefit them as well as the context. For example, one athlete indicated that he learned and practiced his *communication* skills in high school track and field, detailing in particular his experience working with a teammate and teaching her proper running technique in an easy to understand format:

> I worked a lot with her [teammate] on strategy behind the race. She had really short strides, which is not great for sprinting, so I helped her get her strides longer and her time improved by two seconds, which I think is a pretty big deal (A7, Interview One).

At university, this same athlete decided to apply the communication skills he learned in sport to help a fellow engineering classmate with an assignment. He discussed that he made the decision to apply this skill because the classmate was a good friend (i.e., benefit to the context) and he gained personal satisfaction from teaching and helping others (i.e., benefit to the self).

> *Interviewer*: Why did you decide to help [name of student] with this assignment, even though it was a very busy time for you?
>
> *Athlete*: Well [name of student] is my friend and I like to help my friends out and I knew she was struggling. I said "if you ever need help understanding something, I can break the concepts down pretty well". But yeah, I like helping people, I like teaching people … I needed a little bit of a break from what I was doing anyways so I was happy to help (A7, Interview Three).

In addition to internal assets, athletes specified how their interactions with external assets (e.g., parents, peers) influenced their intent to apply life skills beyond sport. Athletes discussed applying a life skill when key individuals in their surroundings displayed the skill and/or spoke of its value. Further, social agents in application settings were said to often ask, instruct, and/or encourage athletes to complete tasks, which prompted athletes' decision to apply their life skills. For example, one athlete reported how his intramural basketball team represented a setting in which he took advantage of opportunities to learn and refine his *leadership* skills as a captain:

> Something that I actually did not take away until probably fourth year is leadership because that's when I decided to step up and be captain … I'm a person who can't just sit down when I'm on the bench and just watch my teammates play. If I see something that we can improve, I try to speak it out loud to my team (A8, Interview One).

This same athlete described his decision to exhibit leadership at his full-time job as an engineer. Specifically, he explained how he made the conscious decision to act more as a leader at work after his manager asked him to demonstrate more initiative on projects, to eventually help him transition from junior to senior engineer.

> *Interviewer*: How did you know that your manager wanted you to lead?
>
> *Athlete*: My manager wrote six goals that I have to meet and one of them was showing more leadership and more initiative in a couple of areas of our development process. So that was like a direct hint that my manager wanted me to take more initiative. In the beginning, he [manager] would help me with a lot of things and at some point, if I asked him a question, he would direct me on how to get the answer myself instead of him giving me the answer. So I realized he wanted me to kind of get out of my comfort zone and find the answer on my own (A8, Interview Three).

Athletes' interactions with the particular features of their application contexts were deemed to influence their intentions to apply their skills learned in sport. Athletes described how they made decisions to apply life skills by comparing their abilities, experiences, and knowledge to those of others within the application context. When athletes noticed skill deficits in others that could negatively affect them and/or the context, they took it upon themselves to apply their skills to remedy the situation. The results also illustrated how athletes' perceptions of the rules (i.e., formal understandings governing behavior) and social norms (i.e., informal understandings governing behavior) within application contexts informed their decision to apply life skills learned in sport. Athletes considered the rules and social norms and then decided to apply a life skill if they thought it would lead to the attainment of a reward and/or the evasion of a punishment. In interviewing and timelining, one athlete mentioned how in university, she had a volleyball coach she disliked and that this experience helped her learn *emotional regulation* skills. This athlete shared how she applied the emotional regulation skills she learned in sport at work when her boss asked her to complete tasks extending beyond her formal job description. Although frustrated, she did not vocalize her frustrations and accepted the extra workload thinking it might help her secure a permanent position (i.e., reward):

> It was frustrating to be tasked with something that is supposed to be handled by the processing unit … it was choosing not to ruffle feathers at that particular moment. If I wanted to get a permanent position, I knew it was important that I get a good rapport with my boss and that he saw me as a good worker (A5, Interview Two).

Life skills application. Within the grounded theory, it is postulated that if the athlete perceives that (a) he/she has a high likelihood of successful application and (b) the application will benefit (i.e., reward

attainment, punishment avoidance) both self and context, then he/she proceeds to apply the life skill learned in sport. Athletes shared examples of how they applied life skills at school and at work, with such events substantiated by social agents. One athlete described how playing a particular type of defense in high school basketball taught him the importance of *teamwork* and the benefits of operating as a coordinated unit:

> We had this zone defense called 'fist', which we used a lot. 'Fist' was the epitome of teamwork. All five parts had to work together in unison. If one part of 'fist' did not do its job or slacked off, then the 'fist' was not effective and broke down. We used 'fist' to shut down some of the best offensive teams and players (A9, Timeline).

This same athlete adapted and applied in law school the teamwork skills he learned in sport when he and his partner had to co-interview a mock client (i.e., an upper year student acting as a client) for a class project on negotiation and mediation. He explained how he teamed with his partner to prepare questions and co-conduct the interview:

> This entry will focus on the teamwork lesson I learned from my sport participation … we were adaptable and open to each other's opinions. We constructed an outline of the questions and the information to gather from our client. We decided to work off each other and ask questions when they came to mind instead of, as other groups decided to do, splitting the interview hour equally (one partner first half, another partner second half) (A9, Journal Entry One).

Moreover, in interview, this athlete highlighted how his experiences in team sports played a crucial role in helping him realize the importance of working in unison and thus enabled him to operate in a coordinated fashion with his partner on this project:

> *Interviewer*: Why do you think you did a good job applying teamwork during the project?
>
> *Athlete*: I didn't play a lot of individual sports growing up and most of the sports I played were team sports. If you want things to go well, all the cogs have to be working well together within the team. So if one person is being a ball hog, things usually won't work out really well or if someone is yelling at someone else, it's not going to work out very well (A9, Interview Three).

This athlete's partner on the project was interviewed and explained why they decided to work as a team and co-conduct the interview "[Name of athlete] and I decided we wanted to feed off of each other and have an organic conversation … when we actually did the interview, it was easy and it was really natural feeding off of each other that way" (SA20).

The grounded theory is built on the tenet that athletes, as they move across time and space, constantly transform or reconstruct their understanding of life skills. As a result, a life skill learned in sport evolves and is adapted when applied beyond sport to meet the demands of the application context. To illustrate, an athlete described learning *discipline* in university varsity rugby. In interview, the stepmother shared her thoughts on the athlete's behavior with the family:

> *Interviewer:* How would you described [name of athlete] as a person?
>
> *Stepmother:* She is very open-minded and very disciplined.
>
> *Interviewer:* Do you have examples that show how [name of athlete] is disciplined?
>
> *Stepmother:* I mean, part of it is probably because she has been involved in team sports for so long in her life … she's always been the person who workouts and goes to the gym. Even now, after Christmas, she's the first one in our family to stop eating treats, she makes sure she goes to the gym, gets there on time, and is up at 7:00 am for work. (SA2).

In another social agent interview, the athlete's roommate described her behavior at home:

> *Interviewer:* What are some of [name of athlete's] strengths as a person?
>
> *Roommate:* She's super responsible and organized. She works a full-time job, but she always makes sure she's in bed no later than 11:00 pm, never eats out, always prepares all her food, whereas I'm a mess, eating out every day, staying up until 3:00 am (SA1).

Although the athlete was deemed by her stepmother and roommate to exhibit much discipline, she described how she grappled with developing a clear meaning of what discipline entailed at work, as she transitioned from student to full-time employee. Her main qualms lied in grasping how discipline was defined at work, realizing how she needed to evolve from her past sport-specific view of discipline by gathering more information directly from the application context:

> I'm figuring out how to be disciplined outside of sport because it's different—it feels like it's a different type of discipline. In sport, it's a matter of I'm setting this goal for myself because I want to lift this much and I want to have this sprint time to set myself and the rest of my team up for success … I'm learning that it's not as straightforward in other areas. At work, I've set general rules for myself on how to be a better employee, but I guess in every situation, there's a bit of a grey area, like am I overstepping in doing this? Am I going to get my hand slapped? I feel like that more in the workplace because I don't exactly know when I'm going beyond what I'm allowed to do (A1, Interview Two).

Appraisal of life skill application. Within the grounded theory, it is postulated that the athlete cognitively evaluates his/her life skill application performance in terms of his/her ability to influence adaptive person-context relations. The results revealed that, in most cases, athletes believed they experienced successful adaptations by applying the skills they learned in sport. For example, one athlete discussed learning *perseverance* following the try-outs for her school's volleyball team. Going in, she did not feel confident about making the cut and thought about dropping out but her father told her to never give up and to believe she would make it:

> I remember my dad saying 'are you going to make the team?' I was like 'I don't know dad, there are still three more try-outs to go'. He was like 'you have to believe that you are going to make the team', and I was like 'okay, I'm going to do it' … every time we had a try-out, the list would get shorter and I just kept making it (A2, Interview One).

This same athlete discussed how she applied the perseverance skills she learned in sport during her eight-week teaching practicum by not giving up on creating a positive relationship with a difficult student. This athlete felt that her will to foster a relationship eventually paid off and helped her fulfill her teaching duties (benefit to person) as the student started to meaningfully engage in classroom activities (benefit to context):

> I tried to stay on him in class, to keep on his work and stop messing around. I was pretty convinced it was doing nothing, but then out of nowhere, he handed in an assignment on time, and then a week later, he handed in another assignment … For the last week of class, he was an absolute angel, he didn't disturb anyone in class, he would talk to me about his personal life, and he handed in every assignment. I didn't know if I was going to get through to him but I'm happy I did and I never gave up on him (A2, Journal Entry Six).

The above example highlights adaptive person-context relations but it is proposed in the grounded theory that life skills application can also lead to maladaptive person-context relations. To illustrate, one athlete stated how playing university intramural volleyball taught him the

value of using *sport as a stress relief*: "The best thing was having intramurals the night before exams because I never looked at my notes before I went to bed … I never thought of anything while I played sports, my mind shut down so I liked that" (A4, Interview One). Although this athlete was aware of the stress-reduction benefits he associated with sport participation, he wrote a journal entry about a specific time when playing volleyball did not help him clear his mind:

> Tonight, I played volleyball with my Wednesday night team. I must admit, this week has been crazy with work, and tonight proved to not be worthy of clearing my mind because of the lack of skill of some players on my team. The play just ends as soon as certain people touch the ball and it's hard to keep encouraging them after a few months … I know I need sport as a break from work but I can't clear my mind and play like this. Might be the reason for my lack of effort in bringing the team together (A4, Journal Entry Two)

Changed person-context. Within the grounded theory, it is postulated that life skills application, and the cognitive appraisal of such application, changes person-context relations. Regardless of whether the athlete experiences adaptive or maladaptive person-context relations, the very act of attempting to apply a skill is posited to allow for new knowledge to be created on the evolving requirements for successful application. Such knowledge, once internalized, can be used by the athlete to adapt (if necessary) future life skills application attempts to enhance the probability of experiencing adaptive person-context relations. Internalization is deemed to occur through a combination of conscious and unconscious cognitive appraisal processes, whereby athletes transform or reconstruct their existing conceptual, procedural, strategic, and tacit understandings of life skills application. Within the grounded theory, it is posited that the perceived stability or instability of the application context (i.e., organizational structure, rules, social norms) plays a significant role in influencing the extent to which athletes decide to adapt their approach to life skills application. Specifically, stable contexts are posited to require fewer adaptations and encourage subsequent life skills application attempts while unstable contexts are posited to require more adaptations and deter life skills application attempts.

The results indicated that athletes believed they operated, for the most part, in relatively stable application contexts. The *change* outcomes resulting from athletes' cognitive appraisal of their application attempts influenced their personal assets and their grasp of application context features. At this juncture, equipped with their new knowledge, athletes made new decisions for future life skills application attempts (i.e., the life skills application cycle began once more). For example, one athlete stated how he applied the *emotional regulation* skills he learned in sport when experiencing heated debates with his girlfriend when travelling across Western Canada:

> I remembered what I taught myself to do in sports, and took some time to breathe and calm down instead of immediately reacting, as I knew this would only make things worse. Taking this extra time to think things over before addressing the issue made me realize that it wasn't her intention to make me feel that way … So that helped me have a more mature response, instead of immediately firing back (A8, Journal Entry Two).

By appraising his application of emotional regulation, the athlete gained new knowledge on how to better regulate his emotions when interacting with his girlfriend. The athlete described how he then adapted his behaviors with his girlfriend when they went to Asia together later in the year:

> Situations about where to eat, where to hang out, and how to plan the next day, we made lots of mistakes in Western Canada. We learned from that and in Thailand, I just kept saying to myself, 'okay, we don't want another Western Canada'. So that was always on my mind and I made sure I stayed calm in Thailand … what I learned and the way I adjusted from that first trip showed in the positive result in the second trip because we weren't as frustrated when somebody made a mistake (A8, Interview Three).

4. Discussion

The present study adds to the literature by outlining key behavioral (i.e., application) and cognitive (i.e., decision-making, appraisal, and changed person-context) mechanisms that help explain what occurs once athletes move beyond sport and apply in different life domains the skills they deem to have learned in sport. In doing so, the study further elucidates how sport can foster the learning of life skills that transcend sport and help individuals succeed in life.

Many past studies (e.g., Chinkov & Holt, 2016; Kendellen & Camiré, 2017) have relied on retrospectively-oriented one-shot interview designs to examine athletes' perceptions of life skills learning and transfer. An original contribution of the current study lies in the use of multiple methods (i.e., interviews, charts, timelines, and journals) and multiple sources (i.e., athletes, and social agents) over an extended time period (i.e., 10 months) to examine perceived experiences of life skills learning in sport and subsequent life skills application beyond sport. In particular, the detailed charting and timelining enabled athletes to (a) systematically document their history of sport participation and (b) comprehensively identify the life skills they believed they learned through sport. Additionally, the three months of journaling allowed athletes to vividly describe their ongoing life skills application experiences as well as the complex interplay of factors they believed influenced this process. In future life skills research, studies should be designed to move beyond the retrospective single interview design and instead integrate multiple methods to further refine our understanding of the life skills process as it unfolds over time.

Past research has found that key social agents in sport, particularly coaches, exert a considerable influence on the life skills process (Camiré et al., 2012; Gould et al., 2007). The present study's findings extend the knowledge base by demonstrating how key social agents outside of sport also influence the life skills process. Athletes stated how they often made conscious decisions to apply in life the skills they had learned in sport because social agents within application contexts asked, instructed, and/or encouraged them to complete tasks requiring the application of such life skills. Once life skills were applied beyond sport, athletes' appraised their application performance in terms of whether or not they and the wider context benefited from the application. By having explored athletes' interactions with key social agents within application contexts, the study further delinates factors at play in the life skills process.

Researchers (e.g., Holt et al., 2009; Pierce et al., 2017) have advocated for connecting the perspectives of athletes and social agents within the same study when examining life skills to further nuance interpretations. The present study offered examples of such connections by presenting findings linking: (a) an athlete's account of having learned a life skill in sport to (b) the same athlete's account of applying that particular skill in a life context beyond sport to (c) a social agent's account of the athlete applying that particular skill in a life context beyond sport. Connecting the data at this level was essential in creating the substantive grounded theory, which led to new explanations of how athletes apply in life the skills they believe they have learned in sport, explanations that would not have arisen through a single method or data source.

A key and noteworthy contribution of the substantive grounded theory lies in exposing how successful life skills application is highly dependent on athletes' ability to transform and reconstruct their understanding of life skills learned in sport in ways that consider and meet the demands of application contexts. Researchers have conjectured that the extent to which individuals can transfer, reconstruct, and subsequently apply life skills in adaptive manners is greatly contingent on the

capital (i.e., social, cultural) available to them in application contexts (Pierce et al., 2017). An individual's social and cultural capital can be briefly summarized as the extent of the resources (e.g., knowledge, experiences, networks) at one's disposal in application contexts that, taken together, enable life skills to be applied in manners that foster adaptive person-context relations. The current findings offer empirical support for the conjectures (Pierce et al., 2017) that athletes' perceptions of and access to social and cultural capital do indeed play significant roles in the life skills application process. For example, the notion of cultural capital was unmistakably exemplified in the introspections of one athlete participant as she reflected on the intricacies of adapting how she originally applied discipline in sport to ways that would allow her to effectively deal with the discipline demands and expectations of her new workplace. For this athlete, as she transitioned from varsity rugby player to full-time worker, it was necessary that she first gain workplace capital before she could reconstruct her meaning of discipline in ways that would allow her to apply this skill in manners beneficial to both her and her workplace environment. Moving forward, future research on life skills must consider the notion of capital as well as the features of application contexts described in the current study (e.g., social agents, rules, social norms) to advance our understanding of life skills application.

4.1. Practical implications

In addition to providing new theoretical insights, the substantive grounded theory has several practical implications. Allen et al. (2015) discussed how the transfer of life skills from sport to life is unlikely to occur if few to no opportunities exist for individuals to apply their skills in contexts extending beyond sport. Consistent with such finding, the substantive grounded theory explains that athletes must perceive opportunities, benefits, and/or needs for life skills application prior to formulating intentions to apply their life skills. Thus, in line with notions advanced by Pierce et al. (2017), having opportunities to apply life skills represents a key contextual factor in the life skills process. In concrete terms, youth sport leaders (e.g., coaches, program instructors) are encouraged to connect and work with teachers and parents in creating situations within which athletes can apply in life the skills they have learned in sport (Pierce, Kendellen, Camiré, & Gould, 2018). For example, a soccer coach can teach his/her athletes emotional regulation skills by having them practice strategies for staying calm prior to taking a penalty kick. To help athletes apply their emotional regulation skills beyond sport, coaches can work with teachers and parents to devise application plans for the classroom and at home (e.g., practicing strategies for staying calm prior to an important oral presentation at school).

Additionally, the findings of the current study indicate that the transformation or reconstruction of a life skill, from its original learning/refinement in sport to its subsequent application in life, is a complex process that occurs over time as athletes acquire the necessary social and cultural capital. Coaches can play an important role in facilitating the capital building process by dedicating time during practices and/or team meetings to get athletes to discuss their life skills application attempts, based on the skills learned in sport (Camiré & Kendellen, 2016). By reflecting on their own application experiences and being exposed to those of their peers, athletes can increase their understanding of the adaptations needed to transform or reconstruct life skills learned in sport to ensure their successful application beyond sport.

4.2. Delimitations of the substantive grounded theory

The substantive grounded theory should be considered in light of the fact that factors not accounted for in the present study (e.g., satisfaction of basic needs, similarity of context) may influence the life skills application process. The present study represents a preliminary attempt to unravel some of the mechanisms vital in explaining how athletes apply in life the skills they believe they learned in sport. Future research is needed to test the explanatory power and analytical generalizability of the present grounded theory (Smith, 2018). From a learning theory perspective (Jarvis, 2006), it is recognized that human learning is constant and fluid, with individuals continually moving through space and time and, consciously or not, taking skills learned in some contexts and applying them in others. Thus, it is important to note that the current grounded theory is framed to represent one linear portrait (i.e., sport to life) within the wider human learning process, with the goal of isolating sport as a learning context and explaining how athletes apply in their lives the skills they believed they learned in sport. Finally, the substantive grounded theory was built based on the experiences of athletes in their late teens - early twenties who had either completed or were enrolled in university. Further, these athletes generally benefited from strong social support systems. As a result, the grounded theory may not be representative of the experiences of athletes in other life stages, athletes without university education, and/or athletes with poor social support systems.

5. Conclusion

In conclusion, the study's original contribution lies in the creation of a substantive grounded theory of life skills application based on comprehensive data collected over a 10-month time period through interviewing, charting, timelining, and journaling with athletes and their key social agents. The current study provides support to and further elucidates the notion that sport can have an important impact on youth's development both within and beyond sport.

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