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Preventing Youth Sport Dropouts
Prevention model
White paper

1. Theoretical background

Recent projects at European level giving various solutions to prevent sport dropout especially at youth. Most of them show best practice models and identify dropout factors but there are very few studies that connect resilience, as psychological ability of the person to overcome difficulties, stress, burnout etc. and staying longer in sport. Moreover, to our knowledge there are no projects that have linked resilience to the coach-athlete-parent triangle and youth sport dropout.

Previous researches show that resilience is a significant factor for dropout in general (Chasley-Carter, 1999; Sorkkila et al, 2019; Sottie, 2011; Wayman, 2002; Wan & Tsui, 2020). Assessing the effects of resilience on the decision of at-risk students to dropout or remain in school, Chasley-Carter (1999) found that students who stayed in school, despite obstacles in their lives (low academic scores, high aggression etc.), were more resilient in that they possessed higher resilience and lower alienation than the dropouts. The similar findings were found by Sorkkila et al. (2019) examining the reasons why some student-athletes do not burn out, unlike others. After conducting research authors concluded that students who do not burn out have a higher level of resilience, and assume that teaching student-athletes resilience-related skills can prevent them from burning out and dropping out from sport and school, what is in the line with Wayman's (2002) assumption that inclusion of resilience-building in school curriculums, teacher preparation programs, classroom teaching techniques, and dropout research programs could reduce drop out in general.

In sports, athletes are exposed to many psychological stressful experiences in their competitive sports activities (Petrie, 1992) thus capacity for successful adaptation despite challenging or threatening circumstances (what we call "resilience"; Masten, Best, & Garmezy, 1990) is of particular importance. Findings of Hill et al. (2018) revealed that resilient individuals were able to return to their previous level of performance after encountering the perturbation, whereas non-resilient athletes' negative performance was followed by another negative performance. Ueno & Suzuki (2016) showed that resilience is negatively associated with burnout among athletes, thus they concluded that applying the concept of resilience to sports may prevent burnout and dropout rate of athletes. Therefore, authors underlining the need to develop intervention programs for improving athletes' resilience and to investigate their efficacy and provide feedback to the athletes and coaches regarding results of these types of studies.

As Jowett & Ntoumanis (2003) state a series of qualitative case studies were conducted in order to ascertain the nature of the coach–athlete relationship, which could define as the situation in which

coaches' and athletes' emotions, thoughts, and behaviors are mutually and causally interconnected. Gould et al. (1996; 1997) reported that situational and personal factors may interactively contribute to youth tennis players' burnout. They found psychological stress, such as high expectations from coaches and parents (pressure to please others and emphasis on winning/ranking...) are major factors leading to burnout. Psycho/social stressors such as negative performance demands, social relations, and lack of social support are some of the major factors associated with burnout (Gustafsson et al., 2008) and can lead to rigid and inappropriate behaviour, decreased performance and withdrawal from activity (Lu et al., 2016). Investigating the effects of athletes' resilience and coaches' social support on the stress-burnout relationship Lu et al. (2016) found that under high life stress, athletes who are both high in resilience and tangible support are less susceptible to burnout than those with high resilience but low tangible support. In the low life stress condition, findings revealed that athletes with high resilience but low tangible support are less prone to burnout than those both low in resilience and tangible support. This way authors confirm that high stress is associated with athlete burnout, that high resilience is negatively associated with stress-induced outcomes, and that social support is negatively associated with burnout, thus emphasize the (good) athlete-coach relationship as a factor of (preventing) burnout, and consequently dropout.

In addition to the coach-athlete relationship a significant factor in the prevention of youth sport dropout is parental involvement in sport activities of young athletes. Researches showed that caring parents who are involved in their children's schooling / participation in extracurricular activities (e.g., after-school sports), and have supportive relationships with teachers/coaches positively contribute to children's academic/sports performance (Nettles, Mucherah & Jones, 2000). However, when a child enters a sport program some parents do not realize their role in that process and own responsibilities, so may miss opportunities to help their children grow through sports, or they may do things that interfere with their children's development. If parents assume an extremely active role in the sports life of their children, their influence may become an important source of children's stres (Smoll, Cummbing & Smith, 2011) that may become chronic (burnout) and cause of childrens' sport dropout. Therefore, for children that participate in sport their parents must be educated on their role in the youth sport triangle (Holden et al., 2015). The sport triangle (Fig. 1), well known as an "athletic triangle", describes the interpersonal relationship of coach, parents and athlete - "all parties that need to positively collaborate within the youth sport environment to enhance the sporting experience for all" (Hellstedt, 1987).

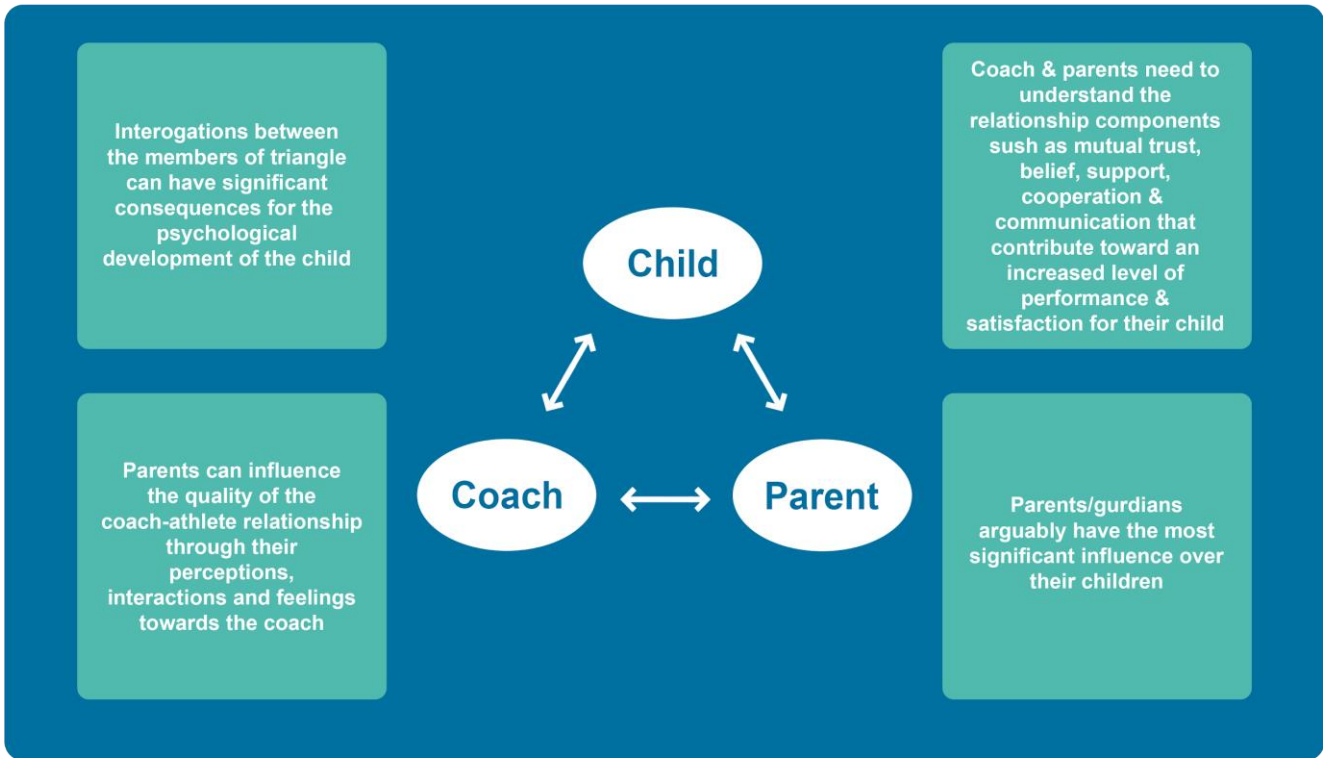

Fig. 1. Athletic triangle by Hellstedt, 1987 (reprented and modified from https://thesportinginfluencerblog.wordpress.com/athletic-triangle/).

There are a number of studies that have investigated athletic triangle (Blom, Watson II & Spadaro, 2011; Hellstedt, 1987; Holden, 2015; Wylleman et al., 1995; Wylleman, 2000) and also development of resilience through a youth sport or/and coach-athlete relationship (White & Bennie, 2015), but to our knowledge this is the first study to link resilience and the coach-parent-athlete relationship as factors in youth sport dropout. While previous researches were focused on interpersonal relations between coach, parents and athlete, PYSD prevention model consist of identification of the resilience level of youth athletes and their relations with parents and coaches, and providing proposals for actions to parents and coaches in order to build up youth athletes resilience as a predictive factor of youth sport dropout.

Taking into account all mentioned findings of previous researches, we assume that building resilience at youth and developing relations with parents and coaches will lead to staying longer in sport or return practicing sport.

2. Instruments

Recent studies in the United States of America shows that children mostly dropout from sport at the age of 12 or 13 and often earlier (O'Sullivan, 2015; Wallace, 2016). Studies of youth sports participation and dropout rates in other countries show similar trends (Carlman, Wagnsson, & Patriksson, 2013). When comparing domain-general and sport-specific dropouts in relation to the dropout age categories, results showed that domain-general dropouts increased with the dropout age (37% at <11 years; 50% at 11-13 years and 65% for >13 years), while sport-specific dropouts decreased accordingly with agee (63% at <11 years; 50% at 11-13 years and 35% for >13 years) (Carlman, Wagnsson, & Patriksson, 2013). In North America 35% of children and adolescents drop out of sport annually (Patriksson, 1988).

Based on previous findings and experience from practice we chose instruments that could be applied in the assessment of psychological characteristics of young athletes, in different cultural contexts. In order to check the metric characteristics of proposed instruments on a sample of young athletes from Italy, Spain, Serbia and Bulgaria we designed a study in which participated 2407 athletes. After reviewing the collected data, 2133 questionnaires that were in accordance with the criteria were taken for further analysis (Italy, n = 785; Spain, n = 673; Serbia, n = 450 and Bulgaria, n = 505). The sample was conducted of young athletes aged 11-15-y (13,2 ± 1.2; mean ± standard deviation) both, male (n = 1550) and female (n = 551) from 2 team sports (basketball, n = 978 and football, n = 707) and from swimming (n = 428), as an individual sport. Six months trained by the same coach was the inclusion criteria for participating subjects in the study (Jowett & Ntoumanis, 2004).

For the assessment of the resilience level we used 40-items five-point Likert-type (ranged from 1 – *never* to 5 – *always*) The Student's Resilience Scale (SRS; Lereya et al, 2016) that covers range of 10 subscales (Family connection, School connection, Community connection, Participation in home and school life, Participation in community life, Self-esteem, Empathy, Problem solving, Goals and aspirations and Peer support) measuring childrens' perceptions of their individual characteristics, as well as protective factors embedded in the environment. As a measure of reliability of the instrument we calculated Cronbach's alpha score (α), which was high (note that maximum value is "1") on the sample from Bulgaria (α = 0.94), Serbia (α = 0. 92) and Italy (α = 0.91) and satisfactory for the sample of children from Spain sample (α = 0.83).

The 3Cs conceptual model of the Coach-Athlete Relationship Questionnaire (11-item athlete version CART-Q; Jowett & Ntoumanis, 2004) was used to assess the coach-athlete relationship as defined by Closeness (interpersonal liking, respecting, trusting, and appreciating one another), Commitment (relationship between members' thoughts about developing a close and lasting partnership), and Complementarity (members' behavioral transactions of cooperation that are willing, responsive, relaxed, and friendly) (Yang and Jowett, 2012) where items were assigned a score ranging from 1 (*not-at-all*) to 7 (*extremely*). Our results showed high internal consistency (α) on the Italian (α = 0.92), Serbian (α = 0.95) and Bulgarian (α = 0.91) sample, while on the sample of children from Spain it was satisfactory (α = 0.85).

Parent-athlete relationship was assessed by The Parent Involvement in Sport Questionnaire, (PISQ; Lee & MacLean, 1997) for both, mother and father / guardians separately. PISQ consists of 19 items rated on five-point Likert-type scales ranging from *never* (1) to *always* (5) that assess the extent to which parents control their children's behaviour in sport (*Direct Behaviour*), the praise and empathy parents display towards their children (*Praise and Understanding*) and parents' activity in the club or during practice sessions (*Active Involvement*). Results showed high values of α for Serbian, Bulgarian (α = 0.93) and Italian (α = 0.92) samples, while for sample from Spain it was satisfactory (α = 0.82).

Moreover, results of the research revealed differences in level of resilience, athlete-coach and athlete-parent relationship respectively between subsamples in general and by subscales, as well as between subgroups (e.g. sex, gender, dominant sport...), which indicates that all three instruments are sensitive enough to record differences between sample's groups and can be used as a valid tool in the further research of the assessment of psychological characteristics of athletes.

Based on previous findings as well as findings of current study we suggest that proposed instruments can be used for screening (current status of resilience and relations to the coach and to the parents), subpopulation characterization (differences for groups by gender, age, country and etc.), diagnostic of special needs (which component is weak and need to be developed) and intervention evaluation (does resilience and coach-athlete relationship, as well as parent-athlete relationship is developed after intervention).

3. Intervention

The youth sport is an integral part of the culture in most of the European countries (Holt, Tomlinson & Young, 2011) and worldwide. In addition to having fun it presents an opportunity for young people to experience the joy of success and cope with setbacks to develop resilient behaviours (White & Bennie, 2015), important for overcoming tough and stressful situations. In this regard, the role of coaches and parents is to provide support to young people by creating a strong coach-parent-athlete relationship (Holden et al., 2015; White & Bennie, 2015). Finding a way to improve this relationship it is reasonable to assume that athletes will enjoy sports more, play them on a higher level and consequently play it longer (Blom, Watson II & Spadaro, 2011).

While a number of studies show some promise for resilience-based interventions that can be a useful way of increasing positive development for children in a wide variety of settings, Brownlee et al. (2013) underline the need to design research studies that include control groups, measure before and after program implementation, use comprehensive instruments to assess resiliency and assess how these factors are related to specific positive outcomes. The authors consider that implemented programs do not always necessarily intend to increase the number of strengths/resilience shown by youths, it may also attempt to support youths in utilizing existing to address their current issues (Brownlee et al., 2013).

In line with this suggestion of Brownlee et al. (2013) and based on the results of our preliminary research we designed another study that includes athletes, their coaches and parents. We assume

that the application of certain measures/actions by coaches and parents over a time could increase (or utilize existing), the resilience of young athletes and strengthen the relationship between athletes, coaches and parents which would indirectly lead to staying longer in sports. In this regard we prepared a list of actions for the development of resilience and the relation between the athlete with his parents and the coaches. The choice of actions is the result of a pedagogical discussion where the leading question was: what actions should a child of a certain age be given to do in order to improve resilience and develop better relationships with the coach and parents? The final compilation of actions is the result of an extensive selection of possible measures, which have been developed and discussed in several expert discussions.

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