## TOOL FOR ASSESSING RESPONSIBILITY-BASED EDUCATION (TARE) IN THE PORTUGUESE CONTEXT: INSTRUMENT ADAPTATION AND RELIABILITY ASSESSMENT

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**ABSTRACT:** Throughout the last decades, the teaching personal and social responsibility model has proven useful in a range of contexts. Several observational instruments such as the tool for assessing responsibility-based education have been developed to assess responsibility-based interventions. However, researchers have recognized the tool for assessing responsibility-based education has limitations. The objectives of this study were to present a modified version of this observational tool applied to the coaching context, analyze the inter-ratter reliability of the new instrument and measure youth athletes' and coaches' responsibility behaviours. The participants were four youth coaches as data from one-minute intervals was collected. There were high rates of reliability in some categories included in the observational tool as others were not present in coaches' behaviours. Additionally, positive correlations between coaches' and athletes' responsibility behaviours were identified. These findings may inform practitioners and researchers about how the teaching personal and social responsibility model is being implemented in such contexts.

**KEYWORDS:** Observational system, Life skills, Athlete behaviour, Coaching behaviour

## FERRAMENTA PARA AVALIAR A EDUCAÇÃO BASEADA EM RESPONSABILIDADE (TARA) NO CONTEXTO PORTUGUÊS: ADAPTAÇÃO DE INSTRUMENTOS E AVALIAÇÃO DE CONFIABILIDADE

**RESUMO:** Ao longo das últimas décadas, o modelo de desenvolvimento da responsabilidade pessoal e social tem-se revelado útil em vários contextos. Diversos sistemas de observação como o instrumento de avaliação da responsabilidade, ferramenta para avaliar o ensino da responsabilidade, têm sido desenvolvidos para avaliar intervenções sustentadas neste modelo. Contudo, investigadores têm reconhecido que este instrumento apresenta limitações. Os objetivos deste estudo foram apresentar uma versão modificada do instrumento aplicada ao treino desportivo, analisar a fiabilidade inter-observador do novo instrumento e avaliar os comportamentos de responsabilidade de treinadores e atletas. Os participantes foram quatro treinadores de jovens, sendo que os dados foram recolhidos através de intervalos de um minuto. Certas categorias apresentaram valores elevados de fiabilidade, apesar de outras não estarem presentes no comportamento dos treinadores. Adicionalmente, identificaram-se correlações positivas entre os comportamentos de responsabilidade dos treinadores e atletas. Estes resultados podem informar investigadores e treinadores acerca do modo como o modelo de desenvolvimento da responsabilidade pessoal e social está a ser implementado neste contexto.

**PALAVRAS CHAVE:** Sistema de observação, Competências para a vida, Comportamento do treinador, Comportamento do atleta

## HERRAMIENTA PARA EVALUAR LA EDUCACIÓN BASADA EN LA RESPONSABILIDAD (TARE) EN EL CONTEXTO PORTUGUÉS: ADAPTACIÓN DE INSTRUMENTOS Y EVALUACIÓN DE CONFIABILIDAD

**RESUMEN:** A lo largo de las últimas décadas, el modelo de desarrollo de la responsabilidad personal y social ha sido útil en varios contextos. Diversos sistemas de observación como la herramienta para evaluar la enseñanza de la responsabilidad han sido desarrollados para evaluar intervenciones sostenidas en el modelo de desarrollo de la responsabilidad personal y social. Sin embargo, los investigadores han reconocido que e la herramienta presenta limitaciones. El objetivos de este estudio eran presentar una versión modificada de la herramienta aplicada al entrenamiento deportivo, analizar la fiabilidad inter-observador del nuevo instrumento y evaluar los comportamientos de responsabilidad de entrenadores y atletas. Los participantes fueron cuatro jóvenes entrenadores, y los datos se recogieron a intervalos de un minuto. Algunas categorías presentaron valores elevados de fiabilidad, aunque otras no estuvieron presentes en el comportamiento de los entrenadores. Adicionalmente, se identificaron correlaciones positivas entre los comportamientos de responsabilidad de los entrenadores y atletas. Estos resultados pueden informar a investigadores y entrenadores acerca de cómo se está implementando el modelo de desarrollo de la responsabilidad personal y social en este contexto.

**PALABRAS CLAVE:** Sistema de observación, Competencias para la vida, Comportamiento del entrenador, Comportamiento del atleta.

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Positive youth development (PYD) has been widely used as a framework to fully prepare youth to positively engage in society through intentionally structured programs that aim to develop a broad range of positive outcomes (e.g., life skills development) with the support of adult mentors (Lerner, Almerigi, Theokas, and Lerner, 2005). Such strength-based programs have been delivered within underserved communities through school-based projects and sport academies (Fraser-Thomas, Côté, and Deakin, 2005) and seek to accomplish several types of objectives such as academic competence, school engagement, or healthy behaviours (Walsh, Ozaeta, and Wright, 2010). Along these lines, physical education and sport have been used as tools to facilitate PYD outcomes (Hellison, 2011; Holt, 2016).

Throughout the last few decades, several sport-based programs that aim to promote PYD have been implemented in different contexts (e.g., competitive youth sport programs) with promising results on youth development. For instance, Martinek, Schilling and Hellison (2006) created a leadership-based program that helped adolescent youth contribute to their communities and develop leadership skills through physical education. Santos, et al., (2015) successfully implemented a program focused on teaching personal and social

responsibility to underserved children within a physical education setting. PYD-based programs are sometimes designed and delivered according to specific instructional or curricular models (Ennis, et al., 1999; Hellison, 2011) or frameworks (Danish and Nellen, 1997) within physical education and sport. Although these frameworks and models follow similar premises and may pursue the same PYD outcomes, there are specific objectives, strategies and types of activities that should be considered in each model/framework. One of these models is Hellison´s (2011) Teaching Personal and Social Responsibility (TPSR) in which responsibility is taught intentionally through five levels of responsibility: (a) respect for others; (b) effort; (c) self-direction; (d) leadership; (e) transference. Most research using the TPSR model has been conducted within school-based afterschool programs and coaching clubs (e.g., Blanco, Delgado-Noguera, and Escartí-Carbonell, 2013). As Hellison (2011) describes it, TPSR is a values-based approach to teaching that emphasizes holistic development, focuses on strengths and youth potential, and empowers youth to take on responsible roles. Therefore, physical education teachers and youth sport coaches should consider the alignment of the TPSR values and philosophy with their own, e.g. their willingness to share responsibility with youth (Gordon, Thevenard, and Hodis, 2012). Despite the fact youth sport can be used to foster responsibility coaching contexts present complex challenges due to the fact that, in certain cases, the focus placed on performance outcomes supersedes other mandates (Holt, 2016). However, if the focus is placed on youth development, TPSR can be effectively applied in such contexts. Based on Hellison´s (2011) perspective, to coach for TPSR it is necessary to focus on youth´s developmental needs and develop a deliberate approach towards responsibility development.

Hellison´s TPSR model (2011) has been used in several countries such as Spain and United States (Blanco, Delgado-Noguera, and Escartí-Carbonell, 2013) and several studies have shown it can increase personal and social responsibility outcomes. Walsh, et al., (2010) analyzed the impact of TPSR-based coaching club program in the United States as the participants were able to transfer responsibility goals to the school environment. It is consensual within the scientific community the TPSR model can facilitate personal and social responsibility outcomes and help youth strive in Physical education and sport, and also in other life domains (Hemphill, Templin, and Wright, 2015). However, it is also necessary to recognize the existence of challenges within TPSR-based interventions that may not be completely understood through self-report data (Walsh, et al., 2010). Therefore, researchers and practitioners must consider measurements that may enable a more comprehensive understanding of a program´s efficacy.

Observational tools are still scarce in certain contexts (e.g., Portuguese context) which limits the extent to which researchers can assess TPSR-based programs. On this notion, Wright and Craig (2011) develop an observational tool designated Tool for Assessing Responsibility-based Education (TARE) to analyze teachers´ and/or coaches´, and youth´s responsibility behaviors. This tool was originally divided in three sections and has been mainly used in physical education settings: (a) observable teaching strategies; (b) personal–social responsibility themes; (c) student responsibility. The first section is an interval recording section and the observer must determine whether teaching strategies were or were not implemented during a 5-min period. The remaining sections are completed by the observer at the end of the session and a five-point Likert scale is used to determine the overall integration of personal and social responsibility themes and student responsibility behaviours. This tool enables a process and product-based evaluation of TPSR-based programs. The TARE has been adapted to other contexts such as the Spanish context (Escartí, Gutiérrez, Pascual, and Wright, 2013). However, an alternate version of the instrument, designated the TARE 2.0 (Escartí, Wright, Pascual, and Gutiérrez, 2015), has been produced as researchers attempted to offer a more comprehensive analysis of responsibility behaviours while maintaining the key components of the original version of the TARE. A three-minute interval analysis of the instructional time was introduced, as well as a new section to provide more information about youth´s responsibility behaviours throughout the session. The same researchers involved in the creation of the TARE 2.0 added: "In summary, the TARE 2.0 retains the value and functions of the original instrument, but is a key contribution in that it adds the new function of measuring student behaviour and has been tailored to yield data of higher quality and quantity for rigorous research and evaluation studies related to the TPSR model or responsibility-based instruction in general." (Escartí, et al.,2015, p. 61).

Therefore, the purpose of this study is to present a modified version of the TARE applied to the coaching context, analyse the inter-rater reliability of the new instrument and measure youth athletes' and coaches' responsibility behaviours.

## MATERIALS AND METHODS

### Participants and Setting

The data was collected at four football clubs as youth athletes were competing in the regional championships promoted at north of Portugal. The four observed coaches were certified by the local Football Association and/or had undergraduate degree in sport sciences. Coaches had a minimum of two years of coaching experience within competitive youth sport and on average were 28 years old, ranging from 24 to 37. All coaches prioritized PYD within their program. Nevertheless, these coaches did not receive any formal or informal training on the TPSR model. The youth athletes involved in these sport clubs were nine- to twelve-year olds (SD = 10.5) who trained at least three times per week in local competitive football clubs. Each coach had approximately 20 youth athletes in their teams. No athletes were involved in any explicit PYD-focused program in sport (i.e., in other sport settings) and/or in other settings (e.g., school) concurrently to the observation protocol.

### Instrument Adaptations

Initially, the latest adaptation to the original TARE (Escartí, et al., 2015) was reviewed by a group of experts in PYD and several procedural questions (e.g., How a 5-point Likert scale may allow observation of responsibility behaviors?, How a 3-minute interval may apply may be applicable?) were raised in order to consider how to adapt the instrument to the Portuguese coaching context as a small scale pilot testing was recommended. As such, the latest version of the TARE was translated from English to the Portuguese language and analyzed by the panel of experts for accuracy and overall coherency as no major changes were recommended. Prior to field testing, observers were instructed by an expert on the TPSR model about: (a) the structure of each category of the TARE; (b) the meaning of each category; (c) and how coding should be conducted. Additionally, the Likert scale was comprised of the following items: zero (absent), one (weak), two (moderate), three (strong), and four (very strong) and was also described and presented to the observers in this workshop. This expert had received training by one of the co-authors who was involved in the creation of the original TARE. This procedure is consistent with the protocol used by Escartí, et al., (2013). Based on the latest changes made on the initial version of the TARE by Escartí, et al., (2015), observers were not able proceed with the observations and attain a minimum of 80% agreement as several changes were proposed and discussed with the group of experts, more specifically: (a) using a one-minute interval to register coaches´ and athletes´ responsibility behaviours which might provide a more comprehensive understanding of coaching behaviour due to the nuances in coach-athlete interactions; (b) observers struggled in using a Likert scale as agreement could not be attained while distinguishing between "moderate" and "strong" implementation of a given strategy. Therefore, the panel of experts who were selected based on their experience with the TPSR model, working with youth athletes and in PYD research projects suggested the need to maintain most of the features present in the original version of the TARE and integrate a one-minute interval analysis as coach-athlete interactions generate more sudden changes and shifts in instructional strategies/aides, activities and athlete behaviour than perhaps in physical education settings. Coaches' behaviours are influenced by athletes' responses which due to the intricate nature of the coaching process might generate frequent nuances.

Therefore, a more precise account of all these behavioural nuances might provide a more comprehensive understanding of coaches' intervention towards TPSR and how this model is being implemented in youth sport. In fact, these proposed modifications might also enable a more detailed analysis of how coaches improve their ability to foster responsibility. Specifically, a frequency-based analysis provides opportunities for researchers to identify minor changes in behaviour throughout time. These nuances and understanding of coach behaviour has been suggested by several researchers that have analyzed coach-athlete interactions (Erickson and Côté, 2016; Jowett, 2017). In addition, in this case a Likert scale was not used as certain personal and social responsibility behaviours were not assessed with an appropriate percentage of agreement as a frequency measurement was used following the initial version of the TARE (Wright and Craig, 2011). Field testing was then conducted once more as a minimum of 80% agreement was attained and this new version of the instrument was created.

**Procedure**

Before proceeding with the current study, the ethics board of the University approved this research. A detailed consent form was delivered to sport clubs, coaches and tutors and/or parents) explaining the scope, objectives and that all the data collected was confidential and anonymous. A sample of four coaches was deemed sufficient for the purposes of this study corroborating past research endeavours (Escartí, et al., 2013). Permission to video and audio record four practices from each coach was requested and granted by all the participants. Invitation letters were sent to two observers who independently coded the data on two separate occasions (i.e., a three week interval was used between observations) and filled the instrument sheets. As sufficient rates of inter-rater reliability were established, a total of 16 practices were audio and video recorded ranging from 60 to 70 minutes long.

**Data analysis**

The SPSS software was deemed an appropriate tool for data analysis and therefore was used by the first author who conducted the analysis. Based on the protocol used by Escartí, et al., (2015), several analytical procedures were used in the present study. As such, the ICC and Pearson correlation coefficients were used to determine reliability for the coaches' and athletes' sections of the revised version of the TARE as a consistency analysis between observers served the purpose of reporting differences between observers (Creswell, 2003). Multiple one-minute intervals were coded and a general overview of the actual observed frequencies of the different responsibility-based strategies attained (see Table 1 for more detailed descriptions). Additionally, significant statistical relationships were determined in order to link coaches' responsibility-based strategies and their athletes' responsibility behaviours. To provide rigor to this process, an external researcher that was familiar with the TPSR model and quantitative analysis served as a consultant and reviewed the decisions made by the authors. A reflexive journal was also kept to monitor the data analysis process.

## RESULTS

**Teaching Strategies, Inter-observer Reliability**

There was a high consistency between observers with an Intra-class Correlation Coefficient (ICC) between 0,66 e 0,94 (see Table 2). The category "Assigning Management Tasks" had the highest discrepancy between observers. In addition, regarding the categories "Leadership", "Role in Assessment" and "Transfer" there were no coding entries (see Table 1 for time-intervals analyzed) by the observers as it was not possible to assess ICC due to the absence of variance. Pearson correlation coefficients varied between 0,586 e 0.903 ($p<0,05$).

Intra-observer Reliability. An internal consistency analysis was also conducted for each of the observers (see Table 3). On this notion, each observers´ coding was analyzed and divergent results reported.

Considering the Pearson correlation coefficients and ICC it is possible to state there is an acceptable intra-observer consistency within most categories. Both observers had the lower consistency value in the category " Assigning Management Tasks" as correlations were not significant in both moments. As stated previously there were no coding entries for the following categories: "Leadership", "Role in Assessment" and "Transfer".

**Personal–Social Responsibility Themes and Athlete´s Behaviours**

**Inter and Intra-Reliability.**

*Table 1*. Time-intervals analyzed.

| Team | Session | MR | SE | OS | FSI | AMT | L | GCV | RA | T | Codes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 12 | 1 | 66 | 62 | 6 | 0 | 3 | 0 | 0 | 150 |
| | 2 | 31 | 0 | 66 | 66 | 1 | 0 | 1 | 0 | 0 | 165 |
| | 3 | 42 | 0 | 67 | 67 | 2 | 0 | 9 | 0 | 0 | 187 |
| | 4 | 21 | 22 | 60 | 60 | 2 | 0 | 0 | 0 | 0 | 165 |
| 2 | 1 | 2 | 20 | 46 | 46 | 1 | 0 | 0 | 0 | 0 | 115 |
| | 2 | 0 | 12 | 37 | 37 | 1 | 0 | 0 | 0 | 0 | 87 |
| | 3 | 1 | 19 | 31 | 31 | 0 | 0 | 1 | 0 | 0 | 83 |
| | 4 | 3 | 18 | 52 | 52 | 0 | 0 | 0 | 0 | 0 | 125 |
| 3 | 1 | 7 | 45 | 39 | 39 | 0 | 0 | 0 | 0 | 0 | 130 |
| | 2 | 5 | 29 | 32 | 32 | 1 | 0 | 0 | 0 | 0 | 99 |
| | 3 | 2 | 39 | 64 | 64 | 1 | 0 | 0 | 0 | 0 | 170 |
| | 4 | 5 | 59 | 48 | 48 | 1 | 0 | 0 | 0 | 0 | 161 |
| 4 | 1 | 1 | 21 | 80 | 80 | 3 | 0 | 0 | 0 | 0 | 185 |
| | 2 | 0 | 15 | 51 | 51 | 2 | 0 | 0 | 0 | 0 | 119 |
| | 3 | 0 | 15 | 62 | 62 | 5 | 0 | 0 | 0 | 0 | 144 |
| | 4 | 0 | 20 | 45 | 45 | 4 | 0 | 0 | 0 | 0 | 114 |
| 1 | 1 | 6 | 2 | 58 | 60 | 5 | 5 | 7 | 4 | 1 | 148 |
| | 2 | 9 | 12 | 48 | 57 | 2 | 5 | 7 | 3 | 0 | 143 |
| | 3 | 23 | 23 | 59 | 59 | 9 | 2 | 24 | 12 | 5 | 216 |
| | 4 | 15 | 13 | 65 | 65 | 5 | 5 | 0 | 0 | 0 | 168 |
| 2 | 1 | 12 | 23 | 52 | 52 | 1 | 0 | 3 | 0 | 0 | 143 |
| | 2 | 2 | 11 | 39 | 39 | 2 | 0 | 1 | 0 | 0 | 94 |
| | 3 | 10 | 27 | 35 | 35 | 0 | 0 | 0 | 0 | 0 | 107 |
| | 4 | 14 | 31 | 54 | 54 | 0 | 0 | 1 | 0 | 0 | 154 |
| 3 | 1 | 5 | 21 | 54 | 54 | 2 | 0 | 0 | 0 | 0 | 136 |
| | 2 | 3 | 19 | 32 | 32 | 0 | 0 | 1 | 0 | 0 | 87 |
| | 3 | 3 | 23 | 64 | 64 | 1 | 0 | 0 | 0 | 0 | 155 |
| | 4 | 1 | 43 | 50 | 50 | 0 | 0 | 0 | 0 | 0 | 144 |
| 4 | 1 | 1 | 11 | 77 | 77 | 3 | 0 | 0 | 0 | 0 | 169 |
| | 2 | 0 | 1 | 62 | 62 | 3 | 0 | 0 | 0 | 0 | 128 |
| | 3 | 3 | 29 | 64 | 64 | 3 | 0 | 0 | 0 | 0 | 163 |
| | 4 | 3 | 22 | 45 | 45 | 3 | 0 | 0 | 0 | 0 | 118 |

*Note:* MR - modeling respect, SE - setting expectations, OS - opportunities for success, FSI - fostering social interaction, AMT - assigning management tasks, L - leadership, GCV - giving choices and voices, RA - role in assessment, T - transfer.

Only five statistically significant correlations were found (see Table 5). The responsibility-based strategies used by the coaches were associated with autonomous behaviours (p<0,05). However, athletes´ autonomy decreased as behaviours within the category "setting expectations" increased (p<0,05). Empowerment was also lower as behaviors within the category "setting expectations" increased (p<0,05) (see Table 4 for agreement percentage for this section).

## DISCUSSION AND CONCLUSIONS

The main purpose of this study was to present a modified version of the TARE applied to the coaching context, analyse the inter-rater reliability of the revised instrument and measure youth athletes' and coaches' responsibility behaviours. This revised version of the TARE was created to consider the specific nature of the coaching context and coach-athlete dyads and may provide insight for future incursions with the TPSR model. Previous research has supported that coaching contexts entail a specific set of objectives, demands and challenges, and influence coaches' and athletes' behaviours and therefore TPSR implementation (Holt, 2016). In the present study, this version of TARE was deemed appropriate to measure coaches' and athletes' responsibility behaviours as high rates of reliability were reported in several categories. With this in mind, the participants had no training on the TPSR model and the data obtained did not reflect the effects of a TPSR-based implementation. However, it was possible to assess the tool for consistency and increase our understanding how this version of the TARE may be used for professional development and to improve TPSR implementation within coaching contexts (Hemphill, et al., 2015).

The TPSR model has been mostly applied within physical education settings and afterschool projects (Blanco, et al., 2013) as coaching contexts such as competitive youth sport and recreational sport still need to be further explored (Wright, Jacobs, Ressler, and Jung, 2016). As such, aligning a TPSR mandate with the challenges of intervening in organized youth sport (e.g., focus on winning and performance outcomes) might require a contextual analysis of how coaches' behaviours progress towards a sound TPSR implementation and how it leads to athletes' responsibility behaviours (Bean and Forneris, 2017; Camiré, 2015). Based on this notion, coach-athlete dyads may be better understood through a more precise frequency-based analysis that captures changes in behaviour and considers the dynamics of this particular context (Smith, Shoda, Cumming, and Smoll, 2009). Therefore, a five-point Likert scale included in previous revised version of the TARE (Escartí, et al., 2015) was replaced by a one-minute frequency-based coding procedure which enabled a specific analysis of coaches' behaviors and could allow practitioners and researchers to monitor and quantify progress more accurately within a TPSR program conducted in sport contexts and consider answering a broader set of research questions (MacDonald and McIsaac, 2016).

This new version of the TARE may provide descriptive information about coaches' adherence to the TPSR model and shed light on how coach training focused on this model may help increase coaches' responsibility behaviours and athletes' outcomes. In present study, there was a low set of coaches' responsibility behaviours reported within the categories "role in assessment" and "transfer". Many researchers (Pierce, Gould, and Camiré, 2017) have mentioned that life skills transfer is a complex endeavour that requires coaches to consider athletes needs, socio-cultural context and life skills targeted in a specific youth sport program. Bean and colleagues (2018) developed a conceptual model to explain how coaches teach life skills to their athletes and highlighted the need to continuously create opportunities for athletes to internalize and apply life skills in and outside sport as these features were not considered by the coaches. Hence, the TARE could be viewed as a source of information that may help coaches combine a TPSR philosophy with the necessary skill set to foster life skills transfer (Escartí, et al., 2012). In this sense, new applications for the TARE are needed to enable reflection and professional development within multiple sport environments (e.g., competitive youth sport) as future research endeavours could focus on understanding coaches' and athletes' behaviours longitudinally in order to provide solid grounds for effective and sustainable TPSR programs (Holt, 2016; Holt, et al., 2017).

Coach training could have played a crucial role in helping the participant coaches develop an explicit approach towards life skills transfer and follow Hellison's (2011) lesson format that includes providing roles for athletes in the assessment process and an explicit life skills transfer focus. Most TPSR-based training has been conducted within teacher education programs as some of these initiatives have used the TARE to understand participants' responsibility behaviours and provide feedback about TPSR implementations (Escartí, et al., 2013; Escartí, et al., 2012; Hemphill, 2014). This observational tool may provide solid grounds to assess the effectiveness of TPSR-focused coach education programs and enable an understanding about how course instructors, researchers and policy makers may promote changes in coaches' behaviours. Additionally, residual changes could be captured by this new version of the TARE which would provide a new outlook about how much are coaches' responsibility behaviours changing. Several researchers (e.g., McCallister,

*Table 2.* Inter-observer reliability (n=32).

| Categories | ICC | 95%CI | R |
|---|---|---|---|
| Modeling Respect | 0.73 | 0.136-0.830 | 0.718 |
| Setting Expectations | 0.70 | 0.148-0.896 | 0.586 |
| Opportunity for Success | 0.91 | 0.731-0.967 | 0.840 |
| Fostering Social Interaction | 0.94 | 0.836-0.980 | 0.903 |
| Assigning Management Tasks | 0.66 | 0.025-0.881 | 0.513 |
| Leadership | 1 | | |
| Giving Choices & Voices | 0.79 | 0.384-0.925 | 0.651 |
| Role in Assessment | 1 | | |
| Transfer | 1 | | |

*Table 3.* Intra-observer Reliability (n=32).

| | Observer 1 | | | Observer 2 | | |
|---|---|---|---|---|---|---|
| Categories | ICC | 95%CI | R | CCI | 95%CI | r |
| Modeling Respect | 0.895 | 0.698-0.963 | 0.762 | 0.683 | 0.048-0.800 | 0.543 |
| Setting Expectations | 0.847 | 0.563-0.947 | 0.722 | 0.677 | 0.074-0.887 | 0.529 |
| Opportunity for Success | 0.965 | 0.900-0.988 | 0.913 | 0.910 | 0.743-0.969 | 0.847 |
| Fostering Social Interaction | 0.963 | 0.895-0.987 | 0.897 | 0.940 | 0.829-0.979 | 0.900 |
| Assigning Management Tasks | 0.565 | 0.248-0.848 | n.s. | 0.355 | -0.846-0.775 | n.s. |
| Leadership | 1 | | | 1 | | |
| Giving Choices & Voices | 0.867 | 0.618-0.953 | 0.757 | 0.659 | 0.024-0.881 | n.s. |
| Role in Assessment | 1 | | | 1 | | |
| Transfer | 1 | | | 1 | | |

*Table 4.* Agreement percentage for this section.

| Categories | Intra-observer | | Inter-observer |
|---|---|---|---|
| | Obs 1 | Obs 2 | |
| Integration (INT) | 100% | 100% | 93,75% |
| Transfer (T) | 100% | 100% | 68,75% |
| Empowerment (E) | 100% | 93,75% | 100% |
| Coach-Athlete relationship (CAR) | 100% | 100% | 100% |
| Self-control (SC) | 100% | 100% | 100% |
| Participation (P) | 100% | 93,75% | 100% |
| Effort (E) | 100% | 93,75% | 100% |
| Self-direction (SD) | 100% | 93,75% | 62,5% |
| Helping others (HO) | 100% | 93,75% | 93,75% |

*Table 5.* Bivariate correlations between responsibility-based strategies and athletes' behaviors.

| Note: P<0,05 | INT | T | E | CAR | SC | P | E | SD | HO |
|---|---|---|---|---|---|---|---|---|---|
| Modelling respect | 0,367 | 0,040 | 0,005 | 0,267 | 0,148 | -0,037 | 0,121 | ,569* | 0,148 |
| Setting Expectations | -0,373 | 0,060 | -,661* | 0,032 | -0,257 | -0,087 | -0,325 | -,569* | -0,257 |
| Opportunity for Success | -0,210 | -0,240 | 0,089 | 0,134 | 0,065 | 0,010 | -0,239 | ,596* | 0,065 |
| Fostering Social Interaction | -0,220 | -0,235 | 0,086 | 0,140 | 0,059 | 0,059 | -0,226 | ,611* | 0,059 |
| Assigning Management Tasks | 0,043 | -0,151 | 0,106 | 0,019 | -0,137 | -0,246 | -0,374 | 0,072 | -0,137 |
| Giving choices and voices | 0,140 | -0,188 | 0,082 | -0,101 | 0,148 | -0,106 | 0,219 | 0,280 | 0,148 |

Blinde, and Weiss, 2000) have argued that changes in coaching philosophy might lead to progressive shifts in coaching practice as this nuances could be measured through a frequency-based analysis similar to the one proposed in this study (Potrac, Brewer, Jones, Armour, and Hoff, 2000). Hence, future studies could develop TPSR-focused coach training programs aimed at helping coaches increase model fidelity and an explicit life skills transfer focus. Previous studies (Santos et al., in press; Falcão, Bloom, and Gilbert, 2012) have developed process and outcome evaluation protocols to assess PYD-focused coach training programs; however more insight is still needed. This research avenue could further increase our understanding on how to teach coaches to foster a TPSR mandate.

Findings also showed the responsibility-based strategies used by coaches were positively associated with autonomous behaviours. Previous research (Holt, et al., 2017) has highlighted the value of coaches' implementing an explicit approach towards TPSR that includes specific responsibility-based objectives, activities and strategies as coaches develop deliberate efforts to generate responsibility outcomes (Barker and Forneris, 2012). These outcomes include an autonomy-based climate. However, athletes´ autonomy and empowerment decreased while coaches' behaviours within the category "setting expectations" increased. This might be explained due to the fact coaches could have focused predominately on exposing desired responsibility behaviours, however developmentally appropriate opportunities to practice personal and social skills on a systematic basis may have been scarce. The absence of concrete opportunities to practice personal and social skills has been associated to an implicit approach to PYD that might not result in responsibility outcomes (Bean, et al., 2018). In certain cases, coaches also feel pressured to focus on game performance and mainly provide opportunities for sport skill development which might generate less responsibility outcomes than an explicit approach towards TPSR (Santos, et al., 2017). This is cause for concern as coaches viewed their program has conducive to responsibility outcomes despite not developing an explicit approach.

Moving forward, the TARE could be used to assess how coaches' transition from an intentional to an intentional approach to TPSR and how that affects athlete's outcomes (Holt, 2016). It is critical to monitor these changes in coach and athlete behaviour and attain a more objective insight about how they progress over the course of a coach education program and become prepared to foster an increasingly effective TPSR program. In this sense, "The use of the TARE in the intensive training phase can serve to introduce teachers to the core teaching strategies of the TPSR model. Training activities can allow teachers to identify, differentiate, and discuss the strategies." (Escartí, et al., 2015, p. 60).

Finally, there are several limitations that need to be considered while analyzing the present study. A small sample of coaches and athletes was included and represented a specific socio-cultural context in Portugal (i.e., competitive youth sport). Additionally, no female coaches were included as male coaches were overrepresented. Certain categories (e.g., transfer) were also not present within most coded coach behaviours which limited our analysis and reliability testing of the new instrument. A TPSR-focused coach training program could have been conducted prior to data collection to understand model fidelity more globally. Hence, this revised version of the TARE intends to provide new insight on TPSR implementations and suggests coach and athlete behaviour might require a differentiated approach in terms of how this specific tool is framed and what research questions need to be answered within organized youth sport and the TPSR model.

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