Topics and Cognitive Reasons in Disposition to Change among Grassroot Football Agents after participating in the Psytool Program

Alexandre Garcia-Mas*, António Rosado**, Sidónio Serpa**, Paulo Marcolino*** and Cristófol Villalonga****

ABSTRACT: This study analyses the intentions to change of the Change Agents (AoC) recruited by the different partners of the European project Erasmus+ Psytool. The project has theoretical frames on positive training, psychological well-being and the promotion of enjoyment and fair play. It consists of ten lessons that extend over six weeks, whose topics range from doping to preventing the acceptance of cheating and deception. The intentions to change is framed within the Transtheoretical Model of internal change with different phases of change, from contemplation, preparation, to behavioural change and its maintenance. For this, 63 change agents were analysed (Mage = 32.39, SD = 9.02), with an average experience of 9.02 years (SD = 7.68) through an adaptation of the Disposition of Change Questionnaire (DCQ), administered once the psychoeducational program was finished. The data were analysed descriptively and through Content Analysis. The results show a high value of the DCQ factors: Disposition to change, Reasons for Change and Change Behaviours. Qualitatively, the AoC showed cognitive changes (n = 83), mainly in the face of Discrimination, Violence, Fair Play and Personal Growth, and metacognitive changes (n = 12), while four Agents of Change declared they did not need to change. Metacognitively, we observed some reflections such as the increase of attention or the prevention of behaviors, evidencing the awareness of this type of problems and the analysis of information about them, assigning the mental resources to solve them. Finally, the changes were divided into those aimed at the promotion of prosocial behaviours and those aimed at the prevention of antisocial behaviour.

TOPICS AND COGNITIVE REASONS IN DISPOSITION TO CHANGE AMONG GRASSROOT FOOTBALL AGENTS AFTER PARTICIPATING IN THE PSYTOOL PROGRAM

KEYWORDS: Grassroot Sports, Coaches, Education in values, Cognitive change.

Recently, there has been a number of studies describing applied psychological programs which promote prosocial values such as fair play in teams of young players, especially in football (Gómez-Espejo, Aroca, Robles-Palazón and Olmedilla, 2017; Villalonga, García-Mas, De las Heras, Buceta and Smith, 2015). These studies offer detailed account of the systematization and periodization used in the application of their psychoeducational principles. But unfortunately in the literature there are few examples of studies evaluating the effectiveness of this kind of programs, either through longitudinal follow-up, or through quantitative and/or qualitative analysis, upon the direct recipients (usually coaches), or on the indirect ones (young players). One of the most recent programs is the one that derives from the European project PsyTool (Cruz, García-Mas, Stambulova, Lucidi, Márquez, Reyes, Serpa and Jaenes, 2017), which is basically theoretically framed by the concept of positive training (Boixadós, Cruz, Torregrosa and Valiente, 2004; Smoll, Smith and Cumming, 2007). PsyTool main objective is promoting changes in the competences, attitudes and behaviors of the so-called Agents of Change (AoC) with respect to fairplay and the promotion of positive values, as well as the reduction and avoidance of anti-social behaviors in grassroots sports.

The construct of sportpersonship according to Vallerand, Brière, Blanchard, and Provencher (1997) is formed by several factors: Personal commitment; Respect for rules and Officials; Level of respect and concern for the opponent(s) and the extent to which the athlete reacts negatively to their participation. On the other side, cheating supposes to infringe the rules with the purpose to deceive and put the opponent at a disadvantage as expressed with: “It is ok to cheat if nobody knows”; “If other players are cheating, I think I can do the same too” (Lee, Whitehead and Ntoumanis, 2007; Ponseti et al., 2011). One step down, gamesmanship represent some kind of actions which, while not infringing the official rules, they do affect the spirit of the game, including faking injury, wasting time, or trying to unnerve the opponent (Sage, Kavussanu and Duda, 2006), resulting in negative consequences for the opponent, and reflect an absence or diminution of fair play (Boixadós, Cruz, Valiente and Torregrosa, 2004; Olmedilla, Ortega, Almeida, Lameiras, Villalonga, Sousa et al., 2011).

The PsyTool Program consisted of a package of 10 self-contained lessons pertaining to various important issues in sports given to selected so-called Agents of Change (AoC), usually grassroots coaches. The lessons range form the importance of...
Sports Psychology and its impact in sports, Sportmanship and gamesmanship in sports, ethical principles in sports, racism and discrimination in sports, gender in sports, aggression in sports etc. Each lesson was structured in a similar way, with a summary of each lessons contents, the importance of the contents, case studies that can be debated and suggested readings. There is also a satisfaction questionnaire at the end of each lesson, regarding the materials of the lesson, as well as a series of evaluation questions regarding the lesson’s materials (Jaenes, Cruz, Petrovic, Velázquez, Viñas and Reis, 2017).

The theoretical model in which the performance and efficacy of the PsyTool Program is rooted is the Transtheoretical Model (TTM, Prochaska and DiClemente, 1983; Prochaska and Norcross, 2010) that conceptualizes the process of internal changes in an integrative and biopsychosocial way. The central element of the TTM is the concept of "stages of change" (Chouinard and Robichaud-Ekstrand, 2007; Prochaska and DiClemente, 1992) and incorporates elements of the Self-Efficacy theory of Bandura (1977), mostly the ones related to the degree of confidence that people have in maintaining the desired behavior even in situations that often trigger relapse.

The phases or stages of change represent a temporal dimension (Norcross, Krebs and Prochaska, 2011), since the change implies the existence of phenomena over time, although the progression is not always linear, since it can happen that people jump between stages or return to a previous one. These stages are: Change Precontemplation (Not ready yet); Contemplation (Getting ready); Preparation (Ready); Action, and Maintenance. The TTM has been studied mainly in the fields of the behavioral changes related with alcohol and tobacco, Gaume, Bertholet, Daeppen and Gmel (2013); drugs consumption, Miller and Johnson (2008), or in clinical psychology settings, Westra (2011).

Complementary to that, the Psytool model is also based on the principles of constructivism, on the recent data provided by cognitive psychology and by the theory of the “reflexive practitioner” and it is intended at the development of professional competencies of the different categories of sport agents.

In specialised literature (Lafortune, 2010), competencies are defined as integrative units of knowledge, habits, motivations and attitudes that facilitate professional conduct and guarantee expert efficacy in specific activity fields and contexts. From the cognitivist point of view, a competence simultaneously denotes declarative knowledge, procedural and conditional (situational) knowledge and attitudes. From the point of view of its structure, competence is an integrative functional system which consists of three components: (1) knowledge: declarative, procedural, conditional and meta-knowledge; (2) abilities: cognitive, psychomotor; (3) attitudes as dimensional integrative structures which include cognitive, affective and behavioural elements.

In the actual information society, meta-cognitive competencies seem essential, namely, self-control, self-knowing and intellectual learning strategies. Successful sport coaching, in particular, can benefit from adaptive meta-cognition, which involves dealing with change, to oneself and to one’s environment, in response to a wide range of sport professional problems. This study underlines the importance of a reflexive approach, today considered as one of the main activities in professional development.

We see coach meta-cognition as the capacity to know how the cognitive processes work and to apply cognitive control mechanisms in the sport coaching process. It involves (1) the capacity to raise awareness and positively influence the manner of processing information; (2) the capacity to continuously evaluate, reflect and control the mechanisms of information processing and problem-solving; (3) the competence of objective evaluation of events, situations, logical reasoning of ideas and rigorous formulation of premises and conclusions.

Thus, the objective of this work is to evaluate in a quantitative and qualitative way the disposition to change of the Agents of Change trained in the Psytool program, in order to find out the degree of impact of the program, as well as the most relevant topics that have been discussed. The main objective of the present research is the evaluation of the efficiency of the training programme centred on the development of cognitive and metacognitive competencies in AoC.

Method

Participants

Participants (N = 63) were Agents of Change trained in the Psytool Project recruited by the program partners. The participants oscillated in age from 21 and 58 years (M_age = 32.39 years; SD = 9.02), professional experience as coaches (M_exp = 9.02 years; SD = 7.68) and gender (56 males and 7 females). The participants voluntarily filled out the survey instrument consisting of Likert-type measures of the variables. All the research and study was conducted following the Helsinki Agreement protocols.

Instruments

An adaptation of the Disposition to Change Questionnaire (DCQ, Miller and Johnson, 2008) was used. Three factors, representing importance, ability, and commitment, constructs that are also reflected in several theoretical models were measured on a Likert 1-10 scale. The DCQ also ask participants to answer an open and qualitative question: “What changes are you considering in your professional practice after the participation in Psytool?”

The instrument was translated to Spanish, Italian and Portuguese languages, and adapted to the sport environment. The translation process used a committee approach (Brislin, 1980) to assure the validity of the procedure.

Procedure

First, the participants (AoC) received the full content of the Psytool educational program (Jaenes, Cruz, Petrovic, Velázquez, Viñas and Reis, 2017) during a period of six weeks, and after they finalized the lessons, they answered the DCQ. After that, we conducted a quantitative and qualitative analysis of the answers. All the process followed the rules of the Declaration of Helsinki for applied research, including the participants informed consent.

Data Analysis

The DCQ answers were analyzed descriptively and looking for mean differences using the null hypothesis tools, by means of the SPSS statistical package.

Content Analysis

Because the primary goal of the research was to develop a description of the educational experience of the Psytool programme and the intention to change after completing it, the preferred method of inquiry was qualitative. Qualitative methodologies, focus on both personal meanings and experiences
and we used the open questions of the questionnaire to access these dimensions.

Each answer from the participants to the open questions of the questionnaire were transcribed. The answers was read multiple times to develop a sense of the overall context of the data. This allowed early forms of analysis by looking for meaningful units of information (i.e., segments of text that were comprehensible by themselves and contained one specific idea or piece of information). The focus was producing an open coding (Corbin and Strauss, 2008), which involved identifying concepts (changing intentions) within the text and developing categories that represented the meaning of these comments. Each comment was divided in several information units, considering different intentions to change included in the answer, and several dimensions were obtained. The categories created in open coding were refined to form more precise explanations of the change intentions. Throughout these processes, incidents and anecdotes were compared for similarities, variations and differences within and across interviews. In a second step, the categories were integrated and arranged to form larger theoretical dimensions and a more general framework that helped to explain the relationships between the categories (Corbin and Strauss, 2008). To evaluate the credibility of the coding we reviewed and discussed all the codes, categories and the resultant model with another researcher. Although there were some initial disagreements about particular categorizations (inter-rater agreement of 92% and an intra-rater agreement of 95%) a final agreement was reached through a process of critical and constructive debate.

**Results**

Regarding the quantitative analysis of the DCQ, we can observe in Table 1 the answers from the AoC to the DCQ indicated a high and a quite similar level of agreement with the three factors studied, well above the average. Also, there is no difference found among these mean values of the factors (Disposition to Change, Reasons to Change and Behaviors made in preparation for the change).

We can observe in Table 2 the results for the first step of the qualitative analysis: the distribution of the AoC expressions about their topics and stages of change. The biggest proportion of changes relates to cognitive ones (88.40%), followed by metacognitive (14.30%). In addition, a few number of AoCs declared no need for to change (4.80%).

These intentions to change consider knowledge about the subject matter of the course and are composed of both content-specific knowledge and general process knowledge of the thematic. In Table 3 we can read some samples of quotes that elucidates AoCs’ cognitive intentions to change.

In Table 4 we can see the results of the second level of Content Analysis, quantifying the number and types of cognitive changes expressed by the AoCs, through their answers to the DCQ open question, and their interviews.

Cognitive intentions of change reflect the specific areas of knowledge that AoC valued based on the PsyTool educational process. This includes knowledge of basic frameworks of the several themes introduced by the program. All the themes seems to be considered in a way that enhances the intention to change with a special emphasis to Personal and Social Development of the Athletes and Training Competencies of the AoC and Discrimination, Violence and Fair-Play as the most cited themes.

Metacognitive content refers to control of cognition, the processes individuals use to acquire and understand knowledge. It involves the intention to consciously and deliberately monitor one’s knowledge processes and cognitive and affective states, and also to regulate these states in relation to the relevant issues highlighted by the PsyTool programme. This dimension considers general statements about the recognition or awareness of the issue or problem and the analysis of information about the problem, allocating mental resources to solve it, and we can observe in Table 5 some samples of AoCs’ quotes that illustrate metacognitive intentions to change.

**Table 1. AoC scores of the three DCQ factors.**

<table>
<thead>
<tr>
<th>Factors</th>
<th>X</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disposition to Change</td>
<td>4.55</td>
<td>0.41</td>
</tr>
<tr>
<td>Reasons to Change</td>
<td>4.71</td>
<td>0.42</td>
</tr>
<tr>
<td>Behaviors made</td>
<td>4.54</td>
<td>0.54</td>
</tr>
</tbody>
</table>

**Table 2. AoCs’ types of considered and expressed changes.**

<table>
<thead>
<tr>
<th>Type of Change</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Change</td>
<td>4</td>
<td>4.80</td>
</tr>
<tr>
<td>Metacognition</td>
<td>12</td>
<td>14.30</td>
</tr>
<tr>
<td>Cognition</td>
<td>83</td>
<td>88.40</td>
</tr>
<tr>
<td>Total</td>
<td>99</td>
<td></td>
</tr>
</tbody>
</table>

**Table 3. Samples of AoC quotes explaining cognitive changes.**

"Introduce in the training these concepts of fair-play, reinforcing to the coaches the need to put it into practice daily and from the first moment"  
"I learned a lot today and I am open to make some adjustments based on my new knowledge; like talking about aggression, anger and violence"  
"Urging players, coaches and parents to be respectful at all times, highlighting negative behaviors and promoting good ones, acting whenever anyone is under threat from bullying or discrimination"
Meta-cognition involves judgment and decision making and refers broadly to human information processes for making decisions. This metacognitive process requires deliberate reasoning, evaluation of evidence and comparison of alternatives and it’s the basis of reflective teaching, an important output of any psychoeducational program.

As was observed in Table 2, several AoC (n = 4) referred that they don’t need to change because they already possess the metacognitive and cognitive competencies and knowledge required, as the following quote highlights (Table 6).

Table 7 shows that the themes and topics that are declared as cognitive goals of change have been divided into two categories, according to their orientation. First, there are objectives based on the Promotion of Positive Skills (such as Ethics general, Commitment, or Self-Control), and goals that are based on Negative Skills Avoidance (such as Racism, Discrimination or Mistreatment - Coach), reflecting the coaches’ intentions to enhance positive development of life skills at the same level to intentions to fight against negative effects.
Discussion

This study examined the effectiveness of the Psytool program for the AoC that participated in it. It seems that the evaluation on the effectiveness of the Psytool program was, generally, very positive. The approach presented here supports the idea that there is a real disposition to change among the AoC after attending the Psytool program. The program seems to promote a variety of reasons to make changes in the training or professional process undertaken by the several types of Agents of Change. The study findings highlight, also, the multi-dimensional nature of the intentions to change. The analysis showed elements of both cognitive and metacognitive conceptualizations of intentions to change. Particularly interesting is the regular reference to a underline area of coaching: metacognitive competencies.

Meta-competencies are ‘overarching’ competencies that are relevant to a wide range of sport coach settings and which facilitate adaptation and flexibility to diversity and emerging professional tasks. Meta-competencies are usually said to include learning, adapting, anticipating, and creating change. In fact, sport coaching can be viewed as a meta-field that must focus on process and structure more than content. Sport coaches must have theoretical knowledge and advanced skill in problem solving, communicating, working with the players of reflexive awareness, facilitating change, working to actualize a person’s potentials, talents, passions, and visions. Meta-cognitions involves, also, self-actualization and personal and social skills, and we can see them as important in the definition of the future of coaching. The future of coaching involves strategic thinking and action, participation in “knowledge networks” not limited to technical and professional topics, influencing others in direction of a vision, optimise the environment in which participants are involved, included and have a sense of ownership and encourage and support team work within own team, managing the paradox of stability and change that characterizes the modern sport world.

The program conceived activities for the development of each specific area of knowledge, by making use of interactive strategies, optimizing AoC’s cognitive and metacognitive reflexive practice.

The main objectives to change for the surveyed AoC were stimulating the personal and social development of the players, endorsing their own training competencies as coaches, promoting fair play and fighting against discrimination and violence.

In fact, among the educational values which are valorized in sport settings, we highlight transversal humanistic objectives, like freedom, fondness, honesty, friendship, peace, self-knowledge valorization, discipline, fraternity, social acquaintance, cooperation and tolerance. More than performance improvement and the adoption of a healthy lifestyle, sport is a project of social and civic and intercultural education based on the values of fraternity, comradeship, social acquaintance, cooperation, respect and mutual comprehension. It is also a fight against discrimination in relation to several characteristics such as, nationality, ethnic group and gender.

In this context, there are various intentions to change reflecting the complexity of the problems faced by coaches and athletes in sport settings. There are, also, two behavioural dimensions of change: one, centred on positive promotion of life skills and psychosocial competencies and another focused on avoiding negative behaviours that affect sport participants. In fact, for personal growth to be realized youth sport programs must be developed with this goal in mind. We must emphasize the valuable skills and attitudes and promote their development. Nevertheless, the effects of participation in sport is related, also, to negative effects like cheating, gamesmanship, bullying and mistreatment, doping just to name a few problems (Boixadós, Cruz, Torregrosa, and Valiente, 2004).

Some AoC reported that they don’t feel the need to change; this results must be understood as an effect of the circumstance that several participants are active members of several intervention projects and they are in fact very competent in the area of positive skill promotion or in the area of fighting against several sport injustices.

When interpreting the findings within an inductive approach, it is important to recognize some of the methodological strengths and limitations of the approach. The strength of this study lies in the qualitative methods and tracking intentions to change over time, qualifying a program intervention. Another major strength was the identification of meta-competencies between the intentions to change. Further explorations of the metacognitive processes involved in intentions to change are indicated for future research. Relevant capabilities include planning, monitoring and revising mental models about the themes of the education programme. Meta-cognitive changes involve questioning traditional cultural assumptions and adjust their mental models during and after interactions and as they seem very generic in nature can be applied to several problems in very diverse contexts. Promoting this kind of thinking was an unexpected result of this study and further research must be carried on in this thematic as higher-order cognitive processes.

We acknowledge the fact that this is a small study and we do not know how representative the results are, including a real follow-up of the behaviors really made, in accord with the stages of change (Action and Maintenance) from the Transtheoretical Model (Prochaska and DiClemente, 2010).

We need also to correlate the obtained results with those that can be gathered through direct observation of the professional activities conducted by the Agents of Change in the frame of the real team, club, and community.

An important limitation of this study is that part of the outcome data was participants self-report statements. Behavioural outputs, reflecting the capability to exhibit appropriate professional behaviors when interacting with participants and other stakeholders must be considered to validate verbal intentions. In fact, mental capabilities for reflecting and understanding must be complemented with the ability to exhibit appropriate actions, based on professional and ethical values. This includes having a wide and flexible repertoire of professional behaviours with respect to fair-play and the promotion of positive values in grassroots sports.

It’s necessary to develop the present study, such as repetitive investigation, raising the importance of the practicing of the reflexive practice, reflecting upon the sport practice and its context; studying the transfer of the learning experiences to future actions and different professional settings and developing their own model of coach philosophy and education. We need also to promote the awareness of the psychological mechanisms involved in coaching, the self-analysis of coach practices, promoting their monitoring capacity and control of the mechanisms of information processing.
TEMAS Y RAZONES COGNITIVAS EN LA DISPOSICIÓN AL CAMBIO ENTRE LOS AGENTES DE FÚTBOL DE BASE DESPUÉS DE PARTICIPAR EN EL PROGRAMA PSYTOOL

PALAVRAS CLAVE: Fútbol de base, Entrenadores, Formación en valores, Cambio cognitivo.

RESUMEN: En este estudio se analiza la disposición a cambiar de los Agentes de Cambio (AoC) reclutados por los distintos partners del proyecto europeo Erasmus + PsyTool. El proyecto tiene como marcos teóricos el entrenamiento positivo, el bienestar psicológico y la promoción del juego limpio. Está formado por diez lecciones que se extienden a lo largo de seis semanas, cuyos temas van desde el Doping, hasta la prevención de la aceptación de la trampa y el engaño. La disposición a cambiar se enmarca en el Modelo Transteórico de cambio interno y que posee distintas fases de cambio, desde la contemplación, la preparación, hasta el cambio conductual y su mantenimiento. Para ello, se analizaron 63 Agentes de Cambio (M = 32.39; DE = 9.02), con una experiencia media de 9.02 años (M = 7.68) mediante una adaptación del Disposition to Change Questionnaire (DCQ), administrado una vez acabaron el programa psicoeducativo. Los datos fueron analizados descriptivamente y mediante el Análisis de contenidos. Los resultados muestran un elevado valor de los factores del DCQ: Disposición al cambio, Razones para el Cambio, y Comportamientos realizados para cambiar. Metacognitivamente, los AoC mostraron cambios cognitivos (n = 83), principalmente frente a la Discriminación, Violencia, Juego Limpio y Crecimiento Personal, y metacognitivos (n = 12), mientras cuatro Agentes de Cambio declararon no necesitar cambiar. Metacognitivamente, aparecieron reflexiones como el incremento de la atención o de la prevención de comportamientos evidenciando la concienciación de este tipo de problemas y el análisis de la información sobre ellos, asignando los recursos mentales para resolverlos. Finalmente, los cambios se dividieron en aquellos dirigidos a la promoción de conductas prosociales y los orientados a la orientación de los anteriores de las antisociales.

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