EMOTIONAL COMPETENCIES OF THE SPORT COACH: A QUALITATIVE APPROACH WITHIN A PHYSICAL ACTIVITY PROGRAMME FOR MULTIPLE SCLEROSIS PATIENTS

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ABSTRACT

Multiple sclerosis (MS) is characterised by functional impairments (fatigue, motor weakness, spasticity, poor balance) and limitations in social functioning. Accordingly, people with MS are more affected by sedentarity and not enough aware of their physical capacities. Finally, those behaviours lead to physical deconditioning and general poor health in this population. To encourage physical activity with MS people, a specific coaching programme whereby MS patient are individually supported by a sport coach has been launched at the University Hospital Center of Liège. In this context this study aimed to(1) describe the intervention of the coach ;(2) link emotional competencies and behaviors of the coach ; (3) propose recommendations to improve MS patient's physical activity management. Behaviors, attitudes, values, representations and emotional competencies of seven coaches were analyzed focusing on both visible (audio and video recording) and invisible (questionnaires and interviews) variables. Results show that effective coaching to MS patient implies a high support and cooperation level of the coach and a highly specific approach characterized by a systematic appraisal of patient's behaviors revealing his/her current psychological and physical states. Recommendations the coach education are discussed with an emphasis on social and emotional skills.

Keywords: coaching, multiple sclerosis

INTRODUCTION

Background

Multiple sclerosis (MS) is an immune-mediated inflammatory disease of the central nervous system. The incidence of MS reaches approximately 58 out of 100,000 people in the United States (Plow, Resnik & Allen, 2009) and affects more commonly women than men (Duquette, 1998). For most of the MS population, it leads to functional impairments. Defective walking mechanisms, muscle weakness and spasms, poor balance, pain and fatigue are the most usual physical symptoms experienced by this population (Motl, McAuley & Snook, 2005). Nevertheless, the expression of these symptoms is highly individualized and the majority of MS people are characterized by a relapsing-remitting process. It means that unpredictable relapses are followed by periods of months or years of relative quiet (remission) with no new signs of disease activity. This progressive disease can also imply social limitations or psychological troubles as depression and unstable mood (Siegert & Abernethy, 2005). All those dimensions of one's well-being are aggregated in the concept of quality of life (QOL), an umbrella term that describes a number of outcomes that are considered important within an individual's life (Rejeski & Mihalko, 2001).

If researchers have reported that individuals with MS have lower QOL than non-diseased population (Benito-Léon, Morales, Rivera-Navarro, & Mitchell, 2003; Mitchell, Benito-Leon, Gonzalez, & Rivera-Navarro, 2005), sedentary behaviours encountered by MS people are largely involved. Moreover, Stuifbergen (1997) has showed that MS people are more sedentary than their capacity allows. Besides, a recent paper of Beckerman, de Groot, Scholten, Kempen, & Lankhorst (2010) illustrates the lack of practice of physical activity of MS population compared to nondiseased adults. Symptoms of MS associated to common recommendations to 'take it easy' might be substantial barriers to develop a physically active lifestyle. On a long-term basis, those behaviours and attitudes toward physical activity bring MS people in a vicious circle of a general poor health, especially when associated with the fatigue factor : fatigue leads to a decrease in physical activity, which leads to impaired fitness. At the end, the latter leads to increased fatigue (Petajan, Gappmaier, White, Spencer, Mino, & Hicks, 1996).

In order to counter the numerous health problems associated with physical deconditioning (Convertino, Bloomfield & Greenleaf, 1997; Krupp, Alvarez, LaRocca, & Scheinberg, 1988), participation in specific physical activity is considered as helping MS people to substantially improve their QOL. A three-month exercise programme proposed by McCullagh, Fitzgerald, Murphy & Cooke (2010) improved participants' exercise capacity, QOL and fatigue, with the improvements in QOL and fatigue lasting after the programme. Other aspects as self-esteem and social integration were improved after this programme and helped MS people to access to a more productive life. Likewise, White & Dressendorfer (2004) reviewed numerous studies that reported positive outcomes of exercising with MS persons, outweighing potential adverse effect of physical activity intervention. Whether there is a strong evidence in favor of exercise therapy when reading the several clinical trials assessing therapeutic effects of physical activity in people with MS, there is still much to be learned about the type of educational support that leads to the better long-term results for QOL in this specific population. In fact, when practicing physical activity or sports, MS people cannot be considered as normal athletes as they encountered psychological and physical problems that should be taken into account.

The study of Borkoles, Nicholls, Bell, Butterly & Polman (2008) aimed to highlight the difficulties faced by people with MS when practicing regularly physical exercise. Researchers found that social and psychological aspects were decisive to persuade MS persons to engage in physical activity. By example, the anxiety felt about sport coaches' incompetency or about showing disabilities to the healthy public were real barriers encountered by MS people. To struggle this, Petajan and White (1999) recommended various

strategies including a dynamic and reassuring coaching staff able to adapt programs according to the patient physical and psychological state. Knowledgeably, it would seem wise to prepare physical educators in order to meet the specificity of MS people.

Coaching skills include social and psychological competencies which are important factors that will influence coaching efficacy (Feltz, Chase, Moritz, & Sullivan, 1999). The awareness of the coach to his/her and the others feeling's, mood state's and emotions' will influence several aspects of the teaching-learning process (Thelwell, Lane, Weston, & Greenlees, 2008). Emotional competencies are aggregated in the emerging concept of emotional intelligence, which is proposed to be the ability to perceive, monitor, employ and manage emotions within oneself and in others (Salovey & Mayer, 1990). Regarding to the literature (Mouton & Cloes, submitted), this concept seems to play a relatively important role in order to supervise adequately and specifically the MS population when practicing physical activities.

Nevertheless, there is currently a lack of research focusing on this part of the relation between physical activity and MS. Most of the studies nowadays are dealing with the results of a training programme on patient's functional capacity (White & Dressendorfer, 2004). The training programme is usually more characterized by a specific duration and intensity of the exercise than over the coaching strategies used while the way to propose similar contents can bring totally different effects. A focus on the process, rather than on the product, that encompass the teaching strategies as well as the coaching approach of the physical educator would provide a new and interesting point of view opening another way to optimise the physical intervention for MS people as the human relationship seems so important with this kind of participants.

At the University Hospital Center of Liège, a tailor-made project for MS people has been launched in 2008: the "Besep" program, meaning "Be your sporting health partner". In the latter, persons with MS are taken individually in a sport context, supervised by a sport coach during a one year programme. Coupled once a week with a MS person, the MS sport coach's support stick out the usual fitness instructor role of personal fitness assessment and training program. The common goals of those actors are (1) to assist patients in setting and achieving realistic fitness goals based on each client's needs and ultimately, (2) to give the opportunity to the client to be able to individually develop and (3) to follow goals based on the personal trainer's knowledge. Additionally, the MS sport coach must meet the specificity of MS people by adopting a specific coaching approach. Despite the growing interest of literature over sport and disabilities (De Pauw & Gavron, 2005), one specific analysis of the sport coach's intervention within the particular group of MS people has not been studied at this time.

Objectives

Therefore, the main purposes of this study were to describe the coaching strategies implemented on the field in the specific context of the Besep programme. We aimed to (1) describe the intervention of the coach, (2) link emotional competencies and behaviors of the coach and finally (3) propose recommendations in order to improve MS patient's physical activity management.

METHODOLOGY

Participants and Design

Because of the personal nature of each MS intervention, in-depth case studies were identified as the most appropriate approach to use. Specifically, this study should be considered as a descriptive case study regarding to the definition of Yin (2003): describe an intervention or phenomenon in the real-life context in which it occurred. The descriptive approach to case study was selected as it allows data to be collected from as many sources as are considered appropriate to provide in-depth information (Woods & Catanzaro, 1988). Furthermore, a cross case comparison (as for multiple case studies) were achieved for similarities and differences. This data triangulation was the first step to establish further recommendations addressed to the sport coaches. In social science research, the concept of triangulation is used metaphorically: it refers to a process by which a researcher wants to verify a finding by showing that independent measures of it agree with or, at least, do not contradict it (Miles & Huberman, 1994).

The intervention strategies of seven sport coaches were analyzed in an individual physical activity program addressed to seven MS patients at the University Hospital Center of Liege in 2010. The coaches' characteristics differed in many ways (table 1): 3 women and 4 men were part of the program with a mean age of 33.9 years (SD=10.3). If the level experience's in the Besep program differed considerably (ranged between less than 6 months to more than 2 years), 5 out 7 seven sport coaches were graduates of sport related educational program. Coaches shared also a common participation to professional development activities: posturology and communication. Those activities are requested by the leaders of the association for all new Besep coach and were organized through internal workshops.

Even if Besep organization accepts other people with disabilities in the program (i.e. Parkinson disease or idiopathic diffuse polyalgia syndrome), participants concerned by this study were identified as MS patients'. These were 6 women and 1 man with a mean age of 48.4 years (SD =11.3).

Table 1. Participants' general characteristics. Note : C, coach ; P, patient.

	Gender	Age	Sport graduation	Seniority in Besep	MS patient' gender	MS patient' age
C1	Male	45	No	> 2 years	Female (P1)	34
C2	Male	51	No	> 2 years	Male (P2)	58
C3	Male	28	Yes	1 – 2 years	Female (P3)	65

C4	Female	34	Yes	> 2 years	Female (P4)	36
C5	Female	29	Yes	1 – 2 years	Female (P5)	54
C6	Male	24	Yes	< 1 year	Female (P6)	46
C7	Female	26	Yes	< 1 year	Female (P7)	46

Measurements Instruments

Several measurement methods were required to identify the usual coaching approaches adopted by each coach with MS people. Both patients and coachs were involved in the data collection process in order to compare the views of each part at every step of the intervention. Figure 1 provides a chronological design of the data collection.
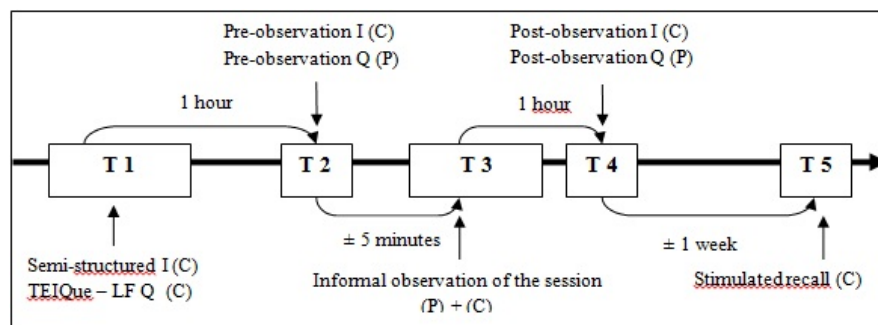

Figure 1. Chronological design of data collection.
Note: I, interview ; Q, questionnaire ; (C), coach ; (P), MS patient.

Our intervention during this study could be qualified as cross-sectional, providing a "snapshot" of a population at a particular point in time. Indeed, data over a single session of sport with MS patient were collected. However, interviews and questionnaires to the patient and the coach were built with the intention to describe the usual coaching approach of the coach throughout the Besep program.

One hour before the beginning of an individual sport session with the MS patient, each coach was involved in a meeting with a researcher to complete two different instruments. The first instrument was a semi-structured interview built to elicit coach's ideas about various aspects of the coaching approach used when practicing in the Besep program. As every coach' context of practice is highly different, this form of interview can help the researcher to tailor the questions and meet this specificity (Lindlof & Taylor, 2002). The themes' framework explored during the interview included professional experience in and outside the Besep program, representations and values toward physical activity for MS people, and didactical strategies employed during the sport sessions. This interview last about 30 minutes and was directly followed by the completion of the questionnaire measuring emotional competencies of the coach.

To evaluate the ability of the coach to identify and control the emotions of one's self or others, the Trait Emotional Intelligence Questionnaire (Petrides & Furnham, 2003) was used. The TEIQue consisted of 153 items arranged on a 7-point response scale (from strongly agree to strongly disagree). It provides scores for 15 subscales, four factors (well-being, self-control, emotionality, and sociability) and global trait EI. The French version of the TEIQue used in this study shows excellent psychometric properties (Mikolajczak, Luminet, Leroy, & Roy, 2007).

Before the beginning of the observed session, coach and MS patient were both involved in a data collection process: as the patient completed a short questionnaire over personal characteristics, mood and feelings just before physical activity, the coach answered to a semi-structured interview related to the objectives and contents of this particular session. Assessement of the behaviors and speech interventions of the coach were achieved by an audio and video recording of the session. In addition, the researcher proceeded to an informal note taking of the main points of the interaction between the two actors of the activity.

After the session, coach and patient were again both concerned about filling out a questionnaire (patient) or field to questions of an interview (coach). The post-observation interview asked to the coach whether the session was conducted as expected, focused on the emotional relationship with the patient and on the impact of exercising on the patient psychological and physical state. The post-observation questionnaire interrogated the patient over their representations, values and attitudes toward physical activity. Additionally, MS patient were asked about their coach's emotional intelligence via the TEIQue 360° - SF (Petrides & Furnham, 2003). This is a short form for peer or 360° ratings on the 15 TEIQue facets. Facets are presented with a brief explanation and rates are requested to provide percentage scores for each target.

Approximately one week after the recorded Besep physical activity session with the MS patient, a stimulated recall interview was achieved. As the semi-structured interview assignment was meant to capture coaches' knowledge and beliefs, the stimulated recall interview was intended to examine teachers' interactive cognitions. In this interview, coaches explicated what they were thinking in response to the videotape of the session they had given. For each particular behaviour or attitude identified by the coach, systematic questioning of the researcher helped to provide a more in-depth analyse of the content.

Data analysis

Data processing was coherent with the qualitative nature of most of the data collected in this study. Semi-structured interviews, stimulated recall and open-ended questions were processed according to Huberman and Miles' (1991) double level coding process. All those qualitative data were first fully transcribed. Secondly, we classified the different units into categories according to their meaning. Then, we gathered these categories together into meta-categories considering their common properties. Inter-observer reliability coefficients ranged from 83% to 87% according to the level of coding, exceeding recommendations levels of the literature (Kirkendall et al., 1987). We used a well-known method to guarantee the validity of our data and their interpretation: triangulation. According to Griffin and Templin (1989), this method consisted in using at least two different tools to collect data, in observing and interviewing several participants about the same situation, and in mobilizing several interviewers or researchers on the same case. Finally, TEIQue data were analysed using the statistical software Statistica (StatSoft, v8.1) in order to obtain descriptive information (mean and standard deviation) and a comparison with the reference population of the study of Mikolajczak, Luminet, Leroy, & Roy (2007) : a population of 740 French speaking Belgian people (M age = 25.5, SD = 11.31).

RESULTS

Physical activity representations

Coaches and patients shared relative similar representations of the role of physical activity for the MS patient's QOL. Indeed, when they were asked to mention two keywords revealing a type of impact of physical activity on MS patient, physical and psychological well-being were the most chosen words (Figure 2).
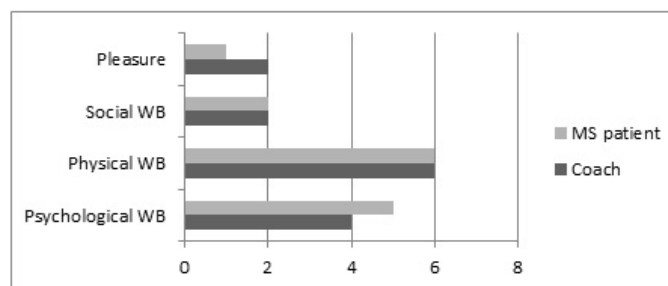

Figure 2. Physical activity representations (number of occurrences). Note: WB, Well-being.

Especially in the Besep programme, coach n°1 (C1) said that "physical activity is a way to socialize outside the hospital and improve self-confidence" when C3 explained that "this programme helps to increase walking distance, gain flexibility, reinforce strength and develop a better control of body movements".

Nevertheless, coaches (C2 & C4) mentioned that "most of the MS patients return to sedentarity after the Besep program (1 year) and only few remain physically active by participating to the collective Besep intervention".
Most of the subjects had positive attitudes towards physical activity. For example MS patient n°5 (P5) said: "physical activity in the Besep programme increases my self-confidence and decreases my stress level"; "is a social opening to the outside world" (P2) or "a way to delay the onset of fatigue by increasing my fitness and my strength" (P7).

Coaching strategies

Before each sport session, most of the coaches (6/7) took into consideration the state of the patient by a general observation (physical state) and a dialogue (psychological state). By example, C2 stated "I always request to the patient to perform a short physical testing to assess his physical abilities of the day". C1 only "looks at the walk of the patient when he arrives and estimates his actual mood by a short talk".
Even if the session programme is already prepared, 4 out of 7 coaches argued that they "adapt the lesson to the patient's desire at the current time". P2 and P3 both mentioned that "the coach is able to adapt and propose a variety of exercises according to my physical and psychological state".

If all coaches used a substantial part of their sessions to specific warm-up and stretching, main activities observed were muscular strengthening (5/7), cardio-training (3/7), yoga (2/7) or body balance working (2/7). During those varied sessions, 6 out of 7 coaches integrated musical support in order to help the patient to "increase his motivation's level" (C3, C4 & C6), "experience sport in an enjoying atmosphere" (C1 & C7) or "concentrate on exercising" (C5).
A common aspect of the coaches' methodological approach dealt with the progressivity of the physical training from the warm-up until the end of the main activity. "I make no distinction between warm-up and main activity and encourage the patient to gradually overcome its limitations by going a little further in the effort", explained (C7). In addition, C2's comment over "the necessity to set goals on a short term and a long term basis to maintain patient's motivation" highlights the need of assessing progress.

Figure 3 points out the main qualitative categories of verbal interventions used by the coaches during the recorded sport sessions. Reinforcement referred to simple (11.1%), informative (3.6%) or interrogative (5.9%) feedbacks. This category also includes guidance (6.2%) and boosters (repeated encouragements, (13.1%). Instruction looked up to educational interventions before the beginning of the session (1.9%), when changing activity (1.3%) or during activities (34.6%). the session. Information was about giving general new information (15.5%, not instructional) or asking about the current state of the patient (4%). Jokes or humour used by the coach in its intervention went to the affectivity category (3%).

The average frequency of interventions given by the coaches during the session reached 1 intervention every 8.3 seconds (SD =3.2). Behavioural interventions used by the coaches during the recorded sport sessions are illustrated in figure 4.
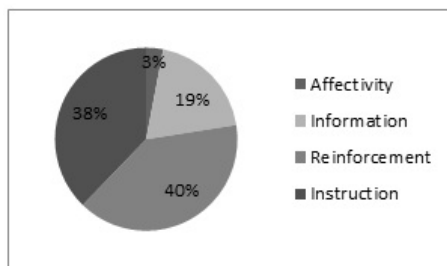
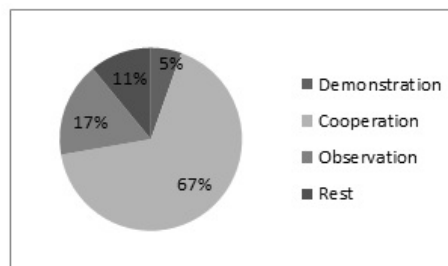**Figure 3.** Coaches' verbal interventions.

Figure 4. Coaches' behavioral interventions.

Demonstration pertained to situations where to coach demonstrated the exercise to the MS patient (5.4%) as the latter was relatively inactive. When practicing together (cooperation), the coach came in contact with the MS patient (4.2%) or not (62.7%). Observation (16.7%) differed from the rest (11%) category by an active follow-up of the patient by the coach (accentuated visual contact).

Emotional competencies of the coach

Coaches of the Besep program scored higher than general population on each general factor of the TEIQue (Petrides & Furnham, 2003). The well-being (5.59, SD : 0,76), self-control (4.54, SD : 0,58), emotivity (5.42, SD : 0,47) and sociability (5.37, SD : 0,59) factor scores (mean) of the coaches exceeded respectively of 0.6, 0.51, 0.58 and 0.74 point the factor scores of the reference population.

Figure 5 highlights also higher competencies of the coaches on each facet score (n=15) compared to the reference population (mean scores). The highest differences were noticed on self-esteem (0.94), trait optimism (0.88), emotion expression (0.98), social competence (0.71), assertiveness (0.98) and self motivation (0.81).
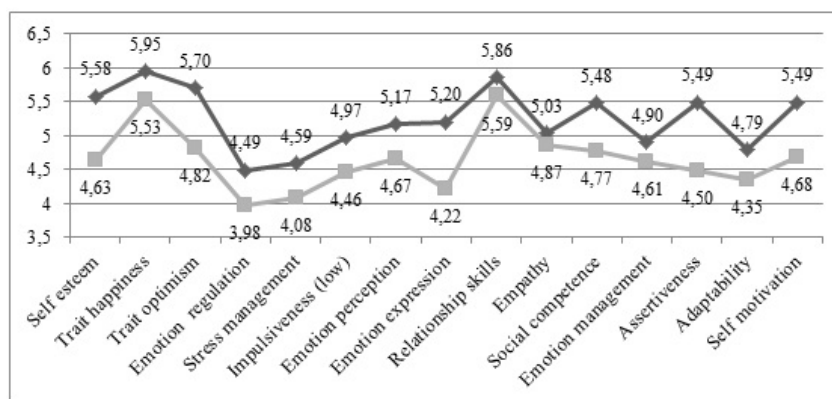

Figure 5. Coaches' (◇) trait emotional intelligence on each facet of the TEIQue (Petrides & Furnham, 2003) compared to a reference population (■, Mikolajczak, Luminet, Leroy, & Roy, 2007).

Coaches were creating one familiar way to communicate with their patients. 5 out of them used the second person ("tu") form when speaking to their patient. Similarly, C1, C2 and C4 mentioned that an empathic approach of the person must be used systematically, excluding any hierarchical relationship. "To establish a direct contact with the patient with a general questioning before each session" is a means to be aware of the latter psychological state (C6 & C7). Moreover, each coach ended his session by a discussion with the patient focusing on the contribution of the exercises on their QOL and on the next objectives to reach.

When they were asked to characterized their personal coach approach, MS people put forward some emotional competencies as "empathy" (P1, P4 & P7), the "ability to listen" (P4 & P7), a "good humour" (P1 & P2), "optimism" (P3 & P6) or "motivation" (P1, P4, P6 & P7).

DISCUSSION

Coaches shared a common conception of the objectives to reach: a global development of the patient's QOL by increasing physical and psychological well-being. The patients agreed on the programme social impact: a way to socialize outside the hospital, improve self-confidence and decrease stress levels. Those results confirmed findings of Petajan, Gappmaier, White, Spencer, Mino, & Hicks (1996) who showed that 15 weeks of aerobic exercise training resulted in a reduction of fatigue, depression, and anger in a sample of 54 individuals with MS.

If regularity of practice is important to improve health in MS people (Motl, McAuley & Snook, 2005), the content of each sport session has to be specifically prepared to maintain motivation on a long-term basis. Indeed, Kerdoncuff et al. (2006) exposed that a third of people with MS stopped their activity because of their illness. If the coaches showed highly personal approaches (selection of the activity to be taught, relationships with the patient …), some aspects of the coaching strategies were similar. As the progressivity of the training, musical support was an important coaching tool for most of the coaches. Karageorghis and Terry (1997) concluded that music combined with efforts performed at moderate intensity decreased the sensation of fatigue and perceived effort with a positive effect on anxiety and mood. These authors have concluded that well-chosen musical accompaniments could enhance the enjoyment as well as the subject's motivation to participate in sports.

As mentioned by Borkoles et al. (2008), MS disease can be a real barrier for the individual intention to join to a sport centre. Being aware that the adherence to exercise is difficult for MS people (McCullagh, Fitzgerald, Murphy, & Cooke, 2008), the coach's attention to patient's behaviours revealing his/her current state seems to be the first step of an effective intervention.

Then, the approach of sport coaching with MS public needs to be very different from that is traditionally used in sport settings. In this study, empathy, dialogue, support, reinforcement, cooperation and closeness to the MS patient were some of the most important characteristics of the relationships highlighted by coaches and MS individuals. As reported by Motl, McAuley, & Snook (2009), the coaches involved in these programmes should be prepared specifically with an emphasis on the development of social and emotional skills.

If trait emotional intelligence was higher for the coaches of the Besep programme than for the general population, facets of this concept have to be developed in those future educational programmes. Indeed, as mentioned by Nelis, Quoidbach, Mikolajczak & Hansenne in 2009, trait emotional intelligence training has already been proposed with findings underlining the interest of these initiatives. The latter also reported that emotional skills can be improved on a long term basis (6 months) after attending training courses aiming to develop these skills.

Coaches and patients agreed on the need of a systematic action to encourage personal practice of physical activity and avoid a substantial drop out at the end of the programme. A recent follow-up programme of the Besep has been launched at the University Hospital Center of Liege, focusing on the same goals but with a collective approach. Regarding to the results of this study, an emphasis on the social aspects of physical activity for MS individuals could probably reduce the substantial drop-out at the end of a tailored programme.

Limitations of the study

By definition, the qualitative analysis used during this study next to each coach-MS patient couple brought a picture of the situation at a particular time during the Besep programme. In order to expand our data collection to the habits of each coach in Besep, interviews and questionnaires were built in this objective. Nevertheless, a longitudinal study would have provided more information over the progression of coaching strategies and relationship with the patient adopted by the coach.

The TEIQue 360° - SF (Petrides & Furnham, 2003) for peer rating has been administrated to MS patient to evaluate the trait emotional intelligence of their coach. This instrument is usually given to someone who knows well the evaluated person. In this study, some individuals with MS knew their coach for a long period of time while others were involved since less than a month in this relationship. Thus, data from this assessment tool were not included in the results of the study. Selecting precisely the time when the data collection must be done would provide more comparable results (i.e. after 10 sport sessions with the same coach).
Some of the results, based on a qualitative analysis of the verbal and non verbal interventions could not be compared to the literature because the double level coding process based on classifying different units into categories was highly specific to the context of this study.

Finally, the relative small sample of coaches implicated in the study did not allow us to extend the TEIQue result's analysis in a valid form. Comparison with the reference population has been done without taking into account its variability (variance or mean square). One must then be careful when using those results for comparison with another population.

CONCLUSIONS

Effective coaching to MS patient implies a high support and cooperation level of the coach and a highly specific approach characterized by a systematic appraisal of patient's behaviors revealing his/her current psychological and physical states.
Specific education of the coaches with an emphasis on the development of social and emotional skills organized through internal workshops could probably stroke down numerous barriers to physical activity practice encountered by the MS population.
Future research focusing on the teaching strategies of the MS coaches with a greater population as well as on the importance of a specific education of the latter would provide interesting recommendations to improve QOL of MS individuals on a long term basis.

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