

Determination of Self-Esteem from the Practice of an Intense Exercise and Rehearse With Post-Adolescent Athletes

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Abstract-This study aimed to investigate the relationship between self-esteem and the practice of repeated shuttle sprints ability (RSA) in young post-adolescent athletes. Twenty-one students aged between 16 and 18 affiliated to sporting clubs with different disciplines have participated to this study. All recognized subjects have presented in this study by responding to the Self Esteem Scale EES-10. The same subjects realized the evidence of RSA test intersected with a recovery time of 25 s (6× (20+20m)). This test allowed the measure of the Total Time (RSA_{TT}), the Maximum Time (RSA_{max}) and the Fatigue Index (RSA_{IF}). Statistical analysis has revealed a very significant correlation between RSA_{TT} at the self-esteem ($r = 0.58, p < 0.001$). A considerable correlation ($p < 0, 05$) has been also observed between self-esteem and RSA_{max} ($r = 0.50, p < 0,001$). This has led the study to conclude that getting a good performance in repeated sprints would increase significantly the level of self-esteem in adolescents and has played a vital role in the mental and physical health of these people.

Index Terms: RSA test, young athletes, self-esteem, motivation.

I. INTRODUCTION:

The Work on self-esteem occupies a prominent place in the history of psychology as one of the most recent Sciences and Technology of Sport and Physical Activities (STAPS). The Self-esteem is defined as a conscious perception of its own qualities (Tesser and Campbell, 1983). The Recent literature made this concept determinate a variable level of commitment of a subject in a physical practice (Coleman and Iso-Ahola, 1993) or as an indicator of good mental health (Harter, Waters and Whitsell, 1998). Other authors have emphasized : the considerable part of the perception of the body in the construction and evolution of self-esteem (Bruchon-Schweitzer, 1990; Biddle and Goudas, 1994; Fox, 1997), the hierarchies models (Fox, 1997; Fox & Corbin, 1989) offers an absolute better understanding of the mutual links between physical practice and self-esteem & The determination of self-esteem from the practice of intense exercise and the repeated post-adolescent athletes (Fox & Corbin, 1989; Marsh and Shavelson, 1985). This necessity has been followed by the request of the Physical Education Professionals or wanting the rehabilitation to assess the effects of their actions on self-esteem and sentimental populations in charge (Fox and Corbin, 1989; Sherrill, 1997). It was not until 1989 for the first work in English validation to shine an inventory of self-esteem to be centred on the body area and the Physical Self-Perception Profile (PSPP) of (Fox and Corbin, 1989).

The Research in physical education and sport psychology has confirmed the importance and the perception of the body in building self-esteem. This work has highlighted the development of the perceived physical value contributed to the enhancement of self-esteem (Biddle et Goudas, 1994) and a certain level of self-confidence was required to maintain the commitment of a subject in the physical practice (Roberts, Kleibert & Duda, 1981). For this reason the improvement of self-esteem has become a

priority in some PE programs. In the UK, for example, one of the eleven objectives of the EP program is to strengthen the self-esteem of pupils. The same way, one of the priorities of stakeholder's physical activity suits is to restore self-image issues either mental or physical disabilities (Sherrill, 1997).

Under the influence of some particular concept (Bandura, 1977), and the developing of feeling of competence (Harter, 1982). This concept designates the valuation that a subject does on its competencies on different domains (Harter, 1982). These areas are designed to a multidimensional manner where structure of self-concept, the value of self-worth or overall self-esteem (Harter, 1982) being the next level and covering all. The multidimensional approach Bond considers the esteem not as a self-global entity taking into account the context, but rather as a self-perception of several areas of competence such as work, social relations, sports, physical appearance and behaviour (Harter, 1988). The main advantage of this is that the modelling about self-value and the field of competence is comparing other according to a given context, (Harter 1988) and Laboret validun questionnaire (Self Perception Profile) for each major period of life (childhood, adolescence and adulthood).

The multidimensional approach allowed a better understanding of areas affecting the overall self-esteem without nevertheless being able to qualify this influence with precision (Harter, 1998). The hierarchical model obtained was able to realize the relationship between perceptions of a sub domain and global self-perceptions. This relationship has been working in an upward or downward in hierarchical structural way. For example, a high level of satisfaction in a task (juggling soccer) would reinforce the sub domain sports competence with high importance for the subject. This enhancement has improved the perceived field of the physical value, which has positively influenced the level of overall self-esteem. Conversely, a sudden global impairment of self-radiates in lower areas, for example in the physical realm would influence self-evaluation in a specific sub domain. The hypothesis of this model is that the concrete sub-domains (appearance, competencies sports, fitness, strength) are subject to variations due to valuation contexts while overall self-esteem is more stable and independent entrance of life events (Fox, 1997). As per this field study, its literature does not cover the verification of the existence of a relationship between self-esteem and physical exertion; however it aims to investigate the relationship between self-esteem and practices the repeated shuttle sprints in young post-adolescent pupils.

II. METHODOLOGY

1. Subjects

The population study is composed of 21 pupils from a secondary school, aged between 16 and 18 years old & affiliated with different sports club disciplines. These are subjects being engaged in daily sports activities at the rate of 4 times per week with an average of 1.30 hours of practice.

2. The experimented Protocols:

The repeated-sprint ability test - Before the test, the subjects should have a ten minute warming exercise based on jogging followed by some acceleration over short distances. The repeated sprint test RSA intersects the period of recovery of 25s ($6 \times (20+20\text{ m})$) (Impellizzeri, 2008). The first sprint has been done after a stopping departure on a standing position. There were no signs of departure the subject would decide his departure time with a maximum of speeding, however, the sprints signals were a sign of recovery. A demonstration has been done to understand this test. Well all Assessments were done on a broke ground of handball. The subjects were a continuous encouragement to run the maximum at every rehearsal. This time the rehearsal was different and recorded with electrics units' photo. At the end of this physical assessment, the same subjects were called one more time to fill the (EES-10). This assessment enabled to calculate and measure the total time (RSA_{TT}), The fatigue index (RSA_{IF}), the maximum time (RSA_{Max}) and possess a quantification of the self-esteem degree pre and post RSA.

3. The Psychological Protocol:

The level of the self-esteem of Rosenberg-

5 minutes of recovery after the RSA test, subjects would fulfil carefully the self-esteem (EES-10). The level of the self-esteem of Rosenberg, developed by Rosenberg (1965), remains the more used test in the research in psychology to measure the overall level of self-esteem, and virtually known for his work on the self-concept. He defined the self-esteem as a positive or negative orientation to himself, a global evaluation of his value. It is, according to his model, a component of self-concept that is all negative thoughts and negative feeling of the person toward himself. In addition to self-esteem, other components of self-concept are feeling self-efficiency, which is the belief about its capabilities to achieve goals, and self-identities.

4. The statistics procedures

To analyse the collected data given on the population study, we have chosen the statistical tools most frequently used in the field of sports and physical activities. The perusal statistics data on the population survey, has been used with the descriptive, the variance the analysis and the study of correlation. In the descriptive statistics, we have used the means & standard deviation. This was the correlation between the performance indices of the repeated performance and psychological parameters studied. The coefficient of simple correlation of Pearson has been used and 0.05 was the confidence level admitted for the significance of appearance.

III. RESULTS

The data obtained for all performance parameters are presented in Table 1. The mean (\pm SD) for the values indices measured, RSA_{TT} , RSA_{MAX} , and RSA_{IF} obtained scores were respectively: 48, $15 \pm 2,7$; $8,52 \pm 0,5$; $3,09 \pm 0,1$. The statistics analysis revealed a very significant correlation between the RSA_{TT} is and to the self-esteem ($r = 0.58$, $p < 0.001$). A significant correlation ($p < 0, 05$) was equally observed between the self-esteem (pre, post test) and RSA_{Max} ($r = 0.50$, $p < 0, 01$). In contrast no correlation has been observed between the esteem of oneself and RSA_{IF} (Table 2).

Table 1: The all measured performance parameters

	RSA_{TT} (s)	RSA_{Max} (s)	RSA_{IF} (s)	The esteem of oneself (pre)	The esteem of oneself (post)
Mean	48.15	8.52	3.90	31.19	32.95
\pm SD	2.7	0.53	0.17	3.39	5.27

Table 2: Correlation between the performances of RSA test and the esteem of oneself

	RSA_{TT} (s)	RSA_{Max} (s)	RSA_{IF} (s)
Score estimates of oneself Pre	0.65**	0.56**	0.31
Score estimates of oneself Post	0.60**	0.51*	0.61**

**p<0.01; *p<0.05

VI. DISCUSSION

In adolescents, the physical activity is considered as a way to fight against the academic and social disinvestment. It would, moreover, channel aggression, master concentration, develop a cognitive and physical cleverness, adapt to new situations and gain self-esteem. This benefit exists regardless of practicing the discipline (Harter, 1998). In this case, the 21 subjects tested have seen their level of self-esteem raised significantly after the 6 repeated sprints of series have been done in one side ($r = 0.58$, $p < 0.001$) very significant between the total time of the execution and rehearsal RSA_{TT} and self-esteem, on the other side ($r = 0.50$, $p < 0, 01$) significant between the best rehearsal RSA_{Max} and the self-esteem. As a conclusion achieving good performances in the repeated sprints will increase noticeably the degree of the self-esteem degree in the adolescent. In the same way Bandura and Harter have developed the concept of « feeling of competence », that is « the evaluation done by the subject and its competences in different domains ». If the person has the feeling of competent in the area that seems important to him, self-esteem will be all improved.

One Success could be also added to what he learned; in addition the adolescent would feel effective and proud of himself that we could meet with success any challenges if positive attitudes and good strategies have been adopted. This feeling gives the adolescent hope and gives access to multiple learning (Duclos, Laporte et Ross, 1995). By cons, and on a second component, the results between the fatigue indexes of the test subjects while the repeated sprints and the degree of self-esteem noted and founded doesn't show a signification. This could be explained that the discontent of some of the subjects compared to the temporal cart performance between trials (1st to 6th), fatigue sets in a test and another performance has been declined increasingly. To explain this phenomenon, the idea of André and Lelord (2002) should be involved which posits that self-esteem are more regulators, and that are important success and low pretentions. Then this could raise the habit of the necessity of repetition to not provide the same pleasure of intensity the first time and boost more our self-esteem. The self-esteem not achieved one time; they need to be constantly including new success. After an initial success, our self-esteem increases significantly and we feel a great pleasure. Then we get used to the necessity of the repetition that we do not provide the same pleasure of intensity the first time and boost more our self-esteem. This will appear to us almost normal. To progress it again, then we need to raise our pretentions looking for sharper success in other areas (Duclos, Laporte et Ross, 1995).

From now on the research has successfully proved that the body area involved in the construction and structure of global self-esteem (Biddle & Goudas, 1994; Harter, 1988), and more precisely with the adolescents (Bruchon-Schweitzer, 1990; Harter, 1990). A satisfactory perception of the body promotes the well-being of adolescents (Bandura, 1982), as much as it facilitates relationships with others (Harter, 1990). According to Sonstroem (1984), involving a physical exercise helps improve the self-esteem but also the physical value perceived (Baumeister, 1993; McAuley, Mihalko & Bane, 1997). The physical value perceived plays the role of the mediator between the felt from the physical activity and the psychological dimensions while facilitating tolerance effort, maintaining the activity and maintain it in an activity where health body is accessible (Fox, 2000). The body has been apprehended like a central element of self-identity because it is the interface between the perceptions that the individual has of himself and the physical and social environment in which evolves (Fox, 2000; Messer & Harter, 1986). It requires a particular interest in the field of STAPS or predominate the bodies transformations as well as the self-esteem.

V. CONCLUSION

All the pupils have seen their self-esteem degree increasing considerably after taking the RSA. This has been explained by the Success of the subjects who carried out the resistance test speed. In the context of defeat, the level of personal efficiency of an individual is to believe in his own capacities and produce or not the task requested, turns closely to influence their self-esteem and strategies planned for success.

REFERENCES

- [1] L.M. Tesser and R.N. Campbell, Self-definition and self-evaluation maintenance. In J. SulsetA.Greenwald (Eds). *Psychological perspectives on the Self*.Hillsdale, N.J.: Erlbaum1983, 2, 1-31.

- [2] D. Coleman and Iso-Ahola, S.E. Leisure and health: The role of social support and self-determination. *Journal of Leisure Research*, 1993, 25, 111-128.
- [3] M.L. Bruchon-Schweitzer, *Unpsychologie du corps*, Paris, P.U.F. 1990.
- [4] S. Biddle and M. Goudas, Sport, activité physique et santé chez l'enfant. *Enfance*, 2-3, 135-144. Self-determination. *Journal of Leisure Research*, 1994, 25, 111-128.
- [5] K.R. Fox. Self-esteem, self-perceptions and exercise. *International Journal of Sport Psychology*, 31, 228-240.
- [6] Fox, K.H. & Corbin, C.B. (1989). The Physical Self-Perception Profile: Development and preliminary validation. *Journal of Sports et Exercice Psychology*, 2000, 11, 408-430.
- [7] H.W. Marsh and R. Shavelson. Self-concept: Its multifaceted hierarchical structure. *Educational Psychologist*, 1985, 20, 107-123.
- [8] Scherrill, C. Leadership training In C.Scherrill. *Adapted Physical Education*. Human Kinetics Books, Champaign Illinois, 1988; 265, 285.
- [9] G.C.Roberts, D.A. Kleibert, and J.L. Duda. An analysis of motivation in children's sport: The role of perceived competence in participation. *Journal of Sport Psychology*, 1981, 3, 206-216.
- [10] A. Bandura, Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 1977, 84 (2), 191-215.
- [11] S. Harter, The perceived competence scale for children. *Child Development*, 1982, 53, 87-97.
- [12] S. Harter, Causes, correlates, and the functional role of global self-worth: A lifespan perspective. In R.J.Strenberg&T.Kolligian (Eds.), *Competence considered*. New Haven, CT: Yale University, 1988, 69-97.
- [13] S. Harter, Comprendre l'estime de soi de l'enfant et de l'adolescent. Considérations historiques, théoriques et méthodologiques, in BOLOGNINI, M. 1998.
- [14] F. M. Impellizzeri, E. Rampinini, C. Castagna, D. Bishop, D. Ferrari Bravo, A. Tibaudi and U. Wisloff. Validity of a repeated-sprint test for football. *Int J Sports Med*. 2008 Nov;29(11):899-905.
- [15] C.André, and Lelord, F. L'estime de soi. O. Jacob Poches. 2002.
- [16] G. Duclos, Laporte, D. Ross, J. L'estime de soi de nos adolescents. Guide pratique à l'intention des parents. Montréal: Hôpital Ste-Justine. (1995)
- [17] A. Bandura, Self-efficacy mechanism in human agency. *American Psychologist*, 1982. 27, 115-126.
- [18] R.F. Baumeister. Understanding the inner nature of self-esteem. In R.F. Baumeister (Ed.), *Self-esteem: the puzzle of low self-regard* 1993 (pp. 201-218). New York: Plenum Press.
- [19] E.McAuley, and Courneya, K.S. Adherence to exercise and physical activity as healthpromotingbehaviours: attitudinal and self-efficacy influences. *Applied and PreventivePsychology*, 1993, 2, 65-77.
- [20] B. Messer and Harter, S. (1986). *Manual for the adult Self-Perception Profile*. Denver, CO: University of Denver.

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