

- James, M. & Pedder, D. (2006). Beyond method: assessment and learning practices and values. *Curriculum Journal*, 17(2), pp.109-138.
- James, M. & McCormick, R. (2009). Teachers learning how to learn. *Teaching and Teacher Education*, 25(7), pp.973-982.
- Levin, B. (2004). Making research matter more. *Education Policy Analysis Archives*, 12(56), pp.1-22
- Levin, B. (2008). Thinking about knowledge mobilization. Paper prepared for an invitational symposium sponsored by the *Canadian Council on Learning and the Social Sciences and Humanities research Council of Canada*, Vancouver, May.
- Levin, B., Cooper, A., Mascarenhas, S. and Thompson, K. (2010). Using interventions to increase knowledge mobilization in Canadian secondary schools. Paper presented at the *American Educational Research Association Conference*, Denver, April.
- Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology*, 140, pp.1-55.
- MacBeath, J. & Mortimer, P. (Eds) (2001). *Improving school effectiveness*. Buckingham: Open University Press.
- McIntyre, D & McIntyre, A. (1999). *Capacity for Research into Teaching and Learning*. Final report to ESRC Teaching and Learning Programme. Cambridge: School of Education, University of Cambridge.
- Nutley, S. M. & Davies, H. T. O. (2000). Making a reality of evidence-based practice: some lessons from the diffusion of innovations, *Public Money and Management*, 20(4), pp.35-42.
- Nutley, S., Walter, I., & Davies, H. (2007). *Using evidence: How research can inform public services*. Bristol: Policy Press.
- OCED. (2010). *Education at a Glance 2010: OECD Indicators*. Paris: Organization for Economic Co-Operation and Development. Available at <http://www.oecd.org/edu/eag2010>.
- Pedder, D., Opfer, V., McCormick, R., & Storey, A. (2010). Schools and Continuing Professional Development in England – State of the Nation research study: policy context, aims and design. *Curriculum Journal* 21(4), pp.365-394.
- Pollard, A. (2008). Knowledge transformation and impact: aspirations and experiences from TLRP. *Cambridge Journal of Education*, 38(1), pp.5-22.
- Pollard, A. and Oancea, A. (2010). *Unlocking Learning? Towards Evidence-informed Policy and Practice in Education*. Report of the Strategic Forum for Research in Education, 2008-2010. London: SFRE.
- Procter, R. (2011). Knowledge Mobilisation: a dual scale questionnaire to determine teachers use and value of research knowledge. Poster presented at Outcomes and Impacts, University of Bedfordshire, 5-6 July 2011, Luton.
- Procter, R. (2012). Teachers and research: the gaps between their values and their practices. Poster presented at the Going for Gold Conference, University of Bedfordshire, 3-4 July 2012, Luton.
- Robertson, P., Sammons, P., Thomas, S. & Mortimore, P. (2001). The research design and methods, in: J. MacBeath & P. Mortimore (Eds) *Improving school effectiveness*. Buckingham: Open University Press.
- Shahar, E. (1997). A Popperian view of 'evidence-based medicine. *Journal of Evaluation in Clinical Practice* 3(2), pp.109-16.
- Thomas, G. & Pring, R. (Eds.) (2004). *Evidence-based Practice in Education*. Maidenhead: Open University Press.
- Tooley, J. & Darby, D. (1998). *Educational research: a critique. A survey of educational research*. London: Office of Standards in Education.
- Webb, R., Vulliamy, G., Hamalainen, S., Sarja, A., Kimonen, E. & Nevalainen, R. (2004). A comparative analysis of primary teacher professionalism in England and Finland, *Comparative Education*, 40(1), 83-107.
- Whitty, G. (2007). Education(al) research and policy-making. In L. Saunders (Ed) *Educational Research and Policy Making*. London: Routledge.

## Reflecting on Professional Practice: The Importance of Motivating Adolescent Girls in Physical Education

Lucy Crane, University of Bedfordshire

### Abstract

According to Calderhead *et al.* (1993), being a reflective practitioner is a vital requirement in the quest to improve both teaching and learning. The stimulus for this research was therefore determined through reflection on current practice within an educational setting. Both sport and academic achievement play a large part in school life. As research by Blaire *et al.* (1999) demonstrates, regular active participation in sport helps prevent many health risks including obesity, cancer and heart disease. In recent findings however, Shen (2009) identified a steep decline in the involvement of physical activity during adolescent years (12-18 years). This research was further confirmed by 'The National Heart, Lung and Blood health study

account' (in Kimm *et al.*, 2002), a finding of which was a dramatic decrease in the median of adolescent's activity between the ages of 12-18 years. Work by (Ogden *et al.*, 2002) subsequently confirmed that inactivity enhances the rates in obesity and Type two diabetes. The focus of this research is therefore to examine why adolescents' motivation towards physical activity decreases with specific reference to the causations and potential methods of how to change this perspective, thus promoting lifelong physical activity participation (Haerens *et al.*, 2012). Through using Kolb's (1984) model of experimental learning, reflection on current practice can be investigated to demonstrate the relationship of conceptualising experiences. Findings can then be used to inform planning to support

improvement in current practice. The research involved synthesising literature themes including motivation and physical activity, identifying the relationship of activity patterns during adolescence to future participation habits, and the impact of team V individual sports on motivation to engage with physical activity within an educational environment. Key themes drawn from the literature illustrating a positive correlation to motivating adolescents included the provision of choice (Prusak, 2004, Pangagi, 2000), the provision of challenge and independent learning tasks linked to skill requirements (Reeves, 1987; Garn *et al.*, 2011), the provision of non-competitive and enjoyable activities (Cherubini *et al.*, 2005; Garn *et al.*, 2005; Johnson *et al.*, 2011), and finally the provision of an environment to enhance levels of perceived competence and autonomy (Wang *et al.*, 2007).

### Introduction

According to Schofield *et al.* (2002), substantial activity is necessary for both physical and social health. They identify the increased risks adolescent girls are facing due to inactivity. The 2011 Government Guidelines for 5-18 year olds recommend moderate to vigorous activity for 60 minutes three times per week (DHSSPS, 2011). Schofield *et al.* (2002) conducted a study involving year 8 and year 11 pupils in seventeen different public and private schools. Results identified a significant decrease in physical activity in year 11 students, suggesting participation may decrease as age increases.

### Motivation

According to Litt *et al.* (2011), motivating adolescents to maintain levels of physical activity is important because its impact on health and well being in adult life. Koezuka *et al.* (2006) showed that those who engage in greater levels of sedentary hobbies occupy lower levels of physical activity participation, and suggested that the inter-relationship between sedentary behaviour and inactivity was complex. Targeted interventions are therefore crucial for addressing patterns of sedentary behaviour. Cherubini *et al.* (2005) examined how individual motivation is developed, and discovered that the most effective way to influence motivation was to acknowledge not only the characteristics of individuals but also their social environments, including their roles and responsibilities at school and at home. They also discovered that family, friends, peers and teacher relationships determine an individual's degree of motivation towards physical activity. However, motivation for sport is fluid and; direction and intensity of effort, persistence and regularity of engagement all vary. Corbin (2002) however, rejects this idea and states that behavioural intention strongly influences motivation in physical activity. According to this theory,

intention directs behaviour, leading towards physical activity and demonstrating a need to achieve. It is crucial, therefore, to understand how physical education lessons can be tailored to manipulate both behavioural intention and motivation towards physical activity. Corbin (2002) advocates the promotion of physical activity through school centred interventions with special foci based on physical education. This has been found to have an immediate and unique contribution to adolescents' daily physical involvements.

Garn *et al.* (2011) reviewed past research and revealed the positive impact that developing an interest can have on the achievement outcomes of early adolescents in physical education. Here the term 'interest' means a state of mind that leads to taking part in physical activity on a number of occasions. However limited work has been carried out to ascertain students' perceptions on this definition of 'interest'. It is therefore suggested that methodologies involving critical analysis of data on student perceptions is required. As part of their work, Garn *et al.* examined the factors reported by early adolescent students to have impact on the development of their individual interest in physical education. The research design included interviewing and observing 8 male and female students. Results revealed that the provision of opportunities to practice and levels of perceived competence determine students' perceptions of what they deem as important in developing individual interest. Another interesting finding of this study was that students felt meaningful learning did not take place in physical education lessons. Skill requirements were found to be an important factor for building interest. However, interestingly, it was found that the traditional multi-activity curriculum created barriers to developing individual interest. Therefore moving towards more meaningful curriculum units of instruction such as sports education could enhance the development of individual interest with early adolescents. Developing these ideas, Wang *et al.* (2007) examined the relationship between sport ability beliefs, achievement goals, self determination, and female students' enjoyment of physical education. The sample included female secondary students from single sex schools and focused on the measurement of sport ability beliefs, goal orientations, relative autonomy, perceived competence and enjoyment in physical education lessons. Results identified relative autonomy and perceived competence to have the strongest impact on enjoyment. Thus if high levels of relative autonomy and perceived competence can be managed in lessons, an increase in enjoyment will drive positive levels of motivation (Wang *et al.*, 2007). Garn *et al.* (2011) supported this theory, finding that the opportunity to practice and perceived competence were the main factors students deemed as

important in developing individual interest. Cherubini *et al.* (2005) also found enjoyment influenced sports participation and therefore played a crucial role in sports motivation. It has also been found by Hilland *et al.* (2011) that the provision of feedback and attention, particularly praise, supportive criticism and technical information can increase self-perceptions and enjoyment, thus increasing motivation (Hilland *et al.*, 2011). Shen *et al.*, (2009) describes the task value to be critical. Both 'attainment value' and 'subjective task value' have also been found to be important in affecting learning in physical education. 'Doing well' appears to be important as an outcome. Therefore students should be motivated to become effective participants.. Cox and Whaley (2004) concur with these findings. Their results found that students' interests were positively associated with effort and persistence in physical education. The research, however, only focused on a basketball unit, thereby limiting the validity of results.

#### **Relationship of activity patterns during adolescent to future participation habits**

According to Taylor *et al.* (1999), childhood and adolescents physical activity patterns is a major factor influencing adult participation habits. The purpose of their study was to evaluate the relationship among specific components of physical activity during adolescence and in adulthood. Findings illustrated that being forced to participate in activity during childhood can have a detrimental effect on adult participation. This suggests that activity during adolescence does indeed have consequential effects on adult participation, and that providing choice may indeed have a positive effect on participation. The research however, only focused on team sports, failing to represent individual activity participation. The volunteers used were male only, and thus limited the validity of the research to this particular study. Scheeder *et al.* (2006) support the finding of Taylor *et al.* (1999) that being sport-active during youth is positively correlated with adult engagement in sport. The sample for this particular study concerned females (31-42 year olds).. These volunteers were selected from those involved in the 1979 Leuven Growth study carried out twenty years previously. Analysis of questionnaire data indicated that a moderately high correlation existed between adolescent and adult exercise habits. Specifically this study suggested that the more an individual participates in physical activity during adolescence, the more active that individually is during adulthood.

#### **Team V individual sports**

According to Johnson *et al.* (2011) adolescent females prefer non-competitive activities. Research has illustrated that adolescents perceive team sports to be

for boys and creative activities such as dance and gymnastics to be for girls (Clifton and Gill, 1994). Le Masurier *et al.* (2005) identified that skills tests promoted higher levels of situational motivation when teaching adolescent females. Ryckman *et al.* (1992), examined the predictors of female adolescent involvement in organised team sports. They showed that girls who had a greater involvement in sports generated a stronger need for positive stimulation through friendship and weaker need for emotional support. This suggested that it is not the teaching that motivates interest in physical activity in adolescent girls, but their individual social needs. Reeves *et al.* (1987) point out that the independent sector schools include more competitive team games and more time dedicated to physical education than the state sector. It might then be questioned whether this could be affecting motivation towards physical education. Reeves *et al.* (1987), suggest that, if pupils are engaged in low competitive team activities, positive attitudes and increased levels of engagement may be achieved. Prusak's work (2004) shows that adolescent females are more motivated to engage in physical activity if they are given choice. According to Prusak, the provision of choice drives the want to achieve, allowing females to feel like they are doing something they want to do as opposed to what they are told to do. Self-determination theory may be used to examine emerging adult dispositions in adolescent girls in PE. It can be used to explain how the activities in a particular lesson affect student motivation through the situation, the PE context, and in an individual's expectation of being active as an adult. Offering choices allows students to become more self-directed. Adolescent girls may be particularly under-served by traditional physical education activities such as team or individual sports. This theory highlights the importance of challenge through providing independent learning tasks that allow pupils to identify potential achievement. By providing independent learning tasks, they are able to view various potential outcomes reflecting levels of achievement, and from this they are able to work towards achieving their potential. Darst and Pangrazi (2002) agree with this approach, suggesting activities should be designed to promote independent learning. Thus, the need for autonomy in a situation as a precursor to motivation may be prominent during adolescence.

#### **Methodology and Critical review**

Kolbs (1984) Model of Experimental Learning

The validity and reliability of much educational research can be questioned. This is due to the ethical nature of educational research and the variables inherent in

different schools and locations. If however, practitioners are able to synthesise findings of rigorous and triangulated primary and secondary research, the trustworthiness of the research is increased. The use of 'Kolb's (1984) model of experimental learning (in Healey *et al.*, 2007), has been employed to structure this research. The model is well-known (Healey *et al.*, 2007). It consists of a cycle of four different stages; Concrete Experience/ Reflective Observations/ Abstract Conceptualisation and Active Experiments.

#### **Concrete Experience (doing/ having the experience)**

Kolb's (1984) Model of Experimental Learning – Stage 1.

The institution in which this research was conducted has achieved an exceptional standard of excellence, sending pupils to high profile universities including Oxford and Cambridge University. Such institutions place considerable prominence on achieving top grades (A-A\*) in academic subjects. Prior to 2012, physical education was not offered as a GCSE or A-Level subject due to the lack of interest and a perception that it was a 'non-academic' subject. Unfortunately, this view was shared among the school environment and pupils perceived PE, not as a requirement for success, but more a 'fun' lesson to participate in. Observations further supported this view.

#### **Reflective Observation (Reviewing/ reflecting on experience)**

Kolb's (1984) Model of Experimental Learning – Stage 2.

Following observations, formal discussions with subject teachers took place. A clear lack of focus and motivation, which could not be construed as an error in teaching style or ability, was identified. Data analysis showed that both Middle Five (year 10) and Upper Five (year 11) year groups continued to be the most challenging groups to motivate in Physical Education. Analysis demonstrated that sample members accepted this interpretation as the norm. A stimulus for this research was the perception that there must be specific causes for lack of motivation, and that there must be strategies that could be used to overcome the low levels of motivation observed in adolescence towards Physical Education. An aim of the research was to understand why this was the perception and indeed the 'accepted' behaviour from Middle Five (year 10) and Upper Five (year 11) students in PE lessons. Through synthesising related literature, and identifying methods to motivate the pupils, new approaches of practice could then be established.

#### **Abstract Conceptualisation (concluding/ learning from the experience)**

Kolb's (1984) Model of Experimental Learning – Stage 3

Key findings arising from the literature review suggested strategies to test in context. When considering the design of this research, previous studies were consulted. From a critical perspective Garn *et al.* (2011) valued student-centred research. This influenced the inclusion of the personal perspectives of students in this research. Hastie (2008) supports Garn *et al.* (2011) in criticising methodologies that fail to represent or capture the voices of students themselves. Thus, the approach employed was Open Enquiry with mixed data collection methods of questionnaire and group interview. Analysis of the questionnaire data would externalise pupils' perspectives; analysis would reveal factors influencing their motivation in lessons. The focus group interview would provide another opportunity to test key themes drawn from the literature to inform future planning. Five adolescent female students from Upper Five and Middle Five were selected for the sample because they exhibited a wide range of individual interest in different sports and skills. This would allow results to be obtained from different perspectives towards Physical Education. The sample pupils were asked to complete an adapted version of the: Interest Inventory-sports and Physical Education Questionnaire (adapted from Crawford *et al.*, 1987). BERA ethical guidelines were adhered to including obtaining school permissions and a informed consent from participants. Results from both the questionnaire and focus group interview reflected key findings from the literature review. Pupils preferred working in group as opposed to individual activities. When challenged they felt further motivated to achieve. This supports Reeves' (1987) research. Results also suggested pupils felt challenged when working on independent learning tasks as Darst and Pangrazi (2011) had also found. Interestingly Physical Education was not perceived as an important subject to achieve in academically but was important for physical health. As identified by Hilland *et al.* (2011), Shen *et al.* (2009) and Garn *et al.* (2011), results from this research also highlighted the importance for pupil focus and motivation of knowing the assessment outcome. Overall, there was considerable congruency of the findings from the literature review and the empirical research, providing foundations to start developing new ideas and applying into practice.

#### **Action and Development- Active Experiments (planning/ trying out what has been learned)**

Kolb's (1984) Model of Experimental Learning – Stage 4.

After conducting the necessary research and applying it to the key literature, a new scheme of work was developed that employed all of the key findings on motivation of adolescents. According to Kirk (2004), the impact of schemes of work can provide a large impact to

the outcomes of PE. The developed scheme of work for Middle and Upper Five included independent, challenging group activities, set in a low competitive social environment as the research findings indicated. Pupils were put into small groups and provided with a linked theme to an aerobics session, for example - the warm up section. Using resource cards, pupils then had choice in composing the group independently. The provision of feedback and emphasis on outcome was found to be crucial to increasing motivation according to Hilland *et al.* (2011), Shen *et al.* (2009) and Garn *et al.* (2011). Therefore assessment criteria were made available; using certain skill requirements allowed all to be achievable. This encouraged increased feelings of perceived competence and autonomy which, according to Wang *et al.* (2007), were key to motivation. New level descriptors and associated assessment criteria were created for the new scheme of work. The importance of achievement was emphasised through the provision of reports detailing pupil performance. To enhance the level of enjoyment, pupils were provided with the choice of music and equipment they wanted to use. The scheme of work was designed to teach pupils key skills which they could then use and adapt appropriately. Reflections on lessons allowed the recall of successes and areas for adaption as necessary, providing the framework for the completed scheme of work.

A second observation by a senior manager took place during the pupils' final lesson, which included their performances. The outcome of this observation was very positive. Pupils showed high levels of motivation, application and enjoyment in their performances. Pupil perspectives on their feelings about the lesson were collected following this observation. Their responses were very positive. They felt challenged but enjoyed the opportunities to bring their own ideas to meet the lesson outcome. This challenge made them more motivated to achieve. With the feedback provided and positive lesson reflections reviewed, evidence was showing a positive response from the pupils towards the new concepts and ideas.

Reflections on self-development over the year and implications for future practice

The development of a new scheme of work and the research that went before have increased the researcher's confidence as a practitioner. New activities have been introduced that reflect challenge and low competitive team activities. Independent learning tasks have been created, involving skill requirements and placing emphasis on achievable assessment outcomes (encouraging increased levels of perceived competence and autonomy).

The adolescent years have proven to be a poignant time in which girls disengage with physical education. It is clear from the literature that practitioners need to ensure the provision of the best possible learning environment and content involving activities to promote motivation for physical education.

## References

- Blaire, S.N; Brodney, S. (1999). Effects of Physical inactivity and obesity on morbidity and mortality: current evidence and research issues. *Journal of Medicine and Science in Sports & Exercise*. 31, (11), 646-662.
- Calderhead, J; Gates. P. (1993). *Conceptualising reflection in teacher development*. London: Falmer Press. Cited in: Ghaye. T. (2011). *Teaching and Learning through Reflective Practice: a practical guide for positive action*. 2<sup>nd</sup> ed. Oxon: Routledge. 21.
- Cherubini, J.M. (2005). Motivation. *Journal of Encyclopaedia of World Sport*. 3 (3), 1012-1015.
- Clifton, R.T; Gill. D.T. (1994). Gender differences in self-confidence on a feminine-types task. *Journal of sport and exercise psychology*. 16, (3), 150-162.
- Corbin, C.B (2002). Physical Activity for everyone: What every Physical educator should know about promoting lifelong physical activity. *Journal of Teaching in Physical Education*. 21. 128-144.
- Cox, A.E; Whaley, D.E. (2004). The influence of task value, expectancies for success and identify on athletes' achievement behaviours. *Journal of Applied Sport Psychology*, 16, (2), 103-117.
- Crawford, L. W., & Carline, D. E. (1987) *A Guide for Reading in the Content Areas, Third Edition*. Bismarck, ND: The State of North Dakota Department of Public Instruction
- Darst, P,W; Pangrazi. R. (2002). *Dynamic physical education for secondary students*. 4<sup>th</sup> edition. San Francisco. Benjamin Cummings cited in: Prusak, K Treasure, D; Darst, P; Pangrazi, R. (2004). The effects of choice on motivation of adolescent girls in physical education. *Journal of teaching in physical education*. 23, (2),19-29.
- Department of Health. (2011). *Physical Activity Guidelines for Children and Young People*. Available: [http://dh.gov.uk/en/publicationsandstatistics/publications/publicationspolicyandguidance/DH\\_127931](http://dh.gov.uk/en/publicationsandstatistics/publications/publicationspolicyandguidance/DH_127931).
- Garn, A.C; Donetta, C; Jenkins, J. (2011). A qualitative analysis of individual interest in middle school physical education: perspectives of early- adolescents. *Journal of Physical Education and Sport Pedagogy*, 16, (6), 223-226.
- Ghaye, T. (2011). *Teaching and Learning through Reflective Practice: a practical guide for positive action*. 2<sup>nd</sup> ed. Oxon: Routledge. 5,21.
- Haerens, L, Kirk, D Cardon, G; De Bourdeaudhuij, I; Vansteenkiste, M. (2012). Motivational profiles for secondary school physical education and its relationship to the adoption of physically active lifestyles among university students. *Journal of European physical education review*, 16,(3), 117-139.
- Healey, M; Jenkins, A. (2007). Kolb's Experimental Learning Theory and its application in Geography in Higher Education. *Journal of Geography*. 99:5. 185-195.
- Hilland, T.A; Ridgers, N.D; Stratton, G; Fairclough. S.J. (2011). Associations between selected demographic, biological,

- school environment and physical education based correlations, and adolescents physical activity. *Journal of Paediatric Exercise Science*. 23 (4), 61-71.
- Johnson, T.G; Prusak, K; Pennington, T; Wilkinson, C. (2011). The effects of the type of skill test, choice, and gender situational motivation of physical education students. *Journal of Teaching in Physical Education*, 30, (4), 281-295.
- Kimm, S.Y; Glynn, N.W; Kriska, A.M et al. (2002). Decline in physical activity in black and white girls during adolescence. *The New England Journal of Medicine*, 347, (6), 709-715. Cited in: Shen, B; McCaughtry, N; Martin, J; Fahlman, M. (2009). Motivational profiles and their associations with achievement outcomes. *Journal of Teaching in Physical Education*, 28 (3), 441-460.
- Kirk (2004) Cited in: Johnson, T.G; Prusak, K; Pennington, T; Wilkinson, C (2011). The effects of the type of skill test, choice, and gender situational motivation of physical education students. *Journal of Teaching in Physical Education*, 30., (4) 281-295.
- Koezuka, N; Koo, M; Kenneth, A; Edwaes, A; Faulkner, G; Goodman, J. (2006). The relationship between sedentary activities and physical inactivity among adolescents: results from the Canadian community health survey. *Journal of American Academy of Paediatrics*. 70 (2), 225-235.
- Kolb (1984). Cited in: Healey, M; Jenkins, A. (2007). Kolb's Experimental Learning Theory and its application in geography in higher education. *Journal of Geography*. 99, (5), 185-195.
- Le Masurier, G.C; Beighle, A; Corbin, C.B; Darst, P.W; Morgan, C; Pangrazi, R.P et al (2005). Pedometer- determined physical activity levels of youth. *Journal of Physical Activity and Health*, 2, (2), 159-168. Cited in: Johnson, T.G; Prusak, K; Pennington, T; Wilkinson, C (2011). The effects of the type of skill test, choice, and gender situational motivation of physical education students. *Journal of teaching in physical education*, 30, (4), 281-295.
- Litt, D; Ronald, J; Wang, J. (2011). Motivations for adolescent physical activity. *Journal of Physical Activity and Health*. 8, (2), 270-277.
- Mckenzie, T; Prochaska, J; Sallis, J; LaMaster, K. (2004). Coeducational and single sex physical education in middle schools: impact on physical activity. *Journal of Research Quarterly for Exercise and Sport*. 75 (4) 446-449.
- Ogden, C.L; Flegal, K.M; Carroll, M.D; Johnson, C.L. (2002). Prevalence and trends in overweight among US children and adolescents 1999-2000. *Journal of the American Medical Association*. 288, (4), 1728-1732.
- Prusak, K; Treasure, D; Darst, P; Pangrazi, R (2004). The effects of choice on motivation of adolescent girls in physical education. *Journal of teaching in physical education*. 23, (2), 19-29.
- Reeves, R.A; Spanner, S (1987). The physical education curriculum and competitive sport for girls. *British Journal of Physical Education*. 18, (2) 83-85.
- Ryckman, R.M; Hamel, J. (1992). Female adolescents' motives related to involvement in organized team sports. *International Journal of Sport Psychology*. 23, (2) 147-160.
- Scheerder, J; Martine, T; Bart, V; Johan, L; Roland, R; Bart, V.E; Gaston, P. (2006). Sports participation among females from adolescence to adulthood A longitudinal study. *Journal of International Review for the sociology of sport*. 41 (4) 413-430.
- Schofield, L; Mummery, K; Schofield, G; Walmsely, H. (2002). Adolescent girls and inactivity. Insight from the central Queensland adolescent physical activity and nutrition study. *ACHPER Healthy Lifestyles Journal*. 49, (2), 17-22.
- Shen, B; McCaughtry, N; Martin, J.J; Fahlman, M. (2009). Motivational Profiles and Their Associations with Achievement Outcomes. *Journal of Teaching in Physical Education*. 28, (13), 441-460.
- Shen, B; McCaughtry, N; Martin, J; Fahlman, M. (2009). Motivational profiles and their associations with achievement outcomes. *Journal of teaching in Physical Education*, 28 (3), 441-460.
- Taylor W.C; Blaire, S.N; Cummings, S.S; Wun, C.C; Malina, R.M. (1999). Childhood and adolescent physical activity patterns and adult physical activity. *Journal of Medicine and Science in Sport and Exercise*. 31 (1) 118-123.
- Wang, J; Lui, W. (2007). Promoting enjoyment in girl's physical education: The impact of goals, beliefs, and self determination. *European Journal of Physical Education Review*. 13 (2) 145-164.