

De Martelaer, K., Seghers, J., Cardon, G., Haerens, L., De Boever, E., & Cloes, M. (2014). Physical Education Stimulating a Healthy Lifestyle and Critical Sports Consumption in Belgium. In, M.-K. Chin & C.R. Edginton (Eds.), *Physical Education and Health Global Perspectives and Best Practice* (pp. 43-56). Urbana, IL: Sagamore.

Physical Education Stimulating a Healthy Lifestyle and Critical Sports Consumption in Belgium

De Martelaer Kristine

Vrije Universiteit Brussel

Seghers Jan

Katholieke Universiteit Leuven

Cardon Greet

Haerens Leen

Ghent University

De Boever Eric

Bond voor Lichamelijke Opvoeding

Cloes, Marc

University of Liege

ABSTRACT: In this chapter, the authors describe the situation and challenges of Physical Education (PE) in Flanders and Wallonia in order to encourage young people to adopt a healthy lifestyle and to become critical sports consumers. In school-age children, about one out of six has problems with obesity/overweight. Compared with earlier measurements there is a trend of increasing sedentary time per day and not enough physical activity (PA) to reach international norms. Girls can be definitely considered as a public at risk regarding the physical activity component of their healthy lifestyle. In recent years, the emphasis has shifted from motor- and/or physical-testing towards the development of a positive attitude towards physical activity and being socially engaged. The main concern of the course-specific final attainment levels is teaching how to deal with the current movement culture of games, sports, fitness, and daily activity. In both regions, it is expected that children are taught to transfer movement and personally-related competencies learned in PE to other contexts. Initiatives to develop and enhance links between PE and other opportunities to be physically active in the wider community are receiving more attention during the last few years, but the situation is still far from ideal. Because of the complex role of promoting a healthy lifestyle during PE and in the whole school, there is a need to educate teachers during their teacher training and lifelong education on how to provide relevant choices, satisfying the need for autonomy.

KEYWORDS: *Health Curriculum, Sports Stimulating Schools, School-community Partnerships, ICT, PETE*

Introduction

Belgium consists of three communities: the Flemish (58% of the Belgian population), the French (about 40%), and the German-speaking community (only about 2%) (http://www.belgium.be/en/about_belgium/). Since the end of the 1980s, “person-related domains” such as education, culture, public health, sports, and welfare are policy domains under the responsibility of the respective communities. Even though nursery education (children 2.5-6 years) is not compulsory, almost all children attend school. Mainstream primary education is compulsory for children 6-12, followed by secondary education for youngsters 12-18. This chapter focuses on the actual situation and challenges of Physical Education (PE) in Flanders and Wallonia in order to encourage young people to adopt a healthy lifestyle and to become critical sports consumers. The evolution of the German-speaking region has continuously been influenced by the two other regions and will not be described separately.

History of PE/Health Practices in Belgium

Physical Education in Belgium was influenced by sports and PE systems in Europe, but most of all by the Swedish system of gymnastics, then competitive sports (UK), the New Games and outdoor recreation, and more recently by the increasing focus on a healthy lifestyle. Currently, PE is protected as part of the Flemish basic school curriculum by the “Education II Decree.” Until 1968 exercises based on Swedish gymnastics predominated. In 1971 the term “gymnastics” was legally replaced by “Physical Education” which remains the official school subject name. From the 1970s, the content of the PE curriculum has accentuated a dominant sport curriculum from successful competitive sport. Objectives/methods/activities of sports clubs, such as circuit training and power training but also types of game play, were gradually adopted in PE. This evolution resulted in the image of PE being a copy of (competitive) sports. As a reaction to this “sportification” of PE, the “New Games movement” and “outdoor recreation” emphasized recreation during the 1970s and 1980s. Next came the need to promote physical well-being, resulting in an increased attention for physical fitness inside and outside schools. Health-based PE programs/assessments became popular (De Martelaer, 2000). Thanks to the introduction of new standards in the 1990s, the Flemish authorities officially recognized the importance of the three developmental domains: (a) motor competencies, (b) safe/healthy lifestyle, and (c) positive self-esteem and social functioning. During the last decennium, the goals focusing on development of a healthy, physically fit, and safe lifestyle are appreciated by stakeholders, teachers, and pupils (Huts, De Knop, & Theeboom, 2005a; Huts, De Knop, Theeboom, & De Martelaer, 2005b; Huts, De Knop, Theeboom, & Van Hoecke, 2008) though not easy to realize in general nor long term in particular.

In Wallonia, the social revolution of 1968 brought major changes in the mentality and behaviors of educational aspects. The adoption of a new curriculum in secondary schools (“renovated teaching”) gave a central place to the student and protected the presence of compulsory PE. The rejection of Swedish gymnastics in favor of a more functional approach, based on cultural-related sports, dance, and circus skills, emphasized the health/educational objectives of PE. Since that major shift when PE teachers had to focus

on sports, they were expected to prepare youth to become members/athletes in sports clubs. Therefore, many of them created extracurricular sports associations and were involved in competitions between schools. In the 80s and 90s, other societal changes, relevant for PE, occurred. Sedentariness increased together with the evolution of sports participation from pyramidal structure (sport for all as basis for top level sport) to compartmented structure (with several parallel levels and target groups) as described by Diegel (1995). In schools, an increasing number of pupils/students progressively lost their motivation towards physical involvement. Under the influence of a worldwide movement, the French-speaking school system was modified at the end of the 1990s. This reform introduced new objectives for all school disciplines, based on the development of competencies. In PE, these competencies meant physical fitness, motor skills, and socio-motor cooperation. The final goals of PE were classified as: health, safety, expression, and sports culture. An increasing number of PE teachers today teach to improve students' motivation (Florence, Brunelle, & Carlier, 1998).

Parallel with this reform, voices claimed the role of PE in the development of physically-educated citizens for adopting a lifelong active lifestyle and learning healthy behaviors. The health-related objective of PE returns to the forefront along with a growing interest in educational concepts like accountability and physical literacy. Along with preparing youngsters for lifelong physical activity, they learn of various possibilities and organizations and critically reflection on the quality offered. Because of the broad offer and range of quality of commercial and non-commercial activities, youngsters have to be taught to be critical sport consumers.

Current State of Well Being of Children and Youth

In school-age children about one out of six has problems with overweight/obesity (Guillaume & Counet, 2009; Heyters & Marique, 2011; Lefevre, Philippaerts, De Martelaer, & Van der Aerschot, 2011; Roelants, Hauspi, & Hoppenbrouwers, 2009). The prevalence rates of overweight/obesity among Flemish and Wallonian children 11-15 years (8-11% for girls and 10-15% for boys) are broadly comparable to levels observed in northern European countries (10-20%) but lower than in the United Kingdom and southern Europe (20-40%) (Brettschneider & Naul, 2007; Currie et al., 2012; WHO-ENHIS, 2009).

Concerning data of sedentary/screen time and physical activity level, subjective (self-report) as well as objectively-measured data (e.g., accelerometer) are available. Most youngsters exceed the recommendation for cumulative screen time of 2 hours/day (Melkevik, Torsheim, Iannotti, & Wold, 2010), and some (about 10%) spend more than 3 hours watching TV/day (Bodson and Zintz (2007). The mean screen time/day has increased over the past 10 years (De Fré, De Martelaer, Philippaerts, Scheerder, & Lefevre, 2011). Based on objective data (accelerometer), Flemish girls aged 10-12 and boys were sedentary on average 8 hours/day (Verloigne et al., 2012).

According to international evidence-based recommendations, school-age youth should participate in at least 60 minutes of moderate-vigorous physical activity/day (Strong et al., 2005). Only 1.4% of Flemish girls aged 10-12 and 14.0% of Flemish boys aged 10-12 met the recommendations (Verloigne et al., 2012).

For the age group 15-24 years, 47% of the males and 19% of the females are participating in vigorous, leisure physical activity (Institut Scientifique de la Santé Publique, & Service Public Fédéral Economie, PME, Classes moyennes & Energie, 2006). Respective means of 73 and 29 minutes/day of moderate and vigorous activity were reported with a clear decrease between 2001 and 2004. Results of a more recent study (Cloes, Maraite, Derome, Van Hoye, & Theunissen, 2009) among 4th-6th grade pupils indicated that of 70% of the boys and 53% of the girls doing sport, only 36% and 14% were reaching at least 5 hours/week of sweat-producing activities.

A Flemish study (Lefevre et al., 2011) reported an amelioration of some tests among Flemish elementary school children of Eurofit such as plate tapping, sit and reach, and shuttle run. Other test results among these children declined in two decades: the hand grip, standing broad jump, sit up, and bent arm hang. Data on basic motor skills among young children (Vandaele, Cools, De Decker & De Martelaer, 2011) indicated that more than 25% of the children obtained a score 0 for locomotor skills based on coordinative skills and body tension. Moreover, object control tasks showed higher percentages of score 0 than locomotor tasks. These results showed similar trends to other studies on mastery of Fundamental Motor Skills (FMS) (Okely & Booth, 2004). Importantly, object control proficiency is considered a predictor of adolescent physical activity behavior (Barnett, van Beurden, Morgan, Brooks, & Beard, 2009).

On the basis of the Eurofit tests among Wallonian children (aged 10-18), Heyters and Marique (2004) compared the performance to data collected 10 years before. The performances, they noted, were statistically lower in most of the fitness tests (hand grip, standing broad jump, Flamingo balance, sit and reach, sit-ups, endurance shuttle run). The decrease reached 5-15% in girls and 3-9% in boys, although increased opportunities as pointed out by some authors (Cloes, 2012) are not compensating the general trends. It seems that a double distribution of citizens will result: (1) one group increases its active lifestyle/fitness level, and (2) another group becomes less active and less performing on fitness testing. The most recent data confirm the general trends (Heyters & Marique, 2011). In a large research project analyzing the individualization process in elementary/secondary PE lessons, Piéron et al. (1998) focused on the perception of competence of students. They pointed out a concordance between the opinion of the teacher about the level of the learners and the opinions of the latter about their own competence in PE. It appeared that 75% and 51% of the students had a positive opinion about their competence in, respectively, primary and secondary school classes.

Finally, we focus on sports participation in extra-curricular context. The most popular sports to practice among a representative sample of the Flemish population (aged 14-85) are: cycling, fitness, walking, running, and swimming. For youngsters (aged 14-17) in particular, the most preferable sports are: soccer, dance, cycling, running, and tennis (De Fré et al., 2011). Notwithstanding the high participation membership rates in club-organized sports activities among teenagers in Flanders, a time trend analysis showed that the intensity of leisure-time sports participation (hours/week) has dramatically declined (Scheerder, Vanreusel, & Renson, 2005).

For Wallonia, Bodson and Zintz (2007) analyzed the answers of children and adolescents (6-18 years) and underlined that 78% of the boys and 63% of the girls reported sport activity whereas, respectively, 8% and 17% of them declared having never participated. Active leisure activities are practiced at least 4 hours/week by a minority of

3th-6th grade pupils (Cloes et al., 2009): playing outdoors, walking, swimming, biking. Youngsters are mostly involved in sports activities, although not necessarily reaching international recommendations. Girls are a public at risk regarding the physical activity component of their lifestyle.

Current Practices

In Flemish preschool, elementary, and secondary school (ages 2.5-18), children have at least two mandatory PE lessons of 50 minutes each per week. Schools are allowed to increase their hours of PE (De Medts, 2005). In secondary school, PE has to be delivered by specialized PE teachers. In preschool/elementary schools non-specialized teachers can deliver PE, although in Flemish elementary schools PE is almost always delivered by a PE specialist (Cardon, & De Bourdeaudhuij, 2002).

The final attainment goals for PE are “guiding” in preschool and rather prescriptive in nature in elementary and secondary school. These goals, clustered in two main areas, result in four categories with subsets focusing on skills, attitude, and knowledge (Figure 1).

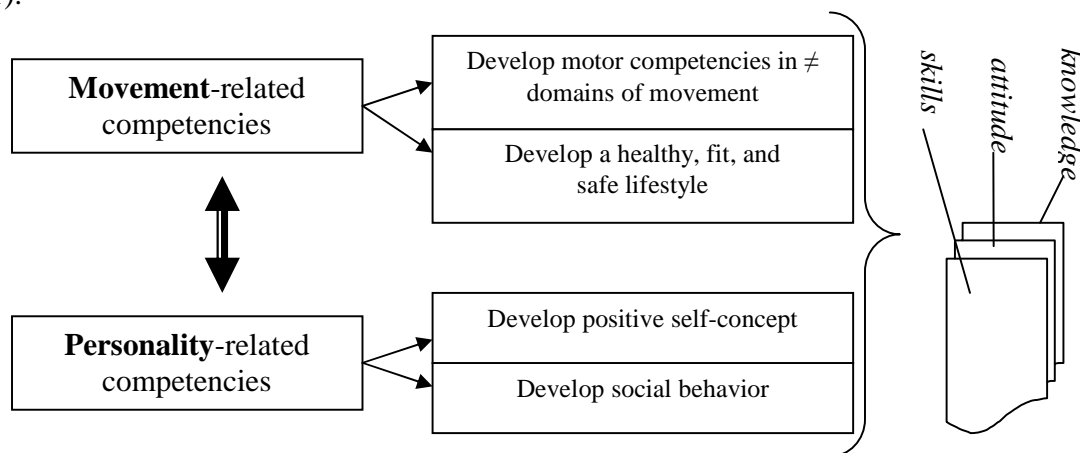


Figure 1: Final attainment goals for PE

The Flemish education system allows for the adoption of various approach/methods and does not specify method of attainment. The three educational networks (public/neutral, municipal/provincial, and private/catholic) drew up this plan and implemented it in the schools. Schools are required to document their curriculum and year plan to implement and to follow up each year. The main concern of these course-specific final attainment levels is teaching how to deal with the current movement culture of games, sports, fitness, daily activity (active transport, ...). The movement domains as described in the final attainment levels are illustrated in Figure 2 (De Knop, Theeboom, Huts, De Martelaer, & Cloes, 2005).

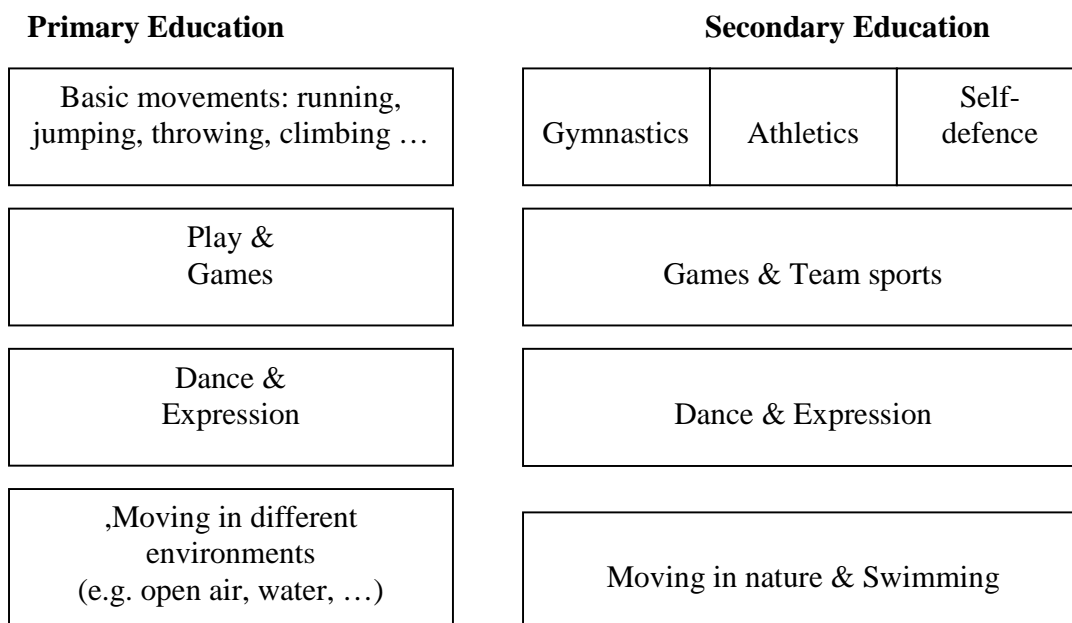


Figure 2: Movement domains for PE

Children are taught to transfer competencies learned in PE to other contexts, resulting in a positive, healthy, daily lifestyle being socially engaged. In recent years, the emphasis has shifted from motor- and/or physical testing towards the development of a positive attitude towards physical activity. Coeducation was debated quite heavily in the 90s, and the choice between single sex or co-education classes depends on the educational network and the individual school board. The introduction of the minimum goals served as an important step in the direction of trying to achieve more quality. However, as in many other countries (Hardman & Marshall, 2000; Hardman, 2006), PE in Flanders is often facing problems such as insufficient curricular time allocation, inadequate and/or unavailable facilities, financial constraints or low status (Cardon & De Bourdeaudhuij, 2002). For 20 years, various structural initiatives have been taken to stimulate the promotion and quality control in schools. The Flemish government bases its quality policy on three Decrees: the final attainment levels for pupils, the financing of continuing education courses for teachers, and the school inspectorate and pedagogical counseling office (De Knop et al., 2005). Leper (2012) reported on the quality as determined during the inspection (2001-2009) of PE at Flemish schools. The movement related competencies are quite well-described, considering developmental/chronological plans in PE courses over the years. On the other hand, there were rarely concrete learning contexts to evaluate the personality-related competencies of pupils, for example respecting individual possibilities/differences of others, categorized as social behavior. More recently, the role of schools in promoting health along with the link between health and education has increasingly been governmentally recognized. In 2006 ministers signed a declaration requiring their addressing health issues in schools and the local community.

In the French-speaking part of Belgium, pupils/students also have a minimum of two PE lessons of 50 minutes per week. Coeducation is proposed at primary school level.

Single-sex classes are organized with rare exceptions at the secondary level. As in Flanders, the educational network (state, private/catholic, community schools) is influencing the vision of the school supervisors/teachers.

The promotion of lifelong physical activity is traditionally accepted even if not specifically mentioned in the PE objectives. In fact, each school can choose to adopt an overall policy focused on sport and physical activity or other objectives (e.g., foreign languages, culture...). The major determining factors influencing the orientation of a school are the convictions of the senior staff (director and school council) and, sometimes, the status of the PE and the PE teachers. Van Hoye, Motter, and Cloes (2009) selected four secondary schools considered good examples with emphasis on physical activity. Despite positive reputation, these schools fell far from meeting the criteria of the active schools defined by Cale (1997). Surprisingly only one school had a written policy for PE and physical activity. Nor did these schools develop relationships with the community sports and physical activity resources. Another study assessed the importance given to PA in 51 out of the 514 secondary schools in the French-speaking part of Belgium. Based on literature (Cale, 1997; Pate et al., 2006), six dimensions broken into variables were identified (school's official policy, PE classes, active transportation policies, sports at school, promotion of PA as inter-disciplinary process, facilities used by the school for PE/sports). The mean global score of the sample on these six dimensions was 44.7%. The lack of an in-school policy for promoting PA was striking. Few actions were taken to encourage active transport to/from school. The facilities used for the practice of PE/sports were better quality than expected, but, PE classes were not efficient (Cloes, 2011).

Even if health is stated as a goal of PE, health education and health promotion is under the umbrella of local school health services who supervise the initiatives launched in any school. Unfortunately, very few projects are implemented specifically considering physical activity. Since 2006, the Government of the region has supported an action to implement a coordinated policy to promote healthy attitudes about food and physical plans for children/adolescents (www.mangerbouger.be). A member of the Board of Education has recently been designated to coordinate the promotion of sport and physical activity in schools and the Sports Ministry has launched several actions in order to develop the relationship between community sports clubs and the school actors (www.adepts.be). Simultaneously, efforts have been made by PE teacher-educators to involve more the practitioners in encouraging their students to adopt an active lifestyle (Cloes, Del Zotto, & Motter, 2009). Following decisions of political authorities of both regions, health issues are becoming increasingly important at school. Physical education, although not clearly identified as the corner stone of the implementation of the actions, is considered a part of the whole process.

Unique Curricular Models and Community Programs

The Flemish Minister of Sports commissioned the development of a framework for providing practical guidelines for schools/community partners to create extracurricular opportunities for PA through the school environment, school policies, school culture, and school-community links. The presented framework integrates five complementary extracurricular components and is consistent with literature recommendations (Seghers, De Martelaer, & Cardon, 2009; Table 1). Van Acker et al. (2011) described in detail the framework's development. Some case studies in Flanders like "Sports Snack" (a community-organized/multi-sport, after-school program for elementary school children not requiring membership in a sports club) showed that school-community partnerships facilitated by PE teachers as on-site PA coordinators can improve the quality/quantity of PA programs. In these projects, the local government (municipality) is considered an important link between the sports actors (sports clubs, schools, municipal sports services) and the participants (De Martelaer & Theeboom, 2006). These school-community partnership projects aim to stimulate all children, including the non/less-talented not yet participating in sports.

Components	Recommendations
1. Sports and PA during lunch break	Activities should be adapted to the interests and profiles of all pupils (e.g., gender, skill-level) and orientated to non-competitive PA transferable to leisure time activities
2. Active school yards	Providing space, sports facilities, and extra game and sports equipment during all school break periods
3. Active commuting to school	Creation of traffic free zones around schools, speed restrictions in school zones, sidewalk, and bicycle lane improvements, and the introduction of walking school busses or bike pooling
4. Integrative health education policy related to PA	<ul style="list-style-type: none"> • Providing health messages to pupils • Providing an autonomy-supportive environment, in which young people are offered choices of activities and autonomy in decision-making • Shared responsibility of the entire school staff, community partners, and parents. Involvement of parents by modeling an active lifestyle, encouraging youth to play outdoors and make activity-related equipment available at home
5. After-school sports and PA	<ul style="list-style-type: none"> • Offer a wide range of very attractive games and sports with an emphasis on play, fun, and recreation, and not solely on competition • Facilitate transport to and from school • Include community organizations (e.g., sports clubs)

Table 1: Framework with five complementary extracurricular components (Seghers et al., 2009)

Furthermore, initiatives to develop and enhance links between PE and other wider community PA opportunities have received more attention during the last few years (Van Acker et al., 2011). PE teachers, in addition to instructing and guiding PE classes and

individuals, now also must prepare to function as a team member in and outside school. Communication with parents, physicians, community representatives, and sport coaches has become vital. Multimedia can help in this communication, as when ICT possibilities (see www.smartschool.be/) follow and stimulate the individual progress of pupils. The possibilities of differentiation, remedial teaching, and feedback on the individual learning route among colleagues and parents foreseen using this digital school platform offer an added value to the traditional ways of communication (meetings, traditional paper report ...). This stresses the role of Physical Education Teacher Education (PETE) and Continuous Professional Development (CPD) following the evolution and possibilities of the PE/health curriculum, as well as the impact of partnerships between the school and local community. PETE programs are currently organized at two levels: non-university and university. At the non-university level (professional bachelor training program, proposed by colleges), student teachers are trained during 3 years (180 European credits - ECTS), certifying them for elementary and the lower levels of secondary schools. University programs for 5 years (180 + 120 ECTS) prepare student teachers for the higher grades of secondary schools (students aged 14-18). Today, six Belgian universities (three in each community) offer a specific PE teacher education program at the master level, whereas 23 colleges (14 in Flanders and 9 in Wallonia) offer a PE teacher education program at the professional bachelor level. Even taking into account the separated regulations of (higher) education in the Flemish and Walloon community, too many university colleges offer a professional bachelor. The integration of these institutions with the academic university education was stimulated by government constructed associations. However, due to significant differences in study level/approach, the cooperation only recently been successful.

In the recent past, PE teachers often reported lack of awareness/education of the health-promoting role of PE (Cardon & De Bourdeaudhuij, 2002; Lecomte, Carlier, & Renard, 2002). Therefore, the actual 5-year Master program is needed with specific materials developed to train PE teachers for measuring physical fitness and stimulating active lifestyle. ICT does help, offering instruments (hard and software) to work in a transparent and efficient way. A picture library is offered on the internet (e.g., via Sports Media) for pupils and teachers, plus several programs for motion/performance analysis and learning process of movements (Dartfish, Kandle, sport analyzer, Kinovea ...). Exergames implementing a dance revolution (www.konami.com/games/ddr) or Twinkle tiles (www.twinkeltegel.nl ...) allow for working with ICT during instruction and for linking with children's individual interest in active digital games. Tools are used to measure the intensity of PA (heart rate monitors such as Polar ...) and frequency of PA with pedometers/accelerometers. Finally, Fitclass (www.fitclass.be) is quite popular and offers individual tasks and training during extracurricular time.

Future Visions and Challenges

Belgian holistic approach in school and local community stimulate healthy and physically active lifestyles and has potential for growth and concrete use in content, methods, and teaching approach. However, financial constraints and few human resources hinder wider and structured implementation. In Wallonia the Government

made an effort to increase interest in a healthy lifestyle in young people. Several initiatives have focused in schools. Regionally, priority was given to nutrition aspects, but today the development of an active lifestyle receives more attention. Informal analysis of public actions indicate lack of a consistent strategy and of coordinated policy implementation. For example, a 4-year-project to double the time of PE lessons in 10 primary schools ended until all involved could agree. Information collected during this experiment was ignored, rather than shared to develop schools motivated to increase promotion of PA. Official guidelines have existed for 5 years, and more projects are being implemented, but schools still lack the leading role they could play in developing an active lifestyle in young people. Mentalities are changing, but the goal remains distant.

PE has to be the professionally-guided starting point, reaching all children and inspiring other initiatives and organizations. Recently, Haerens, Kirk, Cardon, and De Bourdeaudhuij (2011) developed a pedagogical model for Health-Based Physical Education (HBPE). This model suggested that the socio-emotional domain (*valuing* and *enjoying* physical activity) is prominent in planning for learning. With the focus on valuing and enjoying active life, Self-Determination Theory (SDT, Deci & Ryan, 2000) primarily informs the delivery of HBPE schools. SDT suggests that activities inherently found interesting, meaningful, and enjoyable, or which hold personal relevance, will be engaged in more readily outside physical education. Recent evidence has shown that youngsters' motivation for physical education relates to their engagement and activity levels during physical education (Aelterman et al, 2012) and beyond (Haerens, Kirk, Cardon, De Bourdeaudhuij, & Vansteenkiste 2010).

Because of the complex role of promoting a healthy lifestyle during PE but also throughout school, PE and classroom teachers need additional information during their teacher training and lifelong education. Aelterman et al. (2012) developed and evaluated training on Need-Supportive Teaching in Physical Education embedded in Self-Determination Theory. According to SDT, teachers who provide autonomy support, who create a well-structured environment, and who are involved and caring will promote students' valuing/enjoyment of activities. This enhances the autonomous self-regulation of behaviors and the likelihood of becoming more active (Haerens et al., 2010; Aelterman et al., 2012). Conversely, controlling, chaotic, and uninvolved teachers typically thwart students' psychological needs, further impeding students' autonomous motivation (Deci & Ryan, 2000). In addition, the "whole" school approach (Cale & Harris, 2006) emphasized the need for supporting structured/unstructured PA by providing suitable physical environments. A study among Flemish school children confirmed this, showing the physical school environment positively predicts autonomous motivation to engage in PE by satisfying their need for autonomy (Rutten, Boen, & Seghers, 2012). Having sufficient quality sports fields and sports material enables the PE teacher to provide choices, satisfying the need for autonomy.

Technology can help teachers to maximize the opportunities for children/adolescents to develop awareness and handling of their daily movement patterns/motion analysis. New ICT possibilities should only be used when this is beneficial for the school, the class, and the individual. Computer programs (like Smartschool) and the internet are useful in communication on the individual process of the pupils and have increased in use in recent years (press release, GO, 2011). Some other portions of the school curriculum are already worked out in detail on these internet platforms; PE should catch up. This can

enhance the reputation of PE and build awareness among colleagues and parents that PE is crucial in empowering young people to take care of their health in many varied and enjoyable ways. During PETE and CPD, teachers will receive the theoretical information (evidence-based practice reviewing the recent literature/research) and the practical ways to master the methodological approaches considering varied situations and target groups.

Summary

We have provided an overview of the history and the current conditions of PE and Belgian youth being educated towards physical activity and a healthy lifestyle. This is a responsibility of PE teachers and also the school staff in general, parents, and the local community. Adopting a lifelong, physically-active lifestyle means facing complex challenges such as obesity, weak fundamental motor skills, sedentary lifestyle, and low motivation to move or to practice sport. To individually reach every child, the pedagogical model for Health-Based Physical Education and a balanced use of ICT can help. These perspectives are global, reflecting worldwide successful methods, strategies, and procedures and are clearly in line with the Global Forum on Physical Education Pedagogy (GoFPEP, 2010). This was established and structured to explore ways of rethinking, reforming, and reframing health and physical education pedagogy and also PETE and CPD. The possibility of the 5-year Master program with an evidence-based PE teacher education program which offers time for practical training in teaching PE and for broader tasks at class, school, and the community level is promising.

References

- Aelterman, N., Vansteenkiste, M., Van Keer, H., Van den Berghe, L., De Meyer, J., Haerens, L. (2012). Students' objectively measured physical activity levels and engagement as a function of between-class and between-student differences in motivation toward physical education, *Journal of sport and exercise psychology*, 34 (4), 457-80.
- Barnett, L.M., van Beurden, E., Morgan, P.J., Brooks, L.O., and Beard, J.R. (2009) Childhood motor skill proficiency as a predictor of adolescent physical activity. *Journal of Adolescent Health*, 44, 252–259.
- Bodson, D. & Zintz, T. (2007). *Rapport sur les pratiques sportives des jeunes de 6 à 18 ans en Communauté française (2006-2007). Convention de recherche commanditée par le Ministre des Sports*. Louvain-la-Neuve: Université Catholique de Louvain.
- Brettschneider, W.D. & Naul, R. (2007). Obesity in Europe. Young people's physical activity and sedentary lifestyles. In W.D. Brettschneider & R. Naul (Eds.), *Obesity in Europe. Young people's physical activity and sedentary lifestyles* (pp. 7-26). Frankfurt am Main: Peter Lang.
- Cale, L. (1997). Promoting Physical Activity through the Active School. *The British Journal of Physical Education*, 28, 1, 19-21.
- Cale, L. & Harris, J. (2006). School-based physical activity interventions: effectiveness, trends, issues and implications and recommendations for practice, *Sport, Education and Society*, 11(4), 401-420.

- Cardon, G., & De Bourdeaudhuij, I. (2002). Physical education and physical activity in elementary schools in Flanders. *European Journal of Physical Education*, 7, 5-18.
- Cloes, M. (2011). Involvement of the Community in Physical Activity Promotion. Analysis of the Wallonian Context. Paper presented at the 5th Asian Pacific Conference of Exercise and Sports Science “Locating Schools in the Development of Healthy Lifestyles”, Shanghai, China. Available on <http://hdl.handle.net/2268/112367>.
- Cloes, M. (2012). La Wallonie en mouvement : vers une culture sportive et de l'activité physique ? In, M. Germain et R. Robaye (Eds.), *L'état de la Wallonie. Portrait d'un pays et de ses habitants – 2011*. (pp. 70-80). Namur: Les éditions namuroises.
- Cloes, M., Del Zotto, D., & Motter, P. (2009). What Wallonian PE teachers do to promote a lifelong active lifestyle in their students? An analysis based on critical incidents technique. In, T. Rossi, P. Hay, L. McCuaig, R. Tinning & D. Macdonald (Eds). *Proceedings of the 2008 AIESEP World Congress «Sport pedagogy research, policy and practice: International perspectives in physical education and sports coaching. North meets South, East meets West»*, Sapporo, January 21-25 {cd-rom – ID: 72}. Brisbane: HMS, University of Queensland.
- Cloes, M., Maraite, A.A., Derome, S., Van Hoye, M. & Theunissen, C. (2009). Doublement des heures d'éducation physique dans l'enseignement primaire. Analyse des aspects motivationnels, affectifs et du style de vie. 4^{ème} année. Résultats de l'année scolaire 2008-2009 et suivi depuis le début de l'expérience. Rapport final d'une recherche réalisée dans le cadre d'un contrat de service entre le Ministère des Sports de la Communauté française de Belgique et l'Université de Liège (104/2007). Liège : Département des Sciences de la motricité, Université de Liège.
- Currie, C. et al. (eds.) (2012). Social determinants of health and well-being among young people. Health Behaviour in School-aged Children (HBSC) study: international report from the 2009/2010 survey. Copenhagen, WHO Regional Office for Europe, Health Policy for Children and Adolescents, No. 6.
- De Fré, B., De Martelaer, K., Philippaerts, R., Scheerder, J., & Lefevre, J. (2011). Sportparticipatie en fysieke (in)activiteit van de Vlaamse bevolking: huidige situatie en seculaire trend [Sport participation and physical (in)activity of the Flemish population: actual situation and secular trend] (2003-2009), In: Lievens J., Waeghe H. (Eds.), *Participatie in Vlaanderen. Eerste analyses van de Participatiesurvey 2009 [Participation in Flanders. First analysis of the participation survey]* (pp.25-42). Leuven / Den Haag: Acco.
- De Knop, P., Theeboom, M., Huts, K., De Martelaer, K., & Cloes, M. (2005). The state of school Physical Education in Belgium. In U. Pühse & M. Gerber (Ed.), *International Comparison of Physical Education. Concepts, Problems, Prospects* (104-131). Aachen: Meyer and Meyer Sport,.
- De Martelaer, K. (2000). Ontwikkelingen in de LO in Vlaanderen [Developments in PE in Flanders]. In, P. De Knop (Red.), *Veertig jaar sport- en vrijetijdsbeleid in Vlaanderen. Een terugblik op de loopbaan van Livin Bollaert [Fourty years of sport and leisure policy in Flanders. A look back at the career of Livin Bollaert]* (pp.105-128). Brussel: VUB Press.
- De Martelaer, K. & Theeboom, M. (2006). Physical education and youth sport, Edition: In D. Kirk, D. Macdonald & M. O'Sullivan (Eds.). *The handbook of physical*

- education* (pp: 652 – 664). London: Sage Publications.
- Deci E.L., & Ryan R.M. (2000). The "what" and "why" of goal pursuits: Human needs and the selfdetermination of behavior. *Psychological Inquiry*, 11, 227-268.
- De Medts, C. (2005). Meer Lichamelijke opvoeding op school? Het kan! Een bewegingsgezinde basisschool. [More Physical Education at school? It is possible! A motion minded primary school] *Tijdschrift voor Lichamelijke Opvoeding*, 207 (3), 4-6.
- Diegel, H. (1995). *Sport in changing society – Sociological essays*. Schorndorf: Verlag Karl Haufmann.
- Florence, J., Brunelle, J., & Carlier, G. (1998). *Enseigner l'éducation physique au secondaire. Motiver, aider à apprendre, vivre une relation éducative*. Bruxelles : De Boeck Université.
- GoFPEP 2010, Available on Internet: <http://www.globalpeforumgc.org/>
- Guillaume, M., & Counet, L. (2009). L'excès pondéral et l'obésité chez l'enfant, un défi pour la santé publique. In, *Enfant et nutrition. Guide à l'usage des professionnels* (pp.: 112-139). Bruxelles. Office de la Naissance et de l'Enfance.
- Haerens, L., Kirk, D., Cardon, G., De Bourdeaudhuij, I., (2011). Toward the Development of a Pedagogical Model for Health-Based Physical Education, *Quest*, 63(3), 321-338.
- Haerens, L., Kirk, D., Cardon, G., De Bourdeaudhuij, I., Vansteenkiste, M. (2010). Motivational profiles for secondary school physical education and its relationship to the adoption of a physically active lifestyle among university students'. *European Physical Education Review*, 16(2), 117–139.
- Hardman, K. & Marshall, J. J. (2000). The state and status of physical education in schools in international context. *European Physical Education Review* 6 (3), 203–229.
- Hardman, K. (2006). Promise or reality? Physical education in schools in Europe. *Compare: A Journal of Comparative Education* 36 (2), 163-179.
- Heyters, C. & Marique, T. (2004). Présentation de l'analyse du "Baromètre de la Condition physique" en 2004. *Clés pour la forme*, 7, 2-10.
- Heyters, C. & Marique, T. (2011). Baromètre de la condition physique des enfants de 8 à 12 ans. Edition 2011. Bruxelles: ADEPS. Retrieved from <http://www.adeps.be/pdf/BARO%202011%20complet.pdf>
- Huts, K., De Knop, P., & Theeboom, M. (2005a). The social quality of school PE in Flanders. *Sport Education and Society*, 10 (2), 257-275.
- Huts, K., De Knop, P., Theeboom, M., De Martelaer, K. (2005b) In Richter, C., Naul, R. & Uhle, R. (Eds.), *Quality evaluation of school physical education in Flanders, Qualitätssicherung im Schulsport* (pp.104 – 116). Velen: EAdS
- Huts, K., De Knop, P., Theeboom, M., Van Hoecke, J. (2008). Gebruikerskwaliteit van het vak lichamelijke opvoeding in Vlaamse secundaire scholen. [User quality of the physical education subject in Flemish secondary schools] *Tijdschrift voor Lichamelijke Opvoeding*, 4, 13 – 16.
- Institut Scientifique de la Santé Publique, & Service Public Fédéral Economie, PME, Classes moyennes & Energie (2006). Enquête de Santé par Interview Belgique 2004. IPH/EPI Reports n° 2006-034. Retrieved from <http://www.iph.fgov.be/epidemiologie/epifr/crospfr/hisfr/his04fr/his20fr.pdf>.

- Lecomte, J., Carlier, G. & Renard, J.-P. (2002). Vingt ans de stages du CUFOCEP: perception des participants. In, G. Carlier, P. Gérard, R. Obsomer & J-P Renard (Eds.), *Éducation physique & sportive. Innovations pédagogiques en formation continue* (pp 9-24). Bruxelles: De Boeck & Larcier.
- Lefevre, J. , Philippaerts, R., De Martelaer, K., & Van der Aerschot, H. (2011). *Fysieke fitheid en fysieke activiteit van de Vlaamse jeugd, 6-11 jaar, anno 2011, [Physical fitness and physical activity of the Flemish youth, 6-11 years, anno 2011]* Steunpunt Cultuur, Jeugd & Sport, Brussel: intern rapport.
- Leper R., (2012). De kwaliteit van de lichamelijke opvoeding in het secundair onderwijs. Een sterkte – zwakte analyse op basis van schooldoorlichtingen in de periode 2001-2009. [The quality of the physical education in secondary education. A SWOT analysis based on school audits in the period 2001-2009] *Tijdschrift voor Lichamelijke Opvoeding*.
- Melkevik, O., Torsheim, T., Iannotti, R. J., & Wold, B. (2010). Is spending time in screen-based sedentary behaviors associated with less physical activity: a cross national investigation. *International Journal of Behavioral Nutrition and Physical Activity*, 7 (1), 46
- Okely, A.D. & Booth, M.L. (2004). Mastery of fundamental movement skills among children in New South Wales: prevalence and sociodemographic distribution. *Journal of Science and Medicine in Sport*, 7 (3): 258–372.
- Pate, R., Davis, M. G., Robinson, T. N., Stone, E. J., McKenzie, T. L., & Young, J. C. (2006). Promoting physical activity in children and youth: A leadership role for schools: A scientific statement from the American Heart Association Council on Nutrition, Physical Activity, and Metabolism (Physical Activity Committee) in collaboration with the Councils on Cardiovascular Disease in the Young and Cardiovascular Nursing. *Circulation*, 114 (11), 1214–1224.
- Piéron, M., Cloes, M., Luts, K., Ledent, M., Pirotin, V., & Delfosse, C. (1998). Analyse de la prise en considération des caractéristiques individuelles des élèves dans les décisions et les comportements d'enseignants experts et débutants. Rapport final (enseignement primaire et secondaire) d'une recherche réalisée dans le cadre d'une convention passée entre la Communauté française de Belgique et l'Université de Liège (157/96). Liège : Service de Pédagogie des Activités physiques et sportives, Université de Liège. Also available on Internet : http://www.enseignement.be/index.php?page=26044&id_fiche=1095&dummy=24877.
- Press release GO (2011). Available on Internet: http://www.go.be/sites/portaal_nieuw/subsites/Communicatie/Perscommunicatie/Documents/20110831%20GO!%20en%20Smartschool%20bijlage.pdf
- Roelants, M., Hauspie, R., & Hoppenbrouwers, K. (2009). References for growth and pubertal development from birth to 21 years in Flanders, Belgium. *Annals of Human Biology*, 36, 680-694.
- Rutten, C., Boen, F., & Seghers, J. (2012). How School Social and Physical Environments Relate to Autonomous Motivation in Physical Education: the Mediating Role of Need Satisfaction. *Journal of Teaching in Physical Education*, 31(3), 216-230.

- Scheerder, J., Taks, M., Vanreusel, B., & Renson, R. (2005). Social changes in youth sports participation styles 1969-1999: The case of Flanders (Belgium). *Sport Education and Society*, 10, 321-341.
- Seghers, J., De Martelaer, K., & Cardon, G. (2009). Young people's health as a challenge for physical education in schools in the 21st century: the case of Flanders (Belgium). *Physical Education and Sport Pedagogy*, 14 (4), 407-420.
- Strong, W.B., Malina, R.M., Blimkie, C.J., Daniels, S.R., Dishman, R.K., Gutin, B., Hergenroeder, A.C., Must, A., Nixon, P.A., Pivarnik, J.M., Rowland, T., Trost, S. & Trudeau, F. (2005). Evidence based physical activity for school-age youth. *Journal of Pediatrics*. 146, (6), 732-737.
- Van Acker, R., De Bourdeaudhuij, I., De Martelaer, K., Seghers, J., Kirk, D., Haerens, L., De Cocker, K., & Cardon, G. (2011). A framework for Physical Activity programs within School-Community partnerships. *Quest*, 63, 300-320.
- Vandaele, B., Cools, W., De Decker, S., & De Martelaer, K. (2011). Mastery of fundamental movement skills among 6-year-old Flemish pre-school children, *European Physical Education Review*, 17 (1), DOI 10.1177/1356336X11402268
- Van Hoye, A., Motter, P., & Cloes, M. (2009). A comparison of the physical activity promotion strategies adopted by selected secondary schools in three European regions. In, T. Rossi, P., Hay, L., McCuaig, R. Tinning & D. Macdonald (Eds.), *Proceedings of the 2008 AIESEP World Congress «Sport pedagogy research, policy and practice: International perspectives in physical education and sports coaching. North meets South, East meets West»*, Sapporo, January 21-25 {cd-rom – ID: 185}. Brisbane: HMS, University of Queensland.
- Verloigne, M., Van Lippevelde, W., Maes, L., Yıldırım, M., Chinapaw, M., Manios, Y., Androutsos, O., Kovács, E., Bringolf-Isler, B., Brug, J. & De Bourdeaudhuij, I. (2012). Levels of physical activity and sedentary time among 10- to 12-year-old boys and girls across 5 European countries using accelerometers: an observational study within the ENERGY-project. *International Journal of Behavioral Nutrition and Physical Activity*, 9:34, Retrieved from <http://www.ijbnpa.org/content/9/1/34>
- WHO-ENHIS (2009). Prevalence of overweight and obesity in childhood and adolescence, fact sheet 2.3, dec 2009, RPG2_Hous_E2

http://www.belgium.be/en/about_belgium/