Movement, Play and Sports as Prevention and Health Promotion in Childhood and Adolescence

**Abstract:** The disappearance of free natural spaces for movement, and the growing use of media and technology lead to a loss of spatial, social and direct physical-aesthetic experiences. Consequences for children and young people are often expressed as weaknesses in coordination and physical posture, obesity, perception and cognitive impairment, antisocial and aggressive behavior, reduced physical strength, addiction problems as well as mental and psychosomatic damages. The question is how to help children and adolescents develop a strong, stable and resilient personality that can deal with conscious problems and critical events. Furthermore, how, in a world full of dangers, one can support children and young people to enhance their health and develop a positive personality and how movement, play and sport can contribute to this. The method adopted for the study was a review of the bibliography. In the context of this study, the possibilities of movement, play and sport are identified to prevent developmental disorders of children and adolescents due to drug use, physical illness, psychosomatic disorders, and psychosocial disorders. In conclusion, offers, in terms of movement, play and sports, should be organized in such a way that children and young people experience success. To this end, it is necessary for the teaching and learning method to be individualized and diversified, to offer simplifications and to present achievable accessible goals.

**Keywords:** Movement, Play, Sport, Prevention, Health Prevention, Childhood

# Introduction

For a harmonious, uninterrupted development, many and multi-faceted requirements are necessary, i.e. a large quantity of quality experience perceptions and kinetic experiences that require contradiction with the body and with the material and personal environment, and lead to testing and expanding skills (Dordel, 2003).

In order for children and young people to develop a positive perception of the ego, one has to offer them opportunities and situations in which they can become active. The pedagogical task is to allow children and young people to act on their own accord and equip themselves with useful skills. A child can learn independence, determination and behavioral planning if he/she is given enough leeway for action (Zimmer, 2001a). This can be achieved by the provision of play material, devices and kinetic situations which require children to become active. By creating free spaces, in which children can exercise and experiment freely and

independently, they are given the opportunity to deal on their own with learning how to discover and solve problems, act on standards and learn from their mistakes. The concept of this movement construction-site is to provide children with the possibility of a wide range of motor and perception experiences as well as movement situations (Miedzinski, 2000).

The idea is based on independent building of movement sites, which already requires children to solve problems. It will give children the opportunity to shape their own environment, actively deal with things and experience more about their bodies. With joint planning, building and experimentation, as well as experiencing the success of building projects, not only social skills (mutual assistance, agreements) are strengthened, but children also learn to trust themselves and move with confidence. It can also motivate children to undertake new challenges and motivate them to cope with their fears. They learn on one hand to overcome their fears and have trust in something, but on the other hand also to admit and accept their fear, as well as to realistically appreciate the dangers. By promoting realistic self-estimation and realistic risk assessment, they can learn to take responsibility for themselves and others. Of particular importance is the behavior of the trainer. The trainer should support children, take care of their safety and prevent accidents (Boes *et al.,* 2002).

Such motor experiences make it clear to children and young people whether they can affect the environment and how they can bring about changes. They offer them the opportunity to get to know themselves and get an impression of their abilities. By offering play, sport and movement situations, in which children and young people with their own actions can bring about changes in their physical environment, activism and independence, are promoted. It is important to gain consciousness that the cause of a successful job or exercise is their own effort, thus enhancing their self-consciousness (Bund, 2001).

However, except the opportunities that the various motor activities have to offer, one has also to consider the dangers they might involve. By comparing with other children/ young people who may be running or are able to run faster, may be jumping or are able to jump higher, there is a risk that children will perceive their weaknesses and feel inferior. It is therefore important to focus on the individual abilities of children and young people and to impart to them the experience of success. By becoming aware of their strengths and talents, the confidence in their abilities can be strengthened. Of course, one has to appreciate the value of the children or the adolescents regardless of their performance and to show them they are acceptable (Zimmer, 2000).

The experience of being able to achieve success because of their own talent, rather than the fact that it has been achieved with the help of an adult, has a positive effect on children’s or adolescents’ self-consciousness, self-confidence, and the expectations of children and young people. This has a positive effect on the perception of the cognitive course. Learning performance is documented as internal, as learning time increases and emotions such as fear, overwork or insecurity are replaced with a sense of certainty. Thus requirements are probably considered challenges. Particularly in younger children, positive motor experiences can contribute to a realistic image of the ego that guarantees good performance. From the consequences of their behavior, they can learn to make specific decisions (choose a lower degree of difficulty or exercise intensively to overcome existing weaknesses) (Zimmer and Hunger, 2004).

Having trust in the available environment 'that can be dominated' and given the trust of their social environment (parents, educators, teachers, other children) in their abilities and talents,

children can develop trust in themselves and their self-confidence. Movement promotion can support this process, taking equally into account both sides - improving efficiency and, above all, the different perception that children have for themselves (Zimmer, 2001).

# Methodology

The present research is a bibliographic review study, presenting the critical points of the existing knowledge on the prevention and promotion of health in childhood and adolescence. The main aim of the bibliographic review is to frame the study within the "body" of the relevant literature. The review of the current study concerns clearly formulated questions and uses systematic and explicit criteria for critically analyzing a body of published papers by summarizing, sorting, grouping and comparing.

# Holistic promotion of movement

Subsequently we will examine the parameters that have been presented in life skills development programs and we will consider whether they can be promoted through movement, play, and sport. We aim at a holistic promotion of movement (motor/physical, mental/emotional, cognitive and social goals), the purpose of which is to build and stabilize the personality of children and young people (Jerusalem, 2003).

The motor/physical level concerns the promotion of physical and motor efficiency, so that it contributes to an improved mental state and quality of life. In the psychological/emotional field, importance is given to, e.g. anxiety management and how to overcome it. Here, a role of paramount importance plays the awareness for body reactions, through the promotion of a different body perception and support, and through learning how to relax with relaxation techniques. We must also examine the correlation from which the anxiety originates. Does it grow, e.g., when children or young people face a situation they believe they cannot cope with. Thus, we reach the cognitive level, which refers to the promotion of a realistic self- esteem, transferring different forms of burden. Also, developing the awareness of the individual's ability to withstand burdens, as well as the psychological-physical burdens, plays a part in contributing so that one takes responsibility for oneself. Implementation at social level involves the promotion of social skills such as communication skills, acceptance of one’s own weaknesses as well as other people’s weaknesses, respect, tolerance, willingness to help, confront one’s own emotions and the feelings of others, and a sense of responsibility (Dordel, 2003).

# Motor/physical level

The motor-physical level is mainly about the promotion of basic motor skills such as coordination, strength, endurance, speed and flexibility. Through the concentration of different motor and physical experiences, children and young people learn how to use their body, which makes it easier for them to try movements without anxiety. With the experience of their motor skills, their knowledge of their performance limits and the goal for healthy performance, they can gain confidence in dealing with the body and various motor conditions (Naschwitz-Moritz, 2000).

Particularly by strengthening coordination and endurance, success can be achieved in a relatively short period of time, which can help build self-awareness. Insecurities in movement coordination can mentally and emotionally burden a child, which makes coordination so important, and always involves reinforcement of perception, to prevent and enhance health. In coordination training, which aims at acquiring, improving and stabilizing motor skills with intensive and multifaceted exercise, it is possible to make rapid progress and thus to

experience success. While assigning exercises, besides the development and performance level of children and young people, it is also necessary to take into account possible fears that may exist, low self-confidence or insecure behaviour, and with resistance training, the performance of children and young people who have not trained in the past can be increased after a relatively short period of time and with little workout. They achieve a quick and noticeable success, which can motivate them for regular training. In order to ensure the level of performance, in terms of endurance, a certain degree of effort must be made regularly. In order to achieve long-term motivation for endurance training it is important to develop and maintain the pleasure of fast and slow running. Furthermore, to set preventative goals in childhood and adolescence, it is important while training for endurance to emphasize on duration instead of tension (Woll and Boes, 2001).

The comparison of performance must be downgraded in the training. Children and young people need to be strengthened to their individual level and see that they achieve progress. It is important to be aware of these changes and to learn that they derive from their own efforts, so as to strengthen their self-consciousness and trust in themselves (Beins, 2007).

# Mental / emotional level

To promote one’s own positive perception of the ego and a better stress and anxiety management, it is important to reinforce one’s own perception of the body, and the knowledge and learning of relaxation techniques. These serve to develop the capacity for psychological and physical self-regulation and they also help to gain awareness of psychological and physical burdens. Developing one's own perception of the body and physical experience is an important goal for promoting one’s own health with movement, play and sport. Among other things, it is a prerequisite for the perception of body alert signals, psychological-physical burdens, personal fatigue, a realistic self-esteem, and the enjoyment of, for example, relaxing situations. With a different perception of the body, the capacity for conscious relaxation can be acquired in one’s own burdening attitudes (Dordel, 2003).

To reinforce one’s own perception of the body, one has to take into account the physiological, cognitive and emotional/psychosocial aspects. The physiological aspects relate to tactile-kinesthetic and acoustic perception, as well as to parts of one’s own visual perception. On a cognitive level, the human body's knowledge of its profile, its structure, its extension, its own proportions, its own functions and movement abilities must be acquired through energetic action. From the emotional/psychological-social aspect, it is most important to experience gratification and have a favorable image of the body, in order to support the development of a positive ego image.

It is about testing body's motor abilities, about the orientation in one’s body, the knowledge of body’s stretching and the awareness of muscle tone. Feeling one’s own muscular tension is an important condition for an appropriate amount of stimuli, in terms of material or opposing players, which plays an important role in violence prevention programs. In achieving awareness, in terms of body perception, it can be helpful, e.g., to feel and experience contrasts (alternating tension-relaxation, fatigue and rest) and the multi-faceted treatment of different forms of movement. At this point, more attention should be paid to orientation, experience and process than to the pursuit of perfection (Dordel, 2003).

In exercises for the perception of the body, the main goals are one’s own body experience, the acceptance of one’s own body image and the improvement of one’s dominance over the

body. To help raise the perception of one’s own ego and that of others, and contribute to an improved introspection/self-esteem as well as expand the abilities for physical and emotional regulation and expression, it is recommended to complete non-verbal physical work with accompanying or subsequent expression of the experience through words and to give adequate time and quietness for the evaluation of subsequent feelings (Remschmidt, 2000).

The different perception of the body on the one hand is a prerequisite for learning the ability to relax, on the other hand the relaxation techniques, e.g. successive muscle relaxation, give a chance to have more physical experiences and to forsake the rejection attitudes of the body. Exercises and relaxation techniques serve the psychological and physical regulation (optimization of activity level, stress degradation, creation of internal balance) and building the confidence of the individual in himself/herself and in his/her body (Dordel, 2003).

For children and young people, it is important to experience, what is intensity and relaxation and how they can achieve it themselves consciously. The more a child/adult develops the sense of his/her own body, the more he/she can experience and use consciously the intensity and relaxation of the muscles (Beins, 2007).

Learning relaxation techniques can improve self-regulation capability in critical anxiety situations. A lot of particular behaviors are the result of constant overload and therefore it is difficult for children and young people to find resting points. If they succeed in applying the relaxation techniques they have learned in stressful situations, this can lead to an increased learning ability and efficiency (Dordel, 2003).

# Cognitive level

The cognitive level refers to the promotion of a realistic self-esteem, the teaching of an appropriate level of requirements and the increase of tolerance to frustration. In order to teach children and young people to better evaluate themselves, to put realistic demands on themselves and thus to avoid unnecessary experiences of failure, one has to change the tasks assigned to them and leave them free to choose the degree of difficulty of the task. However, one needs to support an appropriate level of demands and not ask for too much or too little. This requires the precise knowledge and appreciation of the abilities of children and young people. Determining the individual level of demands from the abilities of children and young people can positively influence the perception of the ego. It is important that children and young people become aware of their strengths and weaknesses. They have to express their individual goals, follow them and achieve them through realistic, immediate and intermediate goals, in order to reinforce their self-consciousness. However, one has to impute the encouraging failures to children and young people and also accept them. They have to experience the fact that failures are a part of life, and it doesn’t mean that the world has come to an end because they have failed. Instead, one has to turn their attention to their individual progress in terms of their performance (Dordel, 2003).

Various forms of burden must also be transferred in order to develop the sense of individual burden capability as well as for psychological-physical burdens. This can contribute to taking responsibility for oneself. It includes, among other things, the awareness of one’s own body reactions (perception of muscle tone change during stretching exercises), the perception of warm up, exhaustion and relaxation, and the manifestation of effort through pulse and breathing (Paletta, 2001).

# Social level

Implementation at a social level involves strengthening social skills such as communicative and interactive skills, accepting one’s own weaknesses and those of others, respect, compassion, tolerance, willingness to help, addressing one’s own emotions and the emotions of the other members of the team, and finally the sense of responsibility. They also need to learn cooperation skills, how to address rules and conflict, and role-taking skills (DORDEL, 2003).

Five key points for the promotion of these parameters are presented below in more detail:

# Understanding and managing rules

This is about learning how to obey, understand, describe, change or devise rules. Flexible management of rules can be reinforced by the need to change a known game, with regard to some basic rules or the setting up of teams (managing, testing, changing rules and adjusting to rules). For this purpose, it is important to teach a proper communication behavior such as letting others talk, give the floor to someone, speak clearly, and be able to listen (Dordel, 2003).

# Assuming and shaping roles

The ability to put oneself in the place of another, to see things from another person’s point of view, can help to better understand others or oneself. By taking different places and roles (writer, viewer, player, teammate, referee, attacker, defender, winner and loser) children and young people can learn to take up different perspectives, as well as to perceive the feelings and expectations of another person. To avoid adherence to rigid roles, they need to be frequently alternated, as this leads to gain experiences with different positions of action and therefore greater social skills. Also, by taking up positive roles and tasks, that strengthen and support social recognition as well as capabilities and talents, a positive contribution to the perception of the ego is achieved.

This also means that something has to be done when weaknesses, failure or a negative image of the ego lead children and young people to take on constantly small or unattractive roles, or enter into these roles, which can lead to stigmatization (Dordel, 2003).

# Avoiding and addressing conflict

Although the ability to avoid conflict is considered to be a major social skill, conflicts within the groups cannot be avoided altogether. They necessarily result from different interests, different desires and needs, in situations of competition. That is why children and young people need to learn how to deal with conflicts. This involves the ability to express and impose their desires without harming others and also to perceive, listen and respect the wishes and needs of the other members of the group. These qualities are important prerequisites for developing common solutions, compromising and co-operating. This can be reinforced in the form of a game by organizing and implementing joint activities. That is why an atmosphere of mutual appreciation and recognition is essential, in which all have the opportunity to describe how they see things and to express their point of view. In a pleasant social climate, it is easier to deal effectively with failure and success, victory and defeat. By learning how to deal with conflicts properly and enhancing emotional stability, children and young people can learn that failures belong to life, without this having negative consequences on their ego perception. Developing the capacity to address and manage conflict is of paramount importance, among other things, also in the context of programs for violence prevention. It contributes to degrade anxiety and the insecurity regarding actions and therefore reduces the tendency for violent behavior (Korn and Muecke, 2000).

Problem solving skills can be taught by assigning open tasks that are becoming increasingly sophisticated in play and motion situations. These require joint programming and controlled action, and promote the ability to develop strategies to solve the problems that arise (Dordel, 2003).

# Dealing with emotions

Knowing how to handle conflicts and expressing one’s point of view is also related to how one treats one’s feelings and the feelings of others. It's not just the experience of feelings like joy, anger, pride, fear, feeling good or bad, but rather also to perceive when one hurts the feelings of others. It is important to teach children and young people to integrate into a group, approach each other, creatively and peacefully resolve conflicts, and develop and maintain good relationships with others. The harmonious atmosphere cannot always be guaranteed. For this reason it is important to consciously and deliberately deal with emotions such as anger and aggression. Children and young people must learn to disagree and impose their opinions and interests without harming or hurting others. Pedagogical support is essential for this purpose. It is important to create a positive mood and an atmosphere in which everyone feels good. Children and young people have to be handled with care and their needs should be taken into consideration. The school principal has to be careful so that everyone can contribute to this mood by his/her behavior. It is important that they are not humiliated and thus their ego image will not be hurt. In order for children and young people to understand the feelings of others, they must learn to realize their own feelings, to allow their manifestation and to express them clearly and without misunderstanding. Games can offer children and young people the opportunity to live their feelings and needs, to act in a self-defining way and to experience without stress the effects of their actions. They can test different behaviors, create multifaceted relationships among team members, and gather experiences with themselves and others (Dordel, 2003).

# Recognizing and taking into account differences

Most of the time, teams consist of heterogeneous members. The perception and acceptance of individual differences and the development of mutual understanding are not only important prerequisites for a positive and pleasant atmosphere within a (sports) group, but also for everyday life outside this group. In order to develop mutual understanding and the integration of all members to the same extent into the group, such games and tasks must be selected in which cooperation is of primary importance and their solution requires the participation of all and, moreover, with mutual respect. This requires great sensitivity for the capabilities and behaviors of children and young people and their appreciation by the team leader (Dordel, 2003). To sum up, we find out that promotion, at the various levels that should not be considered as independent, helps to reinforce the perception of the ego. This is achieved by increasing self-awareness, promoting positive self-esteem, perceiving one’s own efficiency and powers, degrading the orientation towards failure, building optimism in terms of performance, enhancing resilience to frustration, the acceptance of one’s own weaknesses, the increased willingness to try, the stimulation of motivation for exercise, the experience of respect and recognition within the group and the facilitation of integration through the promotion of social skills (Korn and Muecke, 2000). The personality and behavior of the trainer is of great importance.

# Importance for physical education

In addition to the professional skills that a group trainer must have, his/her behavior and personal qualities also play a role. A trainer should show personal interest in children and young people, be able to understand their point of view, treat them with humor, friendliness

and patience, and have a consistent behavior. Furthermore, it is very important to achieve a relaxing and pleasant atmosphere in which everyone can feel comfortable and which is characterized by mutual acceptance and understanding. The trainer should organize the motor activities, play and sport, in such a way that children and young people would experience success. To this end, teaching and learning should be individualized and diversified, offer simplifications and present achievable accessible goals. In order for children and young people to live up to their potential and to strengthen their own ego perception, they should be assigned, at first, tasks that they can certainly carry out. Having at their disposal the possibility to freely choose the tasks’ degree of difficulty, their individual goals and being aware of their own powers, children and young people can be motivated and consequently achieve a realistic self-assessment, something that protects them from the experience of frustration. But they also need to be able to accept their weaknesses and include in their plans, as well as accepting, possible failures (Bund, 2001).

It is important, despite their weaknesses, to be able to build a positive perception of themselves and perfect their own strengths. An important role here plays the positive evaluation by the trainer and the other children/young people. It encourages the individual to trust himself/herself more and thus enhances self-consciousness. A team trainer must create an atmosphere of mutual respect, acceptance and support, and to promote communication among the team members and an understanding of each other. The personal characteristics and behavior of the trainer have a decisive impact on the atmosphere and social coexistence in a group. They define the value of performance, they are responsible for the social integration of the members of the group and can teach values and standards that go beyond sports.

For children and young people, the trainer is often not only a sports expert, but a counselor in difficult situations of life. So, trainers, every hour of exercise, have to deal with specific views, interests and problems of their protégée, and for this reason they are often very close to them. Children and young people confide in them their problems and consider them a role model, regardless of whether they are pursuing it or not. Especially for the younger ones, the behavior of the trainer is important for many daily issues. This function as a model plays a role, for example, in terms of consistency and credibility, as well as health behavior such as smoking and nutrition. The trainer can gain more credibility if he/she is willing to confess and admit his/her own weaknesses and mistakes. Another important aspect, with regard to the behavior of the trainers, is their signs, gestures and body attitude (visual contact, attitude towards the team and physical contact). Besides the possibility of supportive action beyond these aspects, it is crucial how a trainer gives individual instructions, corrections or praises. The formulation and shaping of a performance report play an important role. A person's confidence in his/her efficiency can be built or go to pieces from these reports.

It is simpler to persuade children and young people of a certain disability rather than to convince them that they have the ability to perform certain tasks (Dordel, 2003).

It is more difficult to instill enduringly high beliefs of personal efficacy by precursory means alone than it is to undermine such beliefs» (Bandura, 1997, 104).

It is therefore important to reinforce successful training endeavour and performance reports should be credible, deliberate and realistic. Very frequent and mechanical praise becomes unreliable. By direct and unambiguous report of success, confidence in the person's abilities can be increased and the conviction of internal control can be built. These skills experiences

are of great value to children and young people, because sports performance and skills are recognized by both peers and adults. With the experience of control and the sense of agency, the willingness to strive for other requirements, that is to say, for areas outside sports of everyday life, can be increased. This is more likely, the more one experiences success over a certain period of time. Other transferable effects may also occur when a person is taught strategies to deal with anxiety (before a game), which can be transferred to other areas such as family and school. In addition to transmitting success stories and boosting confidence in one’s own physical performance, it is important that children and young people experience the expected and desirable effects of movement and exercise on their own body. With the planned inducement of positive mental effects (e.g. this is fun, I feel good, I got rid of stress), they get the feeling that they can affect their own emotional state.

If someone often feels good while doing sports, this can contribute to a positive basic mood, which can be generalized in other areas of everyday life. But this depends on how regular the athletic activity is, one’s motivation for exercising, the satisfaction one derives, the experience of success when one exercises, and the aforementioned aspects of the trainer's behavior (Bund, 2001).

# Conclusions

The conditions of life under which children and adolescents are growing today have changed a lot in the recent decades. Children and teenagers have to face multifaceted mental and social burdens. In addition to ecological problems and risk factors such as genetic predisposition, unhealthy living conditions and conditions such as lack of movement, overuse of the media for enjoyment, excessive stress and wrong diet are worth mentioning in this regard. Moreover there is also the risk of a negative impact on development due to the multitude of stimuli coming from the media, and the reduction of physical opportunities for movement. With motor activities, children and young people can acquire important experiences in relation to their body and their health. Movement, play and sport can offer a psychologically relaxing compensation to school daily routines and they can be organized in such a manner so as to "boost" personal mood, which in turn can contribute to maintaining health and well-being. The experience of physical fitness can positively influence the idea that one has for his/her body and for himself/herself, which has a positive effect on personality development.

The possibilities for movement, play and sport, as regards the prevention and promotion of health, consist, among other things, in promoting activities for children and adolescents, transferring the sense of control and providing the possibility for acquiring positive emotions.

**References**

1. Bandura, A. 1997. Self-Efficacy. The exercise of control. New York.
2. Beins, H.J. 2007. Kinder lernen in Bewegung. Dortmund: Borgmann.
3. Beins, H.J. and Cox, S. 2001. Die spielen ja nur? Psychomotorik in der Kindergartenpraxis. Dortmund: Borgmann.
4. Boes, K., Opper, E. and Woll, A. 2002. Fitness in der Grundschule. Foerderung von koerperlich-sportlicher Aktivitaet, Haltung und Fitness zum Zwecke der Gesundheitsfoerderung und Unfallverhuetung–Endbericht. Wiesbaden.
5. Bund, A. 2001. Selbstvertrauen und Bewegungslernen. Studien zur Bedeutung selbstbezogener Kognitionen für das Erlernen (sport-) motorischer Fertigkeiten. Schorndorf.
6. Dodrel, S. 2003. Bewegungsfoerderung in der Schule. 4. Auflage. Dortmund.
7. Jerusalem, M. 2003. Praevention in Schulen. In: Jerusalem, M. And Weber, H., Psychologische Gesundheitsfoerderung, Goettingen, 461-477 pp.
8. Korn, J. and Muecke, T. 2000. Gewalt im Griff. Bd. 2: Deeskalations-und Mediationstraining. Weinheim and Basel.
9. Miedzinski, K. 2000. Die Bewegungsbaustelle. 9. Auflage, Dortmund.
10. Naschwitz-Moritz, R. 2000. Praxisanregungen. In: Naschwitz-Moritz, R. (Hrsg.): Die psychomotorische Idee, Aachen, 138-271 pp.
11. Paletta, A. 2001. Gesundheitsfoerderung durch Sport und Bewegung bei Jugendlichen. Butzbach.
12. Remschmidt, H. 2000. Entspannungsverfahren. In: Remschmidt, H. (Hrsg.): Kinder-und Jugendpsychiatrie. 3. Auflage, Stuttgart, 361-365 pp.
13. Woll, A. and Boes, K. 2001. Gesundheitserziehung. In: Haag, H. and Hummel, A. (Hrsg.): Handbuch Sportpaedagogik. Schorndorf, 294–306 pp.
14. Zimmer, R. 2000. Handbuch der Psychomotorik. 2. Auflage. Freiburg im Breisgau.
15. Zimmer, R. 2001. Identitaet und Selbstkonzept. Zur Bedeutung von Bewegungserfahrungen für die Persoenlichkeitsentwicklung. In: Zimmer, R. and Hunger,

I. (Hrsg.): Kindheit in Bewegung, Schorndorf, 13-23 pp.

1. Zimmer, R. 2001a. Handbuch der Bewegungserziehung. 11. Auflage. Freiburg im Breisgau.
2. Zimmer, R. and Hunger, I. (Hrsg.) 2004. Wahrnehmen–Bewegen–Lernen. Kindheit in Bewegung. Schorndorf.