

Sport and Health

- Review of German-speaking publications in 2006 and 2007

The review comprises German monographs and anthologies as well as articles published in professional journals between 2006 and 2007. This review ties in with the reviews published in the 'International Journal of Physical Education' issue 2/2000, issue 2/2002, issue 2/2004 and issue 2/2006 about sport and health¹.

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1 Introduction: Basics

'Sport and health' has become an established topic at conventions centering around the Sport Sciences, with particular regard to the annual conventions organized by the 'Health Committee' of the German Union for Sport Sciences (dvs)². This committee sets the scientific standards for German speaking Sport Sciences and represents the continuity as well as variety in the development of this area of research. Within the time period of this review, the topic "Rehabilitation: Between movement therapy and disabled sport" was discussed within the scope of the 2006 Convention which took place at the Universität Kassel.³ The dvs-Health Committee's 2007 Convention was incorporated into the dvs 'openhouse' at the Universität Hamburg. A review of the abstracts from the conference (Backhaus, Borkenhagen & Funke-Wienecke, 2007) reveals that 14 of 63 working groups explicitly had health based topics and more than a quarter of the 200 articles exhibit a thematic reference to 'sport and health'. Therefore, 'sport and health' proves itself to be a central theme across the various disciplines of the Sport Sciences. The dvs-Health Committee invited Ulla Walter from the Medical College of Hannover to present as the Key-Note speaker at the conference. Her presentation on "Movement as a field of action in health promotion – Requirements for research and practise from the Public Health perspective" integrated the perspective of the Health Sciences. The dvs Health Committee's panel discussion on the topic "Social disadvantages – a topic for movement related health promotion" served also as the closure of the Congress of the German Society of Sport Science. The dvs-sections Biomechanics, Motor Learning and Exercise Sciences also included the topic 'prevention and rehabilitation' in their combined 2006 Symposium in Bad Sassendorf. The symposium's Proceedings from Freiwald, Jöllenbeck & Olivier (2007) document the variety of articles written on sport and health from the point of view of both movement and exercise scientists. Furthermore, the area 'psychomotor therapy' took on the topic of health: with the anthology "Movement in education and health" the authors Fischer, Knab & Behrens (2006) provide insight into 50 years of psychomotor therapy in Germany.

The strong transition that the field 'sport and health' has undergone is represented by the second edition of the handbook "Healthsport" from Bös & Brehm, which was published in 2006. Only 8 years after the first edition (1998), the handbook had to be fully revised, with newly constructed contents: The chapter on "Organizations and Institutions" was taken apart and built into a new chapter with new objectives called "Interventions and Quality

¹ The following professional journals were looked through systematically: 'Sportwissenschaft', 'Sportunterricht', 'Spectrum der Sportwissenschaften', 'Deutsche Zeitschrift für Sportmedizin', 'Psychologie und Sport', 'Sportpädagogik', 'Motorik', 'Prävention', 'Praxis der Psychomotorik' sowie 'Gesundheitssport und Sporttherapie'.

² See also www.dvs-gesundheit.de

³ The outcomes from the convention will be published by Wegner, Pochstein & Pfeifer 2008.

Management”. Fourteen of the thirty-three articles (in the first edition there were 39 articles altogether) are entirely new and the remaining articles (often under new authorship) were revised and updated. The bridging to psychology is also worth mentioning, with articles from Becker (2006) on “Health and Health Models” as well from Fuchs (2006) concerning “Change of Behaviour Models”. New thematical topics include articles from Krüger (2006) on historical aspects, from Tiemann & Wanek (2006) on legal principles, from Fessler (2006) on relaxation or from Wydra (2006a) on flexibility. The impressive and extensive rearrangement of the handbooks’s contents justifies the need for a second edition after such a short amount of time, however, structural mistakes and carelessness that occurred during the final editing process of the handbook make for a less enjoyable scientific read– this is even more regrettable considering the amount of effort invested by the editors and authors for this second edition.

The publication from Schlicht & Brand (2007) on physical activity, sport and health calls for the implementation of an interdisciplinary approach. Based on the current statistics regarding physical activity (or better said – inactivity), various possibilities of taking control of one’s lifestyle are being discussed based on ‘Change Behaviour Models’ and the implementation of intervention strategies through appropriate movement and sport programs. This article communicates scientific-methodical fundamentals of sport and health from the perspective of both the Sport Sciences as well as the Health Sciences.

The anthology from Fuchs, Göhner & Seelig (2007) is dedicated to exploring the question of how to promote physically active lifestyles. The authors provide an excellent overview on the theory, research position and practise in health related physical activity within the Sport Sciences, Psychology and the Health Sciences. Aspects such as physical activity as an ‘everyday habit’ (Fuchs, 2007), the effects on health parameters (Hänsel, 2007), as well the proof of intervention programs (Höner, 2007) are introduced and various approaches that describe a physically active lifestyle are discussed. Furthermore, intervention programs for building up and/or stabilizing a physically active lifestyle in different settings are presented. The authors also introduce, in detail, several kinds of intervention approaches. The articles of the anthology impress readers with the scientific-methodological quality and also enable readers to get a general idea of the current stand regarding this central health-related topic. With the example of a group program directed towards physical activity and healthy nutrition, Göhner & Fuchs (2007) demonstrate how such programs can concretely influence health behaviour. Curriculum and detailed didactical work material for these programs, such as a movement and nutrition book, slides and poster and flipchart guidelines (also additionally enclosed as CD) that have been practically tested, are provided for implementation in the field. With these materials - and in combination with the author’s specially created homepage - the authors meet the requirements of a ‘Field help for group leaders’ in its entirety.

In connection with the question of a theory-based description of a physically active lifestyle, the journal article from Lippke & Wiedemann (2007) on social-cognitive theories and models for the description and the transition of movement and sport should be mentioned. This article complements the journal articles from Scholz, Schüz & Ziegelmann (2007) on motivation and physical activity, Sniehotta et al. (2007) on volitional behavioural control and Lippke & Kalusche (2007) on phase models of physical activity. Lippke & Wiedemann (2007) briefly describe central model approaches, discuss the corresponding current results concerning the evidence base and from this, draw out recommendations for designing resource efficient methods for movement and sport promotion which take individual-specific aspects into consideration.

Kleinert, Golenia & Lobinger (2006) formulate the meaning of emotional processes in the area of planning and following through with health related actions. Based on a classification of terms, the authors analyse the significance of emotional processes in predominantly cognitive directed Health Behaviour Models. They introduce their view on the role of emotions during the planning and follow through of a health initiative. This view leads to the development of an own stucture model that classifies emotional processes in the regulation of health initiatives. Aside from the enhancing effects, the authors also address the emotional processes that have hindering effects on health initiatives.

The publications that have been discussed up to this point contain basic developmental trends in the field of ‘sport and health.’ The following discusses the articles published within the time frame of this review that report on the effects on health, and the evidence base regarding these claims(chapter 2), as well as diagnostics, parameters and characteristics of health sport

(chapter 3). Discussions concerning various specific populations is focused on exercise with children and youth (chapter 4), as well as with adults and seniors (chapter 5). To close, the future perspectives for scientific research are briefly outlined.

2 Effects of health sport: The question of the evidence base

The starting point for the conception of health based sport programs is the relevance of activity as an important element of lifestyle. In the past years, epidemiological data has been provided time and again as the base of prevalence of physical activity within the population. For the time frame of this report, the article from Becker, Klein & Schneider (2006) should be mentioned, which presents data from a sportmedical perspective on the degree to which the German population takes part in physical activity. The data comprise a time frame from 1992 until 2001 and stem from the 'Social-economic Panel' that has been carried out for years by the 'German Institute for Business Research'. According to this data, the prevalence of physical activity (defined as being physically active 'at least one time a week') within the German population has increased from approximately 25% in 1992 to 30% in 2001, however, the majority of the population can still be classified as inactive (45% in 2001 as compared to 51 % in 1992). Including the social-structure data from 2003, the authors observed a lower sport participation rate that still exists in the lower social classes. They conclude: "...that, those taking part in recreation, belong to social groups who are ...exposed to a lower rate of health risks anyway. Thus, members of the upper class, the younger generation and those who are socially integrated exhibit a below average rate of sickness and disease" (p. 231). In view of the orientation of the relevant health promotion measures, Becker, Klein & Schneider speak here of the "Preaching to the converted" effect and suggest developing health promotion programs that are directed towards specific target groups. Tönges, Weidmann & Schneider (2006) refer to epidemiological data from the first Federal Health Survey (BGS 98) for their examination of the "compliance to a doctor's recommendation for sport". Of 7124 subjects aged 18 to 79, 488 indicated to have received a 'sport recommendation,' however, only 252 people (approximately 52%) carried through on it. "Thereby, women, people with a healthy nutrition pattern and non-smokers, as well as people who are more content in life and who have high somatization scores are significantly more likely to follow a doctor's recommendation for sport" (p.111). Tönges, Weidmann & Schneider also comment on this „Preaching to the converted“ phenomenon: "According to this, the population groups who are aware of a healthy lifestyle and, as a result, have a below average morbidity risk are more open to a preventative intervention compared to socially and health deprived population groups" (p.111).

Brehm et al. (2006) present evaluation results from the specially designed health program "Healthy and Fit"⁴. The one year program is based on the model 'Qualities of Health Sport' developed by Brehm's working group in Bayreuth and consists of the following main goals: 1. Strengthening of physical health resources, 2. the decrease of the risk factors, 3. strengthening of the psycho-social health resources, 4. to overcome physical discomforts and indispositions, 5. commitment to physically healthy behaviour and 6. creation and optimization of supporting settings and/or health promoting interactions. In the meantime, this concept has established itself within scientific discussions among Sport Scientists about the theoretical base for health sport in Germany, and is used by sport unions as a guideline for the certification of health related physical activity programs and is also used in primary and advanced training for specialists in the field (Brehm et al., 2002). This model favors application to distinct target groups and is directed primarily towards "healthy people with a lack of movement, movement beginners and 're-beginners' to physical activity programs, as well as "people with special risks concerning the musculo-skeletal system, the cardiovascular system, metabolic system and the psycho-somatic domain" (p.35). With their evaluation study, Brehm et al. (2006) present the empirical proof for the effects of such a theory based, high quality intervention program. The authors document the effects of the one year training program on the physiological-, psychological- and social-health situations of the subjects, as well as lasting impact on health behaviour. The results of the Dose-Effect-Relationship are of special interest: "At a high energy output (< 1000 kcal/week), fitness and risk-status significantly improve to a stronger degree than at a lower energy output (500-800kcal/week)"

⁴ The conception of the program 'Healthy & Fit' has already been described in detail from Brehm, Pahmeier & Tiemann (2001).

through additional physical activity, whereas, the subjective health parameters (well-being, physical discomforts, psycho-social resources) show a low correlation to the amount of energy output (p.168). Based on these results, Brehm et al. (2006, p.170) recommend the specification of a 'lowest threshold for a necessary metabolic rate': "For adults with a lack of movement, but who are fit and healthy, a minimum energy output of 1000 kcal/week is necessary for the improvement of fitness and risk factors. For adults who move too little and who have an unfavorable fitness- and risk-status, an energy output from already 500-600 kcal/week leads to slight improvements. Most of the subjective health-parameters improve through a systematically developed program with an energy output of 500-600 kcal/week." In connection with thoughts on the evidence base of health promoting sport programs, more and more questions have been raised in the last years regarding the quality management of such measures. At this point, it is worth mentioning the overview report published within the time frame of this review by Tiemann & Brehm (2006). With respect to quality assurance and quality management, Tiemann & Brehm orient themselves on basic quality standards in the health system and derive central modules of quality management in health sport, such as the utilization of evidence-based health programs, implementation of quality circles and integration of health sport programs. In view of the practical application of appropriate health-sport programs, the authors⁵ see great potential with the sport associations and the corresponding gymnastic and sport clubs, provided that the existing approaches towards quality development and quality management can be developed further and structurally anchored (p.267). At this point it is also worth mentioning an article from Baldus, Huber, Pfeifer & Schüle (2007), in which the authors provide a Quality Model for the field of medical rehabilitation.

3 Health sport: Diagnostic, Parameters and Characteristics

Aside from the question concerning the effects, the field of health research in the Sport Sciences also explores questions regarding the determinants of physical activity, as well as the influences on the individual and collective levels.

In view of the diagnostical aspects in health sport, it is important to point out the anthology from Wydra, Winchenbach, Schwarz & Pfeifer (2006) on "Assessment Procedures in Health Sport and Movement Therapy," which, under the same name, contains the results of the Convention of the dvs-Health Committee 2004. Problems are discussed in detail concerning measuring, testing, and diagnosing special populations; medical-physiological test procedures are also introduced. The publication allows a good overview of the current state of research in this, until now, seldom explored field. Diagnostical aspects of physical activity and self-concept, as well as current state of health are discussed by Pfeffer & Alfermann (2006) in an overview article. Different theoretical approaches are briefly presented and the corresponding measuring instruments and their applications are introduced, which "...in the research from the last 20 years have found the most approval and at the same time indicate a future direction" (Pfeffer & Alfermann, 2006, p.64). In their outlook, the authors call for a future development of intervention measures with systematical variations in the design of sport programs (until now, predominantly endurance programs have been offered) and the corresponding individual differentiation (for example, more attention paid to the current fitness level at the beginning of the program), but also the inclusion of characteristics of different social and cultural contexts and considering what that means for a physically active lifestyle.

With the perspective of the basic parameters and characteristics of sport and health, this review sets the focus on prevention oriented health sport, however, it also discusses the links to therapeutic sport (activity) forms. The anthology from Deimel et al. (2007) gives an overview on the meaning of physical activity and sport in prevention and rehabilitation. In the first section, the current basic conditions for health promotion and rehabilitation is presented, in the second and third sections, the rehabilitation aspect dominates with the representation of a multifaceted sport and movement therapy, which includes various indications and health disturbances, as well as current developments in sport for people with disabilities.

⁵ Brehm und Tiemann are members of the scientific advisory board ,Health-sport' of the "Deutsche Turnbund" (German Gymnastics Association)

In sight of the aspects surrounding physical activity, endurance training stills holds the first place for training forms in health sport, whose meaning for physical and psycho-social factors of health has since long been proved (for example, Knoll, 1997; Knoll, Banzer & Bös, 2006). The publication from Muster & Zielinski (2006) can also be mentioned, in which the authors, who primarily address doctors, medically trained laypersons, medical students and students of degrees involving Public Health and the Sport Sciences, explore the effects of physical activity and endurance training. This publication delivers basic knowledge about how endurance training affects the organ system, cardiovascular risk factors, as well as specific patterns of diseases/sicknesses. Within a field oriented portion, the authors convey basic principles of endurance training and include tips for integrating a training program into every day life. Walking, as well as Nordic Walking programs are currently very popular in the area of endurance training. Kleindienst et al. (2007) were able to show through a biomechanical laboratory study that the impact on the lower extremity joints during running are higher than during walking and Nordic Walking. The results clearly show, however, that the use of Nordic Walking sticks does not lead to a reduction of the mechanical impact compared to walking. On the contrary: during Nordic Walking "...a higher impact on the knee is observed within the landing phase, which is accounted for by the Nordic Walking (diagonal) technique" (p. 105). Therefore, it becomes clear, that to minimize possible negative effects, qualified practical introductions in this recreation sport are recommended.

Publications that deal exclusively with secondary prevention through physical and/or sportive activity are mainly concentrated, as in past years, on diseases of the cardiovascular system. Hence, Graf & Halle (2007) give a current overview on the meaning of physical activity and coronary heart disease, whereby Predel (2007) on high blood pressure. Bjarnason-Wehrens (2007) explains 'Status Quo and Perspectives of ambulatory cardiological rehabilitation of the Phase II in Germany'. Sudeck (2006) presents comprehensive research results in reference to strategies for the entry and re-entry into physical activity for patients with coronary heart disease. He presents the conception and evaluation of a movement related intervention program which highlights the necessity to strengthen the patient's ability of self-regulation through the corresponding intervention programs (also see Kanning, 2007; Sudeck, Höner & Edel, 2007). Zeuschner & Freidl (2007), as well as Kaufmann & Huber (2007) document effects of multi-sport movement programs with obese adults, while Schlicht & Schumann-Schmid (2007) present a literature review on the 'Effectiveness of Sport Therapy with adults who are obese,' which demonstrates the meaningfulness of combined programs that address the adjustment of nutrition and level of physical activity simultaneously and include the appropriate steps to create a social support system.

More and more, studies about the influence of the movement system are becoming the center of attention. For example, Klee (2006) presents a review on the effects of flexibility training as a method of injury prevention and discusses various types of injuries. Overall, the data regarding long-term effects of flexibility training is still irregular. Various publications stand out within this reporting period that discuss the role of sport and movement in back pain. Schneider (2007a, b) presents epidemiological data to this topic on the prevalence of back pain in 3488 working adults between the ages of 18 and 69 years. According to the data "...the 7 day prevalence of back pain consists of 34%, the one year prevalence 60%. Manual labour and physical stress at the work place is associated with a significantly higher risk of back pain, whereby physical activity in one's free time (recreation) is associated with a lower prevalence of back pain." (Schneider, 2007a, p.433). Schneider (2007b) also adds that 'serious social differences in the prevalence of degenerative joint diseases' also exist. Leonhardt et al. (2007) was able to demonstrate that "...depression and fear-related cognitions play a mere secondary role with back pain patients and their willingness to take part in regular physical activity, to which extent they take part, as well in the 'back-sliding' into inactivity" (p.39). Intervention studies on how various movement programs effect orthopedic problems (in this study, adults with herniated discs) are presented by Stoll et al. (2007), while Kempf (2007) presents supporting documentation to preventative effects of 'back-school' programs. These studies can be seen together as documentation for the emerging paradigm change in dealing with back pain, in which movement oriented therapeutic interventions are continually being seen as more important and questions regarding the evidence base are being increasingly discussed.

4 Health sport with children and youth

Within the time period of this report, many articles have been published concerning the question of motor performance, the physical activity status and the state of health of children and youth.

As in the past, the research surrounding physical activity in children and youth builds a thematic focal point. In this reporting period, the special issue of the journal 'Movement Therapy and Health Sport' ('Bewegungstherapie und Gesundheitssport'; Issue 6/2006) is of special interest. Bös et al. (2006) present within this issue, the results of a nation wide motoric study that took place within the framework of the 'Children and Youth Health Survey' ('Kinder- und Jugend-Gesundheits-Survey') carried out by the Robert Koch-Institute. The test battery, developed by the authors for the purpose of this study, delivers representative data on physical performance ability from children and youth in Germany and also offers a chance for a baseline and standardization of the performance diagnostic in this age group. Rommel, Mensink & Lampert (2006) introduce thoughts on indication points for the measurement of the 'Sport-quota'. Motoric tests are presented for various settings, such as Ketelhut (2006) in kindergarten, Klaes (2006) in schools and Bappert et al. (2006) in sport clubs. This special issue collects various thoughts on standardization of motoric performance (Wydra, 2006b) and on developing a corresponding data bank (Beck, 2006). In summary, the publications show that a differential assessment of physical activity is necessary for the establishment of evidence based health programs. Burrmann, Stucke & Streso (2007) demonstrate the necessity of standardized test procedures in the German Sport Sciences with their thoughts on 'a lack of fitness, due to measuring artefacts.' Meanwhile, the 'German Union for Sport Sciences' (Deutsche Vereinigung für Sportwissenschaft) has developed its own 'task force' that is commissioned to develop a test procedure for children and youth.

In the area of intervention through movement and sport for children and youth, the study from Wydra & Leweck (2007) exemplifies the short-term trainability of fitness with school-aged children in grades 5 and 6 in Luxemburg. The influence on motor performance in overweight and obese children and youth can be identified as a thematic focus. Thus, Graf et al. (2006) present a compact overview of the data records to this topic and discuss the recommendations and interventions for the elimination of physical inactivity and thereby, the problem of overweight children and youth. Complimentary to this article, is the study by Danielzik & Müller (2006) which, by using the example of overweight and obese children, demonstrates socio-economical influences on a child's lifestyle and health. The data from the so called 'Kieler Obesity Prevention Study' show an inverse relationship: "The lower the social status, the higher the prevalence of being overweight." (p.214). Within this 13 year (until 2009) cross-sectional and longitudinal Cohort study, intervention measures have clearly shown the necessity to take social factors into consideration when designing a program that should involve a setting-based prevention (also see Nething et al., 2006). Korsten-Reck et al. (2006a) also present results from an intervention study, in which an effective treatment within an 8-month intervention program for obese children is documented and Lawrenz (2007) demonstrates in an overview that physical activity and sport should be recommended to children with a manifested illness; in this study, congenital heart failure. Thiel et al. (2007) discuss the methodical measurement problems in calculating energy output based on heart rate using the example of a pediatric therapy for obesity.

Also for this reporting period, it is important to list a few publications that address the role of movement and sport for health promotion development of pre-school children, in particular, the special issue 1/2006 of the academic journal 'Motorik'. In this special issue, Zimmer & Dzikowski (2006) advocate on a conceptional level for an early applied, holistic health promotion, while keeping the Salutogenesis-Model in mind. Such an approach aims towards "...the building up and strengthening of competencies that can be significantly influenced through movement and contribute to a child's successful and adequate self-awareness, as well as a child's confrontation with his or her personal and social surroundings" (Zimmer & Dzikowski, 2006, p. 35). Ungerer-Röhrich et al. (2006) also argue in this direction with the introduction of the concept "Treasure Hunt at kindergarten," which is likewise aimed at the all-round strengthening of health resources in the kindergarten setting. Research results are presented by Scholz & Krombholz (2006) comparing the motor ability of children taking part in so called 'forest-kindergarten' and children attending a regular nursery school. The results reveal a better motor performance in the children attending a 'forest-kindergarten' however, the results from Scholz & Krombholz (2006) cannot be generalized due to the methodological

limitation in the research design, such as the inability to compare the sample groups due to the lack of existing data at the beginning of the investigation and differences based on half-day and whole-day set-ups of the individual nursery schools.

5 Health sport with adults and seniors

From the perspective of the Sport Sciences, physical activity, fitness and health are being increasingly discussed as central elements to one's life-span. This is seen, for example, in the fact that 2 scientific conventions in the year 2008 chose such themes as the main topic for the convention: the dvs-Health Committee's yearly convention in "Sport and health in the life-span" and the dvs-section Sport Sociology's yearly convention with the topic "Socialization and sport during the life-span." The initial question and starting point is: What relationships exist between physically-sportive activity and one's health condition across the life-span and to what extent can physical activity be seen as a building block towards a healthy life-style? Meyer (2006) draws attention to the need of research, especially in the area of physical activity for seniors. Woll (2006) addresses this theme in a comprehensive monograph with research results showing how physical activity changes during one's lifetime and which effects on fitness and health can be verified. It is also interesting to point out that the data stems from a running, intercultural longitudinal study since 1991 which compares representative sample groups of 741 adults between the ages of 35 and 55 in Germany and Finland. Woll was able to provide evidence of the overall meaningful influence of age and social status on the level of physical activity among adults: younger adults and people belonging to a higher social class are clearly more active (p.272). Also cultural differences are revealed: "In Finland, physical activity plays a more important role in middle-aged to older adults than in Germany." (p.272). Overall, the physical activity, fitness and health constructs exhibit a middle to high degree of stability within the timeframe of the study (p.273). The causality analysis of the influence of physical activity based on the LISREL-Analysis revealed, "...that during the simultaneous testing of the influence of physical activity, fitness and the internal psychological resources and internal physical demands on two different factors of health – 'functional impairments' and 'subjective well-being' – are identified as meaningful effects of physical activity." (p.274). The data deliver a convincing argument for the necessity of intervention programs for adults. Woll maintains that, here, the role of communal sport and health promotion becomes relevant: "Finland can, in many areas, serve as a future model for communal sport development and methods of documenting sport and health behaviour, which can possibly encourage ground-breaking developments in this field in Germany." (p.278).

Korsten-Reck et al. (2006b) discuss single aspects of physical activity across the lifespan concerning women after menopause. Siegrist, Lammel & Jeschke (2006) and Kemmler et al. (2007) present results for this target group on how training programs can possibly prevent Osteoporosis. Reimers (2006) gives an overview on the neurological aspects of sport and aging. Freiberger & Becker (2006) highlight the risk factors and prevalence of falls in elderly population, whereas Schott (2007) discusses aspects of the fear of falling. Freiberger, Lindemann & Pfeifer (2006) present intervention possibilities in fall prevention and Granacher et al. (2007) introduce research results of sensorimotor training on the strength ability in men aged 60 to 80. Kaeding (2006) gives an overview on the theories and concepts of a prevention oriented strength training for older adults.

The publication from Werle, Woll & Tittlbach (2006) takes on characteristics of a text book for promoting health in older adults through physical activity. It gives an overview on theories and models for health and health promotion, discusses motor ability and activity as a resource for healthy aging, makes suggestions for planning appropriate health related interventions and offers options from various field concepts regarding health promotion through movement, play and sport for older adults. The didactical layout with summaries and theme related learn questions makes this publication suitable for application in the education and training of movement and health professions.

The publication, "Sport in Prevention" by Vogt & Neumann (2006) is also practise oriented as a "Handbook for exercise leaders, physical education teachers, physiotherapists and trainers" that was developed in cooperation with the "German Sports Association" (Deutsche Sportbund) as part of its quality initiative in education and training. This handbook offers an overview on the significant components of a prevention oriented health training program for adults and explains relationships between nutrition, sport and health. In closing, the authors

discuss methodological-didactical aspects under the subject matter 'instruction, motivation and communication' and present exemplary prevention oriented programs that can be offered by sport clubs. Despite the experience oriented focus, this publication only touches briefly on concrete application possibilities. Instead, the emphasis is placed on basic knowledge for individual health behaviour with a primary focus on aspects of sport medicine and exercise science. Approaches for specific settings within conditional prevention are not explicitly discussed, as might be expected.

Especially helpful for application in the field is, in contrast, the publication "Physical Resources" (Tittlbach et al., 2007) in the collection "Work material for education, training and advanced training" from the German Gymnastics Association. The publication is, like other publications within this collection, oriented on the Quality Model and its main goals. Physical health recourses are presented in detail, as well as purposeful recommendations for a program plan with the appropriate instructions and test procedures for testing the physical health parameters.

6 Future Perspectives

In summary, it can be said that in the past two years, research concerning health sport within the Sport Sciences has been strongly focused on the theoretical foundation, the evidence base and the quality assurance of health sport programs. In the future, the implementation of methodical verified test instruments (by testing the evidence from the intervention programs) has to be emphasized. Mandatory quality standards for health sport programs can be assured on the basis of accounted for, empirical evidence and guaranteed through corresponding quality management. For these reasons, a trusted health promoting sport program is an essential building block for the design of programs and steps towards health promotion and prevention.

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