Germany: adolescent mental well-being – current status and promotion and prevention initiatives

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Executive summary

This case study focuses on the promotion of mental well-being in adolescents in Germany by means of empowerment, strengthening life skills and healthy behaviours and reducing substance use. It describes a recent evaluation study that has a special focus on adolescents who are at higher risk of developing mental health problems.

The BELLA Study, which is a mental health module part of a representative nationwide health survey, revealed that nearly 22% of interviewed children and adolescents aged 7–17 years showed symptoms suggesting possible or probable mental health problems. Boys were more often affected than girls and the percentage of children and adolescents with general psychological problems increased with age.

In addition to low family socioeconomic status, other risk factors for mental health were identified, such as an adverse family climate, the presence of a parent with a mental disorder, and living in a one-parent household. The prevalence of mental health problems increased markedly when several risk factors were present simultaneously. Conversely, positive individual, family and social resources coincided with an absence of mental health problems.

Substance use was identified as a risk factor for the development of mental health problems, with results from the 2002 HBSC survey on adolescents' risk behaviours being alarming. At that time, Germany not only had one of the highest rates of daily smoking, but was also one of the countries with highest rates of weekly drinking.

Germany is a federal country, so policies aimed at reducing the extent of adolescents' risk behaviours (such as special taxation on tobacco products and spirit-based "alcopops") are developed at national level by the Federal Government and at regional level within each federal state. Regional activities within the federal states against substance misuse among adolescents are predominantly school-based, using school activities as measures of intervention. The implementation of school-based life-skills programmes designed to prevent substance misuse and promote mental health and well-being has become more important in this regard.

Although school-based life-skills programmes are effective in delaying the onset of substance use and in reducing the rates of substance use during adolescence, it is not sufficiently clear whether children and adolescents from families with low socioeconomic status and/or with a migrant background also benefit from these programmes. Unfortunately, previous evaluation studies have failed to address mental health as a main outcome.

To address deficits in existing research, the "Prima schule" project is evaluating three life-skills programmes in two German federal states –the predominantly rural Schleswig-Holstein in the north, and the capital city of Berlin. Problematic schools with an increased proportion of children with low academic performance or who come from families with lower socioeconomic status and/or with a migrant background are being particularly targeted for participation.

Mental health, social cohesion and substance use were the foci of the project. The programmes were evaluated using a pre- and post-design which included baseline, post-intervention and three-month post-intervention measurements. Intervention and control groups were randomly assigned. Quantitative analyses of questionnaire data and qualitative analyses of focus groups and interviews with pupils, parents and teachers were carried out.

Mental health and well-being status among adolescents: mental health and risk behaviour among German adolescents

Germany is a western industrialized welfare state with good facilities for health care services. The country has experienced a considerable decrease in perinatal, infant and child mortality during the past century. The WHO understanding of health as having physical, mental and social well-being components has gradually come to the fore. Official statistics, however, focus on mortality and do not provide a complete picture of the health status – including mental health – of children and adolescents in Germany. Additional data are therefore needed.

Results from the BELLA Study

Having recognized the need for representative data on the health and development of children and adolescents in Germany, the Robert Koch Institute (Federal Public Health Institute of Germany) in Berlin was commissioned by the Federal Ministry of Health to develop a health examination survey approach to fill the information gap.

The German National Health Interview and Examination Survey among Children and Adolescents was designed as a representative nationwide health survey of children and adolescents from 0–17 years. Following a pilot study carried out between March 2001 and March 2002, the main survey was launched in May 2003. Over the following years until May 2006, 17 641 participants were examined in 167 randomly selected study locations all over Germany. Data collected at an individual level included objective measures of physical and mental health and self-reported information on subjective health status, health behaviour, use of health care services, social and migratory status, living conditions and environmental determinants of health.

The core of the survey – compiling benchmark health information from the complete sample – was supplemented by further modules investigating specific target areas, such as mental health in representative subsamples. The BELLA Study used key data from the core survey on behavioural problems and subjective well-being, supplementing it with targeted questions and additional instruments. The BELLA Study examined mental disorders and emotional well-being and behaviour in a representative subsample of the core survey, including 2863 families with children aged 7–17. This large sample allows results to be extended to the national level. An additional longitudinal design also enabled an analysis of a connection between risks and protective factors, also known as “assets for mental health”.

Prevalence of mental health problems within the mental health survey was assessed using the SDQ and additional standardized screening measures. Out of the total sample, 21.9% (CI: 19.9–24.0) of children and adolescents showed signs of mental health problems. The psychiatric disorders observed included anxiety (10.0%; CI: 8.7–11.6), conduct disorder (7.6%; CI: 6.5–8.7) and depression (5.4%; CI: 4.3–6.6). Of the risk factors examined, adverse family climate and low socioeconomic status stood out particularly as negative contributors. The prevalence of mental health problems increased markedly when several risk factors occurred simultaneously. Conversely, positive individual, family and social resources coincided with an absence of mental health problems. Children and adolescents with mental health problems displayed distinctly impaired health-related quality of life. Very few of them were receiving treatment.

The results of the BELLA Study indicate that identifying high-risk groups requires the assessment of available resources and assets to be added to the usual risk factors for mental and subjective health screening. Strengthening these resources should be a key objective, both in prevention and intervention.

Results from HBSC survey

The German HBSC survey was realized as a regional sample of four federal states (Berlin, Hesse, North Rhine-Westphalia and Saxony) in 2002, and five federal states (Berlin, Hamburg, Hesse, North Rhine-Westphalia and Saxony) in 2006. The resulting representative samples consisted of 5650 (in 2002) and 7274 (in 2006) children and adolescents aged 11, 13 and 15 years.

Risk behaviour

HBSC data from the 2002 survey showed that Germany was one of the countries with the highest rates of daily smoking in

15-year-old adolescents (girls: 28.7%; boys: 26.3%) – only pupils in Greenland reported higher rates. Germany was also one of the countries with the highest rates of weekly drinking (in this age group) (girls: 33.3%; boys: 45.7%).

Data from the recent HBSC survey, however, show that these high rates in substance use among 15-year-olds are declining. In 2006, "only" 16.4% of girls and 13.3% of boys reported smoking on a daily basis. The rates for weekly drinking had also decreased substantially (girls: 14.9%; boys: 24.8%). The same trend applied for drunkenness. After an increase in 2002 (girls: 34.4%; boys: 44.3%), fewer adolescents reported having been drunk on two or more occasions in their lifetime in the 2006 survey (girls: 27.7%; boys: 31.2%). The declining trends in substance use in adolescents are very positive and confirm the efforts of national and regional policy and interventions in recent years.

Findings from an international study *(1)* show that adolescents who smoke on a regular basis report mental health problems more frequently than their non-smoking peers. Binge drinking on a regular basis also increases general psychological problems. Adolescents who smoke and binge drink regularly are more likely to report a lower quality of life in almost all dimensions.

From this perspective, strategies which prevent or delay adolescent substance use should also be used to promote and improve mental well-being in young people.

Social and policy context: German initiatives for the promotion of a healthy lifestyle and improving mental well-being among adolescents

Germany is a federation consisting of 16 federal states, each with its own constitution, parliament and government. Policies aiming to reduce the extent of adolescents' risk-taking behaviours are initiated by the federal government at national level and also at regional level within each federal state. The federal states are responsible for education programmes and policies and are more-or-less free to choose specific school-based prevention programmes and strategies.

National activities

The federal government has changed a number of legal requirements to combat high substance use among adolescents in recent years. These activities were outlined in the Act for Improving the Protection of Young People against Dangers of Alcohol and Tobacco Consumption. Tobacco taxes were raised and the sale of cigarettes via cigarette automats was limited to adults only, using a special ID card. The act also aims to reduce the consumption of alcopops by increasing the price.

The implementation of extraordinary taxes for spirit-based alcopops proved a very successful policy initiative. This special tax was introduced in 2004 after the dramatic increase in the consumption of alcopops by young people was recognized. Alcopops were the most-favoured alcoholic beverage at that time, especially for young girls. The special tax is levied exclusively on alcopops manufactured using distilled spirits or products containing distilled spirits.

Consumption of spirits-based alcopops among 12–17-year-old young people declined significantly from 28% in 2004, when the tax was introduced, to 16% one year after the intervention *(2)*. Spirit-based alcopops are no longer being purchased in the same high numbers, primarily because they have become too expensive and because young people are better informed about the associated health risks. Additional analyses show that the change in alcopop consumption has not led to increased consumption of other alcoholic beverages.

Regional activities

Regional activities against adolescents' substance use within the federal states refer mostly to school and school-related activities. For example, the responsible ministries of education are prohibiting smoking in schools and school areas in a growing number of federal states.

The importance of implementing school-based life-skills programmes has also been recognized. A multitude of prevention and health promotion strategies following the life-skills approach are being introduced in German schools at the current time.

Within these programmes, the life-skills approach is used to promote mental health and well-being by strengthening life skills, empowerment and healthy behaviour and reducing substance use in young people.

Since the 1990s, several school-based prevention programmes using the life-skills approach have been developed, adapted and evaluated in Germany. Life-skills education programmes attempt to have a positive influence on adolescents' feelings of empathy and communication skills to help them establish and maintain social relationships. Programme activities encourage positive self-awareness, thoughtful decision-making and the development of problem-solving and coping strategies. The manual-based prevention programmes, administered by trained teachers in schools, use interactive methods such as role playing, small group interactions and group discussions to focus on encouraging cooperative learning, communication skills, non-violent problem solving and reinforcement strategies. As these programmes were conceptualized and developed to prevent or delay substance misuse, their unspecific and resource-orientated approach not only supports healthy behaviour, but also attempts to improve mental health and well-being.

Three of the most common life-skills programmes in Germany are "Erwachsen werden", "Fit und stark für's Leben" and "Buddy-Projekt".

The "Fit und stark für's Leben" project is a recommended and well-established school-based programme with age-appropriate teaching and learning material for three age groups (grades 1–2; 3–4; and 5–6). It focuses on prevention of aggression, violence, stress, and substance misuse. There are 20 weekly teaching sessions lasting from 60 to 90 minutes each, directed by trained teachers. Topics discussed include self-perception and empathy, stress reduction, resisting peer pressure, promoting healthy behaviour, communication and problem-solving skills.

The Lions' Quest programme "Erwachsen werden" is also based on the life-skills approach. It was designed for adolescents aged 10–15 years. Training in social and communication skills and information about substance misuse are major aspects of this prevention programme. Teachers are trained and are provided with a manual containing material for 70 optional teaching sessions. Education material and workbooks are also available for pupils and parents.

The "Buddy-Projekt", established in 2002, is a relatively new life-skill programme. Teachers attend a workshop conducted by certified trainers in which they are given information about substance misuse, empowerment and conflict-resolution strategies. Through the combination of a theoretical framework and practical interaction, teachers learn to be aware of specific problems within their school and their classes. They are encouraged to develop and implement self-directed school projects with their pupils to tackle these problems.

In general, each school is free to take part in the prevention programmes that are authorized by the ministry of education. Interested teachers are selected by the principal of their school. The workshops are conducted by certified trainers. In some federal states, the ministry of education has installed a counsellor system to support programme activities.

Since each federal state is responsible for its own education programmes and policies, they are able to choose specific school-based prevention programmes and strategies. These programmes, usually preventive in nature, are founded by non-profit associations or institutions but are organized and authorized by the ministry of education of each individual federal state.

Each ministry of education and its subordinate authorities provide organizational support for the programmes, such as authorization for additional school lessons. Programme providers are in charge of organizing and financing the training of teachers. In some federal states (such as Berlin, Hesse, Saarland, Lower Saxony and Saxony), cooperation agreements between programme providers and the ministries of education have been established to ensure programme sustainability.

Policy and interventions: school-based life-skills programmes

An essential criterion for the success of prevention programmes is the degree of differentiation and target-group specificity. As children and adolescents undergo various socialization processes and experience different life circumstances, a general preventive effect cannot be assumed. Indeed, current programmes still take specific life conditions and prevention needs too little into account. The result is what is referred to as the "prevention paradox", according to which those population groups who are the most vulnerable benefit the least from preventive measures *(3)*.

International and national findings attest to the fact that social and ethnic affiliations are two of the key determinants of health inequality *(4–14)*. Socially disadvantaged children and adolescents exhibit more health-risk behaviours, rate their physical and mental health more negatively and show more behavioural disorders, especially disorders of social behaviour, hyperactivity and attention disorders *(2,15)*. The Drug Affinity Study, which has been conducted by the Federal Centre for Health Education (BZgA) since 1985, shows that adolescents who have completed general school smoke more frequently and are more often regular smokers than adolescents who have an intermediate school degree or a grammar school degree *(16)*.

Children and adolescents from families with a migratory background are more at risk in certain health-related areas than their German peers. These risks include a higher prevalence of overweight, including obesity, a higher rate of involvement in accidents, a lower rate of utilization of physical examinations, lower vaccination rates and more risk behaviours regarding oral health care *(17–22)*. Pressures associated with a migratory background and developmental crises also contribute to a higher addiction potential in children and adolescents *(23)*. Smoking and drug consumption vary greatly depending on religious and cultural backgrounds and are also gender specific *(24)*. There are several factors which influence the health and health behaviours in a migrant population. These include the health and social situation in the migrant's country of origin, the migrant generation and the duration of stay. An effective health promotion strategy must therefore not only be focused on social aspects, but must also take the migratory background of children and adolescents into account.

Since these target groups evidently have a greater need for health promotion measures but apparently use social and health services only rarely, it is important that setting-orientated prevention strategies, such as health promotion measures in schools, are implemented. In this way, children and adolescents from less-privileged social backgrounds and migrants can be reached.

Evaluation of school-based life-skills programmes

In their 2000/2001 report, the German Advisory Council for Concerted Action in Health Care pointed towards a need for improving health promotion and primary prevention in Germany to ensure quality and efficacy of the health care system *(25)*.

The German Federal Ministry of Education and Research (BMBF) initiated the promotional activities focused "Prevention research" in 2003. The promotion focus is on the integration of programme providers and research. In addition to developing and testing new concepts and programmes, established health promotion programmes are evaluated for effectiveness, practical orientation and applicability. The goal is to improve primary prevention by means of more-focused and high-quality research.

Only a few of the popular and well-established programmes have been evaluated *(26–37)*. Many of the evaluation studies, however, were conceptualized within the framework of the projects, using only relatively small sample sizes and lacking information on both the long-term effects and transferability of the results under "real-life" conditions *(32)*, which greatly limits the significance of the results. Published studies have been largely based on a quasi-experimental, pre-post-test design and have not included randomization. As a consequence, the effectiveness of these studies/programmes could not be statistically verified in the same way as would have been possible with a randomized design.

How the effects on the pupils differ based on their educational and migratory backgrounds was only rarely and, for the most part, inadequately studied. An extensive analysis of the Lions' Quest programme *(32)*, which used the teacher survey as a basis, came to the conclusion that the student and parent material may be inadequate, especially in relation to comprehensibility and length of the text for students from a migratory background, and the cultural perspective was insufficiently taken into account. No current studies include a detailed analysis of health promotion programmes from the pupil's perspective (in relation to contents, language and amount of material and inclusion of varying cultural perspectives).

The mediator – the person responsible for the realization of the programme – is an important factor in a programme's success. Studies from the United States have analysed various groups (teachers, peer leaders, external trainers) to determine the most suitable to act as mediator *(38–40)*. The results show that a determining factor for the success of a programme is the mediator's personal traits, such as the perceived social support of the teacher by the pupils *(33,34)*. These studies did not include systematic measures of the teacher's effect on the pupils depending on his or her motivation, however, and also did not take personal and social competence into consideration.

The present evaluation studies indicate that programmes focusing on preventing addictive behaviours are not only effective in relation to smoking in children and adolescents, but also have an influence on mental health outcomes, such as reducing problem behaviours *(27–30)*. Mental health and subsequent problems can be understood as a result of a successful or unsuccessful mastering of developmental tasks. This developmental process can be positively or negatively influenced by risk and protective factors, which is where school-based health promotion programmes step in. They strengthen pupils' positive resources through behavioural and system-orientated prevention measures.

Most of the school-based health promotion programmes based on the life-skills concept were developed and evaluated as substance misuse prevention measures. Due to their unspecific and resource-orientated approach, however, many also have the capacity to develop mental health in pupils *(41)*. It can be deduced that school-based health promotion measures, conducted as part of a life-skills approach, are suitable in positively influencing mental health, including health behaviours. They achieve this by improving individual competence and empowering pupils (in such areas as communicative competence, acquiring and maintaining social support, knowledge, attitudes, perceived control, self-worth and self-efficacy) and influencing the environment (social support and classroom atmosphere). A holistic approach including mental health for the effect evaluation of programmes does not currently exist.

Within this framework, an evaluation study of school-based life-skills programmes was planned to focus on fifth and sixth graders from families with low socioeconomic status and/or a foreign background. Mental health is a major target within these programmes.

Aims of the "Prima Schule" study

"Prima Schule" is evaluating three previously mentioned school-based programmes in two federal states. The focus is on their effectiveness specifically for socially disadvantaged children and adolescents and those with a migratory background. The methodological deficits of previous evaluation studies are being avoided by adopting a more suitable study design. Guidelines for the adaptation and improved implementation of preventive measures for socially disadvantaged groups and migrant populations are being jointly developed in partnership with relevant stakeholders (the developers, providers and mediators of prevention measures and pupils).

The two federal states chosen for the study, Schleswig-Holstein and Berlin, differ in various structural aspects (school system, population density and proportion of migrants, for instance). The target population is pupils from the fifth and sixth grade in general schools (Schleswig-Holstein) and in primary schools in socially disadvantaged areas (Berlin). In Berlin, the social structure atlas allows us to select primary schools which lie in socially disadvantaged areas with a high proportion of unemployed people and welfare recipients.

The selected age group (11–13-year-olds) is a population group which falls into a period in life in which health-relevant behaviours are developed and begin to stabilize and gender aspects start to manifest. Fortunately, validated instruments measuring life competence and mental health by means of individuals' self-reporting already exist for this age group.

The following questions are being dealt with in detail.

1. Which effects of the health promoting programmes "Fit und stark für's Leben", "Erwachsen werden" and "Buddy-Projekt" can be proven for socially disadvantaged children and adolescents and children from a migratory background in relation to "life competence", "substance consumption" and "mental health"?
2. What factors that influence the success of an intervention for this target group can be identified? The integration of various programmes makes it possible to differentiate here between programme effects and those which result from the specific format of programme implementation.
3. What role do teachers play as key participants in conveying programme contents?
4. What differences arise in programme effectiveness in terms of gender, social and migrant background? How must these be dealt with in the programmes?
5. Which orientations/views of pupils and teachers have an influence on the success of the programme, and what conclusions can be drawn from this in relation to adjusting the programme?

6. Which of the identified protective factors of mental health in the studies can be promoted through the employed measures? To what extent is this possible? To what extent can the achieved effects of the measures be explained by influencing the specific protective factors?

Design and methods

The school-based life-skills programmes are being evaluated using a pre-test and post-test design (baseline, post-intervention, three-month post intervention) with randomly assigned intervention and control groups. Quantitative analyses of questionnaire data, qualitative analyses of focus groups and interviews with pupils, parents and teachers are being carried out to assess improvements in mental well-being. Effects of the prevention programme are being measured by the outcome variables of self-efficacy, social competence, school and class climate, substance misuse, mental health and health-related quality of life (as well as bullying). Data from approximately 3000 fifth and sixth graders and 90 participating teachers are being collected.

Lessons learned

One of the aims of this case study was to highlight the main strengths and advantages of German initiatives for the promotion of mental well-being in adolescents. At the same time, it also attempted to point out the challenges and problems that need to be addressed for future policy improvements.

Germany now possesses nationally representative data on mental health and well-being in children and adolescents. Analyses of an association between risks and protective factors make it possible to identify children at risk. Data on health care utilization further show that additional efforts are necessary to reach these children.

Prevention programmes focusing on substance use offer one example of a national strategy to promote mental health and well-being in Germany. These prevention programmes, however, must take the special requirements of pupils with the greatest need into account. Further research is needed to create a better understanding of the accessibility and effects of these programmes for children and adolescents who come from families with a lower social status and/or a foreign background.

An evaluation of school-based life-skills programmes should focus on the integration of programme providers and research to ensure evidence-based effectiveness, practical orientation and applicability of the applied programmes. In terms of a process evaluation, results should be used to improve the programmes.

In this regard, the views and perspectives of all parties, including programme providers, teachers, pupils and their parents, should be used and integrated into the evaluation process. The case study shows that different research strategies should be used simultaneously to collect qualitative and quantitative data. Questionnaire data, interviews and focus-group discussions with all participating parties ensure that all views and opinions are considered.

Once high-quality research has proven the effectiveness and efficiency of a programme, it should be promoted beyond regional implementation. A continuous evaluation process should nevertheless be established to ensure quality maintenance and appropriate reactions to the needs of children at risk in the future. Needs of children and adolescents with other risk factors, such as living in one-parent households or having parents with mental health problems, should also be taken into account for further evaluation studies and research. The development of new measures for the special needs of this group of children should also be promoted.

Establishing a system that ensures financing and implementation of the prevention programmes on a sustained and enduring basis remains a big challenge. The case study has been able to point to this and a number of other challenges and problems that need to be addressed to improve future policy.

References

1. Ravens-Sieberer U et al. Risk behaviour and health related quality of life among European adolescents. In: Silbereisen R, Weichold K, eds. *Special issue Sucht: cross-cultural differences and similarities in risk and protective processes for adolescent substance use*. Sucht 2006, 52:4: 236–244.
2. von Rueden U et al. Socioeconomic determinants of health related quality of life in childhood and adolescence: results from a European study. *Journal of Epidemiology and Community Health*, 2006, 60:2: 130–135.

3. Kühn H, Rosenbrock R. Präventionspolitik und Gesundheitswissenschaften. In: Rosenbrock R et al., eds. Präventionspolitik. *Gesellschaftliche Strategien der Gesundheitssicherung*. Berlin, Edition Sigma, 1994:29–53.
4. Barker DJP, ed. *The foetal and infant origins of adult disease*. London, British Medical Journal Publications, 1992.
5. Ferri E. Forty years on: Professor Neville Butler and the British birth cohort studies. *Paediatric and Perinatal Epidemiology*, 1998, 12:1:31–44.
6. Smith K, Joshi H. *The Millennium Cohort Study. Population Trends*, 2002, 107:30–34.
7. Winkleby MA et al. Ethnic variation in cardiovascular disease risk factors among children and young adults: findings from the Third National Health and Nutrition Examination Survey, 1988-1994. *JAMA*, 1999, 218:1006–1013.
8. Böhm A et al. Soziale Lage und Gesundheit von jungen Menschen im Land Brandenburg. *Das Gesundheitswesen*, 2003, 65: 219–225.
9. Ellsäßer G et al. Soziale Ungleichheit und Gesundheit bei Kindern – Ergebnisse und Konsequenzen aus den Brandenburger Einschulungsuntersuchungen. *Kinderärztliche Praxis*, 2002, 4:248–257.
10. Klocke A. *Armut bei Kindern und Jugendlichen und die Auswirkungen auf die Gesundheit. Gesundheitsberichterstatung des Bundes, Heft 03/01*. Berlin, Robert Koch-Institut, 2001
11. Hurrelmann K et al., eds. *Jugendgesundheitssurvey – Internationale Vergleichsstudie im Auftrag der Weltgesundheitsorganisation WHO*. Weinheim/München, Juventa, 2003.
12. Mielck A. Armut und Gesundheit bei Kindern und Jugendlichen – Ergebnisse der sozial-epidemiologischen Forschung in Deutschland. In: Klocke A, Hurrelmann K, eds. *Kinder und Jugendliche in Armut. Umfang, Auswirkungen und Konsequenzen*. Opladen,Westdeutscher Verlag, 2001:230–244.
13. Lampert T, Schenk L. Gesundheitliche Konsequenzen des Aufwachsens in Armut und sozialer Benachteiligung. In: Jungbauer-Gans M, Kriwy P, eds. *Gesundheit und soziale Lage von Kindern und Jugendlichen*. Weinheim/München, Juventa, 2004:112–139.
14. Lampert T, Ziese TA. *Soziale Ungleichheit und Gesundheit. Expertise des Robert Koch-Instituts zum 2. Armuts- und Reichtumsbericht der Bundesregierung*. Bonn, BMGS, 2005.
15. Ravens-Sieberer U. Der Kindl-R Fragebogen zur Erfassung der gesundheitsbezogenen Lebensqualität – Revidierte Form. In: Schumacher J, Klaiberg A, Brähler E, eds. *Diagnostische Verfahren zur Lebensqualität und Wohlbefinden*.. Göttingen, Hogrefe, 2003:418–188.
16. *Die Drogenaffinität Jugendlicher in der Bundesrepublik Deutschland*. Köln, Bundeszentrale für gesundheitliche Aufklärun, 2001.
17. Delekat D. *Zur gesundheitlichen Lage von Kindern in Berlin. Ergebnisse und Handlungsempfehlungen auf Basis der Einschulungsuntersuchungen 2001*. Berlin, Senatsverwaltung für Gesundheit, Soziales und Verbraucherschutz Berlin, 2003 (Gesundheitsberichterstattung Berlin, Spezialbericht 2003 – 2; http://www.berlin.de/imperia/md/content/sen-statistik-gessoz/gesundheit/spezialbericht20032.pdf, accessed 28 July 2008).
18. Gawrich S. Wie gesund sind unsere Schulanfänger? Zur Interpretation epidemiologischer Auswertungen aus der Schuleingangsuntersuchung. *Hessisches Ärzteblatt*, 2004, 2: 3–76.
19. Erb J, Winkler G. Rolle der Nationalität bei Übergewicht und Adipositas bei Vorschulkindern. *Monatsschrift Kinderheilkunde*, 2004, 3:219–298.
20. Böhmann J, Ellsäßer G. Bevölkerungsbezogenes Gesundheitsmonitoring in einer deutschen Gemeinde. *Monatsschrift Kinderheilkunde*, 2004, 152:3: 299–306.
21. Kühnisch J, Senkel H, Heinrich-Weltzien R. Vergleichende Untersuchung zur Zahngesundheit von deutschen und ausländischen 8- bis 10-Jährigen des westfälischen Ennepe-Ruhr-Kreises. *Gesundheitswesen*, 2003, 65: 96–101.
22. Van Steenkiste M. Zahngesundheitliches Verhalten bei deutschen und türkischen Vorschulkindern. *Oralprophylaxe*, 2003, 25:3:121–128.
23. Tuna S. Entwicklungskrisen und migrationsbedingte Belastungen als Suchtgefährdungspotenziale. In: Salman R et al., eds. *Handbuch interkulturelle Suchthilfe. Modelle, Konzepte und Ansätze der Prävention, Beratung und Therapie*. Gießen, Psychosozial-Verlag, 2002:89–102.
24. Surall D, Siefen RG. Prävalenz und Risikofaktoren des Drogenkonsums von türkischen und Aussiedler-Jugendlichen im Vergleich zu deutschen Jugendlichen. Eine Dunkelfelderhebung bei Schülern der Stadt Marl. In: Boos-Nünning et al., eds. *Migration und Sucht. Eine Expertise im Auftrag des Bundesministeriums für Gesundheit*. Baden-Baden, Nomos Verlagsgesellschaft, 2002.
25. *Appropriateness and efficiency. Volume I - the formulation of aims, prevention, user orientation and participation. Report 2000/2001*. Bonn, Advisory Council for Concerted Action in Health Care, 2001.
26. Aßhauer M, Hanewinkel R. Lebenskompetenzförderung und Suchtprophylaxe in der Grundschule. Entwicklung, Implementation und Evaluation primärpräventiver Unterrichtseinheiten. *Zeitschrift für Gesundheitspsychologie*, 1999, 7: 105–119.
27. Aßhauer M, Hanewinkel R. Lebenskompetenztraining für Erst- und Zweitklässler. Ergebnisse einer Interventionsstudie. *Kindheit und Entwicklung*, 2000, 9: 251–263.
28. Wiborg G, Hanewinkel R. *Eigenständig werden. Persönlichkeitsentwicklung, Gesundheitsförderung, Lebenskompetenzen, Sucht- und Gewaltprävention in der Schule. Evaluation des Programms für Schüler der Klassenstufe 1 im Freistaat Sachsen*. Kiel, IFT-Nord, 2003.
29. Hanewinkel R, Aßhauer M. Fit und stark fürs Leben. Universelle Prävention des Rauchens durch Vermittlung psychosozialer Kompetenzen. *Suchttherapie*, 2003, 4:197–199.
30. Hanewinkel R, Aßhauer M. Fifteen-month follow-up results of a school-based life-skills approach to smoking prevention. *Health Education Research*, 2004, 19:125–137.
31. Hollederer A, Fuchs K, Bölcskei P. Kinder stark machen: Klasse 2000 in der Grundschule. In: Rumricht B, ed. *...und es gibt sie doch. Suchtprävention an Schulen*. Konzepte, Modelle und Projekte. Nürnberg, emwe, 2001:62–64.
32. Kähnert H. Evaluation des schulischen Lebenskompetenzförderprogramms „Erwachsen werden". *Dissertation Gesundheitswissenschaften*, Bielefeld, 2003.
33. Leppin A et al. Prävention auf den zweiten und dritten Blick: Differentielle Effekte eines kompetenzorientiertes Suchtpäventionsprogramms. In: Kolip P, ed. *Programme gegen Sucht*. Weinheim, Juventa,1999:215–234.
34. Leppin A, Hurrelmann K, Petermann HJ. *Jugendliche und Alltagsdrogen – Konsum und Perspektiven der Prävention*. Berlin, Luchterhand, 2000.
35. Kröger C, Reese A. Schulische Suchtprävention nach dem Lebenskompetenzkonzept. Ergebnisse einer vierjährigen Interventionsstudie. *Sucht*, 2000, 46:197–208.
36. Petermann H, Fischer V. Wie effektiv sind schulische Suchtprävention? Ergebnisse der Leipziger Präventionsstudie. In: Leppin A, Hurrelmann K, Petermann HJ, eds. *Jugendliche und Alltagsdrogen – Konsum und Perspektiven der Prävention*. Neuwied, Berlin, Luchterhand, 2000:141–161.
37. Walden K. Sollten in Lebenskompetenzprogramme geschlechtsbezogen unterschiedliche Inhalte zur Nikotinprävention vermittelt werden? In: Leppin A, Hurrelmann K, Petermann HJ, eds. *Jugendliche und Alltagsdrogen – Konsum und Perspektiven der Prävention*. Neuwied, Berlin, Luchterhand, 2000:195–217.
38. Botvin GJ et al. Preventing adolescent drug abuse through a multimodel cognitive-behavioral approach: results of a 3-year study. *Journal of Consulting and Clinical Psychology*, 1990, 58:4.
39. Gottfredson DC, Wilson DB. Characteristics of effective school-based substance abuse prevention. *Prevention Science*, 2003, 4:1:27–38.
40. Tobler NS et al. School-based adolescent drug prevention programmes: 1998 meta-analysis. *The Journal of Primary Prevention*, 2000, 20:4:275–336.
41. Paulus P. Anschub.de – Allianz für nachhaltige Schulgesundheit und Bildung. *Prävention*, 2002, 25:75–77.