

# Abstract

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The last Children's Health Report of the City of Vienna was published in 2000. What about the current health situation of children and young people in Vienna today?

An expert group composed of all institutes, stakeholders and representatives of the different medical disciplines was set up. Three work sessions chaired by Dr. Karin Spacek, head of Municipal Department 15 – Public Health Services of the City of Vienna, and Dr. Beate Wimmer-Puchinger, Women's Health Commissioner of the City of Vienna, discussed the key issues at stake. To create a new reporting structure, it was agreed to not only describe the health situation of children and young people in facts and figures but also to provide an overview of the services and measures currently offered by the City of Vienna. The more extensive chapters on epidemiology and mental health were moreover edited and co-ordinated in the framework of internal working groups. The following text summarises the key information contained in the individual chapters.

## Early childhood development

A child's development is decisively influenced not only by the parents but also by the social environment. Different lifestyles, value systems and patterns of behaviour inform the lives of children growing up in the metropolis. Modern living environments are individualised, while universally binding and consensual standards are lacking. As a result, we can no longer speak of "one" childhood but rather have to consider that children in the city live in quite different ways. This individualisation is accompanied by greater workplace mobility. Flexible employment conditions with differentiated time structures are on the rise. As a result, the need of children for foreseeable and ordered daily rhythms is met only to a limited degree. It becomes increasingly difficult to delimit children's lives from the world of adolescents and adults. This is shown most clearly by the pedagogisation of childhood: children are supposed to perform effectively already at a young age; the kindergarten becomes a preschool. To cope with these changes, the daily routines of children must be organised as well. Individual living environments are perceived as separate and distinct islands to and from which children are "transported". This experience of flexibility obviously affects the physical conditions of youngsters. Thus illnesses formerly exclusively diagnosed in adults are increasingly often identified in children as well.

## Psychology: basics of development

Innate predispositions and the environment mutually determine the development of children to varying degrees, depending on the respective area of development. Of course, the differences between individuals are massive. There are guidelines for every area of development, if normal development is delayed in any of these areas, appropriate remedial measures should be undertaken immediately.

Strictly speaking, the psychological development of the child begins in the womb; for example, the sensory organs of newborns are almost fully functional. Thus highly different temperaments already emerge at birth.

In addition to its importance for the development of motor skills and language, infancy – defined as the period from birth to the end of the first year of life – takes on a particularly significant role in the development of the individual's social and attachment behaviour. At this age as well as at the stage of infancy (1-3 years of life), development is especially fostered by playing and

being social interactiv. The international standard for crèche care at this age is one caregiver for four children, which is often impossible to provide for financial reasons. In early childhood (3–6 years of age), most children already attend kindergarten. For youngsters experiencing the separation from their main attachment figure as particularly difficult, this period of detachment must be handled with great sensitivity. Middle childhood (6–11 years of age) is characterised by school. School readiness is a key prerequisite for learning success and is ascertained in an examination to clarify whether the child in question requires a preschool year before attending primary school. Cognitive development should absolutely be taken account of to be able to provide adequate tuition. In case of problems at school, it is essential to react quickly and find a solution together with the teaching staff. Adolescence (11–21 years of age) is composed of pre-puberty, puberty and pre-adulthood and as a rule sets in one to two years earlier in girls than in boys. Over the past 100 years, the onset of this phase tends to occur at an increasingly young age. Parallel to the onset of the reproductive phase, i.e. menarche and maturity of primary and secondary genital organs in girls, it is common to observe a performance drop which, however, should not dramatically affect the young person's school career if adequate support and care are provided. Conflicts due to the adolescent's gradual detachment from the primary reference persons or parents are "pre-programmed", since girls and boys undergoing this life phase need to establish their individual personality, their own notions and goals and above all their own self-perception. While the parents act as models, the young person also has to become independent to accelerate the process of individuation. This leads to feelings of uncertainty and destabilisation and also renders young people more vulnerable. Relationships and attractiveness are being tested. Although in many ways conflict-laden, this phase also offers the opportunity to develop a responsible, mature relationship with the parents. Due to a lack of personal and social resources of their own, some parents are moreover (over-) challenged by this development. Here, parents-counselling-services can offer important support.

## Sociodemographic trends and perspectives in vienna

In the recent past, Vienna's demographic development has been characterised by a strong population growth, which is expected to be continued. The number of deaths is declining, with mortality risks decreasing not only for older adults but also for children and young people. Life expectancy has increased. Since 2004, Vienna has been recording a net population growth (number of births over deaths). In 2011, 245,314 children were living in Vienna. Since 1970, the total fertility rate has been constant at approx. 1.4 children per woman. The average fertility age has risen further and currently stands at 29.8 years. Household and family structures, too, have changed over the past decades: single households have increased, while multi-person households have decreased. Flat sharing, patchwork families, single parents or life partnerships are more and more replacing the traditional family.

The compatibility of work and family is continuously improving. Free kindergarten places for all children were introduced in 2010. 93% of the children attending such facilities are provided with whole-day care, thus enabling both parents to work full-time. 34% of women working throughout the year as well as 12% of men have part-time jobs. The ongoing concentrated provision of additional childcare places will improve the childcare quota even further.

Every year, approx. 15,700 first-formers in Vienna begin their school career. In all, the lower cycle of the **Allgemeinbildende höhere Schule** (academic secondary school) has more pupils than the **Hauptschule** (general school) or **Neue Mittelschule** (new secondary school). According to forecasts, the number of pupils in compulsory schooling will increase further (2020: 226,345 pupils).

## Epidemiology

### Pregnancy – delivery – influence of perinatal factors

#### Care for newborn and premature babies

6.7% of newborns (1,208 in absolute figures) in Vienna presented a birth weight of less than 2,500 grams; 9.5% (1,712 in absolute figures) were born before the 37th week of pregnancy. Premature births, congenital defects and complications at birth are the most frequent causes of morbidity and mortality in the neonatal period as well as the causes of potential late sequelae. The maturity of the unborn child in the womb is decisive for the later health status of the newborn. In 0.2% of infants, congenital defects were ascertained at birth; 1-2% of all newborns suffer periparturient asphyxia. Progress in the field of obstetrics has entailed a marked decrease of periparturient complications. This is countered by the growing number of Caesarean sections (2010: 28.5%). In Vienna, premature and sick babies are cared for by the neonatological wards of the Perinatal Centre of the Vienna General Hospital/Vienna University of Medicine, the Perinatal Centre of the Social-Medical Centre East/Donauspital, the Glanzing Children's Hospital at the Wilhelminenspital, the Preyer'sches Kinderspital and the Krankenanstalt Rudolfstiftung.

#### Infant nutrition and breastfeeding

The nutrition of newborns is optimal if the baby is exclusively breastfed or fed mother's milk from the bottle in the first six months of life. Towards the end of the first six months, complementary food should be added to the mother's milk. After the first year of life, infants can participate in family meals and digest these very well. According to a nationwide study, 93% of mothers breastfeed after birth. After three months, 60% of babies are fully breastfed while 12% are partly breastfed. The corresponding figures for babies aged six months are 10% and 55%. At the moment, Vienna has three "breastfeeding-friendly hospitals": Semmelweis-Klinik, Krankenhaus Göttlicher Heiland and Krankenanstalt Rudolfstiftung. This programme fosters optimal care and the promotion of breastfeeding in obstetric and maternity wards. Moreover, parents can obtain preliminary information and advice free of charge at family midwife centres, parents' counselling centres, parent-child centres, outpatient maternity wards, etc.

#### Teenage pregnancies

Unwanted pregnancies in adolescence create a particularly stressful situation for young people, especially for girls. Many decisions need to be taken which will affect the whole life of the young person and whose consequences are impossible to assess at this moment. The young person's life situation creates an additional challenge: interrupted schooling, no occupation, no financial resources or social support and a lack of housing. In 2010, 4.2% of all births in Vienna (747 infants) were due to young mothers aged 11 to 19 years. To protect young people from this situation, information is needed, especially in the phase of budding sexual curiosity in order to complement the youngsters' often sketchy understanding of the female menstruation cycle, teach the correct use of contraceptives and instil a responsible attitude towards one's own body. This is inter alia promoted by the sex education film "Sex we can?" and the sex education workshops offered at Vienna's schools. Municipal Department 11 – Youth and Family Welfare Office and the association "YoungMum" extend counselling and care for pregnant teens and teenage mothers in this stressful life phase.

## Selected diseases and disorders

### Discharges from inpatient wards

In 2010, 46,754 hospitalisations (42% girls, 58% boys) of children and young people aged 0 to 15 years were recorded in Vienna. The most common causes of hospital stays include respiratory diseases, cancer, injuries and intoxication as well as psychological and behavioural disorders. Over the past 20 years, the diagnostic groups of "neoplasms" and "psychological and behavioural disorders" have significantly increased. In addition to improved diagnostics and the resulting, more frequent diagnoses as well as improved and longer concomitant therapies, this rise might also be due to an increasingly dense network of care facilities. Conversely, the number of discharges from hospitals in the diagnostic group of "respiratory diseases" has dropped markedly. This might be due to the increased outpatient therapies and treatment in physicians' surgeries as well as to the upgrading of outpatient care options.

### Infectious diseases

Viral infections of importance for children include inter alia measles and rubella. The Austrian vaccination recommendations provide that children should be vaccinated twice against measles, mumps and rubella already in the second year of life. Under the federal vaccination scheme for children, these vaccinations are free of charge. As a result, measles and rubella occur only rarely nowadays. Since 2002, physicians are obligated to report all cases of measles; this obligation was also introduced for rubella in 2006. In 2010, ten cases of measles were reported for children aged under 15 years in Vienna; there was no case of rubella. An exceptional situation was created in 2009 by the pandemic caused by A/H1N1 (2009) influenza. 357 cases of this influenza confirmed by the lab were reported in the 2009/10 influenza season in Vienna for the age group of 0 to 15 years. In the field of bacterial infections, cases of bacterial food poisoning are registered most frequently. Bacterial meningitides attain peak age in infants and may be of special importance due to their progress. In keeping with the findings of an epidemiological study conducted from 1995 to 2010 by the Austrian Agency for Health and Food Safety, the age group of 0 to 5 years was most frequently affected (Group B strep disease in 5.88/100,000 person-years and Group c strep disease in 0.61/100,000 person-years).

### Cancer

In the last decade, 30 to 45 children aged under 16 years were annually diagnosed with cancer in Vienna. In 2008, this figure concerned 14 boys and 15 girls. In the same period, two girls and three boys died of cancer. Out of all forms of infantile and adolescent cancer, this includes: leukaemia (31.0%), malignant neoplasms of the brain and nervous system (27.6%) and non-Hodgkin lymphoma (17.2%). Tumours of the brain are the most frequent cancer-related cause of death in childhood and adolescence. Depending on the diagnosis and stage of the disease, the current average cure rate exceeds 70% and even 90% in case of acute lymphatic leukaemia.

Every year, the St. Anna Kinderspital, Austria's biggest oncological centre specialising in children and adolescents, takes care of 120 youngsters newly diagnosed with cancer. The majority of patients come from the Federal Provinces of Vienna, Lower Austria and Burgenland. Approx. 50 children suffering from brain tumour are treated annually at the University Clinic of Paediatrics and Adolescent Medicine of the Medical University of Vienna. The Children's Cancer Research Institute (CCRI) of the St. Anna Kinderspital and the Documentation Centre of Children's Cancer Research contribute enormously to providing cutting-edge, state-of-the-art care for children and adolescents suffering from cancer.

### **Diabetes**

Type 1 diabetes mellitus occurs in childhood with a frequency of over 90%. Type 2 diabetes mellitus is diagnosed much more rarely in children and adolescents aged under 14 years. A positive case history in the family, presence of the metabolic syndrome or being part of a risk population increase the chances of being diagnosed with diabetes. Only little information is available regarding type 2 diabetes in childhood; since 2000, it is attempted in the context of diabetes incidence studies to obtain an overview of type 2 diabetes; due to the small number of cases, though, the data are not very reliable. At the moment, the incidence rate seems to be approx. 1 per 100,000 person-years.

Over recent decades, the manifestation rate of type 1 diabetes mellitus has increased in Austria (as elsewhere) by 3% and is particularly dramatic for children under five years of age. The situation for Vienna is similar. The standardised incidence rate for type 1 diabetes mellitus in children under 15 years of age is 14.1/100,000 person-years. In addition, the blood sugar level is influenced by nutrition, emotions, exercise, diseases, etc. To ensure a successful therapy course, parents, children and all caregivers involved need to be trained accordingly. Medical care is extended by four children's wards of Viennese hospitals offering outpatient services for diabetes patients. Transition outpatient wards safeguard continuous diabetes care for young patients close to adulthood.

### **Overweight and obesity**

More and more children are overweight. The data captured in Vienna within the scope of the HELENA Project show that 22.9% of girls and 22.2% of boys are overweight and obese. An evaluation of the data of the Austrian Obesity Report 2006 for Vienna by age groups shows that in particular the age groups from 7 to 9 years (girls: 21.8%; boys: 22.6%) and from 10 to 12 years (girls: 19.4%; boys: 21.7%) are affected by overweight and obesity. Differences emerge with regard to the criteria "school type" and "migration background". Thus children attending the Hauptschule type of secondary schools as well as children and young people with a migration background present a higher prevalence. Therapeutic methods must hence be multidisciplinary with a focus on long-term goals, involvement of the family in the change of diet, increase of physical activity and psychological assistance. Prevention plays a particularly important role. The Vienna Forum for Overweight and Obesity, the Vienna Network of Health-Promoting Schools (WieNGS) as well as a variety of courses within the context of the initiative "rundum gesund" (Healthy All Round) – this is a service by the Institute for Women's and Men's Health in co-operation with the Fund for a Healthy Austria (FGÖ) and the Vienna Health Promotion Office (WIG) – take care of this task. "rundum gesund" is the only project in Austria to focus on culturally and gender-sensitive health promotion to counter obesity. It covers a comprehensive programme targeted at socially disadvantaged women, men and families with or without a migration background and follows a culturally and gender-sensitive approach.

### **Neurological diseases**

Approx. 20% of all diseases of children and young people are of neurological origin. They are hence relatively frequent and often chronic. The prevalence of various neurological diseases can only be estimated: 2 to 2.5% for infantile cerebral palsy, 3 to 6% for epilepsy, 0.53% for hereditary neuromuscular diseases, etc. Often, these diseases impair not only the existing functions of the nervous systems but also the potential for future development phases. Children with developmental disorders of unclear origin are mainly taken care of by diagnostic and therapeutic centres of publicly funded institutions, e.g. at the Centre for Development Promotion (ZEF) or the outpatient wards of the association VKKJ. In Vienna, the diagnostics

of impairments and diseases of the infantile nervous system as well as acute therapy are a competence of the departments for paediatrics and adolescent medicine.

### **Heart diseases**

Around eight to ten out of 1,000 newborns suffer from a congenital heart defect. Thus heart defects are the most common congenital malformations in childhood. The defect is usually diagnosed already during pregnancy by cardiac ultrasound. This tentative first diagnosis is followed up by other examinations conducted at specialised centres. In 2010, the Gynaecological Clinic of the Vienna University of Medicine thus conducted 526 foetal echocardiograms. In approx. 10% of the cases (53 fetuses), a cardiac defect was confirmed; in six other cases, foetal cardiac arrhythmia was diagnosed. Ventricular septal defect occurs most frequently (30% of all cases). In 2011, 206 cardiac surgery interventions were carried out at the Infantile Cardiac Centre of the Vienna University of Medicine at the Vienna General Hospital. Over 50% of these operations (52 newborns, 64 infants) concerned children under one full year of age. In addition, 269 cardiac catheterisations were conducted as well. Paediatric outpatient wards extend long-time care to children with congenital heart defects, cardiac arrhythmia, congenital myocardial insufficiency and inflammatory heart diseases.

### **Allergies and asthma**

Allergic diseases are on the rise and in fact are among the most common infantile diseases. Passive smoking during childhood, allergic conditions of parents, excessive hygiene or a high socio-economic status of the family are among the factors increasing the probability of triggering an allergy. Boys are more frequently affected by allergies than girls. Allergic asthma is the most common chronic disease and often occurs before the fifth year of life. An early diagnosis and adequate therapy have a strongly positive effect on the further progression of the disease. The findings of the Vienna Health and Social Survey show that approx. 17% of boys and 14% of girls aged under 15 years suffer from an allergic disease, with children aged between 6 and 9 years being most frequently affected (20% of boys and 17% of girls). Asthma was diagnosed in approx. 2% of girls and boys; boys are in particular affected at the age of 0 to 2 years (3.5% of boys and 0.8% of girls).

### **Juvenile idiopathic arthritis (juvenile rheumatoid arthritis, JIA/JRA)**

Juvenile idiopathic arthritis is the gravest and most common form of rheumatic disease in children. It is a chronic-inflammatory degenerative disease of the joints occurring in childhood. In Vienna, it affects about 800 children and adolescents under 16 years of age. Patients are treated at the outpatient wards for juvenile rheumatoid arthritis of the Vienna General Hospital/Vienna University of Medicine, of the Social-Medical Centre East, of the Preyer'sches Kinderspital and St. Anna Kinderspital (in co-operation with the Vienna University of Medicine). As a rule, the disease is quickly diagnosed by a physician in his/her surgery, which ensures that patients are rapidly transferred to a centre for juvenile rheumatoid arthritis. In recent years, patients face a much better prognosis. However, one third of the patients suffering from JIA in childhood must expect marked limitations of joint mobility in adulthood, while another third will be affected by slight functional impairments. Another third of the patients are fully cured and need not expect joint mobility impairments in adulthood.

### **Postural impairments**

In the 2010/11 school year, a free-of-charge routine orthopaedic screening was carried out on a total of 2,033 primary school pupils in Vienna. The findings of this examination present

a very high prevalence of spinal anomalies (one in two children). These are mainly due to false posture, mainly of muscular but also of scoliotic origin. The examination also looked at alterations in foot and leg development (one in five children) as well as at overweight (one in seven children). To counteract this development effectively, the City of Vienna co-conducted the project "Bewegtes Lernen" (Learning in Motion). The current "Learning in Motion Initiative" was set up as an independent element of Vienna's health promotion programme. In 2012, the "Nationaler Aktionsplan für Bewegung" (National Action Plan for Physical Activity) was adopted and implemented; in due course, it will entail a wealth of positive initiatives to promote exercise and physical activity in Vienna.

### **Dental health**

The 2006 survey conducted by the co-ordination point for dental health of ÖBIG (the Austrian federal institute for health) indicated that the number of six-year-old children who are free of dental caries has increased throughout Austria (1996: 47%; 2006: 53%). This positive development is the outcome of years of dental health education in kindergartens and primary schools, e.g. on the basis of the successful anti-caries programme "Tipptopp Kariesstop". However, a small segment of children, i.e. children from low-income families with low educational attainments as well as children with a migration background, are at particular risk of developing caries. Early infantile caries is on the rise. On the one hand, cariogenic germs are transferred to the child due to inappropriate behaviour of the parents, e.g. by feeding the infant liquids containing sugar in the evening or at night from the baby bottle (to make the child sleep), using the same spoon for themselves and the child, etc. On the other hand, inadequate oral hygiene, inappropriate nutrition or irregular visits to the dentist also act as risk factors. Due to the latter, caries is often only detected at an advanced stage. Physically and/or mentally challenged persons in particular constitute high-risk patients regarding dental health. The dental clinic for young people of Municipal Department 15 specialises in providing treatment and care for children and adolescents up to 18 years of age as well as for disabled persons of any age. Its therapeutic activities comprise approx. 10,000 treatment sessions annually, one third of which is accounted for by treatments at the orthodontic ward. In 2010, approx. 1,500 treatment sessions were conducted under sedation or general anaesthetic.

### **Mortality of infants and children**

Infant mortality has been very low for numerous years. In 2010, 4.7 infants per 1,000 live births were stillborn; 3.0 infants per 1,000 live births died in the first hours post-partum; another 3.7 infants per 1,000 live births died during the first weeks of life, and 4.3 infants per 1,000 live births died within the first 28 days post-partum. Congenital defects were the single most frequent cause of infant mortality and accounted for about one fourth of deaths. One fifth of the mortality rate resulted from a too short term of pregnancy or too low weight at birth. Sudden infant death caused the decease of six infants in Vienna. In the age group from 0 to 15 years, a total of 143 children died in 2010, of which 104 cases occurred in the first year of life. Perinatal affections, mainly resulting from too short term of pregnancy or too low weight at birth, and congenital defects were the main causes of death in the first year of life. In the age group from 0 to 15 years, seven children died of cancer (ICD-10 C00-C97); six, of infectious and parasitic diseases (ICD-10 A00-B99), while four children each died of a disease of the group "diseases of the nervous system and sensory organs" (ICD-10 G00-H95) or as a result of accidents (V01-X59), and three children died from nutritional and metabolic diseases (ICD-10 E00-E90).

## Psychosocial health

### Developmental disorders – development diagnostics

Development is a complex process that unfolds in the interaction between the child, his/her primary reference systems and the environment. Development is influenced by the biopsychosocial predispositions of the child as well as by favourable or inhibiting environmental conditions. It is the task of development diagnostics to identify retardations, disorders and problems related to development as early as possible and to initiate appropriate care or therapy, if required. Due to a lack of standardised epidemiological studies on the prevalence of developmental disorders in children and young people for all of Austria, there is a dearth of reliable data. Experts assume that around 20% of all children are at risk. This trend is confirmed by the development diagnostics of the City of Vienna. In the context of Vienna's programme for children at risk, the parents of newborns presenting risk factors either during pregnancy or before, during and directly after birth are invited since 1979 to take part in developmental assessments at one of two facilities of MA 15. Children considered at risk are identified by the obstetric and paediatric wards of hospitals. This ensures early diagnosis of problems, abnormalities or risks, suitable counselling, promotion and therapy in the spirit of preventive paediatrics. Counselling services to improve parenting skills and strengthen parents' ability to deal with their child in a sensitive, nurturing and appropriate fashion are essential.

### Protecting children – supporting families

Municipal Department 11 – Youth and Family Welfare Office is the biggest organisation for child protection in Vienna committed to preventive and proactive child protection. Numerous measures and services, targeted assistance, interdisciplinary co-operation of social workers, psychologists, social educators and other specialists are to promote the mental and physical health of children and young people and support positive parenting already before birth. Parents and children may count on a great variety of counselling points in Vienna. For example, the services of parent-child centres are mainly aimed at improving communication and preventing psychological and physical violence in the family; moreover, parents in difficult situations are assisted in coping with their parenthood more effectively and hence enabled to derive greater joy from their situation: in 2010, 2,211 marriage and family counselling sessions and 2,713 family-planning counselling sessions were conducted. Furthermore, mothers and fathers can attend meetings for parents of babies or toddlers or take part in parent-child meetings.

The Competence Centre for Integration Issues extends social services to children with disabilities. A support and problem-relief concept is developed together with the families. In 2010, the Competence Centre counselled a total of 86 girls and 117 boys.

Lectures by experts at the "Parent School" inform parents-to-be about a variety of topics and thus enable them to prepare for the future life with their child or children (2010: 3,921 visitors on 346 evenings). The City of Vienna offers numerous preventive and early-assistance services to preclude the emergence of major family crises. The counselling services want to enable clients to help themselves, so that families will effectively cope with future challenges in their lives and relationships.

### Eating disorders

The eating disorders anorexia nervosa, bulimia nervosa and binge eating disorder are among the most severe psychological disorders in adolescents. Causes of these disorders include lack of self-esteem, impaired self-confidence, identity problems and a negative body image.

Eating and fasting determine the lives of sufferers. Anorexia is characterised by deliberate, massive weight loss; bulimia, by recurring overeating with loss of control and subsequent compensatory behaviour; binge eating disorder, by recurring overeating with loss of control yet without compensation. More than 90% of all eating disorder cases concern girls or young women. According to hospital discharge statistics, the diagnoses of anorexia nervosa and bulimia nervosa have risen significantly since 2001 across Austria and also in Vienna. However, these figures do not reflect actual numbers by far, as in addition to poor insight into their syndrome on the part of sufferers, eating disorders are often diagnosed not at all or too late even by experts. According to surveys, only about 2% of general practitioners are able to spot eating disorders in patients despite the typical symptoms. Risk factors for the emergence of disturbed eating behaviours including fully-fledged eating disorders are teenagers' dissatisfaction with their weight and body image or the preoccupation with a variety of diets. Current data are provided by the HBSC study for Vienna: 52% of the 15-year-old girls participating in the study feel that they are too fat, although only 14% are actually overweight; 25% follow a diet.

The Vienna Women's Health Programme is especially dedicated to this issue and already in 1998 developed a range of basic services including phone counselling (eating disorder hotline), training courses for teachers and social workers concerned with children and young people as well as a platform against eating disorders to act as a network offering low-threshold assistance at an early moment. Moreover, numerous school workshops involving young people were organised in recent years to sensitise girls and boys for this issue. The objective lay in helping young people in a school setting to develop a positive body image and to prevent the discrimination and mobbing of overweight children and adolescents suffering from eating disorders.

### **Psychiatric disorders in childhood and adolescence**

Paediatric and adolescent psychiatry is concerned with the treatment, prevention, rehabilitation and assessment of severe psychological, psychosocial, psychosomatic, developmental and neurological disorders or disturbances and of psychological and social behavioural impairments. Paediatric and adolescent psychiatry promotes a holistic diagnostic approach that is reflected in the "multi-axial classification scheme" (MAS) of WHO according to the ICD-10 classification system. The findings derived from the German KiGGS and BELLA study show that approx. 20% of children and young people present indications of psychological disturbances; 10% would actually require treatment. On the basis of these data, it is possible to derive the following estimates for Vienna: 50,000 children and young people under 15 years of age present indications of psychological disturbances, while 25,000 children and young people would require treatment. The most common disturbances include emotional problems, behavioural disturbances, hyperactivity and ADHD as well as problems with peers. The volume of psychotropic drugs prescribed to children diagnosed with the "trendy disorder" ADHD gives cause for concern: the soaring number of patients in treatment for this syndrome points towards over-diagnosis (2006: 4,673 medication prescriptions for 809 children; 2010: 7,730 medication prescriptions for 1,557 children).

### **Physical, psychological and sexual violence**

The consequences of physical or psychological violence are far-reaching and often entail significant acute and long-term physical, psychological, psychosomatic as well as psychosocial sequelae in victims. If the perpetrator is a family member, which occurs most frequently, the situation is particularly delicate for children and young people, since conflicting loyalties often

make them shy away from confiding in outsiders. According to an Austrian prevalence study of 2011, 40% of women and 50% of men fall victim to psychological or physical violence in their childhoods. Following police interventions, the association "Domestic Abuse Intervention Centre Vienna" in 2010 assisted 5,914 victims of violence in the family. In the same year, the four women's shelters of Vienna took in 538 children. Likewise in 2010, the Youth and Family Welfare Office conducted 9,964 on-site inspections to assess the risk to women and children. According to the police crime statistics, a total of 1,884 cases were reported. In 2001, a curriculum for hospital staff was introduced as the first project of its kind in Austria to facilitate the early identification of violence victims (women and children); the project as developed on an initiative of the Vienna Women's Health Programme and implemented in two-day workshops for each hospital. More than 800 physicians and nurses took part in this early identification and communication training. Since 2004, hospitals with paediatric wards have a legal duty to institute child protection groups to safeguard the protection of child victims. One central task of these groups is to decide whether or not to report each individual case to the Youth and Family Welfare Office.

### **Addiction-afflicted family systems**

Substance abuse during pregnancy can have adverse effects of varying severity on the health of the future mother, the foetus and the newborn (2010: 87 births by mothers suffering from addictions). Good care for the mothers before, during and after birth is essential to aid their medical and psychosocial health. This can lay the basis for a positive bond between mother and child, which in its turn contributes towards a marked improvement of the child's health and development. Various working groups and co-ordination meetings are organised to ensure adequate, high-quality care for all substance-dependent pregnant women and mothers with young children. KISAM (an acronym of the German expression for "children of substance-dependent mothers") is the name of the relevant co-ordination group of Municipal Department 11 that also involves the Drug Commissioner of the City of Vienna, the Vienna Addiction and Drug Co-ordination, the outpatient ward for child development of the NRZ Rosenhügel (neurological rehabilitation centre), of the Preyer'sches Kinderspital and Municipal Department 15. Numerous working groups like that of Vienna's drug help units ("Children from Addiction-afflicted Families") or projects such as the one run by the Preyer'sches Kinderspital ("Optimised In-patient Care for Newborns of Substance-dependent Mothers") try in co-operation with Municipal Department 11, the Vienna Addiction and Drug Co-ordination, the outpatient ward for child development of the NRZ Rosenhügel and the Wilhelminenspital to improve the quality of available services. Moreover, the co-operation with outpatient wards for pregnant women at risk, obstetric wards and paediatric wards of Vienna's hospitals was further intensified as well.

Manifest addiction problems of children or young persons require multidisciplinary care and treatment with the particular involvement of paediatric and adolescent psychiatry as well as networked co-operation of all experts and institutions.

## Health behaviour in school-aged children (selected findings of HBSC study)

The following assessments regarding the health status and behaviour of schoolchildren aged 11, 13, 15 and 17 years as well as several key determinants of these are based on findings of the 8th HBSC survey conducted during the 2009/10 school year.

Both for Vienna and the rest of Austria, it was found that the age of respondents correlates relatively markedly with most variables. Thus e.g. life satisfaction and physical activity diminish with age, while subjective health complaints and the consumption of alcohol and tobacco are increasing. Generally, the interaction between sex and the indicators considered is less marked. Girls tend to view their subjective health as worse and also tend to engage in health-damaging behaviours less frequently than boys. One exception is tobacco consumption, where girls have caught up with boys. Furthermore, it was ascertained that some of these interactions are more developed in Vienna than in the rest of Austria. Irrespective of sex and age, Vienna in recent years recorded somewhat positive trends regarding subjective health and subjective health complaints.

The effect of socio-economic status is slight to moderate, especially with regard to subjective health and life satisfaction, with pupils from less affluent families tending to give a lower assessment of these factors. The strongest influence on the health and health behaviour of schoolchildren in Vienna is exerted by the psychosocial situation of the family. Children and young people experiencing a high degree of affection from their parents report markedly better subjective health, markedly reduced subjective health complaints, particularly high life satisfaction and also present a lower risk of smoking. Moreover, a positive attitude to attending school likewise improves subjective health and reduces the risk of smoking or drinking alcohol as well as exerting a positive effect on the intake of fruit and vegetables.

## Kindergartens and schools as living environments

### Health promotion in municipal kindergartens

Private and municipal childcare facilities in Vienna offer a total of approx. 84,000 places for children. Municipal Department 10 – Vienna Children's Day Care Centres provides roughly half of the places needed and in addition supports private daycare centres, which account for a total of 47,500 places. The implementation of the Vienna Education Plan in 2006 strongly highlighted the importance of kindergartens as an elementary educational institution. A significant aspect of this phase of education lies in providing a comprehensive approach to health promotion and health preservation. Health-promoting measures, e.g. dental prophylaxis or various initiatives supporting healthy lifestyles such as "Wirbeltrix – gesund wie nix" (for healthy development of the spinal column), "Kinder gesund bewegen" (Healthy Activities for Children) or the planting and growing of vegetable patches, are widely taken on board and implemented by kindergarten teachers.

### Healthy nutrition in childhood

Kindergartens as the basic level of the educational system are an important institution to embed health-conscious attitudes and behaviours during an early development phase. Through this institution, it is easy to reach out to the vast majority of children, which offers the possibility to offset health-related disadvantages due to social status, sex or a migration background. For this reason, kindergartens are a key setting for health promotion. Adequate nutrition

can exert an optimum influence on physiological and psychological development and guard against diet-related diseases such as diabetes mellitus, obesity or cardiovascular disorders. The nutritional concept "optimix" combines the findings of nutritional science, dietary habits and food preferences of children and young people. The outcome is an optimised and balanced mixed diet that safeguards supply with the recommended quantities of nutrients and energy carriers and is suitable for the whole family.

### **Survey: physical activity level of primary school pupils**

It is the objective of the survey "Physical Activity Level of Primary School Pupils in Vienna" to identify favourable factors as well as potential barriers that influence the activity behaviour of primary school pupils and to obtain an overview of the attitudes of children, parents and school principals regarding sports, exercise and the willingness to walk certain distances on a daily basis. A qualitative methodology was chosen. For this purpose, eight interviews with eight principals as well as two focus group discussions with a total of 19 primary school pupils and two focus group discussions with 17 parents were conducted. According to the survey, children, parents and principals attach great importance of the physical activity of children. The children themselves also have a good opinion of the beneficial effects of exercise on their wellbeing and fitness. With regard to the Austrian recommendations for health-enhancing physical activity, it may be argued that these are already largely implemented during class. Thus the recommendation that children should engage in physical activity at least 60 minutes per day is normally attained without problems. According to the survey, modern Viennese primary schools do not have their pupils engage in sedentary tasks exceeding one hour. Apart from individual factors, such as pleasure in exercise or motivation, social factors including the example set by parents, teachers and above all peers also exert influence on the activity behaviour of primary school pupils. Key structural resources mentioned in the survey mainly refer to the availability of green spaces and the possibility to travel safely from and to school.

## **Care and therapy structures**

### **Structures of medical and socio-medical care**

In all, Vienna offers a total of 184 paediatric surgeries, with a local concentration around the General Hospital of the City of Vienna, the St. Anna Kinderspital and the Krankenanstalt Rudolfstiftung. The General Hospital houses university clinics for paediatrics and adolescent medicine, paediatric surgery and paediatric psychiatry. The St. Anna Kinderspital specialises above all in the therapy of infantile cancer, while the Glanzing Children's Hospital at the Wilhelminenspital focuses on paediatric infectiology, and the Donauspital, on perinatal medicine and paediatric surgery. Approx. 42% of all paediatric surgeries in Vienna are run by doctors who can be freely selected by patients against full or partial reimbursement of the fee paid. Most surgeries work Mondays through Fridays between 9 a.m. and noon and Mondays through Thursdays from 2 to 5 p.m. Compared to the period from Monday to Thursday, only about one third of the surgeries for paediatric and adolescent medicine also receive patients on Friday afternoon. For working parents, these standard surgery hours mean that they can only see their paediatrician Friday morning; in the afternoon, they have to consult the outpatient wards of hospitals. Vienna offers numerous socio-medical services provided by public healthcare institutions in co-operation with the social and educational facilities of the City of Vienna on behalf of the population.

Thus Vienna operates 24 parent counselling centres, a medical service for municipal kindergartens and a medical service for schools. Moreover, many other facilities, such as e.g. the Psychological Service, offer prompt and free-of-charge psychological counselling. In addition, there are various services focusing on development diagnostics and on the care for, and assistance of, infants and toddlers whose development is retarded or at risk or who are affected by disabilities. Child protection services extend help in cases of violence against children and young people.

#### **Ambulance interventions**

In 2011, Vienna's ambulances provided a total of 13,419 interventions involving children and young people. Most operations were motivated by slight to moderate health problems. 20% of interventions were due to respiratory infections and influenza. Conversely, the number of interventions necessitated by excessive alcohol consumption was very low.