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PREVENTIVE HEALTH SERVICES FOR CHILDREN 0-18 YEARS

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TODAY'S HEALTH, TOMORROW'S WEALTH
NEW DIMENSIONS IN PREVENTION IN CHILDHOOD

KIEV, 1985

Preventive health services for children 0-18 years

by

J.M.L. Phaff

This background paper on preventive health services for children and adolescents is based on the situation in the Netherlands and on the reports of a limited number of European countries*. Some statistical data were used from WHO files.

1. DEMOGRAPHY AND STATISTICS

Children 0-18 years comprise about a third to a fourth of the population in Europe, with a marked tendency to decrease due to falling birth rates. The population is growing older; the group above 65 is rising. Life expectancy is well above 70 years (table 1, 2).

Mortality in all childrens age groups has declined in a major way during the last decades, which is most conspicuous in the perinatal and infant group. The rates in these groups have been halved or more and are nearing 10 per mille perinatal and less than 10 per mille in the infant group (0-1 years) (table 3).

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Mortality rates from 1-4, 5-9 and 10-14 show a tendency to converge at 0.3 to 0.4 per thousand - the lowest rate of any in life. No major changes are shown in the last decades. Adolescent mortality (15-18 years) remains double the 0-14 mortality, 0.6 to 0.8 per thousand. The higher mortality rate in boys starts at birth. In the adolescent group the male death is twice the female death.

The main causes of death in the first year of life are congenital anomalies, perinatal anoxia and prematurity, while later on accidents and malignancies are gaining the first rank. Nationwide statistics however tend to hide regional differences in one and the same country. Perinatal mortality for instance can be double or thrice in remote rural regions. And even in the same regional, differences are showing up between social classes.

Data on morbidity in most countries are meager and inadequate. Available sources are coming mostly from hospital and are oriented to somatic diseases. Sometimes morbidity statistics are available, established by questionnaires addressed to parents or young people themselves (UK, Finland, Sweden). School health services provide in some regions data on referrals, on health functioning or on school functioning (tables 4, 5, 6).

Major changes in morbidity are shown in health profiles, registered as hospital entrance diagnosis:

In Greece infectious diseases, deficiency diseases and rheumatic fever disappeared from 1960 to 1980 (table 7).

Changes in health profile are obvious in the primary health care level, too. Pediatricians in Greece registered that 45% of office visits and 80% of telephone calls could be characterized as health surveillance requests. They

include questions about nutrition, immunization, behaviour problems, schooling problems and child rearing problems.

Continuing registration of congenital malformations is only established in a limited number of countries. Incidence can be guessed at 2% at birth, growing to double that number after some years.

Accidents are still the leading cause of mortality in children and adolescents in developed areas. They account for over half or more of all deaths in the adolescent age group. Road traffic accidents are the most common type of fatality, they are more frequent in boys than in girls.

Some countries (Belgium, Finland, Netherlands, Sweden) report a significant decrease during the last decade. This is probably due to general policy measures, like hard helmets, safety belts, maximum velocity, cycle tracks, playgrounds. Health education by classic methods is probably not very successful, except if youngsters are actively participating in education projects (table 8).

2. MAJOR SOCIAL CHANGES

Lifestyle has changed in a major way in the last two decades. The per capita income rose three to five times, although there are still differences between social classes (table 9). The caloric value of daily food has increased, with a higher consumption of meat and a decrease of cereals, sugar, butter. Consumption of fruits and vegetables increased. The use of alcohol has increased tremendously, as well as smoking of cigarettes. Illiteracy is rapidly diminishing, the general level of education is rising. The general

hygienic situation is improving, supply of drinking water and sewage system is covering most of the inhabitants in developed regions.

The family is still the cornerstone of society, but changes are showing. Single parent families are growing, in some countries one out of every three children are living in a single-parent family (Sweden)- Out of wedlock births are growing. The divorce rate is shooting up everywhere (table 10). The extended family is diminishing; one child families are becoming more common. Children from divorced couples are labelled at risk, prevention of emotional and social problems is lagging behind (table 11).

Changes in the attitude of young mothers to their children and family are attributed to feminism and emancipation. Young mothers are no longer exclusively living in the home to rear their children and to care for their husbands. A growing number work at a job either parttime or full time. Fathers are much more involved in the household and in rearing the children. A new attitude toward sharing responsibilities has developed.

Sexual lifestyles show major changes, sexual activity is starting earlier and is more accepted. Family planning methods and services are growing and used, but in many countries need and demand are showing a wide gap. Pregnancy in teenagers appears to be lower in Europe than in USA, but even in Europe big differences exist between countries, which are worth studying (table 11).

Data on abortion rates, legal or illegal, are showing tremendous differences, leading to the conclusion that abortion in some countries is used as a method of family planning (table 12). Unemployment is growing and becoming a major problem of society. Overall rate in Europe (except in USSR and eastern Europe) is 10%, but the rate for young people from age 15 to 24 is

25% to 60%. At stake is much more than jobs and work satisfaction.

Unemployed young people are more likely to commit suicide, more susceptible to drug abuse, more prone to out-of-wedlock pregnancies and to prostitution, more inclined to delinquency. Unemployment is worst among the children of ethnic minorities, who came during the boom years of the 1960's. They are subject to widespread discrimination with a distinct racial edge.

3. MAJOR EDUCATIONAL TRENDS

Compulsory education has lengthened from 6 to 15 years in most countries. A tendency can be seen to start training earlier, nursery schools being integrated to the basic school and made compulsory too. Creches and toddler playgroups are growing fast, although need and demand do not meet. Teachers, especially of nursery schools, are quite aware of developmental problems and may not be forgotten in health surveillance and health education.

Classes are diminishing, half the size of two decades ago (average 25-30). Career orientation is starting very early, in the beginning of secondary school at age 13 to 14. This may lead to stress in adolescence if a wrong choice has been made or a career has been chosen for which no jobs are available. Stressing situations are also growing because more and more youngsters are applying for higher education and competition for a limited number of places is leading to a struggle in schools for examinations and a central place of cognitive learning. Discussion about the educational system is continuously going on. The trend is to give children more freedom of choice and to shift from cognitive learning to training in social skills and emotional areas.

The objectives of child rearing at home is changing, too, being less oriented on strict and formal attitudes and more oriented to tolerance, allowing more freedom for individual orientation and taking up responsibilities and decisions at an earlier age.

A proliferation of popular journals and TV programmes is spreading information in new ways of child rearing and education.

Physical activities and sports at school have a tendency to decrease, due to competition with cognitive learning. Provision for special education and training for children with physical and mental disabilities is growing, but still insufficient in many countries. A tendency can be seen for integration with normal education for all children. Parent participation is increasing. Parents are becoming involved with creches and playgroups, with basic school and secondary school activities. Discussion groups, project groups, learning groups are attracting parents to try to integrate school and community.

School meals are diminishing in the Netherlands.. School milk is still provided in some countries. Child guidance services are growing such as for school and education guidance, mental guidance, career guidance, drug and alcohol guidance. Problems for parents seem to be nowadays:

- more uncertainty about child rearing
- more single child families
- more single parent families
- unemployment of parents, future unemployment for young people
- drug abuse, alcohol abuse in parents and in children
- smoking habits
- suicide and attempted suicide
- truancy, delinquency, leaving home, adolescent prostitution

4. PREVENTIVE HEALTH SERVICES 0-4 YEARS

From the beginning of this century, preventive care for babies and toddlers has been organised in all European countries. However, the organisation of these services is different. They are either well organized and staffed by paediatricians and public health nurses as in the USSR and Eastern Europe, or organised on a minimum scale in health centres which mostly integrate curative and preventive work by general practitioners, nurses and midwives as in southern Europe. In many cases preventive work is done by private paediatricians. In between these organisation systems fall the northern and western European countries where well-baby clinics and toddler clinics are organized by the State or by private organisations. Coverage of these preventive systems is again different with a range of 90-100% in USSR, eastern, northern and western Europe and far less in southern Europe. In the last region (Southern Europe) private practitioner-pediatricians, general practitioners are filling the gaps.

In this chapter the situation of the Netherlands will be given with special attention to major changes in the last decade and to actual problems.

The objectives of preventive care for children are:

- to observe growth and development
- to detect handicapping conditions
- to implement immunisations
- to advise parents on feeding, hygiene, child rearing, safety
- to detect risk factors in the family, at home and outside the home, assessing risk situations.

Mothers are bringing their babies ten times to the clinic in the first year and their toddlers once a year. District nurses see mothers and children at the clinic, they make home visits three times during the first year and once a year until the age of four, when children enter kindergartens. In each area (about one to two million inhabitants) a full time organisation staff of doctors and nurses, trained in prevention health care, is supervising. They organise services, introduce new methods, provide refresher courses, organise experimental projects and counsel and advise the field workers. They coordinate communication with other health and social services.

In the clinic, a registration document is kept for each child, length, weight, head circumference, psychomotor and psychosocial development is registered. Screening tests for inborn errors of metabolism (PKU, hypothyroidy) hearing disorders, visual defects, orthopedic defects (hip dysfunction) are performed as routine. Advice is given to questions of the parents, anticipatory guidance is offered. Parents today are uncertain and have feelings of guilt due to lack of experience and to changing rearing attitudes. As for nutrition, advice is given on breastfeeding and bottlefeeding, vitamin AD and fluoride tablets are added. A slight rise of rickets has been noted among immigrant children.

Major changes in the last decade

- developing team work between doctors and nurses, in some cases alternate doctor and nurse clinic sessions are organised. More time is spend on team discussion before and after clinic sessions.

- job and task description of doctors and nurses(basis for evaluation)

- consultation with social workers and child psychologist in team sessions

- employing full-time doctors instead of part-time and fee for service

- allowing clinic staff more time for communication with other child health and welfare field workers

- eliminate isolated work for nurses by reorganising working groups of ten to fifteen nurses with a coordinating senior nurse.

- introduction of new screening methods as for PKU, hypothyroidism, hearing defects, visual defects, psychomotor development.

- work in a more systematic and standardised way.

- organisation of annual meetings and refresher courses.

- organisation of regional multidisciplinary teams for early detection of developmental disorders. These are referral and advisory teams.

- gradual change of attitudes of doctors and nurses: less clinical, more social oriented, more non--directive attitude, emphasis on listening and interviewing, more oriented to the family than to the isolated child.

- organisation of parent discussion groups, meant for self-help of minor rearing and emotional problems.

- giving the parents a home-based health booklet in which are registered the main health issues and in which questions by the parents to the doctors may be put.

Immunisation.

The national immunization scheme provides against diphtheria, tetanus, pertussis, poliomyelitis, measles and rubella. The primary series of DTP Polio (Salk) is given at three, four and five months, boosters (without pertussis) are given at one, four and five years. Measles vaccine (live attenuated) is given at 14 months, rubella vaccine at 11 years only to girls. Tuberculin vaccine as a routine has not been introduced due to low T.B.C. statistics. Immunisation coverage is about 95%. Some small pockets of religious groups and immigrant children are unvaccinated. Health education programmes are directed to the latter group using their own language and involving group opinion leaders. In some countries coverage was decreasing in recent years due to public discussions on effectiveness and side effects.

Registration is fully computerised. Screening for PKU and hypothyroidism is based on the same registration system. Immune serum levels are studied in children and adults (conscript soldiers).

Research is being done on adding mumps vaccine, giving rubella vaccine to boys besides girls and bringing the primary number of immunisation doses down from four to three.

Transfer to school health

Preventive services for preschool children are separate from school health services. Transfer of information is far from optimal although progress is being made. Local and individual contact between clinical staff and school

health staff is established sometimes, clinic staff sending a summary of health issues to the school health team.

Problems

- frequency of examination
- function of nurse-consultation
- effectiveness of home visits
- attitude of clinic team. This attitude is still mostly oriented toward clinical somatic aspects. More attention should be given to psychosocial development, to mother-child interaction, to family and surrounding risk factors.
- training has to be oriented to psychosocial development, to non-directive approach, to interview techniques, to listening and observation (using video, tapes, etc). Teamwork has to be learned!
- epidemiology. The use of simple methods in everyday work, feedback and discussion of research projects, research on handicapping conditions, on dysfunctions and discontentment, on evaluation methods, on risk concept and how to use it.
- diagnostic and therapeutic aspects: no reliable screening methods are available for hip dysfunction (overuse of X-ray), for psychosocial development, for speech- and language defects, for visual defects in babies. A lack of therapeutic possibilities for minor psychosocial

dysfunctions. No structural facilities for advice and consultation on psychosocial problems is available.

- Registration. This is mostly oriented to the process (number of patients, number of clinical sessions, number of referrals) and not towards problem and follow-up outcome. No reliable follow-up system, few possibilities for evaluation.

- Communication. Non-optimal transfer to school health service, non-optimal communication line with primary health care and with clinical specialists, with mental health service and welfare service.

5. SCHOOL HEALTH SERVICES

School health services started in the beginning of this century when schooling was made compulsory. As with preventive 0-4 services, many differences are seen between European regions. Eastern Europe and USSR are providing prevention through the paediatric services, integrating curative and preventive work. Northern and western Europe have mostly special preventive school health services, staffed by doctors, nurses, and in varying ways, psychologists, physiotherapists, social workers and health education specialists. Southern European school health services are on a minimum scale, providing services from local health clinics or by private general practitioners; working on a parttime base or on fee for service. (The system in the Netherlands will be described with special attention to major changes and actual problems.)

The format of school health services did not change in a major way in the last 80 years. School children are seen periodically: once at nursery school,

thrice at primary school and once in secondary school. Most school doctors are working isolated, sometimes they are coordinated by a senior medical officer. School nurses or secretarial helps are assisting.

Function

Periodical examinations are based on anamnesis (diseases, complaints, lifestyle, school results, recreation, sports) and examination. Mothers, or nowadays sometimes fathers, accompany their child to the doctor, at least in primary school. More use is made of standardised examination methods and criteria, especially for height and weight measuring, for visual and hearing defects, for posture, genital development. Annual screening in these fields are in many cases being done by school nurses. In an experimental project, more responsibility still was given to the school nurse. The outcome was that 30% of the children had to be referred to the school doctor. The conclusion of the project was that the nurses responsibility had to be limited to well-standardised methods. Research is going on about widening the task and job of the school nurse, expanding to home visits, health education, follow-up of referrals, communication with parents.

Psychomotor and neuropsychological development are not based on reliable standardised methods. The same problems arise in social and emotional development.

In team discussions before and after examinations the teacher is consulted, if motivation and time allow. The training of doctors and nurses prepares them mainly for curative work and gives them a curative and clinical attitude. Not enough attention is being paid to developmental psychology, to parent-child relations, to emotional problems, to social situations and social

networks and to child rearing. No systematic training has been given to nondirective attitudes and to interview techniques.

The doctors advises on individual problems. based on medical experience, with regard to selecting schools, career planing, sports and recreation. He refers about 10% of the children to the general practitioner, the linking pin in primary health care, mostly on problems of hearing or seeing, of posture. Consultation is asked from specialists about psychologic problems, about speech and language problems, about mental health and orthopedic problems.

Health education is a growing field. The doctor's job is mostly restricted to individual advise or to lecture to children's groups, parents groups or teacher groups. The government has ordered that health education has to be integrated in the teachers' task and quite recently a law was passed to make health education obligatory for the teachers lessons. Integrated in this education is prevention of accidents. Social aspects of school health are being neglected. There are only few school social workers, school nurses are making home visits in some services. There is no possibility for action and work in the community. In many cases information is lacking on the family situation, on local social conditions (unemployment, recreation facilities, accidents, ethnic minorities, discrimination, risky situations, housing problems) and on health situations at home (infectious diseases, diarrhea, head lice, mental health, addiction, risk factors).

Risk concept

The value of working with the risk concept is being debated. The attention of the school health service is focussed on children with handicaps, children receiving special education and ethnic minority children. The

government has given attention to these risk groups. The doctor-pupil ratio for special education and for handicapped children schools is five times the ratio for normal children, for ethnic majority children two times the ratio. The normal doctors-pupil ratio is one in 6000, the nurse-pupil ratio being the same.

School drop-outs (more common after age 14) and school leavers are falling outside the scope of the health team. In the daily work at school special attention is given to children who previously showed problems, absenteeism, low school achievement or children who themselves seek advice for their problems.

Mental health specialists are focussing on other groups: one parent families, adolescent marriages, children who contacted police, battered children, depression, delinquency, leaving home, drug abuse.

Dental health services

Preventive and curative attention to the dental situation of children has increased during the last decade. This is especially due to an increasing dental awareness, and partly due to the fact that social security funds pay for preventive dental care. A combination of routine dental care, health education, the use of fluoride toothpaste and dental hygiene had excellent results. Fluoridation of drinking water was rejected on political reasons. The percentage of dental caries has decreased in a major way. In 1970 three percent of all children under six was free of caries. In 1982 thirty percent was free. Cause-effect studies do not show the most important measures. Sugar consumption did not go down, health education and dental hygiene had probably a minor outcome. Fluoridation of tooth paste has helped in a major way.

Anyhow, due to these facts and to the country's economic problems, the government decreased the network of school dental services. Coverage was in 1975 60%, nowadays nearly zero.

Major problems

- Frequency of school examination.

-The format of school health examination is changing in a few services. Two examinations at least are asked for, one at school entrance and one at school visit. This is giving the school doctor more time for follow-up of risk groups and for active participation of children, teachers and parents.

-Job and task description of the school doctor

(divided in: 1) individual and group preventive care.

2) epidemiology and health education

3) surveillance of environmental risks.

- Job and task descriptions of the school nurse. Many feel that their role is underdeveloped.

Nevertheless the old format is still being used by most services. There is a definite reluctance to change as well by doctors and also by parents and teachers. Therapeutic opportunities for treating minor psychosocial and emotional problems are lacking. There is a lack of clinical psychologists in the services. Psychologists in the school guidance services are school oriented and not oriented to the needs of the individual child.

6. ADOLESCENT HEALTH SERVICES

The school health team is covering the children at the primary school (6-12 years) and at secondary school (12 - 16 years). Coverage is about 100%, although nearing 16 years dropouts are growing in number. After 16 years, there are no specific official services for adolescents in any country. They are regarded as ordinary citizens who can take care of their own health and they can use general health services. General practitioners, youth guidance clinics, alcohol and drugs guidance services, family planning services, local welfare services, industrial health services, university health services are trying to cover the field. Alternative services like SOS telephone lines and discussion self-help groups are filling the gap between need and demand. Assessment of those needs and demands and studies on evaluation of health services are few. The general feeling is that many adolescents with problems do not find their way to general services. Guidance clinics work mostly with younger children and do not have enough time for preventive work and for minor problems, which could become rapidly significant. There is a great need for more trained personnel, as well as health professionals in education and welfare personnel. Finland is reporting a system in order to improve contact with children who need advice and guidance. A private organisation started training so called peer counsellors in the early 1970's. They are training children of 13-14 years and above. The counsellors are selected by their own classmates and they are therefore accepted well by other pupils.

At secondary school one or two routine examinations are performed by the school health team. Although many professionals are aware of the need for a freely accessible consultation clinic for adolescents (12-16 years), only few school health teams offer such a kind of clinic. Projects such as alternative

services, organised by the school health team, like discussion groups, SOS telephone services, are few.

Finland reports organisation of specific adolescent health clinics, staffed by doctors, nurses, psychologists, social workers. Psychiatrists and gynaecologists are available, Youngsters are free to enter on their own initiative.

Epidemiology

Research on epidemiological problems is scarce. Gaps are existing in our knowledge on incidence and problems, on follow-up and referrals, on outcome of therapeutic measures and natural history of diseases and functional problems.

The major health problems reported by school health teams are:

- psychosocial problems
- gynaecological problems (menstruation disorders)
- birth control, e.g. contraception, abortion, morning after pill
- venereal diseases
- eating disorders, e.g. obesity, under-nutrition, anorexia nervosa
- acne
- mononucleosis infectiosa
- epilepsy
- diabetes
- allergies, e.g. hay fever, asthma, atopic dermatitis
- accidents
- suicide, homicide
- drugs, alcohol, smoking.

In some health services questionnaires about health problems are sent out, sometimes with open-ended questions like: Is there any problem you worry about day and night?

In recent years a continuing research project was organised by a national group of general practitioners. Sixty of them are reporting regularly for four weeks a year on morbidity incidence, with fixed and variable items. They also report on adolescent health problems, like:

Contraception

25% of 15 to 19 year old girls use contraceptives orally. No data is known about other contraceptive methods. 1,5% of this group ask for the morning after pill. The 15 to 19 year group shows the highest level of all age groups. 0,5% have abortions.

Although general practitioners are increasingly prepared to provide young girls with contraceptive advice, many of the girls visit contraceptive services of a private organisation. They feel that confidentiality (from their parents) is better guaranteed there than with the general practitioner.

Finland reports changes in adolescent sexual problems in the last decade. In 1975 8.2% of the mothers were under 20 and in 1983 only 4.3%. Legal abortion per 10 000 women decreased from 88.5% in 1973 to 56.5% in 1983.

Venereal disease

Since 1976, obligatory (anonymous) notification is required by law in the Netherlands. The incidence of gonorrhoea has a peak from 20 to 30 years, but the incidence from 15 to 19 years is rising.

Mononucleosis infectiosa

The incidence is highest from 15 to 19 years. The nickname is "kissing disease".

Problems:

- how to organize adolescent health services
- how to coordinate these services
- how to evaluate them
- how to organize health education
- how to train health workers for adolescent problems

6. MENTAL HEALTH

A WHO working group on child mental health and psychosocial development (WHO Copenhagen 1983) reported on prevalence of mental health problems. The prevalence rate of mental retardation and epilepsy are roughly the same in all reporting countries. The same applies to emotional and behavioural disorders, although comparison of these data is probably not very reliable, because classification problems and total population surveys are lacking.

Studies of children's reactions to stress were rarely reported. When they were, withdrawal, aggression and behavioural disorders at school were indicated as common responses to stress. As to mental disease, the following prevalence data were reported.

- mental retardation (IQ less than 50)	3 per thousand
- mental retardation (mild)	25 per thousand
- autism	3-4 per thousand

- psychosis	4-5 per thousand
- emotional disturbance	6 % urban
	3% rural
- epilepsy	4-8 per 1000

The main causes for emotional and behavioural problems are found to be urbanisation, with the loss of supporting family members, particularly a problem in the southern and eastern countries of Europe. High divorce rates, distorted family relations, failure to attend school, physical illness and brain damage are contributing causes, as are poverty and malnutrition (table 13).

In the Netherlands research showed that referrals to mental health services were five per thousand for the 0-9 group and eight per thousand for the 10-19 group. Of the referred group three percent from 0-9 years and ten percent of the 10-14 group needed institutional care.

Research studies in Finland suggest that 10% to 20% of school age children are in need of psychiatric help.

Risk groups of adolescents, so called marginal groups, are growing, forming groups and leading to aggression and delinquency. Scarce information is available on the problems of these groups. Contact with health and welfare services is lacking.

7. SCREENING

Mass screening in children has only recently been organised on a nation-wide scale. Newborns of seven days old are screened for

phenylketonuria and hypothyroidism (coverage 99%), babies of nine months are screened for hearing defects (coverage 70%) using the method of the Ewings. Eight month old babies were screened in an experimental project for strabismus and visual defects.

Screening methods to be used in individual periodical examinations were developed and implemented, such as a test for psychomotoric development, for psychosocial development and for hip dysfunction. Both last methods (Denver developmental test and hipdysfunction) are not very reliable as to prediction value.

During school age screening methods are used for hearing and vision defects (audiometer, Snellen, Landolf) and for posture. Screening methods for psychosocial development are still missing. Speech and language screening tests are in a research phase. Tuberculin tests are used for epidemiological reasons on sample groups.

Evaluation in implementing and in continuing screening methods is most important. Field workers, managers, boards of health organisations and government officials are not sufficiently aware of this importance. In considering a new method theory and implementation, organisation and training, registration and case-benefit, laboratory facilities and motivation of specialist and last but not least continuous evaluation has to be studied. Field trial projects are important as a first step.

In looking at continuing evaluation an efficient way is to set up a small supervisory group to monitor all the items just mentioned. The relatively small budget has to be integrated in the total budget. Cost-benefit of this evaluation in regard to quality of work is very positive.

8. RESEARCH

Research in child health has been going on in research institutes, in health and social security organisations and in regional and local health services. Cooperation and integration of research projects is not optimal, overall registration is being built up. There is no general agreement on priorities.

Most research studies are initiated by clinical people, such as for diabetes, hypertension, epilepsy, blindness, deafness and mental retardation. New fields of research are opened by behavioural scientists, such as on lifestyle, eating habits, smoking, drinking, drug addiction, social psychologic problems (divorce, one child families, children in day care centers, contraception, sexual habits). Research work in which health field workers participate can be reported, such as on traffic and sport accidents, on obesity, on scoliosis, on absenteeism, on smoking and drug abuse, on environmental problems as head lice, formaldehyde intoxication, on suicide.

Research on new screening methods is reported, such as psychomotoric development, speech, writing and language problems, visual and hearing defects. Research on evaluation of health services and quality of work is scarce. School health services as such have been studied in a nation-wide project, periodic examinations and their predictive value in a regional project. None of this research was oriented to efficacy and to outcome evaluation. In which way are health problems prevented by preventive health services?

In an evaluation study of hearing defects, screening in 9-month old

babies major differences of false positives were registered in different regions due to declining motivation and declining quality of work of health workers.

9. EDUCATION AND TRAINING

Preventive health has been integrated in general medical and nurses training more than a decade ago, but it is still not optimal. One of the problems is to find motivated and trained teachers who had experience in preventive health work. A definitive trend can be shown to ask senior field workers (doctors, nurses, midwives, health administrators) to act as parttime teachers, to use discussion groups, tapes, videos and roleplaying methods, to send out students to preventive health services, writing study reports. Even in training for pediatrics, these methods are used.

Health education is now being integrated in the curriculum of student teachers.

Full-time training courses for doctors in preventive health are being given, comprising one year theory and two years work in the field under supervision. Full-time training courses for nurses are integrating social medical work and prevention, with a duration of two years after having finished nursing education.

Postgraduate and refresher courses are set up in regional programmes for general practitioners, nurses, health administrators and health officials. Organisation is in the hands of private organisations, universities and hospitals.

Finland reports that faculties set up the degree of health science candidate only recently. There are lines for administrators, teachers and nurses.

10. HEALTH AUTHORITIES

Health services for prevention for children are not laid down by law in the Netherlands, but government subsidies and social security subsidies have been given for many years. The preventive health services are being implemented on a regional and local base, for 0-4 years by private organisation and for 6-16 years by local health authorities. School health services are to be based on law in the near future, integration with local health authority services on a regional base is growing rapidly. Specialists in these health services like dieticians, health education people, epidemiologists, social workers can assist the school health team. The national government is giving the overall minimum programmes and are attending to new problems, such as extra attention to handicapped children and migrant children, risk fields like battered child syndrome and sexual aggression.

The Ministry of Health has been integrated with the Ministry of Welfare. There is a tendency for better cooperation between the ministerial departments of Health and Welfare, Justice and Education. The medical staff of the Chief inspectors of health is supervising the quality of work.

Which general policies about young people are facing governments today?

In a WHO publication (Demographic trends in the European Region, WHO, Copenhagen 1984) priorities for social and health policy were listed, indicating that a major change in the 0-19 group is showing in needs and

demands. A function of politicians and of decision makers is asked for psychosocial and prevention needs more than before, for education of the family, for unemployment and family breakdowns, for urbanisation and family planning. A warning is given for the growing needs of youngsters, who are more or less competing with the increasing old age group.

Conclusion

In this paper trends were given regarding social and health changes in the last two decades, mostly looking at the situation in the Netherlands. In conclusion, new ways are outlined for the near future to cope with existing trends and to face new problems, trying to define the common denominators for all European countries, different as they are as to provision of preventive health care for youngsters.

- To indicate ways to make health authorities and health field workers aware of the influence of social and health change on young people and to a priority change from physical to psychosocial health problems.
- To assess the influence of social and educational change to the health and well being of children.
- To find new ways to eliminate the negative effects of these changes.
- To give incentives to health field workers to cope with new trends and new problems.
- To study in depth the resistance to change of the format of health services to cope with new problems.

- To show new ways for epidemiological research on morbidity and psychosocial dysfunction and to propose realistic ways for implementation in the health field.

- To propose new models for adolescent health care.

- To stimulate preventive health care in the training of primary and secondary health care workers, integrated with curative care and in the training of youth care staff as teachers, social workers, administrators.

- to stimulate training for full time workers in the preventive health care for children, who may coordinate and stimulate the health field workers.

- to make health authorities aware of the growing importance of health and social problems for young people, notwithstanding the decreasing number of young and the increasing number of old people.

TABLES

TABLE 1. Decennial rates of population growth in the European region
1950-1980. Percentage change in population size. Age 0-19.

	1950/60	1960/70	1970/80
Eastern Europe	8.2	2.8	-3.3
Northern Europe	8.7	6.3	-4.6
Southern Europe	1.9	6.9	2.4
Western Europe	10.8	12.4	-6.5
USSR	10.1	17.2	-3.0

Source: WHO Regional Office for Europe, 1984. Demographic trends in the European region.

TABLE 2. Crude live birth rates in the European region 1950 - 2000

	1950/54	1995/99
Eastern Europe	23.6	14.4
Northern Europe	16.7	12.4
Southern Europe	21.1	13.8
Western Europe	17.6	11.8
USSR	26.3	16.4
Europe total	21.8	14.3

Source: WHO Regional Office for Europe 1984, Demographic trends in the European Region.

TABLE 3. Trends in infant and perinatal mortality in selected countries of the European Region 1960-1980

	Perinatal mortality		Infant mortality	
	1960	1980	1960	1980
Belgium	28.4	15.9	26.7	13.1
Czechoslovakia	20.9	16.3	23.5	17.7
Finland	27.5	9.4	23.6	7.7
German Dem. Rep.			38.8	12.1
Great Britain			18.0	12.0
Greece	26.7	21.3	40.1	19.2
Hungary	35.5	23.1	47.6	23.2
Netherlands	24.1	10.2	15.7	7.4
Norway	22.5	11.1	17.1	8.1
Portugal	41.1	31.3	77.5	26.0
Sweden	26.2	8.7	16.6	6.9

Source: WHO Regional Office for Europe 1984. Demographic trends in the European region.

TABLE 4. Referrals from preventive health clinics (0-4 years) Percentage of all referrals. Netherlands

	0-1 years	2-4 years
Strabismus, otitis, rhinitis	21	42
Bronchitis, heart	18	13
Diarrhoea	18	12
Hip dislocation	15	13
Others	28	20

Source: Report on Netherlands by Dr J.M.L. Phaff

TABLE 5. Health disfunctions, registered by school health teams, Netherlands.

Percentage of all children.

	<u>5-9 years</u>	<u>10-14 years</u>	<u>15-19 years</u>
Visual defects	12	15	20
Hearing defects	7	2	1
Adipositas	2	3	6
Orthopedic defects	4	5	10
Enuresis nocturna	2	1	1
Asthma, bronchitis	2	2	2
Cardial defects	0.5	0.5	0.5
Behavioural and learning defects	2	2	2

Source: Report on Netherlands by Dr J.M.L. Phaff

TABLE 6. Psychosocial dysfunction in schoolchildren. 5-15 years, Netherlands

Percentage of all children.

	% of boys	% of girls
sleeping disorders	7	8
enuresis nocturna	10	10
somatic illness	9	6
somatic complaints	18	14
hyperactivity	7	3
inactivity	5	4
behavioural defects	18	8
low intellectual capacity	11	8
speech disorders	12	5
peer relation defects	25	9
relation with adult defects	11	6
concentration problems	16	10
depression	10	9
anxiety	12	8

Source: Nederlands Instituut voor Kinderstudie. Antlog.Bodnor, 1983. Report on the Netherlands. Dr J.M.L. Phaff

Table 7. Admission-diagnosis Pediatric University, Athens

1960	1981
Infectious diseases	Thalassaemia
Deficiency diseases	Acute respiratory disease
Rheumatic fever	Malignancies, leukaemia
Tuberculosis	Epilepsy, convulsions
	Gastroenteritis
	Accidents
	Behaviour problems
	Congenital heart disease

Source: Report on Greece, Dr C. Bakoula and Dr S. Doxiadis

Table 8. Mortality by accidents, 1-14 years, per 100,000 in the age group.

Finland

	1970	1980
1-4 years	29.1	12.2
5-9 years	31.2	10.7
9-14 years	10.7	8.8

Source: Report on Finland. Professor N. Hallman, 1985.

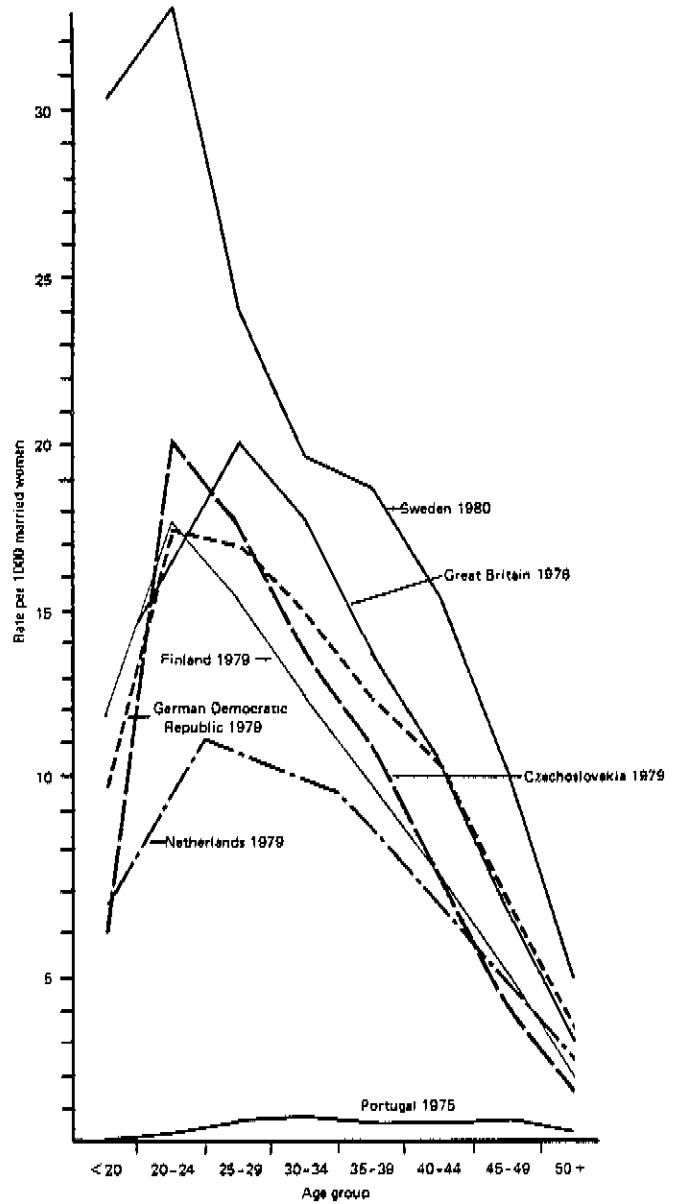
Table 9. Per caput income in selected countries, in US dollars

Country	Amount in US\$
Switzerland	16.390
USA	14.090
Norway	13.820
Sweden	12.400
Denmark	10.940
Fed. Rep. of Germany	10.680
France	9.450
Netherlands	9.280
Luxembourg	8.740
Belgium	8.265
Great Britain	8.020
Italy	6.255
Ireland	5.030
Spain	4.170
Greece	3.695
Portugal	2.030

Source. The World Bank Atlas, 1985

Table 10

Age-specific divorce rates for married women in selected countries, latest available year



Notes: Great Britain < 25 years.
Netherlands 20-29, 30-39, 40-49 year age groups; rates include judicial separations.

Source: Based on data presented in the respective country reports

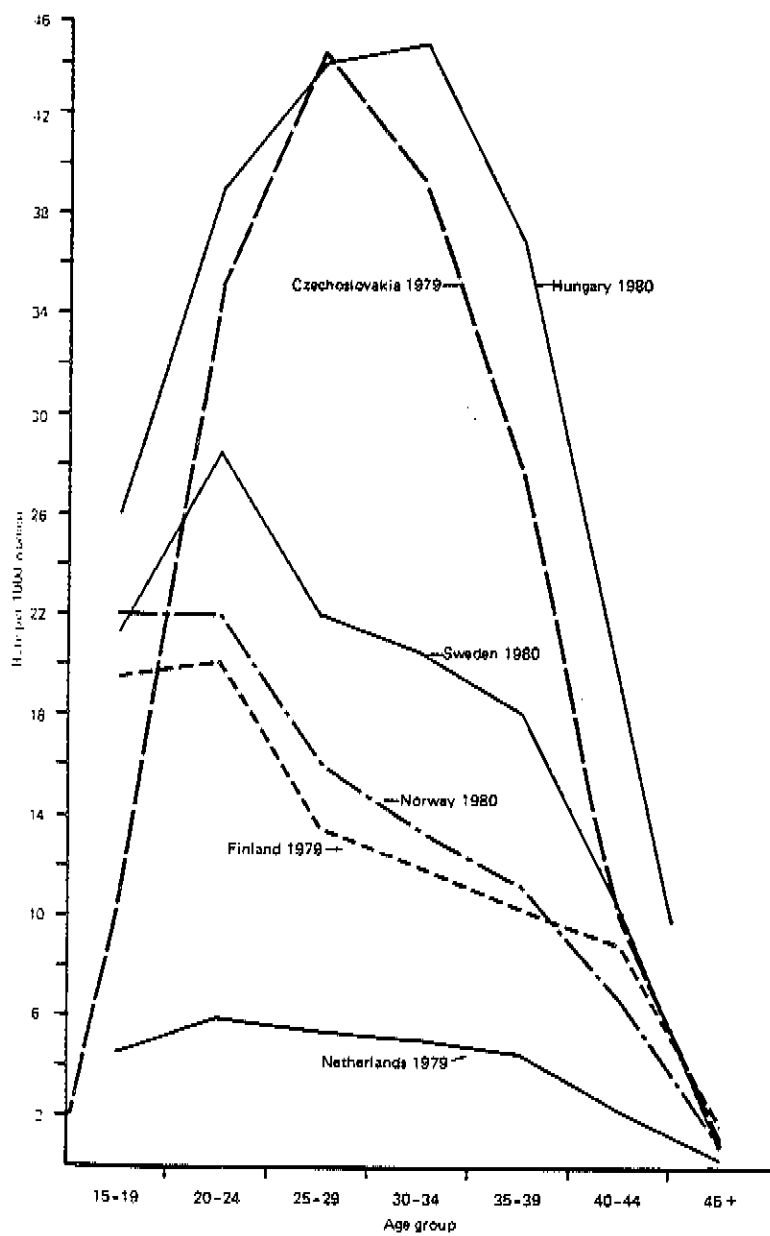
Table 11. European countries with the highest proportion of illegitimate births in 1978-1979 and corresponding rates for 1963.

Percentage of all births

	1963	1978-1979
Sweden	13	38
Ireland	25	37
Denmark	9	31
German Dem. Rep.	9	20
Austria	12	15
Norway	4	13
Finland	4	12
France	6	10
England	7	10
Bulgaria	8	10

Source: WHO Regional Office for Europe. 1984. Demographic trends in the European Region.

Table 12. Age-specific abortion rates
in selected European countries, 1979-1980



Source: Based on data contained in the respective country reports.

Table 13. Percentages of the population living in urban areas in 1975 and in 2000, Age 0-19 years.

	1975	2000
All Europe	62.7	73.9
Eastern Europe	52.9	67.3
Northern Europe	82.0	89.1
Southern Europe	53.2	67.7
Western Europe	72.9	81.0