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REVIEW OF COMMON HEALTH NEEDS AND PROBLEMS OF THE PRE-SCHOOL CHILD IN THE EASTERN MEDITERRANEAN REGION AND ECOLOGICAL CONSIDERATIONS

by

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INTRODUCTION

The pre-school child is a "biological" and "cultural" individual, with basic and interrelated physical, mental and social needs. The basic needs of children and adults are food, shelter, clothing, love, health care and education. Over and above these basic needs, the pre-school child has special (or extra) needs due to the physiologic stress of rapid growth and intensive adjustment to the physical and cultural environment. Health and survival are maintained by a continuous process of adjustment between the needs of the endowed potentialities of the growing child, and the provisions made by the environment. When environmental conditions are sub-optimal or noxious, the mechanism of adjustment (or adaptation) gives way under stress. The outcome may be a nutritional deficiency and/or illness with or without permanent impairment of function (disability), or death. Therefore, health problems arise as a result of unmet needs.

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The organic survival in relation to the environment is the concern of ecology, "the science of the habitat or home". Medical ecology is the study of the "home" of disease (or malnutrition) both within the individual organism and in the larger environment, physical and social/cultural. In an ecological context health is a state of relative equilibrium of body form and function, which results from its successful dynamic adjustment to environmental challenges tending to disturb it. Disease (or malnutrition) then becomes synonymous with the word "maladjustment", rather than "mere impairment of health". Maladjustment expresses a temporary state of the living cell in conflict with environmental challenges, and trying to cope with them and survive. Such definition links the health problem (disease, malnutrition or disability), resulting from partially or totally unmet needs with the place of occurrence. It has the advantage of bypassing the problem of deciding what is "normal", and introduces new dimensions and approaches for the effective prevention and control of health problems in human communities, and the effective provision of health services to meet these objectives.

Disease (or malnutrition) cannot arise without the convergence at a certain point in time and space within the person of the patient (host) of two orders of factors:- (1) factors that take the form of environmental stimuli (exogenous factors); and (2) factors that condition the response of the tissues (endogenous factors). The exogenous stimuli, or challenges to adjustment are not the same in every environment. They vary with the geographical or cultural location. People respond differently to environmental challenges due to two aspects of host genetic material which is distributed throughout the tissues: a) the fixed, finite, and stable set of basic characteristics

called genotype (i.e. like weight, density, volume, and chemical composition in a given pellet of clay); and b) the plastic, infinite and adaptable characteristics, which could be moulded under environmental pressure into an infinite number of possibilities (i.e. a pellet of clay can become a man, a horse, a bird, etc.), without losing its finite characteristics. Therefore, the survival and health status of an individual are governed by a number of endogenous and exogenous factors. He responds in a new way to a new situation. If he is able to survive the challenge, he will store up another scar that will again make him a changed individual, geared to produce a new and somewhat different response to further stimuli and so on indefinitely until death.

Both the biological and the psychological aspects of the personality may be regarded as largely the product of scars inflicted upon a relatively stable set of genetic circumstances by specific environmental challenges. The set of stimuli arising from the geography of one region shapes the "personality" of the human population inhabiting the region within the limits of the local genotype. The present populations of the Eastern Mediterranean Region represent the cumulative scars inflicted by environmental factors of the most ancient and recent past. The new shape that future populations will take depends largely on environmental provisions made by development plans to meet the basic and special needs of the present generation of pre-school children. Health services are one important set of the anticipated provisions.

In this presentation needs and problems of the pre-school child will be reviewed within the context of development plans and existing local health care systems, meeting his health needs from birth through five years of age. Examples will be derived from the on-going experience of four countries in the region, which were visited during the summer of 1973, namely, Egypt, Iran, Iraq and Syria.

NEEDS

Quantitative Needs: Demographic and Other Transitional Limitations

Countries in the Eastern Mediterranean Region have young populations in transition with an annual average rate of natural increase ranging from 2% - 3.5%, and a high youth dependency ratio. Children in the pre school age (birth - 5 years) constitute about 20% - 22% of the total population, amounting to about 16-17 million only in the four countries which were visited (6.5 million in Egypt, 6.8 in Iran, 2.2 in Iraq and 1.4 in Syria). Every fifth person in the population is a pre-school child. These large numbers represent a high-risk group create a heavy demand for health services, and are the most difficult segment of the population to reach for group care.

In addition to the demographic transition, the high-risk millions of pre-school children are also currently faced with at least three other transitional limitations, which give rise to special needs for health care and protection:- 1) a rapid change in the whole organizational structure of society, 2) a transition in family structure and functions; and 3) rapid urbanization and modernization. The urban/rural population ratio is changing rapidly with increasing migration from villages to cities and large towns creating serious problems of overcrowding up-rooting of culture and traditional mode of life and drastic changes in outlook and behaviour However, despite rapid urbanization over the past decade, the rural sector continues to be substantial, ranging from 48.9% of the total population in Iraq to 62% in Iran. Only in the four countries which were visited rural pre-school children amounted to about 10 million. The majority live in widely dispersed villages

with low population density (4 200 villages in Egypt 50 000 in Iran 14 180 in Iraq, 5 500 in Syria), unpaved roads and limited means of transport.

On the whole, the needs of all pre-school children continue to be neglected, because they are non-vocal, cannot be easily heard through organized pressure groups, and their needs are not well understood by most policy makers. However, within the pre-school population, some segments are more neglected than others and their special needs are hardly met. These segments are the newborns (full-term and premature); toddlers between 2-5 years of age; pre-school children of rural sectors and low-income groups of the urban and peri-urban sectors; and special problem pre-school children suffering from physical, mental or social disability.

Statistical Limitations and Assessment of Needs

Reporting of births and deaths is still relatively poor, particularly in remote rural areas despite increasing effort to improve the situation. For example, in 1971, 143 244 live births were registered in Iraq amounting to a crude birth rate of 14.7 per 1 000, whereas demographers estimated the birth rate at 47.5 - 48.9 per 1 000. Infant mortality rates are much more commonly reported than mortality rates for the age-group 1 - 4 years of age. In countries where mortality rates or ratios are reported for under-five children, they definitely indicate that most of the deaths occur in this vulnerable age-group (mortality ratio of 17.4 - 48.5 in 14 selected Iranian cities in 1971).

In most instances, causes of death in the pre-school period are not reported separately, to give some idea about their relative significance. Major killers in the pre-school period are mostly preventable. They include

diarrhoeal diseases and dehydration, communicable diseases, respiratory diseases, congenital malformations and diseases of the newborn, accidental injury and poisoning, and neoplastic growth. Malnutrition and parasitism are undermining factors. However, the impact of malnutrition on mortality rates of under-five children continues to be disguised by failure to report nutritional deficiencies, especially PCM, as immediate or underlying causes of death.

Accurate vital and health statistics are a basic prerequisite for proper assessment of need for health and other services. The case of the pre-school child still lacks the fully documented evidence to merit general public concern for organized community action and adequate moral and financial support. Base-line information about the health needs of the pre-school child constitutes a high priority need. The importance of vital and health statistics cannot be overestimated. Without a yardstick by which to measure actual needs, health planning remains speculation; attempts at solving health problems generate a feed-back mechanism of increased cost, poor utilization of resources, maldistribution of services, and a host of other complications

Needs: Development Plans and Policies

Development plans are becoming increasingly comprehensive, and efforts are exerted to introduce the systematic sectoral planning. In addition to priorities given to the economic sector in the early development plans the social sector, including health, education and welfare is given priority in setting the objectives of plans that are now in the process of implementation. The human resource is being increasingly recognized as the goal of

development, and the economic resource as the means for development. Health is considered as an investment and a basic essential for the general well-being of society and for collective productivity.

Health plans aim basically at:- 1) developing an integrated health service system to achieve a balance between curative and preventive services provided to the general public; 2) re-organizing, up-grading and expanding existing services with special emphasis on the development of health centres and MCH care within the framework of these centres; 3) increasing the number of hospital beds and up-grading hospitals by adding the required number of specialists and specialized services; 4) ensuring the availability of basic health services to the rural sector of the population in a more extensive manner; 5) commencing, at least in part, the implementation of Health Insurance Schemes; and 6) increasing the numbers and improving the quality of medical and para-medical personnel; and establishing a balance between manpower training and the development of health services.

Some countries have explicit policies in favour of pre-school children and their families, and others favour their cause implicitly. Explicit policies in favour of pre-school children are highly desirable, in order to bring their special needs to the forefront and to create more public awareness for their support in programme planning and implementation. In Egypt, the National Charter stipulates that "The family is the first cell in society and it must therefore be offered all means of protection children of to-day are the makers or our future, it is the duty of working generations to provide them with all the chances that will enable them later

to assume successfully the responsibility of leadership". Health services for pre-school and school children are viewed as economic savings and investments, since the return therefrom is in manifold access of the expenditures. In Iran the third and fourth plans contained explicit policies in favour of young children and clearly specified that mothers and children constitute a great majority of the population and are in fact, the main resource and capital of the country. In Iraq and Syria plan objectives implicitly reflect a favourable policy with regard to preventive basic health services, including MCH services to high-risk groups in rural and low-income sectors.

In 1965, Egypt adopted a national policy for population control and family planning, aiming at attaining a population growth in equilibrium with national social and economic development plans. Iran's national programme for family planning got underway in April, 1967. It has a social emphasis, with the accent on improved family welfare rather than deliberate population control, and aims to reduce the present 3.2% annual population increase to 2.4%.. In Iraq and Syria there is no explicit population policy, but implicitly family planning activities are promoted to a limited degree. The population explosion is a great limiting factor in the improvement of pre-school children's health and nutritional status and the living levels of their families. Efforts exerted to reduce fertility rates and family size are likely to benefit the pre-school child in more than one way.

In Egypt, a national food and nutrition policy was formulated in the early 1940s. In 1952, a nutrition division was created at the Ministry of Health, and was changed to the Nutrition Institute in 1955. In Iran, a food and nutrition policy was adopted about 15 years ago, and the Food and Nutrition Institute came into being in 1961. In Iraq, the Nutrition Institute was established in 1955, but up to the present time, no clearly defined food and nutrition policy has been formulated. In Syria, the First National Food and Nutrition Conference was held in November, 1972, but the country still has no policy and no Institute.

All four countries have introduced in the 1950s and 1960s basic reforms and new social policies by "Revolution of the People" (Egypt, Iraq, Syria) or by "White Revolution" from the highest level of local authority as in Iran. Major reforms include - land tenure system; labour laws; proclamation of political and social rights for women; nationalization of wasted resources; raising the national per capita income; combating of adult illiteracy; and rapid development of basic health, educational, and social services to meet the rising expectations of the people. All these reforms, which aim primarily at meeting basic needs by improving the general levels of living and per capita income, and by providing adequate food, clothing, housing, education and medical care for every citizen in the country, will undoubtedly have a far reaching impact on the pre-school child, his family and community. However, it must also be recognized that while social reforms provide greater opportunities for meeting health needs, they also promote the expansion of demand for health services. Rising expectations of the people and rising demand for services almost invariably go together.

Major Constraints in Policy Implementation to Meet Health Needs

The major constraints in implementing explicit or implicit policies favouring pre-school children and their families are: - 1) administration, 2) health budget; and 3) health manpower.

Inefficient and centralized administration are bottle-necks in the implementation of targets set by development plans, and in the delivery of health care at the local level. These shortcomings are becoming increasingly known with the increasing demand for the expansion of health services. In order to improve the situation, two measures are being attempted, especially by the Governments of Egypt and Iran - reform and decentralization. Reform measures in Iran are referred to as "The Administration Revolution", which includes in-service schemes for administrative employees. In Egypt, a policy was set for centralization in planning and decentralization in implementation. Since 1954, an increasing autonomy was given to province Health Departments to administer Rural Health Services.

MCH Departments or divisions at the central level were established in most countries in the late 1950s, with administrative machinery at the intermediate level. Some countries, however, still do not have administrative units at the central level for nutrition and nursing/midwifery. Moreover, the dichotomy between central administrative responsibilities for health services and health manpower training often gives rise to considerable limitations at the implementation level.

In all four countries, health budgets were steadily on the increase for the past two decades. But despite the absolute increase, the proportion allocated for the health sector from the over-all national budget continued to range

from 2.13% (Syria, 1972) to 4.5% (Iran, 1965-72; and Egypt, 1970-71, amounting to LE 1.3 per capita per year) or 4.9% (Iraq, 1967-68). However, it must be noted that funds for improvement of the general health status of the people, including pre-school children, come from a wide variety of sources, e.g. funds for water supplies, sewage and garbage disposal systems, housing, public works, health insurance schemes and family planning.

Marked shortage; maldistribution; inadequacies in pre-service and in-service training; and poor utilization of health manpower are common features in all four countries. Quantitative and qualitative factors relevant to human resources are often more critical constraints in the provision of health services than material resources. This is particularly true of the rural sector.

The shortage of manpower is, especially, critical in the case of nurses, nurse/midwives, midwives, dentists, and specialists in paediatrics, obstetrics, and paediatric nursing. However, the scarcity of nurses and midwives has a greater implication for the pre-school child than the scarcity of any other category of health personnel. Most deliveries still take place at home, and 80-90% of them are attended by traditional midwives, who are mostly illiterate. For example, in 1971 Gadalla estimated that in Iraq 93.3% of deliveries for that year took place at home and 6.7% at hospital; the physician probably attended to 1.1% of deliveries; the licensed midwife to 24.2%; and the traditional birth attendant to 74.7%.

On the whole, the physician/population ratio continues to be relatively low, and maldistribution aggravates the problem. For example, in 1972, Iran had a total of 9 535 physicians (6 134 general practitioners; 3 294 specialists, 417 or 12.6% of them paediatricians and MCH specialists; 370 or 11.2% obstetricians, and 107 medical assistants). Of all available physicians, 50% practised in Teheran city and the remaining 50% were thinly dispersed in the provinces. In Egypt, it was estimated that student enrolment in the first year Medicine would have to be increased by 25%, since the expanding population alone would require 15% annual increase in the number of physicians, not regarding the qualitative improvement of the present health services (Report by the Minister of Health, 1972). Shortcomings in paediatric training are a common feature in the four countries. In Egypt, up to 1971-72, the paediatric examination constituted a part of the examination in Internal Medicine. In Iraq, paediatrics still forms a division within the Department of Internal Medicine. In Syria, an autonomous Paediatric Department was recently established at the Medical School of Damascus University. The Department of Paediatrics in Teheran University Medical School was established several years ago, but like the three other countries Iran does not, as yet, have post-basic training in Paediatric Nursing.

The increase in dentists is very slow as compared to the increase in the number of other health personnel. Dental care is very scarce in rural areas, continues to be of a very limited scope in cities, and pre-school children receive the least amount of it.

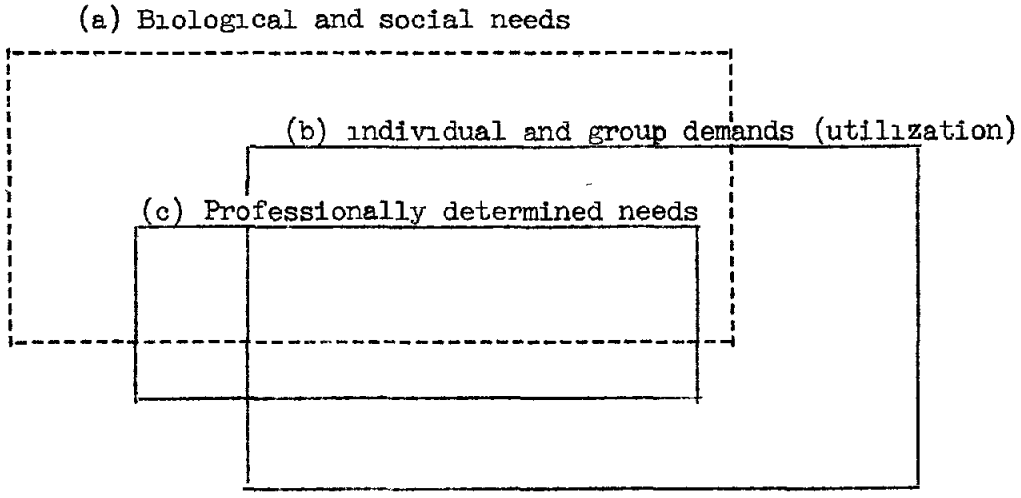
In order to overcome the health manpower problem, governments are exerting effort on more than one front, e.g. improving health manpower planning; upgrading and expanding existing training institutions, and establishing new ones; promoting the training of paramedical and auxiliary personnel by creating Technical Health Institutes; setting policies and incentives to increase the number of professional and auxiliary personnel in rural areas, and to limit the brain-drain; and undertaking training crash programmes of varying duration.

The Need-Demand Relationships

A broad objective in health planning and in the organization of health services is to meet the "needs" of a population (in this case it is the pre-school population), or to match "supply" and "demand". The "need" for health care in any community, unless qualified in some way, is virtually unlimited. Similarly the provision of health care for every pre-school child at the highest possible level is not at present feasible. Need has therefore to be understood mainly in terms of demonstrable disease(s) requiring and amenable to some form of health care. On this basis, the volume and character of the health care requirements of the community can be estimated precisely by means of screening surveys of sample populations, which is costly. It is usual, however, to rely on "demand" as a measure of "need", but the disparity between demand and need must be clearly understood.

"Need" is related to the biological and technical basis of health practice, "demand" to its economic and social basis. "Need" and "demand" largely depend on a wide range of socio-cultural factors. Neither is, by itself, an adequate basis for decision-making in the health field. Both are needed in order to estimate the volume and character of health care requirements.

The lack of agreement between biological and social needs, demands and professionally determined needs is shown in the diagrammatic presentation below. A broken line has been used for the biological "needs", in order to indicate that they do not have fixed boundaries. It has been suggested that the differences shown are closely related to levels of development, tending to be smaller when standards of living and general education are high.



Need-demand relationships
Grundy & Reinke, 1973

Demand, which is usually measured by service utilization gives a fairly good indication of the services likely to be required, provided that the socio-cultural setting remains unchanged and that the effects of service expansion on demand are disregarded. However, while "demand" is an index of a felt need, it cannot be assumed that it represents a need that can be satisfied. Moreover, "demand" almost invariably underestimates "need". In all communities, a proportion of the people in need of health care fail to demand it. They may be sick without recognizing the fact; they may accept a disability or disorder

as normal, and they may fail to respond to an available service out of ignorance, indifference, resignation, prejudices, fear, laziness or what might be called "market resistance". Consumer response is obviously also influenced by factors such as the accessibility of the service in terms of distance, time and cost, by competing claims in other spheres, and by the quality of services and their desirability from the consumer's point of view. All surveys of need have shown that, even in affluent societies provided with comprehensive free service, it greatly exceeds demand or service utilization. The situation also varies from one segment of the population to the other. Thus, even when services are readily available and free, it cannot be assumed that everyone benefits from them.

Recent studies on community demands in both developing and developed countries have shown a link between utilization and demand. They indicated that the consumption of health care is related to such factors as age, sex, distance from health centre or hospital, standards of living, family income, education, and health insurance cover. Standard curves of medical care utilization have been prepared to show that such utilization can be related to the level of socio-economic development. "On this basis it might be feasible for planning purposes to forecast future demand more accurately by relating present utilization to trends in socio-economic development" (Grundy and Reinke, 1973, p.31).