

Urbanization and child health

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Introduction

The rapid growth of cities around the world was one of the most remarkable features of the twentieth century. This process is often termed 'urbanization'.

Some of the main features of urbanization include:

- 1 Living in concentrated and fixed population groups
- 2 Reliance on forms of administration for infrastructure and social services
- 3 Dependence on the provision of water and food supplies from outside
- 4 Drastically altered food consumption and infant feeding practices
- 5 Frequent exposure to industrial and other forms of environmental contamination
- 6 Alteration of the physical environment in ways that increase the risks of injuries and deaths from accidents and poisoning
- 7 Altered social values and behaviours
- 8 The influence of alcohol and other drugs.

Urbanization has become such a force internationally that the populations of many cities are larger than those of many small nations (such as Papua New Guinea). Moreover the populations of the so-called 'mega-cities' like Sao Paulo (Brazil), Chongqing and Shanghai (People's Republic of China) and Mexico City even exceed the populations of larger countries like Australia. A major problem with these cities is that their growth has been so rapid and uncontrolled,

particularly in recent decades, that it has outstripped the capacity of urban administrations and their infrastructure services to meet the physical and social needs of people who live in them. Many of these new urban dwellers have come not from natural increases in urban populations but from rural drift or transmigration. This has been a significant influence in Papua New Guinea, at least from the 1960s when I worked in the country. We will return to consider some of these issues in more detail later in this paper.

It is important to appreciate that many of the factors mentioned above which are associated with urbanization are now occurring not only in populations that live in cities or large regional centres or towns. Major features of urbanization can occur in small population groups that were previously traditional in their styles of living, eating, drinking, exercising and socializing. Pacific Islander populations and the indigenous people of Australia, the Aborigines and Torres Strait Islanders, are important examples of this recent and continuing change.

Traditional non-urban living

In traditional societies a key characteristic is the extended family where responsibilities and caring for different generations are shared among a large number of individuals. The traditional extended family often includes siblings, aunts, uncles, cousins, grandparents and some more distant relatives. This contrasts with the much smaller modern nuclear family, which consists of children and their parents. Apart from the wider 'umbrella' of protection which the extended family provides, for

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example if a parent dies or becomes ill or if family resources are short, the extended family provides support, supervision and role models to children during their crucial time of growth, development and learning. The stability of traditional life is also strengthened by traditional beliefs, customs, and codes of behaviour which differ greatly in different societies. These support structures tend to be quickly weakened or lost in the process of urbanization.

The children of traditional societies are/were nurtured and trained as members of groups that hunted, fished or gathered foods or, in some areas, were 'slash and burn' farmers. Others are/were trained to more conventional agricultural practices or, in some countries, were herders. Papua New Guinea is an important example of the latter because of the role of pigs in the traditional society and economy. The roles of children differed according to gender: boys tended to take the roles of fishing and hunting, sometimes gathering fruits, vegetables and honey, while the girls usually concentrated on gathering, preparing and cooking foods and working on traditional skills such as weaving and clothmaking. In some societies boys and girls would be busy tending gardens and animals and helping to provide shelter for the family by gathering materials and building dwellings.

Urbanized living

Accidents

For children, city living is the antithesis of growing up in a traditional family and community setting. Cities are usually crowded, noisy, busy places with limited areas for exercise and games. Buildings are often multi-storeyed and roads and footpaths are often hazardous for young pedestrians and cyclists. In many industrialized countries, like Australia (which is very urbanized), the main cause of children's deaths is accidents. Many of these incidents are domestic, such as falls, burns, accidental poisonings and drownings in baths or home (backyard) swimming pools. It is very important to make these urban and town environments safer for children, for example by providing safer areas for sport and swimming. Cities and towns should be 'child safe'. A good way this can be achieved is by

having cities and towns that are 'cyclist friendly' by making cycleways that help to separate motor vehicles from cyclists and walkers or joggers. Legislation to enforce the compulsory use of seat belts in motor vehicles and wearing of safety helmets by all cyclists has been an important measure in reducing trauma-related morbidity and mortality among children in some industrialized countries.

Environmental pollution

Overcrowded cities and towns have other health hazards, particularly where there are insufficient health infrastructure arrangements to cope with the population. These include the supply of adequate, safe drinking water, the removal of sewage and solid and liquid wastes from the environment and the deployment of adequately trained health inspection personnel. These skilled health staff are needed to regulate and check on the microbiological cleanliness of food and water and of foodhandlers, to check other sources of illness (such as animals and insect vectors), and to inspect the soundness of residential dwellings and, in particular, establishments where food is produced, manufactured, distributed, sold or prepared for consumption. The speed of these processes in the modern world means that many processed foods (including meat, fish, cheese and other dairy products) are imported within hours or days and can cause common-source outbreaks of foodborne disease. Urban environments, especially those that are close to industrial areas, can have other environmental hazards including heavy metals and irradiation in the atmosphere, in soils and in water sources. The atmosphere in many large cities, like Los Angeles, Mexico City and many others, is so heavily polluted with noxious gases, smog and other irritants that it causes cough, other respiratory complaints and conjunctivitis.

Eating and breastfeeding patterns

Another major impact of urbanization is on the food supply and eating and drinking patterns. In traditional societies food supplies were sometimes limited and affected by the seasons. Prolonged breastfeeding for 2 years or longer was not unusual. Modernization and advances in agricultural and industrial methods in many countries have transformed this

picture dramatically. In highly industrialized countries like Australia, Europe and the United States, food production is adequate to meet the needs of their populations. There are also sufficient funds to import foods that cannot be produced locally or which people want to have as specialty 'consumer goods'. This is a manifestation of the process of 'globalization', a powerful force internationally that is linked to the wealth and power of nations through their so-called balance of trade. Such countries (eg, Saudi Arabia, the United States, Japan, Western European nations and Australia) no longer face food shortages, overall; for them hunger and malnutrition should no longer exist except in the poorest parts of their societies. In fact, a more prevalent and increasing problem in such countries is the over-abundance of food and its over-consumption. In addition the types of food consumed by children in urbanized, westernized societies tend to be high in calories, fat and salt, and to contain more highly refined carbohydrates (sugars) rather than complex carbohydrates like starch. Complex carbohydrates are the major component of rice, maize and many vegetables including potato, sweet potato and other tubers. The early decline of breastfeeding is another feature of urbanization. Breastmilk is often replaced by expensive commercial formulas, which are often used inappropriately. This exposes infants to increased risks of infections, particularly diarrhoeal disease. In developing or transitional countries, including PNG, early weaning from breastmilk is associated with a marked increase in mortality.

'Lifestyle' diseases

The change to westernized diets has been dramatic and rapid in many parts of the world. Along with children's declining exercise patterns in many industrialized countries, this has been associated with overweight, obesity, hypertension, rising incidence of type 2 diabetes mellitus (non-insulin-dependent diabetes mellitus or NIDDM) and increased risk of development of cardiovascular disease. These disorders may have their origins in infancy and the early childhood years, perhaps even during development in utero. The result is a deleterious effect on child health and the later development of chronic, so-called

'lifestyle' diseases of modern society. This 'New World Syndrome' (1) is now of great importance in rapidly transitional (traditional to modernizing or urbanizing) populations, such as the Aboriginals and Torres Strait Islanders of Australia, Papua New Guineans and other Pacific Islander populations. This transition to New World lifestyle diseases is also occurring in many Asian countries that have become affluent since the Second World War, including Japan, South Korea and Singapore. Similar lifestyle changes are present in Asian populations that have migrated to wealthy countries recently, such as people from the Indian Subcontinent who have settled in the United Kingdom and in other parts of Europe.

Changes in social behaviour including drugs, sex and violence

Among the changes that urbanization brings to children and their families the impacts on social behaviour are perhaps as important as most of the others that have been mentioned so far. It is unwise to generalize about these changes because they vary so much from place to place. However, some of the issues that are important include the impact of the media, advertising and computers, homelessness (street children), alcohol and other drugs, prostitution and the risks of sexually transmissible diseases including HIV infection and AIDS. Violence (including homicide and suicide) and lawlessness often reflect a loss of traditional culture and values. They indicate a society that is struggling to control its youth and to show them that they have an important place in society and in a nation's future.

Television, videos and computers can be very useful for children through their ability to educate and entertain. But what impact on exercise patterns, fitness and overweight does long hours sitting with these technologies have on children and adolescents? There is now a high level of concern in many countries about the negative impacts of the media and other technologies, particularly because of their common content of violence, eroticism and the drug culture, on children's behaviour. A newer technology is the Internet, which could be very useful for the education of children. However, the Internet also has potential problems

because of uncontrolled access to violent and erotic material.

Because of the breakdown of the extended family structure and other traditional supporting mechanisms, many children and adolescents in urbanized or urbanizing societies decide to move away from home and live 'rough' on the streets, in parks, and under bridges. They tend to form gangs, which often lead to rivalries and violence between different groups. Gangs are often involved in illegal behaviour including petty crime, house and vehicle thefts, and even rape and murder. Membership of these gangs is not confined to post-adolescent males: females and often pre-adolescents are also involved. Younger members may be manipulated by habitual criminals into lives of crime, violence and prostitution. Gang members often become addicted to alcohol and other drugs including

solvent sniffing, marijuana, amphetamines, cocaine and heroin. The use of drugs intravenously is a very high-risk behaviour that can cause fatal overdoses and exposure to infection with HIV and other viruses that lead to chronic ill-health or death.

The exploitation of girls and boys by unscrupulous criminals can see these children being trapped in cycles of homelessness, under-education, drug addiction, poverty and despair. These unfortunate children and adolescents become pawns or slaves to crime, prostitution and drugs when they should be enjoying their adolescence and developing into the future of the nation.

REFERENCE

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