

Public Health and Children's Well-Being and Health during Antiquity

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Summary

The health and well-being of children depends on many factors. These factors may include : 1) geographic location, 2) genetic composition of the population, 3) existence of parasites and their hosts, 4) previous history of diseases (e.g. immunity) and 5) socio-economic structure (Grmek 1989). During the last two centuries, industrialized societies have successfully manipulated several of these factors for the benefit of children. But what were the possibilities in pre-industrial societies to improve public health and to promote the health of children ?

The aim of this study was to examine the relationship between public health and the health and well-being of children during Antiquity (roughly 500 B. C. - 500A.D.). To realize this aim, both written and archeological evidence was considered. Unfortunately both types of sources are biased, their data being defective with regard to children. Public health was not a major topic of interest for ancient authors (medical or others). There are few archaeological studies which have concentrated on public health aspects (e.g. water supply, sewers, housing conditions) of ancient societies.

Mortality of children

Evidence as to the health of children is meagre. Children were not the main interest of ancient medical authors, although they quite well recognized the specific diseases of children (Ghinopoulos 1930). Older children got a bit more attention than infants from ancient medical authors. Archaeological evidence is also meagre : typical ancient epigraphic and bone materials include too few children to give accurate assessments. Angel has estimated the ratio of infant deaths to those of children and adults in Greece during Antiquity on the basis of skeletal material (Table 1) (Angel 1972). This evidence gives the impression that the mortality of children fluctuated during Antiquity depending on such factors as the ecology of the region and the

ensuing appearance or disappearance of diseases (e.g. malaria in Greece). In classical Olynthos (northern Greece) it has been estimated that only about half of the population reached adulthood (Grmek 1989).

Romano-British cemeteries reveal quite well the serious problems faced by researchers trying to use skeletal remains for demographic reconstructions (Table 2). The most probable explanation for the low proportion of children buried in the Romano-British cemeteries is not a very low childhood mortality but a selection bias; for instance, children were buried somewhere else, and their bones were less well preserved than those of adults (clearly evident at Lankhills cemetery, Winchester).

One solution for the problem of defective sources is to compare findings from ancient materials to various demographic models reconstructed in recent years (Parkin 1992). These models reveal the theoretical limits of demographic phenomena (including infant and later childhood mortality) in human populations,

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Table 1. Mortality ratios for Greece in different periods during Antiquity.

Period	Ratio of deaths (infants : children : adults)	Number of skeletal remains
Classic	5 : 3 : 10	133
Hellenistic	7? : 3 + ? : 10	126
Imperial Roman	(5+) : 3.5 : 10	127

?, + and (), in the original text, indicate problems of estimation.

Source :

Angel JL. *Ecology and population in the Eastern Mediterranean. World Archaeology* 1972 : 4 : 88-105.

assuming the basic biology of the human race to have remained the same during the recent few thousand years. From the scanty sources available, one can draw the conclusion that infant mortality (circa 30%) and later childhood mortality (circa 20 %) during Antiquity was high and comparable to that of other pre-industrial societies.

Health risks of children

What, then, were the principal health risks of children ? We can safely assume that nutrition and different parasites were the main factors influencing their health. From studies concerning nutrition in the Mediterranean area during Antiquity, it may be concluded that food shortages were quite common during Antiquity, but a real famine was quite rare (Garnsey 1988). Universal and longish (e.g. 1 -2 years) breast-feeding would have been quite essential for the well-being of young children. Galenos and Soranos (2nd century AD) indicate that : "mother's milk is always best for all children" (Galenos 7.7.) and "To be sure, other things being equal, it is better to feed the child with maternal milk; for this is more suited to it, and the mothers become more sympathetic towards the offspring, and it is more natural to be fed from the mother after parturition just as before parturition." (Soranos 2.11.18). Medical authors and Egyptian wet-nursing contracts indicate that breast-feeding continued most commonly for about two years (Ghinopoulou 1930, Evans 1991). According to Soranos and Galenos, weaning should start gradually after about half a year, when the first teeth began to appear (Soranos 2.21.46, Galenos 1.10). This period (from six months to two years of age), when solid foods and water or watery wine were being introduced, were most probably the most dangerous period in the child's life.

Available evidence on breast-feeding is biased towards aristocratic families. In Classical Athens and later in the Roman world upper-class families seem to have quite commonly relied on wet-nursing. The upper-class of Roman society was the target of Soranos, who advised on selection of midwives : "A suitable person will be literate" (Soranos 1.3) and wet-nurses : "And she should be a Greek so that the infant nursed by her may become accustomed to the best speech." (Soranos 2.19). Soranos gives very detailed instructions, which could be followed up only by the most well-to-do families, for the selection of a wet-nurse or preferably several wet-nurses for the newborn (Soranos 2.12.19-20). Soranos is quite explicit that "in most cases, (the baby should) abstain from all food up to as long as two days". (Soranos (2.11.17) and "From the second day on after the treatment (birth), one should feed with milk from somebody well able to serve as a wet nurse, as for twenty days the maternal milk is in most cases unwholesome..." (Soranos 2.11.18). This delay in beginning feeding, especially if there was not a suitable wet-nurse at hand, might in some cases have been deleterious for the health of the newborn, especially if unhygienic foods were used instead of breast-feeding (Soranos recommended moderately boiled honey, 2.11.17). There was also the ensuing emotional distance from mother (and father). Fortunately a newborn in a lower-class family most probably had no other experience but breast-feeding by the actual mother.

Some childhood diseases (e.g. smallpox, measles) most probably did not exist during Antiquity in the Mediterranean cultures, or appeared there only in Late Antiquity. Diseases of childhood such as mumps and diphtheria, however, have been identified from the work of

Table 2. Age-ratios for burials in Romano-British cemeteries

Cemetery	Ratio of deaths (infants : children : adults)	Number of skeletal remains with age determination
Trentholm Drive, York 150-350 AD	0,2:0,7:10*	290
South of Fosse way, Cirencester 150-400 AD	0,6 : 1,5 : 10**	362
Lankhills, Winchester 300-410 AD	1,8:2,3:10***	284
Main cemetery, Poundbury 4th century AD	2,6 : 2,6 : 10 ****	969

* 0-5 years old: 5-15 years old: adult

** < 2 years old: 2 - 18 years old: adult

*** < 2 years old: 2 - 15 years old: adult

**** 0/2 years old: 2 - 19 years old: adult

Sources :

Warwick R. *The skeletal remains. In Wenham LP, Birley E., Gillam JP. et al. The Romano-British Cemetery at Trentholme Drive, York. Part II. Ministry of Public Buildings and Works, Archaeological Reports N°5. London : Her Majesty's Stationery Office, 1968 : 112-216.* McWhirr A, Viner L. and Wells C. *Romano-British cemeteries at Cirencester. Cirencester Excavations II. Cirencester Excavation Committee, Corinium Museum, Cirencester 1982.*

Clarke G. *The Roman cemetery at Lankhills. Winchester Studies 3, Pre-Roman and Roman Winchester, Part II. Clarendon Press, Oxford 1979.*

Molleson T. *Mortality patterns in the Romano-British cemetery at Poundbury Camp near Dorchester. In Bassett S. (Ed.). Deaths in towns. Urban responses to the dying and the dead, 100-1600. Leicester University Press, Leicester 1992 : 43-55.*

ancient medical authors (Ghinopoulo 1930). Evidence supports the hypothesis that malaria was an ancient scourge at least in the Eastern Mediterranean (Angel 1972, Grmek 1989). However, it can be assumed that water-borne parasites causing diarrheal diseases were the main health-risk for child populations (Grmek 1989). The diarrheas would be fatal especially when they coincided with food shortages. Lead was perhaps the only toxic chemical widely used during Antiquity, although in pre-industrial societies the biological hazards of early life outweighed the effects of lead. It can thus be assumed that the principal health-risks for the child population were endemic food shortages and contagious diseases (especially water-borne epidemic and endemic diseases).

Public health

What private and public measures to promote the health and well-being of children during Antiquity were then feasible? Examples of measures available to a family for the benefit of their children are shown in Table 3. One thing affecting the well-being of children which was evident in Antiquity as well as in our modern times was whether or not the child was wanted.

The topic of contraception and abortion during antiquity has aroused quite lively scientific discussion. A number of formulas for abortifacients or contraceptives exist, some including effective elements (Riddle 1992). However, their use might have been ineffective because ideas as to conception and development of the fetus were not yet well developed. The idea of general birth-control might have been quite alien to a society faced with high childhood mortality. Contraception and abortion (if practised effectively) may well have been confined to the socio-economic elite or special groups such as courtesans. No means of effective contraception or safe abortion apparently existed during Antiquity to control the number of children in the ordinary family. Faced by a discrepancy between available resources and number of children, exposure and infanticide served most families as their means to limit the number of mouths.

The complex relationship between children and parents depended on the social status of the parents, the sex of the child and on whether or not he/she was wanted. A wanted boy to a family of high social status had the best chance of survival. The ancient medical writers, for instance Galenos and especially Soranos in his

Table 3. Measures available to a family for the benefit of children in Antiquity

Measure	Effect on children	Comments
Contraception	Control of the number of mouths gave protection against food shortages for the remaining members of the family	Although effective formulas existed, use might have proven inefficient
Abortion	-"	"
Infanticide	"	Effectively practised
Exposure	"	"
Breast-feeding	Safe nutrition of the newborn	Common during Antiquity, but the delay proposed by Soranos might have worsened the fate of upper-class newborns.
Personal hygiene "lifestyle"	Advice of Galenos and Soranos might have reduced risk of infections (e.g. choice of pure water and air)	Available only to upper-class families; effectiveness of such recommendations hard to estimate
Medicine	Restoration of the health of diseased children	-"

Gynecology, gave advices to well-to-do parents about ways to promote children's health. Galenos expressed himself quite clearly when he stated that "Among the Germans, children are not well brought up. But we are not now writing this for the Germans or for any other savage or barbarian people, any more than for bears, boars, lions, or for any of the other wild beasts, but for Greeks and for those who, though born barbarians by nature, yet emulate the culture of the Greeks" (Galenos 1.10).

Ancient societies developed various measures (Table 4) to support the child population : e.g. the care of orphans in Classical Athens (Aristotle. *The Athenian Constitution* 24.3 and 56.7), tax-relief in Classical Sparta (Aristotle. *The Politics* II.ix.), common meals in Classical Crete (Aristotle. *The Politics* II.x) and public and private alimentation schemes during the Roman Empire. In Late Antiquity, the Christian church took the initiative in this kind of "welfare policy" (Miller 1985). Some legislation against infanticide and exposure also appeared during Late Antiquity (Boswell 1988). The organization of the food supply of the big cities (first Athens, then Rome and later Constantinople) was also important for children's welfare (Garnsday 1988). The organization of a relatively safe water supply (aqueducts) in the towns of the Roman Empire might also have somewhat reduced the role of

water-borne infections and favoured the evolution of less lethal forms of parasites. However, it can be concluded that unhygienic conditions (problems in waste management and water supply, overcrowding), at least in the urban centres, were quite deleterious for the health of most children (Scobie 1986).

Conclusion

The factors which endangered children's health during Antiquity were most of all biological : viral and bacterial diseases in combination with poor hygiene and nutrition. The role of different measures for the benefit of children taken by families or the broader society was, at best, quite limited. Generalizations are, however, risky, for the health and well-being of children during Antiquity.

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Table 4. Public measures for the well-being of children during Antiquity.

Society	Measure	Comments
Classical Athens	Care of orphans	Scope and effectiveness of the system hard to evaluate.
Classical Sparta	Grain distribution	Improved nutrition of children.
	Tax-relief, exemption from military services for fathers of several boys	Hard to evaluate how much this would have benefitted children in Spartan society.
Classical Crete	Common meals (distribution of the surplus of the society)	Improved nutrition of children.
Roman world	Alimenta (subsistence payments to children)	Helped poor children, mostly in the core areas of empire (especially Italy)
	Grain distribution	Improved nutrition of children in big cities (Rome and Constantinople).
	Aqueducts	Comparatively safe water supply probably diminished children's water-borne infections in towns, especially in well-to-do families
	Sewers, waste management	Scope and effectiveness of such systems hard to evaluate, but most probably highly ineffective and together with overcrowding the major health risk especially for poor children in towns.
Late Antiquity	Care of orphans	By the Christian church; scope and effectiveness of the system hard to evaluate.
	Legislation against infanticide and exposure	Hard to evaluate the effectiveness of implementation of such legislation.

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