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The summer colonies: 'custodians' of the health of the young. Prophylaxis of infectious diseases and educational purposes in the reports of the school medical inspector Benedetto Barni (1893-1970) in the 1950s

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Keywords

Benedetto Barni • Prophylaxis of Epidemic Diseaes • Preventive Medicine • Heliotherapy Colonies • Tuberculosis • Poliomyelitis

Summary

Starting from the 1950s, climatic-prophylactic colonies for children took on characteristics that were partly different from those of their predecessors. From their origins until the years immediately following the Second World War, these facilities had the stated aims of education, prevention and cure for poor and malnourished children. In the mid-20th century, however, a change took place; the colonies no longer catered exclusively for the less privileged and most fragile, but rather for an economically and culturally heterogeneous population, while still maintaining the purpose of health prevention and promotion in childhood and adolescence. The number of agencies involved in organizing the colonies increased, and large companies also participated. Similarly, the annual number of children who spent a period of time in the colonies grew steadily, owing to intense migration towards the cities, increased female employment and holiday closures of large factories during the month of August.

The authors recount this historical transition on the basis of the experience of the Sienese doctor Benedetto Barni (1893-1970) and the unpublished reports that he produced during his time as a school medical inspector. Against the backdrop of the teaching of the great hygienist and initiator of preventive medicine Achille Sclavo, who was Benedetto Barni's mentor, these reports testify to an everyday activity made up of real contacts with the people and with the territory; this enabled Barni to understand the social and healthcare problems facing the country and to try to work out a solution to them from the standpoint of preventative medicine.

Introduction

The summer, or "heliotherapy", colonies were residential institutions situated in locations other than those of their guests' usual residence, where minors were hosted during period of school closure. They were established for social, pedagogical and health reasons:

- *social* because in the initial stages they catered for children of the proletarian classes;
- *pedagogical* because they exploited the stay in another location for educational purposes;
- *health* as they focused particularly on aspects of preventive medicine.

Here, the authors mainly deal with the healthcare aspect, while acknowledging that these different areas are often interconnected.

With the industrial revolution, a new system of production developed in the 19th century, giving rise to the appearance of the proletariat: people who migrated to the cities to work in factories, and who generally lived in the poorest and most insalubrious neighbourhoods. These industrial workers lived in conditions of extreme instability and poverty. Even children were employed in factories for 12 to 14 hours a day in unhealthy and dangerous environments.

Children of the urban lower classes were "deprived of childhood"; they grew up in a world populated by adults who did not recognize that they should have their own space and specific rights.

In the years preceding and following the unification of Italy, the country's health and hygiene situation was extremely precarious and difficult, and it was the children who suffered most. Indeed, scrofula and rickets were rife, affecting the youngest in a population mostly affected by infectious diseases of which the etiology and modalities of contagion are still unknown.

In this scenario, the approach that medicine adopted towards society was changing, in that strategies of social and preventive intervention were implemented in such a way as to reach individual citizens. By the end of the

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century, hygiene had become a highly topical issue, in both medical and political circles, and international conferences on medicine, hygiene and pedagogy were frequently held [1].
One of the main themes on which the attention of the medical class and the government of the time focused was the danger of the spread of infectious diseases, a hazard that was markedly exacerbated by the new structure of the cities, which were overcrowded and insalubrious and lacked water mains and sewers.

The scourge of tuberculosis

Particular concern was aroused by tuberculosis, a very widespread and much feared disease [2-4]. And it was precisely to protect children of the poorest classes from this slow disease – especially in its extrapulmonary form, so-called scrofula (tuberculous lymphadenitis), characterized by enlargement of the neck lymph glands, which tended to suppurate – that seaside hospices were created; these healthcare initiatives were halfway between a hospital model and a holiday camp [5].
One of the first promoters of the idea of a seaside hospice that would not have the character of a hospital was Giuseppe Barellai [6], a doctor at Santa Maria Novella Hospital in Florence and a scholar of forms of tuberculosis prophylaxis. In 1853, he proposed the creation of free facilities for the care of children suffering from scrofula [7], an initiative that gave rise to the *Committee for the foundation of free seaside hospices for indigent scrofula sufferers* [8]. Barellai claimed that there was no "better medicine than sea air and water" for the treatment of scrofula and rickets in children [9, 10].
From their origins until the 1950s, these facilities clearly aimed at prevention and cure for poor and malnourished children. With the advent of fascism, however, an ideological-educational purpose was added, with a view to instilling the principles of the regime into the younger generations. In the mid-20th century, following the end of the Second World War, these summer "colonies" were no longer aimed exclusively at the less privileged and most fragile; rather, they catered for an economically and culturally heterogeneous population, while still maintaining the purpose of health prevention and promotion in childhood and adolescence.
Colonies were a phenomenon that has certainly affected much of Europe and America since the last decades of the 19th century and we must observe that in the context of an evolving concept of childhood, these experiences were presented as an attempt to resolve, through distancing from the urban context and a simultaneous return to nature, the social or health problems typical of the industrial revolution [11-13].
In Europe, France was the country in which the colonies had the greatest diffusion, as evidenced by well-detailed articles written on these experiences, compared to a smaller production in Italy, usually focused on the conquests of the fascist era [14].
It was in a context of tuberculosis epidemic that Brittany became, between the end of the 19th century and the beginning of the 20th century, a real field of health experiments, based on the therapeutic virtues of sea water and the prophylactic qualities of sea air. At the end of the 19th century, the Breton coast became a favorite land for the settlement of colonies.
The recreational aspect only established itself after the Second World War.
As the French scholar Henri Laborde highlighted, summer camps are also closely linked to the collective character of the festival and its timing during a period of school closures. In this regard in 1958 he wrote: "Au sens strict du terme, la colonie de vacances peut être définie comme une œuvre de vacances collettivis qui reçoit, dans un milieu aménagé à cet effet, un groupe d'enfants normaux âgés de 6 à 14 ans, pour des périodes d'étendue variable pendente les congés scolaires" [15, 16].
At the National Medical-Pedagogical Congress in 1953, Agostino Gemelli (1878-1959) stated: "*The doctor is the backbone of the colony, and therefore has a great responsibility on his shoulders. Educators and assistants must refer to the doctor for instructions or advice, which are provided on the basis of the factual data that they present to the doctor. He is therefore the backbone of the colony because its main and fundamental aim is to restore its young guests to a sufficient physiological condition to be able to cope with life; the colony must enable children to return to school in such a physical condition that they can benefit from teaching*" [17]. Thus, the period spent in the colony was regarded as a time to prepare the child or adolescent to return successfully to school. This vision was also stated very clearly by Benedetto Barni (1893-1970), doctor, health officer and school medical inspector in Siena, whose reports, written at the end of the 1950s, prompt the reflections that form the basis of the present article.

School and the colonies in Benedetto Barni's vision of the prevention and promotion of health in childhood and adolescence

Benedetto Barni was born in 1893 into a wealthy family in Montalcino, in the province of Siena. His father, a school inspector, was a dour, dutiful man, and a keen advocate of Maria Montessori's pedagogical ideas. After attending classical high school in Siena, Benedetto enrolled in the Faculty of Medicine and Surgery. However, he was able to pursue his studies only for three years, as he was conscripted into the army in December 1915. Immediately assigned to the military hospital in Florence as an aspiring medical officer, in May 1916 he was sent to the front, where he worked tirelessly to assist the wounded. Having been wounded himself, he was sent on convalescence leave to Siena, and, while still a soldier, was able to complete his medical studies. Immediately after graduating, he was sent to serve as a military doctor at the Gorgòna penitentiary [18].

At the end of the war, he was discharged from the army and returned to Siena, and in 1920 he became a general practitioner in Vagliagli, near Siena.
Thus, for family reasons, he abandoned all ambitions in the academic field, despite his first-rate preparation and the fact that, in the field of Public Health, he had had such great masters as Achille Sclavo (1861-1930) [19] and Giovanni Petragnani (1893-1969).
Achille Sclavo dedicated his life to spreading the principles of hygiene to children and public health by leading numerous health campaigns wanted by the governments of the time. He dealt with preventive medicine and hygiene, applying them to the Sienese territory: it is natural that someone like Barni who worked as a doctor and health officer had a close bond with the great hygienist [20].
In 1937, Barni was transferred to Siena as a general practitioner, and held the position of Health Officer of the Municipality of Siena from 1939 to 1961.
The author of scientific publications on pediatric auxology, Barni left interesting reports on his long healthcare activity. Some of the reports written at the end of the 1950s, regarding his experience as a school medical inspector, reveal the great work of prevention that he carried out on Sienese children and adolescents during the school year, in preparation for their stay in the colony. In particular, he left two autographs, consisting of 167 numbered cards (a draft and the final version), that list the temporary colonies used for the performance of service for the year 1959 [21]. Barni meticulously reported a series of data that were fundamental to providing an up-to-date picture of the health of young people from a preventive medicine perspective. For each colony to which Sienese children and young people were sent, he provided important information on the health of each child: age, weight and height on arrival at the colony, changes in weight and height during the stay in the colony, growth values, and anti-diphteria [22] and anti-poliomyelitis vaccination [23].
These data were correlated with the physical and psychic data collected during the individual visits to school during the year, in line with Agostino Gemelli's observation. As Barni wrote: *"If the summer camps are regarded as the completion of the school year; if the door of the school opens, allowing selected children to reach their pre-defined destinations in the mountains or at the seaside, the current health and hygiene concerns will disappear […]"* [21].
In this regard, Achille Sclavo's report "*Somatic growth and psychic evolution: methods of evaluation – outdoor schools"* [24] is of particular interest. The idea of the outdoor school (Fig. 1) was conceived by Achille Sclavo, in order to create healthy school environments where growth could be integrated with physical education, precepts of hygiene and the principles of the fight against tuberculosis [25].
According to what Barni states in the above-mentioned report, medical examinations of children were frequently carried out during the school year, and all the data collected were carefully noted in personal files.
"*The healthcare assistant collaborates in anti-tuberculosis prophylaxis, which is carried out through the complete radiography of pupils and staff […]. At the same time, an allergy test is conducted by means of an anti-tuberculin reaction patch, and anti-tuberculosis vaccination is carried out if the result is positive. […] The social worker completes health report cards to record, in addition to the mandatory prophylactic vaccinations required by law, smallpox vaccination […], the two diphtheria […] vaccinations and the three polio vaccinations, to which a fourth polio vaccination must be added [...]*" [24, 26].

Fig. 1. The "Achille Sclavo" outdoor school on the bastions of the Sienese Fort (Courtesy of Historical Archive of the Municipality of Siena, Benedetto Barni archival fund).

The data on the percentages of children vaccinated in the five classes of the "Achille Sclavo" outdoor elementary school are interesting: 85% had received the first and second polio vaccine doses, and 73.4% the third dose, while for the fourth they had to wait until the regulatory interval had expired [24]. Data on diphtheria and smallpox vaccinations were also recorded.

Regularity, adequacy, and control: the principles underlying the experience of the colonies

The information provided by Barni suggests that the colonies and the preparation carried out at school during the school year constituted an extremely valuable means of preventing diseases in children and an effective control mechanism. As Barni claimed, "*No child admitted to a colony escaped the third diphtheria booster vaccination*" [21].
Preventive medicine based on the concepts of regularity and constant control.
The work carried out by the colonies owed much to the close collaboration between the Municipal Hygiene Office and the Provincial Anti-Tuberculosis Consortium, which also conducted "*radiographic screening to detect contagious forms and to promptly recognize initial forms before admission to the colony community*" [21].
Medical examination and the checking of vaccination status had the purpose of ascertaining the health of children who were candidates for the colonies, in order to exclude the participation of those suffering from contagious diseases which could prove to be a risk for other children.
These procedures were followed by a thorough social analysis, in order to favor candidates with the greatest economic and family needs.
The primary schools of Siena – Barni wrote in 1959 – *"have been endowed with 6 clinics*", where doctors had been working since the beginning of the school year, their task being to "*prepare pupils for the colony, study them with that purpose in mind, accompany them with all the somatic and physio-psychic information collected from individual examinations* [21]. *"The school doctor certifies that the children leaving for the colony are free from communicable diseases and come from areas where there have been no recent infectious or widespread diseases; he also checks the child's need to be sent to one of the various types of colony"* [21].
In describing the Belcaro colony near Siena, Barni states that: *"During their stay in Belcaro, the children selected and followed during their school life, with their frailty, fatigue, anemia and states of predisposition, which have been scrupulously documented before admission, will have the most suitable physical and mental rest, so that they can then return to school willingly and joyfully. In the colony, healthcare activity takes precedence over teaching activity, this latter being understood only as the assimilation of the norms of health education in the sense of preventive medicine and not curative medicine, since a child who falls ill immediately leaves the collective life of the colony*" [21].
While most of the colonies were at the seaside (Fig. 2), some were located in hilly or mountainous areas (Fig. 3). "*Environments of medium altitude, between 600 and no more than 1000 meters, have a stimulating and tonic effect. As children readily adapt to the mid-mountain climate without great effort, it is considered one of the most suitable climates for childhood prophylaxis, particularly in the summer period […] on account of the*

Fig. 2. Camping at Marina di Cecina - Livorno (Courtesy of Historical Archive of the Municipality of Siena, Benedetto Barni archival fund)

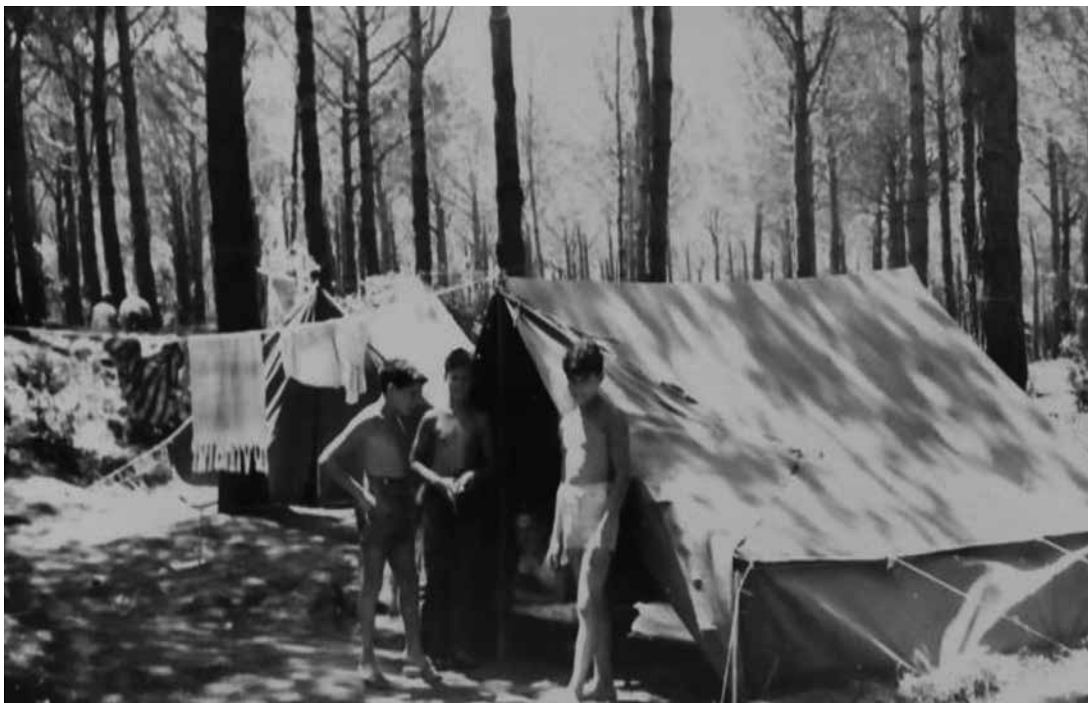

Fig. 3. The mountain colony of San Marcello pistoiese (Courtesy of Historical Archive of the Municipality of Siena, Benedetto Barni archival fund).

lower atmospheric pressure, the dryness and purity of the air and the intensity and longer duration of sunshine, due to the absence of atmospheric dust" [21].

"The Municipality's Hygiene Office is particularly attentive to the needs of children who aspire to benefit from a stay at the summer camps. However, it would be useless to carry out all this activity if the sector made up of managers, auxiliary staff and members of the maintenance and service staff were to be neglected. Indeed, it would be useful, or rather necessary, to provide the members of this sector with a personal booklet in which they can record, in addition to their qualifications and specialization courses attesting to their technical preparation [...], also their physical fitness, in terms of the absence both of infectious or otherwise contagious diseases in progress, and of organic diseases and mental disorders incompatible with life in a childhood community. [...] This must be observed in order to comply with the rules necessary for social safety, according to which vaccination prophylaxis is mandatory; moreover, parenteral vaccination against typhoid, paratyphoid etc. is also mandatory for laundresses and those who handle food and drink, and any healthy carriers must undergo verification by means of laboratory tests" [21].

Conclusions

The reports left by Benedetto Barni provide significant data that help us to reconstruct the organization of an institution, that of the colonies, which accompanied the growth of many generations of Italians for over a century. The colonies remained very popular right up to the end of the 1950s. Indeed, in the summer of 1959, over 3,000 Sienese children and young people – aged 5 to 18 – (on a population of approximately 60,000 inhabitants) attended the seaside and mountain colonies. From the point of view of the age of the children taken in, there isn't in scientific literature a specific position regarding Italy. Sergio Neri, (1937-2000), teacher, educational director, trainer, school inspector, at the end of 1960 refers to a range of age between 6-12 years. If the children were older, it wasn't a colony but a simple stay [16, 27, 28].

It must be said that the structure of the stay in the colony remained substantially the same.

As the colonies were designed to host large numbers of children, who had to be kept under control in large teams, they lacked flexibility and offered their young guests a narrow range of activities. Nonetheless, their value from a medical and preventive point of view is undeniable.

Within this model, the child evidently had a passive role and could not emerge from the anonymous multitude of his peers. At the same time, the educators themselves did not have the freedom to modulate their work according to the children and young people entrusted to them; rather, they had to comply with the directives handed down from above, to respect them and to ensure that the children respected them.

This organization did not change much over time, although the management of the colonies passed from the philanthropic associations of the 19th century to the government in the 20th century (particularly in the fascist period), to finally see the commitment from the 1960s also of important national companies and international.

Continuity between school and colony was extremely close, which prompted Barni to state: "*The school-colony partnership must be maintained without evaluative discontinuity with regard to prophylaxis, which today constitutes a highly social objective*" [21].

This statement reflects the teaching of Barni's mentor, the great Sienese hygienist Achille Sclavo, who devoted much of his life to the prevention of epidemic diseases, particularly those of childhood [29]. Like Sclavo, Benedetto Barni also considered health to be a personal right and a community interest. Barni's writings clearly reveal the foresight of a doctor who devoted his work and his study to the school-age population of the Municipality of Siena.
In this setting, he drew up rules to follow regarding personal hygiene and nutrition; together with vaccines, this approach was instrumental in defeating the many diseases that afflicted the population at the time: tuberculosis, typhoid, polio and diphtheria and which today due to wars, vaccine hesitation and environmental disasters tend to return [30-32]. Barni's professionalism and generosity were such that the Siena colonies were judged to be among the best in Italy.

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Authors' contribution

DO & MM: conceived the study; DO: designed the study; DO, MM: drafted the manuscript; DO, MM, FZ, DP: performed a search of the literature; DO, FZ, DP: critically revised the manuscript; DO, DP: conceptualization and methodology; DO: investigation and data curation; DO, MM: original draft preparation; FZ, DO, DP: review; DO, MM, DP: editing. All authors have read and approved the latest version of the paper for publication.

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