

**'As Good as Five Shillings a Week for Life':
Poor Dental Health and the Establishment of
Dental Provision for Schoolchildren in
Edwardian London.**

Masters Thesis.

**Submitted in part fulfilment for the degree of
MA in Historical Research at the IHR,
University of London.**

September 2014

**© Helen Franklin
Student number: 1442309**

Contents

Contents	p.1
Acknowledgements	p.2
Abstract	p.3
List of Abbreviations	p.4
List of Tables	p.5
Introduction	p.6
Methodology	p.10
Chapter One: The problem: increasing dental disease in the Victorian period.	p.12
Chapter Two: Recognition and extent of the problem and its perceived impact on the nation.	p.27
Chapter Three: How the problem of dental health was addressed.	p.41
Conclusion	p.59
Appendices:	
i: Lipton's Tea advertisement, Illustrated London News, 17 th September 1892	p.62
ii: Metropolitan Police, Notice to Parents, 24 th March 1909	p.63
iii: Reverse appointment card from Deptford Children's Health Centre 1910.	p.64
Bibliography and Sources	p.65-73

Acknowledgements:

My biggest thank you of all goes to Dr Andrea Tanner, who supervised this project. Andrea's historical knowledge is a constant inspiration. I am so grateful to have been supervised by such a nurturing and dedicated tutor. Andrea's enthusiasm for my subject was very motivating and I appreciate all the words of wisdom she shared with me over coffee.

This year has been a fantastic learning journey, so I would like to thank Professor Matthew Davis for all his academic advice throughout the year.

Whilst researching this dissertation, it was necessary to spend a considerable amount of time in specialist libraries and archives. I would like to take this opportunity to thank the staff at the BDA Library, for allowing me to use their resources. Damyanti Raghvani and Ruby Trinder on the issue desk always greeted me with a warm welcome and found my requests with speed - service with a smile. Thanks also to the staff of the Wellcome for helping me to find my way around their new facilities .

Abstract:

This dissertation is an investigation into the rise of dental provision for schoolchildren in Edwardian London, which developed in response to the problem of poor dental health in late Victorian Britain. This subject has seen little attention within the fields of the history of medicine and child welfare. Owing to this academic neglect, the supporting body of bibliographic work is scarce; therefore the sources used in this research are principally contemporary. This study will discuss the causes and extent of poor dental health in schoolchildren and how the problem was perceived and addressed in the period considered. It will explore the establishment of the school dental service in Edwardian London, and will analyse the first dental clinics. This research concludes that the rise of the school dental service, from a philanthropic venture to a municipal service, marked a philosophical shift from parental and philanthropic responsibility for working class children, through the rise of the dental profession, to an acceptance and new-found political value of children by the state. This finding is significant to the theoretical medicalization of childhood and the social reconstruction of children in the Edwardian period.

List of Abbreviations:

BDA	British Dental Association
<i>BMJ</i>	<i>British Medical Journal</i>
<i>Br. Dent. J</i>	<i>British Dental Journal</i>
CLSD	Central London School District
IDCPD	Inter-Departmental Committee for Physical Deterioration
LCC	London County Council
LGB	Local Government Board
LMA	London Metropolitan Archives
MOH	Medical Officer of Health
MOsH	Medical Officers of Health
SMO	School Medical Officer.
TNA	The National Archives

List of Tables:

Table 1: Weekly diet of Children in South Metropolitan District Schools p.20

Table 2: Population and Registered Dentists in London, 1881-1911 p.26

Introduction:

Within the field of the history of child health and welfare, research into the health provision and the treatment of the school-aged child has been largely overlooked.¹ Academic studies of the 1980s and 1990s focussed on the health and welfare of the infant.² The few studies which addressed health provision for school children centred on the debates on national efficiency and the growth of school medical services,³ within the narrative of the origins of the welfare state.⁴ Such studies fail to recognise the impact of increased medical knowledge, practice and professionalization.⁵ In addition, the school dental service is a 'neglected issue' in medical history.⁶ This is despite anecdotal evidence of poor dental health amongst the working classes at the beginning of the twentieth century.⁷

To quote Napoleon: 'an army marches on its stomach.'⁸ But what if the soldier cannot chew his rations because of the poor state of his teeth? Following several months of enquiry, a clear link between the dental health of school children and defective teeth in military recruits was formally

¹ R. Cooter 'Introduction' in R.Cooter, ed., *In the Name of the Child Health and Welfare 1880-1940* (London, 1992), pp. 1-3

² L. Marks, *Model Mothers: Jewish Mothers and Maternity Provision in East London, 1870-1939* (Oxford, 1994). J. Lewis, *The Politics of Motherhood: Child and Maternal Welfare in England, 1900-1939* (London, 1980). D. Dwork, *War is Good for Babies and Other Young Children* (London, 1987).

³ B. Harris, *The Health of the Schoolchild: A history of the school medical service in England and Wales* (Buckingham, 1995).

⁴ B.B. Gilbert, *The Evolution of National Insurance in Great Britain: The Origins of the Welfare State* (London, 1966) and D. Frazer, *The Evolution of the British Welfare State* (London, 1973).

⁵ Cooter, *In the Name*, p. 2.

⁶ J. Welshman, 'Dental Health as a Neglected Issue in Medical History: The School Dental Service in England and Wales, 1900-1940', *Medical History*, 42 (1998), pp. 306-327.

⁷ L. Beier, *For their own good: The Transformation of English Working Class Health Culture, 1880-1970* (Columbus, 2008), includes oral history of working class dental treatment.

⁸ E. Knowles, 'an army marches on its stomach', *The Oxford Dictionary of Phrase and Fable* (2006), [Available from: <http://www.encyclopedia.com/doc/1O214-anarmymarchesonitsstomach.html>, (17.09.2014)].

acknowledged in Britain in the 1904 report of the Inter-Departmental Committee for Physical Deterioration (IDCPD). This Committee was set up to investigate the reasons for Britain's defeat during the Boer War (1899-1902). The health and welfare of the nation's children, already a contemporary concern, produced further governmental enquiry and legislation in the 1907 Education (Administrative Provisions) Act.

The rise of the dental profession was also critical in addressing this problem, a detail often overlooked by academics. The 1878 Dentist's Act was a turning point in the professionalization of dentistry. Registered practitioners moved away from the artisan 'tooth drawer' image of the previous centuries, to be recognised by the state and public as a specialism of scientific medicine. Dentists shared their knowledge through journals and eventually set up a single professional body, the British Dental Association (BDA) in 1879. By positioning themselves professionally, against a backdrop of social, economic and political changes, dentists responded to the increasing demand for dental treatment during the late Victorian period.

Some twenty years before the post-Boer War reports, a few philanthropic dentists had recognised the problem and began treating those who could not afford treatment. They campaigned, with the use of statistical evidence, for the routine inspection and conservative treatment of school children suffering the consequences of a diet high in sugar combined with little dental hygiene.⁹

Academic literature on the establishment of the school dentist service is scarce. Dentist and historian Professor Stanley Gelbier has written several

⁹ The School Dentists' Society, *The School Dentists' Society: Its Objects and Aims* (2nd edn, London, 1913), pp.20-21.

insightful historical accounts including a study of the school dental service,¹⁰ dentistry for pauper children¹¹ and key figures in the campaign for paediatric dentistry.¹² Timmis¹³ and Richards¹⁴ overviews of the school dental service are both too brief (the former also historically incorrect) to consider seriously. Bernard Harris's history of the school medical service¹⁵ relies on the physical deterioration discourse and mentions that a dentist gave evidence at the IDCPD, but disregards the development and influence of the dental profession. John Welshman's account of the school dental service consistently lacks historical accuracy, but points out that dental health is a neglected issue in medical history, because academics have not fully appreciated how dental health played an important role in the deterioration debates.¹⁶ Rufus Myer Ross's PhD thesis on the development of dentistry in Scotland 1800-1921,¹⁷ is a detailed analysis of the professionalization of dentists, superbly demonstrating the demand for dentistry and the reasons behind the prevalence of dental disease. Ross's work argues that professional dentists were concerned that dental disease in childhood was a threat to the future of the nation, long before the government took action.

This dissertation attempts to begin to address this historic inattention.

Chapter one will focus on the cause of the perceived problem, reasons for

¹⁰ S. Gelbier, 'The Rise of London's School Dental Service', *Lindsay Club Occasional Newsletter*, 8 (1982), pp.12-17.

¹¹ S. Gelbier, 'Dentistry for pauper and other poor children in the late 19th and 20th centuries', *Dental Historian*, 43. (2006), pp. 43-61.

¹² S. Gelbier, 'Frederick Breese and London's first school dental clinic', *Br. Dent. J.*, 3 (1981), pp. 309-311, also S. Gelbier and S. Randall, 'Charles Edward Wallis and the Rise of the School Dental Service', *Medical History*, 26 (1982), pp.395-404.

¹³ J. Timmis, *History of the School Dental Service*. Unpublished Presidential Address (1977)

¹⁴ N. Richards, 'Morals and Molars: Physical deterioration and the beginning of the school dental service', *Br. Dent. J.*, 153:1 (1982), pp.35-36.

¹⁵ Harris, *The Health of the Schoolchild*, p. 21.

¹⁶ Welshman, 'Dental Health', p.308.

¹⁷ R. Ross, 'The Development of Dentistry: a Scottish perspective circa 1800-1921', (unpublished PhD Thesis, University of Glasgow, 1994).

poor child dental health in the period considered. Chapter two will relate the extent of this problem and how this was recognised by dentists, Medical Officers of Health (MOsH), doctors and the government. Chapter three will uncover the ways in which the problem was addressed. It will focus, for the first time, on the earliest municipal dental clinics developed for children in London. This dissertation will argue that the dental profession played a key role in the establishment of the school dental service. This marked a shift in the duty of care from parent to State in Edwardian London, and a new political status for children in the twentieth century.

Methodology:

The lack of academic literature on the school dental service has affected the shape of this investigation. Much of it is descriptive, rather than analytical, and arguments and counter arguments are non-existent. In this sense, this dissertation has a theoretical research approach without a defined set of questions or hypothesis from the outset.

It was understood that the relevant contemporary historical sources would need to be collected from a number of archival sources. The BDA library and archive and the Wellcome Institute Library were invaluable for their contemporary primary sources and specialist medical and dental literature. This study would have proved very difficult in the absence of easy access to these institutions. The London Metropolitan Archives (LMA) provided the London County Council (LCC) papers relating to the establishment of dental treatment services. The dental clinics chosen for analysis were justified, because they were the first clinics to open with LCC funding, before the government introduced grants in 1912-13. The LCC records provide evidence of dates (i.e. in minutes of the Education Committee) but also evidence of parental attitudes to the service that was being offered. The National Archive (TNA) was visited for sources relating to the Poor Law School Districts, including correspondence, details of board meetings, inspections and accounts. Memorandum and minutes of the managers meetings were often annotated and initialled by individual members of the board. This provides an invaluable insight into the possible concerns of individuals before decisions were finally reached. The borough Medical Officers of Health (MOsH) reports were also a vital source of

information. These reports reflect the concerns towards health in a given place and time, albeit from a middle class perspective.

In this dissertation, a 'child' will mean the school-aged child, between the ages of five to fourteen. This is to distinguish the difference between the child and infant.

Chapter 1:

The problem: increasing dental disease in the Victorian period.

This chapter will consider the main causative factors in the increase of dental disease in England and Wales between 1851 and 1911. It will show how demographic changes, socioeconomic conditions, new dietary habits and developments in the manufacturing and retailing of foods, combined with a lack of preventative dental care, influenced the dental health of the nation.

It has been suggested that the substantial increase in the population of Britain laid the foundations for the development of other key factors in the rise of dental disease.¹⁸ During the period considered, the population of England and Wales doubled from approximately 18 million in 1851 to 36 million in 1911.¹⁹ Added to this increase was the geographical redistribution to urban areas, which became more populated than the countryside, confirmed for the first time by the 1851 census.²⁰ The rise in population has been attributed to a fall in mortality due to factors including; improvements in nutrition,²¹ the role of the preventive public health movement,²² changes in social attitudes²³ and reforms in the medical profession.²⁴ Immigration was a

¹⁸ Ross, 'Development of Dentistry', p. 228.

¹⁹ J. Burnett, *Plenty and want : a social history of food in England from 1815 to the present day*, 3rd edn, (London, 1989), p. 115.

²⁰ R. Woods, and J. Woodward, 'Mortality, poverty and the environment' in R. Woods, and J. Woodward eds., *Urban Disease and Mortality in Nineteenth Century England* (London, 1984), p.20.

²¹ T. McKeown, *The Modern Rise of Population* (London,1976).

²² S. Szreter, *Health and Wealth : Studies in history and policy* (Rochester, NY, 2005)

²³ A. Hardy, *The Epidemic Streets: Infectious Disease and the Rise of Preventive Medicine, 1856-1900* (Oxford: 1993).

²⁴ J. Woodward, 'Medicine and the city: the nineteenth century experience' in R. Woods, and J. Woodward eds., *Urban Disease and Mortality in Nineteenth Century England* (London, 1984), pp.65-78.

key factor in the increase of London's population, which increased from 2.8 million in 1861 to 4.2 million in 1891 and to 4.5 million by 1911.²⁵

The increase in the urban population in the second half of the nineteenth century led to what has been termed the 'urban penalty', a shorter life for the poorest, whose health suffered as a result of overcrowding and insanitary conditions.²⁶ Many thousands of London's children were conceived and raised in slum conditions.²⁷ It is now understood that deprivation and disadvantage (as a consequence of socio-economic, cultural and biological factors) affect the development of the child *in utero* and during the first three years of life. Many such developmental deficiencies are irreversible.²⁸

Epidemic infectious diseases such as scarlet fever, diphtheria and measles were rife during this period.²⁹ Infections during infancy impact on the ability to digest the nutrients consumed, affecting growth.³⁰ Although there is little contemporary evidence describing the effect of these diseases specifically on oral health, it is now understood that they would have had a considerable effect on the development of the teeth and perioral health of the undernourished child.³¹ Syphilis was also prevalent in Europe during this period. Recent estimates suggest that 15 to 20 per cent of the population

²⁵ Centre of Metropolitan History 'Mortality in the Metropolis' project (1999). This data is based on corrected population figures for the London districts originally sourced from Registrar General's annual reports.

²⁶ Szreter, *Health and Wealth*, p.6

²⁷ A. Wohl, *The Eternal Slum: Housing and Social Policy in Victorian London* 3rd edn (New Brunswick, N.J, 2009), pp.259-260. Between 1890-1901 the LCC slum clearance schemes displaced 6000 families, but only rehoused half of them in new properties.

²⁸ R. Floud, R. Fogel, B. Harris, B and S. Chul Hong, *The Changing Body: Health, Nutrition and Human Development in the Western World since 1700* (Cambridge, 2011).

²⁹ Hardy, *The Epidemic Streets*, p.1.

³⁰ Floud, Fogel, Harris and Hong, *The Changing Body*, p.162.

³¹ Ross, 'Development of Dentistry', p.68.

were infected.³² This venereal disease can be passed from an infected mother to her unborn child through the placenta or during birth. Children born with congenital syphilis would exhibit several clinical signs of this incurable condition in their mouths, such as retarded dentition, malformed and peg like, known as 'Hutchinson's teeth'.³³ The teeth themselves were vulnerable to decay and were fragile, due to poor dentine and enamel formation.³⁴

Despite the success of the metropolitan public health reform movement, pockets of deprivation prevailed until the end of the century (and beyond) all over London, as noted by social investigators such as Charles Booth. For example, despite its notoriety for being an 'Avenue' (Hell), it was not until 1896 that action was taken by the authorities when Kensington's 'Notting Dale Special Area' was conceived in a bid to clean up the area.³⁵

As well as living conditions, diet played its part in child dental problems. By 1850, the British population was such that the nation was unable to produce enough cereal grains to supply itself, and grain imports escalated.³⁶ The importation of wheat was facilitated by the repeal of the Corn Laws in 1846, which abolished the duty on imported grain. From the 1870s, imports of wheat from the North American continent grew, facilitated by the completion of their interior railway system. This grain was cheap (half that of home grown wheat) which reduced the cost of a loaf of bread to its

³² R. Barnett, *The sick rose: or disease and the art of medical illustration* (London, 2014), p.182.

³³ L. LeBourg, *Les Dystrophies Dentaires de la Syphilis Héritaire* (Paris,1939), p. 67.

³⁴ *Ibid.*, p.57.

³⁵ A. Tanner, "'Life and Death in Laundryland', Infant Mortality in Laundryland, Kensington, 1890-1914": (paper presented at the Dirty Linen conference, Women's Library, Guildhall Metropolitan University, 8th November 2002), p.5.

³⁶ Burnett, *Plenty and want*, p.115.

lowest price for a century to six pence in 1900.³⁷ The last decades of the century also brought in a 'new colonial policy', which encouraged the planting of crops such as tea within the Empire. By 1900, India and Ceylon became the prime suppliers of tea to Britain, surpassing China, which had provided more than ninety per cent of the supply in the 1870s.³⁸ Perhaps the most important change to the British diet during the 1900s was the average amount of sugar consumed annually, which increased from 20lbs to 90lbs per person over the century.³⁹ Sugar, like wheat, became cheaper, due to the gradual decline in import duties after 1845, shipped in from well-established colonial plantations.

Alongside the decrease in the price of raw ingredients, were technological advances made in food manufacture and processing. For example, the process of turning wheat into flour was revolutionized by the introduction of roller milling. By the 1880s, this economical method had become more popular than traditional stone grinding.⁴⁰ The resulting flour was therefore cheaper but also finer, and used to bake more appealing white bread. However, it is now understood that a great number of deficiency diseases would have resulted from this innovation as the fine flour lacked wheat-germ, a valuable source of fibre, fat, protein, vitamins and minerals.⁴¹ The abolition of sugar duties in 1874 also boosted the commercial production of jam. Factories sprang up in their hundreds all over the industrialised areas of the country. There were several factories in London,

³⁷ *Ibid.*, p.116.

³⁸ *Ibid.*, p.119.

³⁹ Ross, 'Development of Dentistry', p.234.

⁴⁰ Burnett, *Plenty and want*, p.121.

⁴¹ *Ibid.*, p.121.

usually employing women (who provided the cheap labour)⁴² such as Lipton's in Bermondsey which opened in 1892.⁴³ Sales of the Lipton's mass-produced jam were huge, partly due its low-price and availability, but also because jam was a sweet alternative and cheaper than butter.⁴⁴

Cheap mass market products were important to the success of companies such as Lipton's. In 1871, Thomas Lipton opened his first shop in Glasgow, and by 1914 he had accrued 500 shops across the country. Lipton's retail strategy was to sell a limited range of cheap produce to serve the working class market. The stock was bought in bulk, self-manufactured (in the case of jam) or, as with tea, grown on his own plantations. This cut out the 'middle man' and large amounts of stock could be sold cheaply and with low profit margins. Like many food retailers today, there was vigorous competition between the food retailers. For example, Lipton undercut his rivals and advertised a pound of his quality tea at nearly a shilling less than theirs.⁴⁵ Although Lipton's business catered for the working class market, the poorest were unable to benefit from these low prices, because they could not afford to buy a pound of tea at a time. Evidence from Booth illustrates this reality. For example, one family, with a household income of 17s 6d, survived by pawning their best clothes on a weekly basis and buying everything on credit from the local shop. Items like sugar and tea were bought as needed, necessitating two or three trips to the shop per day to buy

⁴² For details of the role of women in jam making and wages, see C. Booth, *Labour and Life of the People*, vol 1 (London, 1889), pp.462-464, [available at <https://archive.org/details/labourlifeofpeop01bootuoft>, (16.09.2014)].

⁴³ Burnett, *Plenty and want*, p.124.

⁴⁴ P.J. Atkins, 'Vinegar and Sugar: the Early History of Factory-made Jams, Pickles and Sauces in Britain', in D. Oddy (ed) *The Food Industries of Europe in the Nineteenth and Twentieth Centuries* (Farnham, 2013), pp.47-49.

⁴⁵ Burnett, *Plenty and want*, p.127.

a 'twist of tea' for $\frac{3}{4}$ d. Booth estimated that buying tea in this way was equivalent to two shillings per pound.⁴⁶ This was double the cost of Lipton's cheapest advertised tea (see appendix i).

Whilst there were many other food developments, including the availability of a wide variety of imported foods such as tropical fruits and meat,⁴⁷ it will be shown that these items were not commonly consumed by the working classes. Evidence of working class diets comes from the late Victorian social surveys, which developed out of interest in a notion of the 'social problem' within philanthropic and political circles.⁴⁸ Whilst useful, Professor Derek Oddy warns that individual surveys were generally small. However, combining the data from several can provide some insight into the diet within different socio-economic groups of the population.⁴⁹

Taken together, working class women's dietary 'customs' had a damaging effect not only on themselves, but also on their unborn children.⁵⁰ The staple diet of poor women (and children) consisted mainly of sweetened tea, bread and jam.⁵¹ High sugar consumption was combined with very low intakes of fat, protein and calcium from meat and dairy foods respectively, which are nutritionally critical during pregnancy and lactation.⁵² Oddy also notes that Victorian surveys do not account for the distribution of food within the family economy.⁵³ However, more recent studies have addressed this

⁴⁶ Booth, *Labour and life*, p.142.

⁴⁷ Burnett, *Plenty and want*, p.119.

⁴⁸ D. Oddy, 'Working-Class Diets in Late Nineteenth-Century Britain' *Economic History Review*, 23:2 (1970), pp.314-323.

⁴⁹ Oddy, 'Working -Class Diets', p.314.

⁵⁰ Floud, Fogel, Harris and Hong, *The Changing Body*, pp.161-162.

⁵¹ Ross, 'Development of Dentistry' p.236.

⁵² Oddy 'Working -Class Diets', p.318.

⁵³ *Ibid.*, p.317.

issue.⁵⁴ Evidence suggests that, if the family could afford meat and dairy, it was the male of the household who had them; doubling the average working man's calorie intake compared to that of his wife.⁵⁵ This helps to explain the paradoxical situation at the end of the nineteenth century that, despite the increase in real wages, poor nutrition and ill health amongst the poorest prevailed.⁵⁶ The allocation of food resources within the family was largely based on the economic worth of the individual, but there is also evidence of gender bias in the distribution of food to older children, with boys being favoured over the girls.⁵⁷ This was particularly true in families whose household income was low, or in industrial areas where job prospects for girls were slim and boys were more likely to be earning wages. London, however, was not rich in industry. In many poorer households it was the mother who earned the regular wages yet, through 'maternal sacrifice',⁵⁸ survived on little food.

Younger children's' diets were similar to that of their mothers. Booth describes in this snapshot, that the youngest got the most, but mealtimes were almost non-existent and consisted, more or less, of the three basic components:

When they are hungry the mother puts into their hand a 'butty' i.e. a slice of bread with a scrape of butter, and sends them off to consume it on the doorstep or in the street. The youngest of the

⁵⁴ S. Horrell and D. Oxley, 'Crust or crumb?: Intrahousehold resource allocation and male breadwinning in late Victorian Britain', *Economic History Review*, 52:3 (1999), pp. 494-522.

⁵⁵ *Ibid.*, p.320.

⁵⁶ Oddy 'Working-Class Diets', p.322 also R. Milward and F. Bell 'Infant Mortality in Victorian Britain: The Mother as Medium', *The Economic History Review*, 54: 4 (2001), pp. 699-733, suggest that incomes increased on average by approximately 50 per cent.

⁵⁷ Horrell and Oxley, 'Crust or Crumb?', p.496.

⁵⁸ S. Horrell, D. Meredith, and D. Oxley, 'Measuring misery: Body mass, ageing and gender inequality in Victorian London.', *Explorations in Economic History*, 46:1 (2009), pp.93-119.

brood she supplies with a 'sugar butty' i.e. a 'butty' with as much sugar as will stick upon the scrape. A draught of stale tea usually goes with it. When funds are low the scrape and cold tea vanish, the sugar butty a thing of the past, the slice of loaf becomes an intermittent supply, neighbours help out the children's needs, and school meals keep starvation from the door.⁵⁹

Working class mothers were criticized for their lack of ability and household management.⁶⁰ However, these women were faced with severe problems in running the home. Food was purchased according to what could be afforded at that moment, water supplies were inadequate, fuel was costly, and many lacked the basic equipment to produce a cooked meal.⁶¹

So why did working class families not feed themselves on cheap, nutritious and filling foods? Ellen Ross's contention is that there was a distinct cultural attitude towards food amongst the poor, so that some of the easiest, cheapest and nutritious foods, such as porridge, were actively shunned. This was because such foodstuffs were considered to be part of the 'institutional diet', thus associated with social dependence.⁶²

When one compares the diet of working class children with that of pauper children, it is striking to note that children attending Poor Law

⁵⁹ C. Booth, *Labour and Life of the People Vol 2 London continued* (London, 1891), p.492, [available at: <https://archive.org/details/labourlifeofpeop02boot>. (16.09.2014)].

⁶⁰ E. Roberts, *A woman's place: an oral history of working-class women, 1890-1940* (Oxford, 1984), p.151.

⁶¹ Burnett, *Plenty and want*, p.164-165.

⁶² E. Ross, *Love and Toil: Motherhood in Outcast London 1870-1918* (Oxford, 1993), p.32. See also p.252, porridge was found to be absent in diet of poor Scots in 1903.

schools were fed a relatively nutrient rich diet. Portions increased with age and meals were served three times a day.

Breakfast	Dinner	Supper
Bread, butter or dripping, treacle, cocoa.	Bread, potatoes and cooked meat (Sun, Tues Thurs) meat pudding (once a week), fish (Fri). OR Suet pudding (served on Mon, Wed, Sat) made with suet and flour, served with treacle or stewed fruit when plentiful	Bread and cheese OR Bread and butter. Milk to drink or tea (tea only on a Sunday).

Table 1: Weekly diet of Children in South Metropolitan District Schools.

Source: The National Archive, MH27/33, No 2 South Metropolitan Board School District, Annual Report, 1884.

Table 1 is based on a dietary table from the South Metropolitan School District report, November 1884.⁶³ It was the Medical Officer who oversaw the diet. Evidence in this report shows that he queried the quality of the meat and campaigned for the inclusion of fish. There is no reason to believe that the children were not fed this diet, which is a far cry from the Dickensian image of paupers living on gruel. The schools employed cooks and the costs involved in catering are fully accounted for in the reports.

Much has been written on the infant mortality rate in the late Victorian and Edwardian period.⁶⁴ Whilst this is not the place for a full discussion of the subject, there is evidence to support the assertion that the high infant

⁶³ The National Archive (TNA), MH27/33, No 2 South Metropolitan Board School District, Annual Report, 1884.

⁶⁴ For example: E. Garrett, C. Galley, N. Shelton, R. Woods, eds., *Infant mortality: a continuing social problem* (Aldershot, 2006), *passim* and Milward and Bell, 'The Mother as Medium', also see note 2.

mortality rate was indicative of the impoverished working class diet.⁶⁵ It could be suggested that the diet of the infant was not only conducive to a high infant mortality rate, but also led to poor systemic health and set up dental health problems in the future.

The most common cause of 'preventable' infant death was diarrhoea.⁶⁶ Epidemiological data collected by MOsH all over Britain provided evidence of the link between bottle feeding and diarrhoea. These investigations consistently showed that only a small percentage of babies who died from diarrhoea were breastfed, with bottle fed children being raised on either cow's milk or condensed milk.⁶⁷ The use of tinned condensed milk (especially that made from skimmed milk) was arguably popular with poorer families because it was cheaper and thought to be fresher than cow's milk. One can of condensed milk cost eight pence, and when diluted with water, produced five pints against fresh milk at two pence a pint. The resulting liquid fed to infants was not much more than a sugar solution.⁶⁸ This sugary liquid also attracted the common house-fly, a vector for gastric diseases, which were estimated to have been the cause of up to a third of infant deaths in the period considered.⁶⁹ The MOH for Hanover Square, W.H Corfield, produced handbills and posters to educate his parish on the 'low nutritive properties' of the milk. He wrote:

An infant fed upon separated milk alone is subjected to a process of slow starvation, and is as certainly starved to death as if it were given

⁶⁵ Oddy, 'Working-Class Diets', p.322.

⁶⁶ Dwork, *War is Good for Babies*, p.24.

⁶⁷ *Ibid.*, pp.28-30.

⁶⁸ Ross, 'Development of Dentistry', p.238.

⁶⁹ Burnett, *Plenty and want*, p.124-125.

no food at all. Such preparations are, therefore, not suitable foods for infants, and when given to young children they should be accompanied by other foods, such as butter, containing fat.⁷⁰

When such infants were weaned onto solids, around eight months old, the 'milk' may have been supplemented with tea and a crust of bread.⁷¹ Whilst proprietary farinaceous foods were available on the market,⁷² (such as Allen and Hanbury's) they would have been too expensive for the poor working class budget.⁷³ Furthermore, poor working class mothers raised their children in the 'traditional way'. Their child rearing information came from their neighbours or handymen, independent of professional advice.⁷⁴ The MOH for Acton, G.A Garry Simpson, tried to educate local mothers:

When eight month's old, a healthy baby may be allowed in addition to the milk diet, a little boiled bread and milk, rusks soaked in milk, yolk of egg and milk, beef tea, mutton broth...fine oatmeal, Mellin's or Benger's Food, wheaten flour, Savoury & Moore's Food, Allen & Hanbury's Food. **Never give** Wine, Beer, Spirits, Tea or Coffee, Cake or Sweets.⁷⁵

⁷⁰ Hanover Square, *MOH Report*, 1900, p. 32, [Accessed from: <http://wellcomelibrary.org/moh/report/b18247593/31#?asi=0&ai=31&z=-0.4184%2C0.8416%2C1.8618%2C0.8697>, 23.9.2014)].

⁷¹ Booth, *Labour and Life vol 2*, p.272.

⁷² C. Hardyment, *Dream Babies: Childcare from Locke to Spock* (Oxford, 1984), p.49.

⁷³ Burnett, *Plenty and want*, p.164.

⁷⁴ Beier, *For Their Own Good*, pp. 9-10.

⁷⁵ Acton, *MOH Report*, 1899, pp. 8-9, [Accessed from: <http://wellcomelibrary.org/moh/report/b19783346/1#?asi=0&ai=10&z=-0.3543%2C0.6914%2C1.7397%2C0.8126>, (23.9.2014)].

This example suggests that some Victorian working class mothers did not feed their children correctly. However, the problem of infant care was not always due to maternal ignorance, but the financial and practical ability to keep up with raised expectations of motherhood, which came from the increasing influence of health professionals.⁷⁶ At the turn of the twentieth century, concern for mothers and babies led to a series of official preventive measures, collectively now known as the 'maternal and infant welfare movement'.⁷⁷ However, a key failing of the movement was that it did not encourage women to breastfeed. Instead, much effort was placed on the development of municipal milk depots.⁷⁸ Breastfeeding is intrinsic to the health of the infant. Human milk is not only best suited to baby's digestion, but it contains the vital nutrients in the correct quantities. Furthermore, human milk contains substances such as essential fatty acids for brain development and antibodies for immunity. Cow's milk is not suitable for infant feeding under 6 months, being too high in protein and lacking iron.⁷⁹ Diluted skimmed condensed milk is perhaps the worst feed that an infant could be given, due to the very low fat content and absence of vitamin D, which led to rickets in children fed this way.⁸⁰ Ross argues that the underlying condition of the teeth and perioral tissues would have been affected by the absence of so many vitamins and minerals in the diet. It is suggested therefore, that many children from the poorest classes would have started life with a latent low level of dental health, due to congenital

⁷⁶ J. Harris, *Private Lives, Public Spirit: Britain 1870-1914* (London, 1994), pp.82-83.

⁷⁷ Beier, *For Their Own Good*, p.265. See also Dwork, *War is good for babies*, passim.

⁷⁸ Dwork, *War is Good for Babies*, p.106.

⁷⁹ WHO 'Fact sheet No. 342 : Infant and young child feeding', [Accessed from: <http://www.who.int/mediacentre/factsheets/fs342/en/> (19.8.2014)].

⁸⁰ Burnett, *Plenty and want*, p.124.

impairment, illness and malnourishment. Their poor dental health was then exacerbated by high sugar intake during infancy and childhood.⁸¹

There was very little preventative dental care on offer during the Victorian period. Dentistry (as we would regard it today) of the mid-nineteenth century was only available to a small section of society; namely those who were rich enough and had the inclination to look after their teeth.⁸² For the working classes, basic dentistry was carried out by medical men in dispensaries or inexpensive local chemists who offered to extract teeth as the last resort.⁸³ Many so-called dental practitioners in this period were makers of dental prosthetics, although some would have learned operative procedures if their five year apprenticeship was under a surgical dentist. Other 'quacks' abounded, exploiting the ignorance of the public. They advertised their 'skills' and sold tinctures and remedies for dental malaise.⁸⁴

Ross's thesis argues that the rise of the dental profession during the second half of the nineteenth century was in response to the growing demand for dental treatment.⁸⁵ This is not the place for the full recounting of the history of the professionalization of dentistry, but three important steps can be regarded as significant in the rise of 'scientific dentistry' as a profession.⁸⁶ Firstly, the dissemination of ideas through an increasing number of periodic journals, starting with the *British Quarterly Journal of*

⁸¹ Ross, 'Development of Dentistry', p.238.

⁸² *Ibid.*, p 72

⁸³ *Ibid.*, p.72. see also Beier, *For their own good*, p.90-91.

⁸⁴ *Ibid.*, p. 79.

⁸⁵ Ross, 'Development of Dentistry', p.102.

⁸⁶ N.Richards, 'Dentistry in Britain: Some Sociologic Perspectives', *The Milbank Memorial Fund Quarterly*, 49:3 (1971), pp.133-169.

Dental Surgery, the first in Europe, in 1843.⁸⁷ Then state recognition in the passing of the 1878 Dentists Act. Finally, the formation of the British Dental Association (BDA) in 1879, which oversaw registered dentists and was implicit in changing public perception of dentistry as a profession and not a business.⁸⁸

London had become the centre of 'dento-political action' in the late nineteenth century.⁸⁹ The ratio of dentist per population was lower in the capital than the rest of the country, so it was hoped by the dental reformers, that the 1878 Dentists Act would rid the profession of quacks. Unfortunately, quackery continued, as letters to the editor of the journal of the BDA testify.⁹⁰ In London, as the rest of the country, registration led to a shortage of registered dentists, most of who catered for fee paying patients. Post Office / Kelly's trades and professional directories indicate the numbers of registered dentists who were practising in the metropolis. However, as table 2 below shows, although the population of London increased between 1881 and 1891 by nearly half a million, the numbers of registered dentists practising in London remained virtually unchanged. It is not surprizing then that quacks continued to prosper.

⁸⁷ Ross, 'Development of Dentistry', p.87.

⁸⁸ Richards, 'Dentistry in Britain', pp.138-139.

⁸⁹ Ross, 'Development of Dentistry', p.148.

⁹⁰ Anonymous letter to the Editor, *Journal of the BDA*, Vol IX (1888), p.851.

Year	Population of London	Registered Dentists listed	Patients per Dentist
1881	3,816,483	503	7587
1891	4,232,118	507	8347
1901	4,536,541	599	7574
1911	4,521,685	643	7032

Table 2: Population and Registered Dentists in London, 1881-1911.

Sources: Population: Centre of Metropolitan History 'Mortality in the Metropolis' project (1999), and Kelly's Directories: Guildhall Library, 96917/131 (1881), 96917/148 (1891), 97543/7 (1901), 97543/56 (1911).

The lack of professional dental treatment was coupled with a general ignorance in the care of the teeth by the working class. Toothbrushes were often made of bone, which was relatively cheap and readily available, however, they were considered to be a luxury item and were rarely used.⁹¹ The lack of toothbrushes was noted in the Royal Commission Report on Physical Training (Scotland) report (1903), that only five percent of children in Edinburgh brushed their teeth.⁹² This report was the first of three governmental enquiries which considered the physical health of children to be important. The next chapter will address how poor dental health of children was first linked to physical deterioration by dentists, which fostered widespread health concerns, culminating in governmental statutory action.

⁹¹ B. Mattick, *A guide to bone toothbrushes of the 19th and early 20th centuries* (Xlibris, 2010), p.21.

⁹² Ross, 'Development of Dentistry', p.253.

Chapter 2:

Recognition and extent of the problem and its perceived impact on the nation:

Many accounts of the history of municipal school medical and dental treatment services rely heavily on the 'national efficiency' narrative.

However, as Harry Hendrick argues, medical provision under the state was not only motivated by the discourse on physical deterioration, but the idea, at the end of the nineteenth century, of the child as an investment.⁹³ Study of early dental treatment services for children reveals several notable figures in the development of this provision, who were fundamentally concerned with child welfare.

This chapter will demonstrate how dentists first linked the problem of poor dental health in children, to poor dental health in military recruits in 1885, nearly twenty years before the IDCPCD report in 1904. Public health officials and the medical profession also began to show concern over the problem of dental health at the turn of the twentieth century. This link was subsequently crafted by those concerned to campaign for the compulsory inspection and preventative treatment of elementary school children at the cost of the state.

The first recorded suggestion for a national school dental service came on August 27th 1885. Dentist William McPherson Fisher gave a paper called 'Compulsory Attention to the Teeth of School Children' at the annual general meeting of the BDA in Cambridge.⁹⁴ Having worked for eight years

⁹³ H. Hendrick, *Child Welfare: Historical Dimensions, contemporary debate* (Bristol, 2003), p.85-86.

⁹⁴ W.M. Fisher, 'Compulsory Attention to the Teeth of School Children', *Journal of the BDA*, vol. VI (1885), pp.585-593.

in Dundee, Fisher found that the teeth of working and lower middle class children were in a very poor state. This was because their parents could not afford treatment and were ignorant in dental health matters and dental hygiene.⁹⁵ He proposed routine dental examinations at school and early preventative treatment of children, regarding these steps as important to the health of the nation, as tackling infectious diseases. The link to the military originated after Fisher inspected the teeth of 400 boys on the training ship 'Mars'.⁹⁶ These necessitous boys aged between ten and sixteen, were well fed and fit in every other aspect of health, but only eighty of them had perfect teeth. On leaving the ship, many boys were rejected by the Royal Navy recruitment officers because they had not passed the 'dental standard' of the Admiralty.⁹⁷ Fisher argued that the cost of keeping and training these boys had been lost for lack of dental care. The same argument was then used to advocate dental inspection and treatment of elementary school children. Why spend millions educating the nation to have 'healthy minds' when they do not have 'healthy bodies'?⁹⁸

The following year, at the BDA annual general meeting in London, Fisher delivered a second paper on the subject, calling doctors, school teachers and the government to act.⁹⁹ Fisher provided more evidence of the importance of preventative dental inspection and treatment for elementary school children. He pointed out that children in industrial and reformatory schools were looked after medically, through a system of medical

⁹⁵ *Ibid.*, p.585.

⁹⁶ *Ibid.*, p.587.

⁹⁷ *Ibid.*, p.589.

⁹⁸ *Ibid.*, p.591.

⁹⁹ W.M. Fisher, *Compulsory Attention to the Teeth of School Children (the Army and Navy)* (London, 1887), p.3.

inspections and early treatment. This approach saved money on more expensive medical treatment in the longer term. At the same conference, dentist Dr George Cunningham read his paper 'Dentistry and its relation to the State'¹⁰⁰ Cunningham proposed that there was always going to be demand for dentistry, because it was rare to find an individual who did not require the services of a dentist in their lifetime.¹⁰¹ His work had taken him to inspect the mouths of young army recruits in London. Only four per cent had 'truly perfect denture',¹⁰² the rest he found to have varying levels of decay and missing teeth. Cunningham believed that the mouth of the average Londoner was worse than his examinations had shown. This was due to the fact that the initial recruiting sergeant would have already turned away those whom he knew would fail the second tier of recruitment, the medical examination.¹⁰³ The impact of poor dental health on the overall health of the soldiers and sailors was highlighted by Cunningham; digestive problems were caused by the inability to chew and the constant swallowing of pus from untreated infections, could lead to blood poisoning and death.¹⁰⁴ In essence, Cunningham was warning the State about the lack of dental treatment in the military, the 'safeguards of our Empire',¹⁰⁵ long before the Boer War made his warnings a reality.

In 1888, Fisher decided that he needed to support the claims he had made about the state of children's dental health. He requested funding from

¹⁰⁰ G. Cunningham, *Dentistry and its Relation to the State* (London, 1887).

¹⁰¹ *Ibid.*, p.7.

¹⁰² *Ibid.*, p.11.

¹⁰³ *Ibid.*, p.12.

¹⁰⁴ *Ibid.*, p.21.

¹⁰⁵ *Ibid.*, p.24.

the BDA to help conduct an appraisal of children's teeth.¹⁰⁶ Funding was granted and 100 case-books, each capable of recording 1,000 cases, were distributed to Britain's dentists through local branches of the BDA. On 1st March 1890, the BDA set up a Schools Committee to collect and analyse the data and report on the findings.¹⁰⁷ Much of the statistical analysis was done by George Cunningham. Between 1891 and 1897, the teeth of 12,318 schoolchildren were examined and the condition recorded.¹⁰⁸ The Schools Committee reports consistently confirmed that dental decay was one of the most widespread diseases in childhood. The BDA called for state funding to provide free toothbrushes and toothpowder, dental inspection every six months and free treatment, if needed.¹⁰⁹

Such recommendations of prevention, inspection and treatment subsequently formed the philosophy of the School Dentists' Society founded on 23rd July, 1898.¹¹⁰ The Society was established following the appointments of dentists to inspect and treat children in several Poor Law Schools.¹¹¹ Practitioners met and exchanged views on promoting the ethos of school dentistry. They were keen to establish state funded children's services in an attempt to change public perception of dentistry and increase their professional status.¹¹²

When elementary education was made compulsory in England under the Education Act 1880, and free in 1891, there were 510,000 children

¹⁰⁶ The School Dentists' Society, *Objects and Aims*, 2nd edn (London, 1913), p.21.

¹⁰⁷ *Ibid.*, p.21.

¹⁰⁸ *Ibid.*, p.21.

¹⁰⁹ Timmis, *School Dental Service*, p.1.

¹¹⁰ Gelbier and Randall, 'Wallis', p.398.

¹¹¹ The School Dentists Society. *Objects and Aims*, p.20.

¹¹² Richards, 'Morals and Molars', p.35.

attending both board and non-board schools in London.¹¹³ This statutory provision of education brought children into the classroom and highlighted their poor state of health.¹¹⁴ Concern came from the MOHs whose reports on the rates of infectious diseases, such as diphtheria, were collected and analysed by the MOH for the LCC, Shirley F. Murphy. In 1897 Murphy concluded that the increase in school attendance corresponded to a rise in infectious diseases contracted at school. In addressing this issue, he criticised the London School Board for not allowing the medical inspection of school children by his officers, even at the first signs of an epidemic.¹¹⁵ It comes as no surprise, perhaps, that the London School Board was not forthcoming in providing dental inspection or treatment at this time,¹¹⁶ owing to financial constraints.¹¹⁷

The MOsH were not only in support of medical inspections of children for the control of infectious diseases, but also routine dental inspection. In his 1896 report, the MOH for Kingston upon Thames, Fred J. Pearce acknowledged the importance of the dental health of the school child, not only in its own right, but also 'upon their usefulness to future society'.¹¹⁸ In light of his association with the School Attendance Committee, Pearce suggested a scheme of 'examination of the teeth', as dental problems

¹¹³ LCC, 'Appendix I', *MOH Report*, 1893, p.7. Accessed from: <http://wellcomelibrary.org/moh/report/b18252424/1#?asi=0&ai=110&z=-0.3332%2C-0.0206%2C1.7542%2C0.8194>, (23.9.2014)].

¹¹⁴ Timmis, *School Dental Service*, p.1.

¹¹⁵ LCC, 'Appendix I, Report on diphtheria and elementary schools', *MOH Report*, 1897, p.19, [Accessed from: <http://wellcomelibrary.org/moh/report/b18252461/1#?asi=0&ai=156&z=-0.0643%2C0.108%2C1.2117%2C0.566>,(23.9.2014)].

¹¹⁶ Welshman, 'Dental Health', p.308.

¹¹⁷ Gelbier, 'Dentistry for pauper', p.49.

¹¹⁸ Kingston upon Thames, *MOH Report*, 1896, p.7, [Accessed from: <http://wellcomelibrary.org/moh/report/b19969946/6#?asi=0&ai=6&z=-0.413%2C0.7852%2C1.8153%2C0.8479>, (23.9.2014)].

caused much absence from school. He also noted that decay in early childhood was a prequel to decay of the permanent teeth. He acknowledged that there would be a cost involved in such a scheme - but this 'would repay the expenditure in the next generations.'¹¹⁹ In 1903, Pearce once again mentioned the significance of defective teeth to health and education. However, he could only allude to the fact, presumably because he did not have his own statistical data to support his argument.¹²⁰

At the turn of the century, the medical profession did not have a comprehensive understanding of dental matters. For example, in an article published on 21st July 1900,¹²¹ the *British Medical Journal* discussed theories on the causes and increase of dental caries in the race. This article summarised the numerous BDA Schools Committee reports of the 1890s, together with archaeological studies of human skulls, to conclude that, from the doctors' point of view, heredity was a predisposing cause of dental caries. It was suggested that the prevalence of caries was due to a diet high in carbohydrates. This led to fermentation by 'micro-organisms' of lactic acid, which disintegrated the tooth.¹²² Whilst it was understood that the rise of dental caries in children was as a result of artificial feeding in infancy, it was incorrectly attributed to an 'inconsistent temperature of the feeding bottle' which 'irritated the oral mucous membrane'.¹²³ Finally, it was suggested that prepared foodstuffs were easily chewed, leading to poorly exercised jaw muscles. It was believed that this contributed to the inability of the teeth to

¹¹⁹ *Ibid.*, p.7.

¹²⁰ *Ibid.*, p.7.

¹²¹ N. MacNamara, 'Report of the Decay of the Teeth Committee', *BMJ* (21st July 1900), p.166-171.

¹²² *Ibid.*, p.169.

¹²³ *Ibid.*, p.170.

be 'self-cleansing' through sufficient mastication. The inaccuracies of the article led to a spate of correspondence from a dentist, who attempted to set the record straight and educate his medical peers.¹²⁴

One doctor who noted the lack of medical knowledge and understanding of dental health was Dr. William Hunter, Senior Assistant Physician to the London Fever Hospital. Hunter published an article in the *BMJ*, linking the presence of dental caries and oral sepsis to other diseases.¹²⁵ Hunter said of oral sepsis '[T]he more I study it the more impressed I am, at once with its importance and the extraordinary neglect with which it is treated alike by physicians and surgeons.'¹²⁶ Hunter believed that doctors would not tolerate such infections affecting other parts of the body, so why ignore the teeth?

Public health legislation of the second half of the nineteenth century enabled the improvement of the urban environment and tackled the infectious diseases.¹²⁷ Statistics from the Registrar General Annual reports from 1876 to 1897 provide evidence of the partial success of preventive measures, namely, overall decline in the mortality rate, except for infants, which increased.¹²⁸ The political notion of 'national efficiency' took hold in 1899,¹²⁹ fuelled by the fact that the high infant mortality rate was coupled with a decreasing birth rate. Anxiety was expressed by doctors, MOsH, politicians and the press.¹³⁰ Their concerns were not only confined to the statistical fall in population, but the physical condition of the nation in the

¹²⁴ J. Wallace, 'Correspondence', *BMJ* (11th August 1900), pp.392-393.

¹²⁵ W. Hunter, 'Oral Sepsis as a cause of disease', *BMJ* (1900), pp. 215-216.

¹²⁶ *Ibid.*, p.215

¹²⁷ Hardy *Epidemic Streets*, p.6.

¹²⁸ Dwork, *War is Good for Babies*, p.4.

¹²⁹ Hendrick, *Child Welfare*, p.14.

¹³⁰ Dwork, *War is Good for Babies*, pp.4-6.

new century. Over the next few years, much was written about the need to invest in the health of the population in order to maintain the Empire.¹³¹ For example, a collection of essays called *The Heart of the Empire* was published in 1901, by a group of philanthropist reformers. The book's editor Charles Masterman, wrote that the 'condition of the people problem' in London 'still remains...as insoluble as ever.'¹³² Two key philosophies emerged in contemporary comment to explain the poor health of the nation; degeneration or deterioration. Those who believed in degeneration considered eugenics as the way forward. There were doctors who considered deterioration to be the issue, as a result of urbanisation, or as a consequence of rural depopulation.¹³³ However, the MOsH, as public health officials, refuted this opinion because they understood the links between the environment and health. They used their statistical evidence to argue that poor environmental conditions had caused a high mortality rate and poor health, thus a decline in the overall mortality rate was due to environmental improvements and a reflection of the physical health of the nation. The MOsH believed that focus was needed on health education.¹³⁴

As is often cited, the contemporary discourse on 'national efficiency' was reinforced by Major General Sir Frederick Maurice who wrote articles in January 1902 and 1903, about the military's shortcomings in the Boer War.¹³⁵ It has already been mentioned why recruits were rejected; the first

¹³¹ Harris, *Health of the Schoolchild*, pp.8-15.

¹³² C. Masterman, 'Realities at home' in C Masterman, ed., *The Heart of the Empire* 2nd edn (London, 1907) p.6 . Also within this book a whole chapter devoted to the healthy development of children by R.A Bray. [Available from: <https://archive.org/stream/heartofempiredis00londuoft#page/6/mode/2up> (18.09.2014)].

¹³³ Harris, *Health of the Schoolchild*, p 9 see also Gilbert, *Origins of the Welfare State*, p. 92.

¹³⁴ Harris, *Health of the Schoolchild*, pp.11-12.

¹³⁵ Gilbert *Origins of the Welfare State*, p.85.

reason was 'under chest measurement', bad teeth came second.¹³⁶ It came to light that during the war, men who got through recruitment with bad teeth suffered in the field with digestive problems, because they were unable to masticate their food properly,¹³⁷ and as many as 3,000 soldiers were invalidated home due to poor dental health.¹³⁸ For those remaining in South Africa, the Government sent out several dentists, and paid local practitioners to carry out necessary treatment in the field.¹³⁹

In 1902, the Royal Commission on Physical Training in Scotland was the first enquiry which attempted to investigate the causes behind physical deterioration. The Report, published in 1903, considered a link between poor physical health of recruits and the condition of the teeth in working class children, but only recommended that School Boards should employ medical staff to conduct medical inspections and record physical health statistics.¹⁴⁰

In light of the report from Scotland, Maurice called for a national enquiry. The Interdepartmental Committee on Physical Deterioration was set up in September 1903, consisting of seven civil servants.¹⁴¹ Dental health issues played a vital role in the debates over physical deterioration by the Committee, who interviewed sixty-eight witnesses over eleven months. Evidence of a dental nature was offered by Mr W.H Dolamore of the BDA (who later became its President). Dolamore presented findings of the BDA Schools Committee to testify that eighty-six per cent of 10,517

¹³⁶ Gelbier and Randall, 'Wallis' p.396.

¹³⁷ *Ibid.*, p.397.

¹³⁸ P.P, *Appendix to the Report of the Inter-Departmental Committee on Physical Deterioration*, vol.3, *Appendix and General Index*, Cd 2186 (1904) Appendix XXVIII.II, p.99.

¹³⁹ *Ibid.*

¹⁴⁰ Ross, 'Development of Dentistry', pp.251-252.

¹⁴¹ P.P, *Report of the Inter-Departmental Committee on Physical Deterioration*, vol.1, *Report and Appendix*, Cd 2175 (1904), p. v.

schoolchildren examined required dental treatment. It was suggested that this statistical information was a true representation of the majority of children in the country.¹⁴² Evidence was also supplied by W. Rushton, of the BDA Hygiene Committee, which had investigated the alleged increase in dental caries. He stated that hospital statistics showed an increasing amount of dental department referrals, together with an increase in illness as a result of chronic dental malaise, such as stomach disease. Both Dolamore and Rushton recommended that elementary school children receive education on 'the value and care of their teeth.'¹⁴³ This suggestion was echoed by the report of the War Office and Admiralty, who linked poor dental health in recruits back to childhood. It was recommended that dentists be employed by the education authorities to carry out systematic inspection of schoolchildren and 'remedy defects of the teeth at an early age.'¹⁴⁴

The Physical Deterioration report, published on 28th July 1904, concluded, in short, that there was no evidence that the population was deteriorating.¹⁴⁵ The report made a number of recommendations, but most importantly, it embraced the health of the child as key to the future of the nation. With regard to dental health, the Committee recommended that the teeth should receive special attention and that children should be taught how to look after them, enforced daily by parents and teachers. They also recommended systemic inspection of the teeth to within with the general medical inspections of school children that were also proposed.¹⁴⁶

¹⁴² IDCPD, *vol.3*, pp. 98-99.

¹⁴³ *Ibid.*, p.99.

¹⁴⁴ *Ibid.*, p.100.

¹⁴⁵ IDCPD, *vol.1*, pp. 92-93.

¹⁴⁶ *Ibid.*, p.92.

Two of the most influential figures in the rise of the school dental service in London were Dr James Kerr and Dr Charles Edward Wallis. In 1902, Kerr moved to London from Bradford (he had been the first full time school medical officer there) to take up the position of MOH to the Education department of the LCC.¹⁴⁷ Kerr believed that poor dental health had an impact on child development. In 1905 he supported this claim with statistical evidence. He arranged for two dentists to inspect the teeth of 530 pupils. The data revealed that children (especially boys) with poor dental health were shorter and weighed less than those with good dentition.¹⁴⁸ Kerr understood that it was necessary for dentists to inspect the mouths of children rather than medical inspectors. His concern for the dental health of children led to the appointment of dentist Charles Edward Wallis as his assistant MOH in 1905.

Wallis had previously worked as assistant dental surgeon to the Victoria Hospital for Children in 1899, so had experienced of the poor condition of children's teeth. Wallis was active in the School Dentists Society and employed as visiting dentist for the St Marylebone Poor Law Union¹⁴⁹ and Feltham Industrial School.¹⁵⁰ In 1906, following Kerr's suggestion, Wallis conducted detailed dental examinations on 245 eleven year olds at Michael Faraday School in Walworth. Of the 164 boys and 81 girls, only two of each sex had 'perfect dentition'. A few children had had 'amateur' extractions, but no other form of conservative dental treatment was evident. Wallis also

¹⁴⁷ LCC, *MOH Report*, 1925, p.9, [Accessed from; <http://wellcomelibrary.org/moh/report/b18252722/1#?asi=0&ai=12&z=-0.344%2C0.6917%2C1.6263%2C0.7596>, (23.9.2014)].

¹⁴⁸ Gelbier and Randall, 'Wallis', p.400.

¹⁴⁹ The School Dentists' Society, *Objects and Aims*, p.31.

¹⁵⁰ Gelbier and Randall, 'Wallis', p.401.

discovered a gross neglect of oral hygiene; only three of the 245 children owned their own toothbrush and used it regularly. Unsurprisingly, it was these children who showed the best dentition.¹⁵¹ Using dental charts that he had designed himself, Wallis analysed the dental examination data he collected (including the presence of diseases affecting the jaw) against the general physical condition of the child, to reveal a correlation.¹⁵² Wallis found that a large number of children presented oro-facial diseases such as enlarged tonsils and chronic pharyngitis. Aware of Dr Hunter's link between oral sepsis and disease, Wallis argued that early dental treatment of schoolchildren was imperative.¹⁵³ This was not only to treat the poor child in pain, but moreover 'for the prevention of a large number of diseases which follow on chronic oral sepsis.'¹⁵⁴

Wallis was aware that the main issue in starting such a scheme would be convincing the local education authorities that the costs incurred would be beneficial in the long term. However, he was able to use his experience at Feltham Industrial School in his campaign. He claimed that it was because these boys had received dental care at the cost of the ratepayer, their rejection by the military on dental grounds was non-existent.¹⁵⁵ In 1907, Wallis visited three municipal dental clinics for children in Germany. The first of these had opened in 1902 in Strasbourg, under a pioneering scheme initiated by Professor Jessen. The scheme had been approved by the local

¹⁵¹ C.E. Wallis, *The Care of the Teeth in Public Elementary Schools; with special reference to what is being done in Germany* (London, 1908), p. 4.

¹⁵² *Ibid.*, p.3.

¹⁵³ *Ibid.*, p.1.

¹⁵⁴ C.E Wallis, *School Dental Clinics* (London, 1912), p.5.

¹⁵⁵ *Ibid.*, p.7.

authorities as a preventive measure for tuberculosis, after a link was discovered by a fellow physician, Professor Moeller.

To summarise Wallis' ideology at this point; it was understood that the provision of dental treatment of schoolchildren would have both short and long term benefits. Physical health, weight and school attendance would improve, along with increased resistance to disease such as tuberculosis. The military would be provided with healthier recruits and the nation with a healthier workforce.¹⁵⁶

In July 1907, an LCC Special Sub-Committee considered the broader question of medical treatment for elementary school children.¹⁵⁷ The Committee consisted of Education Committee members, representatives from the BMA, the BDA and several London hospitals. The Sub-Committee's report published that November, was a turning point in public health policy. In the years that followed, it provided the basis for much needed health service reform and the political impetus for legislation. The report acknowledged the widespread occurrence of poor dental health in London's schoolchildren and its effect on their well-being, it was decided that this problem could not be allowed to continue. It contemplated the economic consequences of dental neglect, suggesting that the ability to work and the earning power of this new generation could be affected.¹⁵⁸ The lack of existing provision for children's treatment was also addressed, because it was found that the capacity for dental treatment within children's hospitals was only a tenth of that which was needed.¹⁵⁹ The Sub-Committee therefore

¹⁵⁶ *Ibid.*, p.7.

¹⁵⁷ Gelbier and Randall, 'Wallis', p.401.

¹⁵⁸ *Ibid.*, p.402.

¹⁵⁹ *Ibid.*, p.402.

agreed that dental treatment should be included within the plans for medical treatment through school clinics.¹⁶⁰

The Local Education Authorities (LEAs) gained the power to provide school medical inspection and treatment (including the teeth) through the Education (Administrative Provisions) Act 1907 section 13. LEAs could establish their own provision or work with voluntary agencies to develop services, but the Act did not address how the scheme would be funded.¹⁶¹ The ways in which the LCC established the first dental clinics for schoolchildren in will be addressed in the following chapter.

¹⁶⁰ Gelbier and Randall, 'Wallis', p.402.

¹⁶¹ Harris, *Health of the Schoolchild*, p.49.

Chapter 3:

How the problem of dental health was addressed:

This chapter will investigate how the problem of children's dental health in the late Victorian and Edwardian London was addressed. It will consider the development and availability of provision for different socioeconomic groups. Firstly, it will discuss children who were institutionalised; pauper school children and at the other end of the social scale, children attending fee paying boarding schools. It will then discuss that the large majority of children, the working class, were the last to have access to dental inspections and treatment.

The 1834 Poor Law Amendment Act changed the way in which the very poorest children were looked after. The 15,000 parishes in England and Wales were merged under the Act, to form unions, overseen by local Board of Guardians and centrally supervised the central of Poor Law Commissioners.¹⁶² The 1834 Act required each union to establish residential schools, where pauper children could be educated and trained for future careers.¹⁶³ In London, the 1844 Poor Law Amendment Act and 1848 District Schools Act allowed several unions to work together to form seven Poor Law School Districts, with managers appointed to oversee the running of several large residential schools outside the metropolis.¹⁶⁴ The standards of medical care were good, owing to the appointment of Medical Officers.¹⁶⁵ It was their

¹⁶² G. Ayres, *Social Conditions and Welfare Legislation 1800-1930* (Basingstoke, 1988), p.108.

¹⁶³ *Ibid.*, p.85.

¹⁶⁴ LMA *Information Sheet number 4: Poor Law Records in London and Middlesex* (London, 2011), pp.8-9.

¹⁶⁵ Ayres, *Welfare Legislation*, p.109.

responsibility to look after the pauper's health, through a system of regular inspection and treatment, which was regularly reported on.

Concern over the condition of pauper children's dental health was first evident in the report of the Medical Officer for North Surrey School District, dated the 2nd February 1884. In his report, Dr Henry Prangley wrote on the state of the teeth of the 860 pupils that, 'there is nothing special to report, they are much as you would expect to find in children of this age.' However, he suggested that there were many cases which required 'special skilled help' of a dentist. Prangley admitted that he did not have the skill nor the expensive and specialised instruments required to provide the treatment he believed was necessary. In addressing the managers, he wrote 'that in the interest of the children, a dentist should be one of the regular members of the school staff.'¹⁶⁶ The Managers of the school took the matter seriously and wrote to the Local Government Board (LGB) on the 6th March, proposing that a dentist visit regularly, at a salary of fifty guineas a year.¹⁶⁷ A reply, dated the 18th March 1884 was drafted by the LGB but not sent. This draft acknowledged Prangley's report, but doubted that there was necessity for the appointment. The draft advised that 'special cases' could be taken to the out-patients department of the General Hospital. However, notes on the back of the draft, dated 5th and 7th April 1884, written by Dr Bridges of the LGB and another member of the board, show how the proposal was reconsidered. They had never heard of such an appointment elsewhere in the metropolis and wondered what other district schools did about dentistry.

¹⁶⁶ TNA, MH27/59, Poor Law Board and Local Government Board: Poor Law Administration Department and Metropolitan Department: Poor Law School Districts and London School Board Correspondence, North Surrey District School, 1883-1884.

¹⁶⁷ *Ibid.*

Their main objection was the question of funding; medical officers were paid out of the Common Poor Fund, and so to employ a dentist in this way would be setting a precedent. However, they supported the idea of preventative treatment and changed their original stance on sending 'special cases' to the General Hospital, considering that it would be difficult if the guardians did not subscribe. Furthermore, it was felt that much time would be lost by the school staff member who accompanied any child to the hospital, in travelling and waiting for treatment. The LGB finally replied to the School managers on the 15th April stating that they had no objection to the managers obtaining the services of a dentist, but were not prepared to pay for it.¹⁶⁸ The managers of the school went ahead, appointing dentist Henry James Moxton on the 29th December 1884. Under the terms of his employment Moxton was employed to visit one day per week for a salary of £60 per year.¹⁶⁹

Some, but not all, of the seven Poor Law School Districts followed this innovative and unprecedented move. Those which did not were Brentwood, Forest Gate and the South Metropolitan School Districts which were dissolved in 1887, 1897 and 1902 respectively. There is no record of dentists being paid on the ledgers recording the changes of staff of these three districts before their dissolution.¹⁷⁰ The remaining three School Districts started to employ dentists in the 1890s, the first of which was, the Central London School District (CLSD). In 1891, 903 children in the Hanwell

¹⁶⁸ *Ibid.*

¹⁶⁹ TNA, MH9/29, London District: Register of paid officers and staff appointed by the Board of Guardians, etc., of the Metropolitan unions of: Central London School District, North Surrey District School, West London District School, Kensington and Chelsea School District and District School, Poplar and Stepney Sick Asylum District.

¹⁷⁰ TNA, MH9/22, London District: Register of paid officers and staff appointed by the Board of Guardians, etc., of the Metropolitan unions of: Brentwood School District, Forest Gate School District, South Metropolitan School District, Central London Asylum District.

schools were inspected by dentists R. Dennison Pedley and Sidney Spokes, (later President and Vice President of the School Dentists' Society) for the BDA's Schools Committee. In their BDA report, a copy of which was sent to the managers of the CLSD managers, Pedley and Spokes tabulated their statistical findings, demonstrating a great need for dental work. In total, 3357 'unsound teeth' required either filling or extraction. In presenting the figures the dentists also made clear the effect of poor dental health on the ability to masticate, thus recommending biannual dental inspections and preventative dentistry for the children, to save the pain and expense of operations in the long term. In considering the report, forwarded by the CLSD managers on the 30th March 1892, Dr Bridges of the LGB noted the extreme importance of 'sound dentition [for] children to assimilate their food properly' and advised managers to accept Pedley and Spokes' proposals.

The Kensington and Chelsea School District was next to instigate dental provision. The managers wrote to the LGB on 11th January 1892, seeking approval for appointing a dentist to regularly examine and care for the teeth of the children. By this time, however, their letter to the LGB could be regarded as a formality; they had already chosen a dentist, Mr Louis Maitland, who had worked at the Kensington Workhouse and agreed to undertake the role for a year on a trial basis.¹⁷¹

By July 1897, an LGB circular to district school managers recommended a series of conditions in the appointment of 'dental officers', an indication that school dentists were now considered to be part of the Poor Law provision. The circular suggested that the dentist should attend the

¹⁷¹ TNA, MH27/123, Poor Law Board and Local Government Board: Poor Law Administration Department and Metropolitan Department: Poor Law School Districts and London School Board, Correspondence Kensington and Chelsea District School 1893-1895.

school and inspect the teeth the children recently admitted and the teeth of all the children at regular intervals. He would need to keep a record of his work and provide a report to the managers, as the Medical Officers did, stating the numbers of children inspected, and the numbers of extractions, fillings and scalings performed, as well as any other matter arising from an individual case. It was advised that the dentist should be paid by an inclusive salary,¹⁷² which is consistent with evidence of salaries paid in the London School district register.¹⁷³

At the other end of the social scale, during this period, it has been claimed that dentists were being appointed to visit some of the public fee-paying boarding schools.¹⁷⁴ However, investigation has found no evidence of payments being made to dentists in the school ledgers.¹⁷⁵ Furthermore, it would appear that the children at these schools were treated by their own dentist or one nearby. For example, in a memorandum dated 22nd April 1907 entitled 'Dentist's Leave', Headmaster of Eton, Mr E Lyttelton, asks parents for their:

co-operation in reducing the number of journeys made by the boys to dentists in London. At present much time and money are wasted...these interruptions to school life are for the most part unnecessary...a fair number of Eton boys are already in the hands of Windsor dentists.¹⁷⁶

¹⁷² The School Dentists' Society, *Objects and Aims*, pp.63-64.

¹⁷³ MH9/29, London District: Register of Paid Officers.

¹⁷⁴ Welshman, 'Dental Health', p.308.

¹⁷⁵ Personal communication with school archivists at: Eton, Harrow, Winchester, Berkhamstead, Sherborne, Westminster and Dulwich.

¹⁷⁶ Eton School Archive, Headmaster's Memorandum to Parents: 'Dentist's Leave', dated 22.4.1907.

At Sherborne School in Dorset, children were also sent out to the local dentists in the nearest town of Yeovil, although they were discouraged to go in pairs to avoid getting into mischief.¹⁷⁷

In 1909, the LCC Education Committee considered establishing dental provision for elementary schoolchildren. It decided that:

the Council should utilise institutions of the type now existing, giving financial help, if necessary, and receiving special facilities in return for any grant or public money; but that in districts where no suitable institution exists, and where it will be found impossible to make necessary provision by the extension of existing institutions, the Council should consider whether, in default of other means, it shall make provision itself.¹⁷⁸

The LCC carried this out in three exploratory ways. The first scheme provided funding of two existing philanthropic children's dental services, the second an agreement made with a London hospital to provide treatment. The third scheme was an expansion of two new minor ailment treatment centres, to also include dental work, which groups of local doctors were opening with funding from the LCC. It has been argued that the LCC was slow to take action following the 1907 Education Act.¹⁷⁹ However, it should be appreciated that the LCC were 'approaching the matter gradually', because it believed that experience would be the key to long term success.

¹⁷⁷ A.B. Gourlay, *A History of Sherborne School* (2nd edn) (Winchester, 1970), p.142.

¹⁷⁸ London Metropolitan Archives (LMA), LCC/PH/SHS/02/024, Letter from R. Blair to P. Rodgers, 10th May 1909.

¹⁷⁹ Gelbier and Randall, 'Wallis', p.403.

In this sense, the first dental clinics were regarded as ‘experiments’ to deal with what was perceived to be the ‘large and difficult question’ of dental treatment for school children.¹⁸⁰ However, a turning point in the development of dental treatment services came in May 1910. This followed a trip to Germany by Robert Blair (Education Officer for the LCC). He was impressed with the municipal dental clinics he visited and reported his findings back to the Education Committee in June.¹⁸¹

This section will discuss how the first clinics were established and then analyse the early months of service. It will show that the process of experimentation was vital to the development and future success of dental provision in London, as it transformed from a philanthropic venture to a municipal service.

In Victorian London, the dispensary movement was an important part of the formal medical treatment services available to the working class. Dispensaries were charitable organisations used by those who could not afford doctors or subscriptions to medical clubs, but not poor enough (or too proud) to accept Poor Law relief. The medical advice and medicines were supplied for free or perhaps a small fee.¹⁸² St George’s Dispensary was established in 1904 and entirely funded by a retired naval surgeon Rowland Arthur Kirby, to serve the local poor of Blackfriars whose income was less than twenty-five shillings a week.¹⁸³ In 1908, the Dispensary moved to 68 Surrey Row (a former Public House) which provided more room for the

¹⁸⁰ LMA, LCC/PH/SHS/2/73, St George’s Dispensary, Education Committee minutes, 22nd February 1911.

¹⁸¹ Gelbier and Randall, ‘Wallis’, p. 403.

¹⁸² S. Gelbier, ‘Frederick Breese and London’s First School Dental Clinic’, *Br Dent J*, 151 (1981), pp.309-311.

¹⁸³ *Ibid.*, p.309.

treatment of minor ailments and allowed for a special dental room for children to be fitted on the first floor.¹⁸⁴ The dental clinic opened on 20th January 1909, as Kirby's 'experiment'.¹⁸⁵ It was staffed by dentist Frederick Breese, president of the School Dentist's Society in 1907 and his nurse.¹⁸⁶ At first the clinic was open for two sessions a week, treating children from the nearby Blackfriars School, where Wallis had been 'charting' the children's teeth and educating them on dental health.¹⁸⁷ The nurse brought the children after school with written permission from their parents, apparently with little opposition.¹⁸⁸ On the 25th September 1909, Kirby offered his dispensary to the LCC for dental treatment of children. However, at that point the LCC were negotiating with hospitals to provide children's services based in out-patients departments. By mid-June 1910, the LCC reconsidered Kirby's offer to run St George's as an LCC dental centre. In January 1911, James Kerr visited the clinic, reporting that it was suitably adapted, well equipped and efficiently run.¹⁸⁹ As philanthropic funding had stopped for the dental clinic at the end of January 1911, the LCC decided should continue the 'experiment' until the end of that year, with potential for annual renewal. An agreement was signed between the LCC and St George's Dispensary on the 1st May 1911. Towards the end of the year, the clinic was visited by Kerr and deemed to be running efficiently. The agreement for funding was renewed on the 3rd January 1912.

¹⁸⁴ LCC/PH/SHS/2/73, St George's Dispensary, Day Schools Sub-Committee Agenda, 19th October 1909.

¹⁸⁵ LCC/PH/SHS/2/73, St George's Dispensary, Annual Report 1909-1910, p.8.

¹⁸⁶ Gelbier, 'Breese', p.309.

¹⁸⁷ LCC/PH/SHS/2/73, St George's Dispensary, Annual Report 1909-1910,p.7.

¹⁸⁸ *Ibid.*

¹⁸⁹ LCC/PH/SHS/2/73, St George's Dispensary Children's Care (Central) Sub Committee Agenda, 26th January 1911.

The discourse on the history of health and welfare of children in early twentieth century London would not be complete without the work of Margaret McMillan. A founder member of the Independent Labour Party, McMillan spent several years in Bradford, where she became an elected member of the School Board in 1894.¹⁹⁰ It was through this position that she worked with James Kerr, to carry out the first school medical inspection in England. When Kerr moved to London, Margaret was soon to follow, moving in with her sister Rachel in Bromley in 1902.¹⁹¹ Margaret's philosophy of child development was holistic. She believed that education, health and social care were of equal value and understood dental treatment to be of the utmost importance to the growing child.¹⁹² The McMillan sisters are often celebrated for their work in Peckham, where they pioneered an open air nursery in 1914. However, on 15th June 1910, Margaret opened the first medical treatment centre in London, specifically for schoolchildren, at Creek Road, Deptford, philanthropically funded by Joseph Fels. The opening ceremony was attended by several 'VIPs', including the Countess of Warwick, Sir John Gorst MP and George Cunningham, who delivered address on the care of the teeth and received a medal for services to dentistry.¹⁹³

As former colleagues, Kerr and McMillan shared a commitment towards improving the dental health of children and the establishment of municipal provision. The dental department of the clinic opened on 17th

¹⁹⁰ C.Steedman, *Childhood, Culture and Class in Britain: Margaret McMillan, 1860-1931* (London, 1990) p.108.

¹⁹¹ *Ibid.*, p.29.

¹⁹² *Ibid.*, pp.198-199 and p.208.

¹⁹³ LMA, LCC/PHP/SHS/2/85, Deptford (Creek Road) Medical Treatment Centre, Newspaper cutting, 'School Hygiene: Opening of Clinic at Deptford', *Daily News*, 16th July 1910.

October 1910. During the first nine weeks 696 children were treated.¹⁹⁴

Margaret offered the use of her clinic to the LCC to run additional sessions to the two a week that were philanthropically funded but with a small charge made to the parents. The LCC agreed to fund seven half days a week, to be reviewed after a year from January 1911. Following a review of the work at the Deptford Clinic by the LCC and a report by James Kerr, it was decided that funding for the provision was justified. On the 18th December 1911, the LCC renewed the agreement to fund the Deptford Dental Clinic for a further year.

Representatives from Poplar Hospital for Accidents did not sit on the LCC Special Sub-committee on the Medical Treatment of School Children, but it was reported to be well run and free of debt.¹⁹⁵ In June 1909, Hospital Chairman Percy Rogers replied to a 'circular' letter from the LCC, informing them that the Poplar did not have a children's outpatient's department or the specialist staff required for treating children's ailments. The Hospital's committee sympathised with the LCC's concern for the better treatment of schoolchildren and offered the use of some rooms for a fair rent.¹⁹⁶ It was not until May 1910 that negotiations resumed. The Hospital did not wish to bear the cost of alterations and apparatus for the room without a formal agreement, which was not signed until 24th December 1910. Dental treatment finally began at Poplar Hospital on 27th March 1911. The agreement was reviewed at the end of that year and renewed (with modifications) until 31st December 1912.

¹⁹⁴ LCC/PH/SHS/2/85, Deptford (Creek Road) Medical Treatment Centre, Cutting from a journal, 'Deptford Children's Health Centre', *School Hygiene*. April 1911.

¹⁹⁵ LMA, LCC/PH/SHS/02/024, Poplar Hospital, 'The Model Hospital for London', Unnamed newspaper cutting, 15th December 1909. .

¹⁹⁶ *Ibid.*, Letter from P.Rodgers to R.Blair, 11th June 1909.

The two children's dental clinics, set up in Wandsworth and Norwood, were examples of the LCC's third type of experimental venture, the expansion of minor ailments clinics to include dental treatment. These newly established medical treatment centres were instigated by two committees of local medical practitioners around the same time during 1909-1911. In Wandsworth, the inclusion of dental treatment was key to the establishment of the clinic.

On the 21st February 1910, members of the Wandsworth division of the BMA, Dr Fothergill, Dr Gay and Dr Vernon-Roe, met Mr Blair and Dr Kerr proposing a scheme to medically treat elementary schoolchildren in at a G.P-run clinic in Wandsworth, funded by the LCC. The doctors argued that there was a great need for provision in the area. They estimated that 34,000 children attended local schools and the nearest hospital was a long way for children and parents to travel to.¹⁹⁷ However, the LCC did not rush into any agreements of this innovative arrangement. In November 1910, the doctors proposed that dental work could also be carried out at the clinic, a move supported by local dentists. A copy of this proposal was sent to a group of doctors in Norwood, who were also negotiating with the LCC to provide similar medical provision.¹⁹⁸ The offer of dental treatment seemed to reignite the correspondence between the doctors and the LCC, much of which relates to dental rather than medical treatment in the archive. Premises were chosen by the doctors, at 315 Garratt Lane, because they were centrally

¹⁹⁷ LMA, LCC/PH/SHS/2/81, Wandsworth School Treatment Centre, Handwritten notes of an interview between: Dr Fothergill, Dr Gay, Dr Vernon-Roe and Mr Blair, Dr Kerr, 21st February 1910,.

¹⁹⁸ *Ibid.*, Letter from Wandsworth division of the BMA to the Education Officer LCC, 17th November 1910.

located and close to the trams. The dental clinic finally opened on 1st May 1911.

Evidence suggests that the Norwood medical treatment centre was established in the same manner as Wandsworth. However, financial disputes with the LCC led the committee of doctors in Norwood to proceed with caution.¹⁹⁹ The centre opened on 2nd March 1910, but dental treatment services did not begin until 1st January 1912.

Analysis of the first dental schemes at Deptford, St George's and Poplar shows that whilst these schemes were experimental, experience was invaluable; modifications were used to plan future schemes, such as at Wandsworth and Norwood. The key issues that were addressed were medical inspections, the ages of children treated, the use of anaesthetics, funding and parental objections.

During the first few months that the dental schemes were operating, it was thought that the ordinary medical inspections of children (at eight and nine years) by the school medical officer (SMO), would supply these clinics with plenty of cases for treatment. However, it was soon found that insufficient cases were being sent to some clinics, such as Poplar. This was not the case at St George's, because Charles Wallis had been inspecting children in the local schools and sending them for treatment. Wallis pointed out that doctors did not receive special dental training, therefore early dental caries, those most easily and painlessly treated, were almost always missed by the SMO's, who did not use a probe and mirror.²⁰⁰ When Wallis became too busy with other commitments to carry out dental inspections early in

¹⁹⁹ LMA, LCC/PH/SHS/2/69, Norwood Medical Treatment Centre, Day Schools Sub Committee Agenda, 8th February 1910.

²⁰⁰ Wallis, *School Dental Clinics*, p.8.

1911, it was proposed that, where possible, the dentist attached to the clinic divide his time between inspections and clinics.²⁰¹ With special dental inspections, came the realisation that if younger children were inspected at six to eight years, earlier treatment would be less painful, take less time, and education on dental hygiene could start before the permanent teeth erupted.²⁰²

When the initial schemes were established, anaesthetics were thought not to be necessary. However, it was realised that older children often required treatment on permanent teeth; for extractions or surgery to remove the roots of broken teeth. These children could then not be treated until the use of anaesthetics was sanctioned at Poplar and later extended to all schemes.²⁰³

As with any new venture, funding these dental clinics was a key issue for the LCC. This was because the 1907 Education (Administrative Provisions) Act did not legislate for financial assistance from the Treasury,²⁰⁴ so the LCC (and ratepayers) bore the brunt of the cost. The LCC was able to make a small charge to parents towards the costs of treatment, under the 1909 Local Education Authorities (Medical Treatment) Bill. At Deptford, parents paid a small fee in line with the LCC's scale of charges. McMillan had made this clear from the outset. It is not known whether this decision was made simply to cover some of the costs, or because it was felt that parents would prefer to pay a small fee than live with the connotations of receiving free treatment. Funding of the dental clinic at St George's was

²⁰¹ LMA, LCC/PH/SHS/2/73, St George's Dispensary, Education Committee minutes, 1st November 1911.

²⁰² *Ibid.*

²⁰³ *Ibid.*

²⁰⁴ Harris, *Health of the Schoolchild*, p.64.

entirely philanthropic for the first year. When the LCC entered into the agreement with Kirby, however, it was decided that a charge would be made in all cases and that for an entire course of treatment, it would not exceed one shilling. This was in line with what was being charged at Deptford and Poplar, so effort was being made to standardize fees across the service.

However, charging parents a fixed or scaled fee was soon found to be too bureaucratic to enforce, because it was impractical and costly to assess and collect payments.²⁰⁵ For example in 1910, the LCC had only collected £185 in contributions from parents, but the costs borne in doing so were £800.²⁰⁶ It was not until spring 1912, that the government took on the burden of funding treatment through grants. This was consolidated in August 1913, when Local Authorities could claim government grants to cover fifty per cent of their costs incurred in providing both dental inspection and treatment of elementary schoolchildren.²⁰⁷

One of the most interesting aspects is parental attitudes towards dental treatment provision. In Deptford, several parents objected to their children's teeth being treated and came to the clinic to state their objections.²⁰⁸ The dentist, Mr North, reported that the very poorest 'pay scant heed to forms of a voluntary character.' The reasons for objection, at least from North's point of view, were partly financial and partly because the clinics were initially run during school hours.²⁰⁹

²⁰⁵ *Ibid.*, p.66.

²⁰⁶ J. David Hirst, The Growth of Treatment through the School Medical Service, 1908-18, *Medical History* 33, (1989), pp.318-342.

²⁰⁷ Harris, *Health of the Schoolchild*, p.68.

²⁰⁸ LCC/PH/SHS/2/85, LCC/PH/SHS/2/85, Deptford (Creek Road) Medical Treatment Centre, Cutting from a journal, 'Deptford Children's Health Centre', *School Hygiene*, April 1911.

²⁰⁹ *Ibid.*, B.North, Report to the LCC Children's Care (Central) Sub Committee 20th July 1911.

Education of parents on dental health was considered to be a reason for objection by Charles Wallis, who gave talks to parents in Blackfriars and distributed cards on the care of the teeth.²¹⁰ In Deptford, McMillan's dental appointment card had dental hygiene advice on the reverse (see appendix ii). In December 1910, 500,000 the LCC printed leaflets entitled 'Health Hints to Parents' written by James Kerr, which provided information on several health matters for schoolchildren. This included advice on the on teeth and recommended that every child have their own toothbrush and be taught how to use it: 'The use of the tooth-brush will do so much towards ensuring health that it may be said to be as good as five shillings a week for life.'²¹¹ It was also the role of the Schools Care Committees to visit parents and talk about the value of early treatment. Some health education was necessary because of the nature of the working class health culture; which was home based and controlled by laywomen.²¹² Working class mothers' self-identity was based on their ability to look after their children themselves, with support from mutual aid networks.²¹³ As contact with medical professionals increased during this time, municipal dental provision was considered to be interference or an imposition on their duty as a parent, even when money was short.

The availability of provision and whether it is used, are two very different matters.²¹⁴ Some parents were affronted by the offer of treatment, others did not see the need, as letters and consent form replies sent from

²¹⁰ LCC/PH/SHS/2/73, St George's Dispensary, Education Committee minutes, 1st November 1911.

²¹¹ LMA, LCC/PH/SHS/5/7, J. Kerr, Leaflet 'Health Hints to Parents', 1910.

²¹² Beier, *For Their Own Good*, p.35.

²¹³ *Ibid.*, p. 36.

²¹⁴ *Ibid.*, p. 88.

parents to Headmasters in Deptford and Poplar show. For example, written across one consent form:

Certainly Not'. What medical attention my child requires I
[underlined] will have it seen to myself.²¹⁵

Another parent clearly expressed her situation thus:

I cannot understand this about the doctor. Violet has not said anything to me about her teeth and I cannot see anything the matter with them and therefore I don't want them interfered with at present and when her father starts work I will take her to a doctor...her father being out of employment since last November, it is more than I can do at the moment to get food at present for them.²¹⁶

However, at St George's clinic there was apparently little parental opposition to treatment. It is suggested that this was because dispensaries were well established in the working class health culture. As such, poor folk had faith in their services, whereas the new dental clinics that were emerging elsewhere were unknown entities.

Parents had a right to feel suspicious, because for some, being told that your child required treatment was akin to being accused of neglect. The contemporary concern for child neglect was a real issue for parents. This followed the 1908 Children (and Young Persons) Act which was all about

²¹⁵ LCC/PH/SHS/2/85, Deptford (Creek Road) Medical Treatment Centre, Returned consent form: from Mrs Beamish to Headmaster Deptford Park School, 23rd March 1911.

²¹⁶ *Ibid.*, Handwritten letter from Mrs Pasmore to Mr MacDonald, undated.

neglect; i.e. infant life protection and prevention of cruelty to children. The Act considered failure 'to provide adequate food, clothing, medical aid or lodging' or to 'fail to make arrangements for such through the Poor Law.'²¹⁷ Under the Act, parents could be fined; as made clear by the Metropolitan Police (see appendix iii).

In the Edwardian period, it is suggested that rejection of dental treatment was one way in which working class parents retained some agency in raising their children, when it was being increasingly regulated by the State. Whilst public debate and interest in the health of schoolchildren began in the 1880's,²¹⁸ it was not until the beginning of the twentieth century that social legislation concerned with child health was enacted.²¹⁹ It is widely understood that during this period, legislative attention was historically significant to bring about the social reconstruction of childhood in Britain.²²⁰ It has been argued that the government became interested in the body of the child through the 'medicalization of childhood' in order to gain social control.²²¹ However, the existing nineteenth century philanthropic agencies for child health could not cope with the extent of poverty. It was only when this problem was realised and considered to be a threat to the Empire, that the government consciously took action in the interest of the nation.²²² The rise of the school dental service in Edwardian London was significant in the medicalization and legislation of childhood and resulted in a new social and

²¹⁷ Hendrick, *Child Welfare*, p83.

²¹⁸ *Ibid.*, p.21.

²¹⁹ H.Hendrick, 'Child Labour, Medical Capital and the School Medical service, c.1890-1918', in R. Cooter, *In the Name of the Child, Health and Welfare, 1880-1940* (London,1992), p.51.

²²⁰ Steedman, *Childhood, Culture and Class*, p. 62, and Cooter, *Introduction*, p.2.

²²¹ Hendrick, *Child Welfare*, pp.2-3. Medicalization is a Foucaultian term used to explain the social control and power of a medical profession over the human body.

²²² *Ibid.*, p.9.

political identity of children and a shift in the perception of ownership, from the parent to the State.²²³

²²³ Ibid., p.19.

Conclusion:

This dissertation has undertaken pioneering research into a neglected area of child health and welfare, namely, the rise of dental provision for schoolchildren in Edwardian London. This provision marked a significant philosophical shift from parental and philanthropic responsibility of working class children, to a new-found political value of children by the State. This research has contributed to the theoretical medicalization and social reconstruction of childhood in the Edwardian period.

Several factors led to the development of London's school dental service. Chapter one revealed the problem of poor dental health in late Victorian Britain, a result of deprivation, disease and malnutrition, exacerbated by an inadequate diet high in sugar. This was combined with a lack of affordable preventive dental care and knowledge of dental hygiene in the working classes. Chapter two considered the recognition and extent of the problem. Concern for child dental health came from the dental profession, who highlighted and campaigned for child dental provision from the mid-1880s. Such dentists identified and statistically recorded the shortcomings of neglecting dental matters in children. Dental health played an important role in the contemporary discourse on physical deterioration and in evidence given to the Inter-Departmental Committee for Physical Deterioration, whose report recommended dental inspection and treatment of all schoolchildren. In London, James Kerr and Charles Wallis understood the problem and began to work towards establishing the first municipal dental clinics for children in the metropolis. Chapter three investigated how the problem of dental health was addressed. By the 1890s, London's pauper

children received regular dental inspection and treatment, by registered professionals, as part of Poor Law health provision. However, the majority of children, in elementary schools did not receive the same provision free of charge until 1912-1913. This was because the LCC took a pragmatic approach to the establishment of dental provision, aware of the enormity of tackling the dental health problem of London's children without central funding. The process of opening experimental clinics and then making modifications was necessary to the long term success of the scheme.

This research found that parental objections came where it was felt that the provision was being imposed, and where parents' ability to provide for their children was being questioned. It is suggested that the attitudes of parents to school dental services and the acceptance of State responsibility of children, is an area of potential for further research.

LIPTON'S TEAS

Direct from the Tea Garden to the Tea Pot.
No Middlemen's Profits to Pay.

RICH, PURE, & FRAGRANT.

1/- and 1/4 per lb.

THE FINEST TEA THE WORLD CAN PRODUCE.

1/7 per lb.

NO HIGHER PRICE.

OVER ONE MILLION PACKETS SOLD WEEKLY.

SPECIAL NOTICE.—Delivered Carriage Paid for an extra **1d.** per lb. to any address in Great Britain on orders of 5 lb. and upwards. Samples sent free on Application.

**LIPTON,
Tea & Coffee Planter, CEYLON.**

So's Proprietor of the following celebrated Tea and Coffee Estates in Ceylon—Dambatenne, Laymasotto, Moserakande, Mahadambatenne, Honskelle, Pogonnasie, Hamucalla, and Gigrathelle, which cover thousands of acres of the best Tea land in Ceylon.

Tea and Coffee Shipping Warehouses: Maddema Mills, Cinnamon Gardens Colombo.

Ceylon Office: Upper Chatham Street, Colombo.

Indian Office and Shipping Warehouses: 5, Lyons Range, Calcutta.

General Offices: **BATH ST., CITY RD., LONDON, E.C.**

LONDON BRANCHES.

Angel House, Islington, N.; 293, Old Street, E.C.; 19, High Street, Kingsland; 240 and 242, Edgware Road, W.; 69, Westbourne Grove, W.; 417, Erixton Road, S.W.; 87, Chancery Street, Finsbury; 18, St. John's Road, Chatham Junction; 98, Eye Lane, Peckham; 321, Walworth Road; 144, Trafalgar Road, East Greenwich; 19, High Street, Deptford; 245, High Street, Cannon Town; 128, Lambeth Walk, Lambeth; High Road, Tottenham; 18 and 20, Stratton Ground, Westminster; 239, Wandsworth Road; 11, Seven Sisters Road, Holloway; Angel Lane, Stamford; High Street, Harenden, Willesden Junction; 151, King Street, Hammersmith; High Street, Walthamstow; 29, North End Road, Fulsam; 44, North End, Croydon; 68, New Cut, Lambeth; 182, High Street, Stoke Newington; 6, Little Pultney Street, Soho; 11, Chapel Street, Soho; 1, Hare Street, Woodwich; 143, Salomon's Lane, Limehouse, E.; 284, Barking Road, Canning Town, E.

AND BRANCHES THROUGHOUT GREAT BRITAIN AND IRELAND.



Appendix i: Lipton's Tea advertisement , Illustrated London News, 17th September 1892.

Source: British Library, Shelfmark:P.7611, [Accessed from:

<http://www.bl.uk/learning/images/asiansinbritain/large126069.html>, (23.9.2014)].

PUBLIC WARNING.

CHILDREN ACT, 1908.

Among other provisions of the Children Act, Parents or other persons having the charge of Children are made liable to fines or other penalties for

- (1) Leaving a child under the age of 7 in a room with a fire without a fireguard, or without taking other precautions, if the child is burned to death or seriously injured.
- (2) Taking or sending a child under the age of 14 into the drinking bar of a public-house, or any part of the premises exclusively or mainly used for the sale and consumption of intoxicating liquor.
- (3) Giving to a child under the age of 5 any intoxicating liquor (except in cases of illness, &c.)

Persons, other than relatives, undertaking for payment, and for more than 48 hours, the care of one or more infants under the age of 7 away from their parents, must send notice of the fact to the Clerk to the Board of Guardians (in London to the Clerk to the London County Council, Spring Gardens, S.W.; in Scotland, to the Clerk to the Parish Council).

Exceptions may be made where the infants have been boarded out by a charitable society.

PAWNBROKERS must not accept goods from children under 14 (in London and Liverpool, under 16).

DEALERS IN OLD METAL must not buy from children under 16.

TOBACCONISTS must not sell to persons under 16 cigarettes or cigarette papers (nor any other tobacco if there is reason to believe it is for the use of the person under 16).

This does not apply to boys employed in the trade or to boy messengers in uniform employed by messenger companies.

Persons giving entertainments to children, where there are more than a hundred children and any of them go up a staircase to their seats, must have a sufficient number of grown-up attendants to secure the safety of the children in case of fire, &c.

This does not apply to entertainments in private houses.

The Act is in force from April 1st, 1909.

Home Office, 24th March, 1909.

Appendix ii: Metropolitan Police Notice to Parents, 24th March 1909.

Source: TNA: MEPO 2/1138

Help to Save Your Teeth by

Keeping Them Clean.

Brush them after supper, and after breakfast, also brush them after eating sweets.

Wet the brush, then scatter a little prepared chalk on it (you can get a penny-worth at the chemist's). Brush across then up and down the teeth, and brush the back teeth.

Wash out the mouth with a little water, and wash the brush.

F70

Appendix iii: Reverse appointment card from Deptford Children's Health Centre 1910.

Source: LCC/PH/SHS/2/085.

Sources and Bibliography:

Manuscript Sources

The National Archive:

MH9/22, London District: Register of paid officers and staff appointed by the Board of Guardians, etc. of the Metropolitan unions of: Brentwood School District, Forest Gate School District, South Metropolitan School District, Central London Asylum District.

MH9/29, London District: Register of paid officers and staff appointed by the Board of Guardians, etc. of the Metropolitan unions of: Central London School District, North Surrey District School, West London District School, Kensington and Chelsea School District and District School, Poplar and Stepney Sick Asylum District.

MH27/33, No 2 South Metropolitan Board School District, Annual Report, 1884.

MH27/59, Poor Law Board and Local Government Board: Poor Law Administration Department and Metropolitan Department: Poor Law School Districts and London School Board Correspondence, North Surrey District School, 1883-1884.

MH27/123, Poor Law Board and Local Government Board: Poor Law Administration Department and Metropolitan Department: Poor Law School Districts and London School Board, Correspondence Kensington and Chelsea District School 1893-1895.

London Metropolitan Archive:

LCC/PH/SHS/2/24, Poplar Hospital, Letter from R. Blair to P. Rodgers, 10th May 1909.

LCC/PH/SHS/2/24, Poplar Hospital, 'The Model Hospital for London', Unnamed newspaper cutting, 15th December 1909.

LCC/PH/SHS/2/24, Poplar Hospital, Letter from P. Rodgers to R. Blair,
11th June 1909.

LCC/PH/SHS/2/69, Norwood Medical Treatment Centre, Day Schools Sub-
Committee Agenda, 8th February 1910.

LCC/PH/SHS/2/73, St George's Dispensary, Day Schools Sub-Committee
Agenda, 19th October 1909.

LCC/PH/SHS/2/73, St George's Dispensary, Annual Report 1909-1910.

LCC/PH/SHS/2/73, St George's Dispensary Children's Care (Central) Sub-
Committee Agenda, 26th January 1911.

LCC/PH/SHS/2/73, St George's Dispensary, Education Committee minutes,
22nd February 1911.

LCC/PH/SHS/2/73, St George's Dispensary, Education Committee
minutes, 1st November 1911.

LCC/PH/SHS/2/81, Wandsworth School Treatment Centre, Handwritten
notes of an interview between: Dr Fothergill, Dr Gay, Dr Vernon-Roe
and Mr Blair, Dr Kerr, 21st February 1910.

LCC/PH/SHS/2/81, Wandsworth School Treatment Centre, Letter from
Wandsworth division of the BMA to the Education Officer LCC, 17th
November 1910.

LCC/PH/SHS/2/85, Deptford (Creek Road) Medical Treatment Centre,
Newspaper cutting, 'School Hygiene: Opening of Clinic at
Deptford', *Daily News*, 16th July 1910.

LCC/PH/SHS/2/85, Deptford (Creek Road) Medical Treatment Centre,
Returned consent form: from Mrs Beamish to Headmaster Deptford
Park School, 23rd March 1911.

LCC/PH/SHS/2/85, Deptford (Creek Road) Medical Treatment Centre,
handwritten letter from Mrs Pasmore to Mr MacDonald, undated.

LCC/PH/SHS/2/85, Deptford (Creek Road) Medical Treatment Centre,
Cutting from a journal, 'Deptford Children's Health Centre', *School
Hygiene*, April 1911.

LCC/PH/SHS/2/85, Deptford (Creek Road) Medical Treatment Centre, B.
North, Report to the LCC Children's Care (Central) Sub-Committee
20th July 1911.

LCC/PH/SHS/5/7, J. Kerr, Leaflet 'Health Hints to Parents', 1910.

Other Archives:

Eton School Archive, Headmaster's Memorandum to Parents: 'Dentist's Leave', dated 22nd April 1907.

Guildhall Library, Kelly's Directories, 96917/131 (1881), 96917/148 (1891), 97543/7 (1901), 97543/56 (1911).

Printed Primary Sources:

P.P, *Appendix to the Report of the Inter-Departmental Committee on Physical Deterioration, vol.3, Appendix and General Index*, Cd 2186 (1904).

P.P, *Report of the Inter-Departmental Committee on Physical Deterioration, vol.1, Report and Appendix*, Cd 2175 (1904).

Acton, *MOH Report*, 1899.

Hanover Square, *MOH Report*, 1900.

Kingston upon Thames, *MOH Report*, 1896.

LCC, *MOH Report*, 1893.

LCC, *MOH Report*, 1897.

LCC, *MOH Report*, 1925.

Contemporary Articles and Books:

Anonymous letter to the Editor, *Journal of the BDA*, Vol IX (1888).

Booth, C., *Labour and Life of the People, vol 1* (London, 1889).

Booth, C., *Labour and Life of the People, vol 2, London continued* (London, 1891).

Cunningham, G., *Dentistry and its Relation to the State* (London, 1887).

- Fisher, W.M., 'Compulsory Attention to the Teeth of School Children',
Journal of the BDA, vol. VI (1885).
- Fisher, W.M., *Compulsory Attention to the Teeth of School Children (the Army and Navy)* (London, 1887).
- Hunter, W., 'Oral Sepsis as a cause of disease' *BMJ* (1900).
- LeBourg, L., *Les Dystrophies Dentaires de la Syphilis Héréditaire*
(Paris, 1939).
- MacNamara, N., 'Report of the Decay of the Teeth Committee', *BMJ* (21st
July 1900).
- Masterman, C., 'Realities at home' in Masterman, C., ed., *The Heart of the Empire*, 2nd edn., (London, 1907).
- The School Dentists' Society, *The School Dentists' Society: It's Objects and Aims*, 2nd edn., (London, 1913).
- Wallace, J., 'Correspondence' *BMJ* (11th August 1900).
- Wallis, C.E., *The Care of the Teeth in Public Elementary Schools; with special reference to what is being done in Germany* (London, 1908).
- Wallis, C.E., *School Dental Clinics*, (London, 1912).

Published Secondary Sources:

- Atkins, P.J., 'Vinegar and Sugar: the Early History of Factory-made Jams, Pickles and Sauces in Britain', in Oddy. D., (ed) *The Food Industries of Europe in the Nineteenth and Twentieth Centuries* (Farnham, 2013).
- Ayres, G., *Social Conditions and Welfare Legislation 1800-1930*
(Basingstoke, 1988).
- Barnett, R., *The sick rose: or disease and the art of medical illustration*
(London, 2014).

- Beier, L., *For their own good: The Transformation of English Working Class Health Culture, 1880-1970* (Columbus, 2008).
- Burnett, J., *Plenty and want: a social history of food in England from 1815 to the present day*, 3rd edn., (London, 1989).
- Cooter, R., 'Introduction', in R. Cooter, ed., *In the Name of the Child: Health and Welfare 1880-1940* (London, 1992).
- Dalglis, N., 'Robert Morant's hidden agenda? The origins of the medical treatment for schoolchildren', *History of Education*, 19:2, (1990).
- Dwork, D., *War is Good for Babies and Other Young Children: A history of the infant and child welfare movement 1898-1918* (London, 1987).
- Floud. R, Fogel. R, Harris. B and Chul Hong. S, *The Changing Body: Health, Nutrition and Human Development in the Western World since 1700* (Cambridge, 2011).
- Frazer, D., *The Evolution of the British Welfare State* (London, 1973).
- Garrett, E., Galley, C., Shelton, N., Woods, R., eds., *Infant mortality: a continuing social problem* (Aldershot, 2006).
- Gelbier, S., 'Frederick Breese and London's first school dental clinic', *Br. Dent. J*, 3 (1981).
- Gelbier, S., 'The Rise of London's School Dental Service', *Lindsay Club Occasional Newsletter*, 8 (1982).
- Gelbier, S., 'Dentistry for pauper and other poor children in the late 19th and 20th centuries', *Dental Historian*, 43 (2006).
- Gelbier, S. and Randall, S., 'Charles Edward Wallis and the Rise of the School Dental Service', *Medical History*, 26 (1982).
- Gilbert, B.B., *The Evolution of National Insurance in Great Britain: The Origins of the Welfare State* (London, 1966).
- Gourlay, A.B., *A History of Sherborne School*, 2nd edn., (Winchester, 1970).
- Hardy, A., *The Epidemic Streets: Infectious Disease and the Rise of Preventive Medicine, 1856-1900* (Oxford: 1993).
- Hardyment, C., *Dream Babies: Childcare from Locke to Spock* (Oxford, 1984).

- Harris, B., *The Health of the Schoolchild: A history of the school medical service in England and Wales* (Buckingham, 1995).
- Harris, J., *Private Lives, Public Spirit: Britain 1870-1914* (London, 1994).
- Hendrick, H., 'Child Labour, Medical Capital and the School Medical service, c.1890-1918', in Cooter, R., *In the Name of the Child, Health and Welfare, 1880-1940* (London, 1992).
- Hendrick, H., *Child Welfare: Historical Dimensions, contemporary debate* (Bristol, 2003).
- Hirst, J. David, The Growth of Treatment through the School Medical Service, 1908-18, *Medical History* 33, (1989).
- Horrell, S., Meredith, D. and Oxley, D., 'Measuring misery: Body mass, ageing and gender inequality in Victorian London.', *Explorations in Economic History*, 46:1 (2009).
- Horrell, S., and Oxley, D., 'Crust or crumb?: Intrahousehold resource allocation and male breadwinning in late Victorian Britain', *Economic History Review*, 52:3 (1999).
- Horrell, S., and Oxley, D., 'Bargaining for basics? Inferring decision making in nineteenth-century British households from expenditure, diet, stature, and death', *European Review of Economic History*, 17:2(2013).
- Lewis, J., *The Politics of Motherhood: Child and Maternal Welfare in England, 1900-1939* (London, 1980).
- Marks, J., *Model Mothers: Jewish Mothers and Maternity Provision in East London, 1870-1939* (Oxford, 1994).
- McKeown, T., *The Modern Rise of Population* (London, 1976).
- Milward, R., and Bell, F., 'Infant Mortality in Victorian Britain: The Mother as Medium', *The Economic History Review*, 54: 4 (2001).
- Mooney, G. and Tanner, A., 'Infant mortality, a spatial problem: Notting Dale special area in George Newman's London' in Garrett E, Galley C, Shelton N, Woods R, eds. *Infant mortality: a continuing social problem* (Aldershot, 2006).
- Oddy, D., 'Working-Class Diets in Late Nineteenth-Century Britain' *Economic History Review*, 23:2 (1970).

- Parker, D., 'A convenient dispensary: elementary education and the influence of the school medical service, 1907-1939', *History of Education*, 27:1, (1998), pp.59-83.
- Richards, N., 'Dentistry in Britain: Some Sociologic Perspectives', *The Milbank Memorial Fund Quarterly*, 49:3 (1971).
- Richards, N., 'Morals and Molars: Physical deterioration and the beginning of the school dental service', *Br. Dent. J.*, 153:1 (1982).
- Roberts, E., *A woman's place: an oral history of working-class women, 1890-1940* (Oxford, 1984).
- Ross, E., *Love and Toil: Motherhood in Outcast London 1870-1918* (Oxford, 1993).
- Steedman, C., *Childhood, Culture and Class in Britain: Margaret McMillan, 1860-1931* (London, 1990).
- Szreter, S., *Health and Wealth : Studies in history and policy* (Rochester, NY, 2005).
- Welshman, J., 'Dental Health as a Neglected Issue in Medical History: The School Dental Service in England and Wales, 1900-1940', *Medical History*, 42 (1998).
- Wohl, A., *The Eternal Slum: Housing and Social Policy in Victorian London* 3rd edn., (New Brunswick, N.J, 2009).
- Woods, R., and Woodward, R., 'Mortality, poverty and the environment' in Woods, R., and Woodward, R., eds., *Urban Disease and Mortality in Nineteenth Century England* (London, 1984).
- Woodward, J., 'Medicine and the city: the nineteenth century experience' in Woods, R., and Woodward J., eds., *Urban Disease and Mortality in Nineteenth Century England* (London, 1984), pp.65-78.

Unpublished Papers and Theses:

- Centre of Metropolitan History 'Mortality in the Metropolis' project dataset (1999).
- LMA *Information Sheet number 4: Poor Law Records in London and Middlesex* (London, 2011).

Mattick, B., *A guide to bone toothbrushes of the 19th and early 20th centuries* (Xlibris, 2010).

Ross, R., 'The Development of Dentistry: a Scottish perspective circa 1800-1921', (unpublished PhD Thesis, University of Glasgow, 1994).

Tanner, A., "'Life and Death in Laundryland', Infant Mortality in Laundryland, Kensington, 1890-1914": (paper presented at the Dirty Linen conference, Women's Library, Guildhall Metropolitan University, 8th November 2002).

Timmis, J., *History of the School Dental Service*. Unpublished Presidential Address (1977).

World Wide Web Sources:

Knowles, E., 'an army marches on its stomach', *The Oxford Dictionary of Phrase and Fable* (2006), [Available from: <http://www.encyclopedia.com/doc/1O214-anarmymarchesonitsstomach.html>, (17.09.2014)].

WHO 'Fact sheet No. 342 : Infant and young child feeding', [Accessed from: <http://www.who.int/mediacentre/factsheets/fs342/en/>, (19.8.2014)].