



The Elusive Science: Medicine and Women in Late Colonial Bengal

Sharmita Ray

PhD Researcher, University of Delhi

The author has pursued Ph.D. in History from the University of Delhi. Her area of interest includes gender history in the context of social history of medicine. Her doctoral research has focused on social prescriptions determining the status of health of women in late colonial Bengal. Her research relies on interdisciplinary engagement with sociological, anthropological and literary perspectives in studying gender history. She has published papers in *Social Scientist* and *Journal of History*, Vidyasagar University and has received award for Best Paper in the Section on Modern India in the 76th Session of Indian History Congress, held in 2015.

Abstract

Gender biases had denied women the opportunity to engage with the sciences and empirical learning until the late nineteenth century. These biases were thwarted when the determination of a set of reformers and the practical needs felt by a gender-segregated society generated the demand for trained female medical professionals in India. This paper reflects on the evolution and fruition of a gendered identity of women in the field of medicine as qualified doctors in late colonial Bengal. This paper will present an analysis of women's fraught relations with scientific learning and its subsequent application in Bengal with special focus on women's inception into professional medicine. The biographical works of Kadambini Ganguly, Jamini Sen and Haimabati Sen will serve as the crucial source for analysing the earliest experiences of women in the medical profession. The adjoining section of the paper will assess the influence of knowledge of science/medicine and the Bengali women's consequent interest and engagement with issues pertaining to women's health as reflected in articles published in Bengali medical and women's journals from the late nineteenth century. This section will argue that bio-medical concerns pertaining to various issues of social reforms with respect to women, were effectively articulated in the vernacular journals. The paper will assess the evolution of a unique identity of Bengali women as doctors and of women with a scientific temperament engaging with the knowledge of health and medicine. The paper will explore the evolution of this identity in the backdrop of the colonial context which created special circumstances for women to explore their individuality.

Keywords

Bengali journals, women, science, doctors, biographies

Introduction

The nineteenth century witnessed remarkable advancements in the status and opportunities for women in Bengal in the backdrop of the Bengali Renaissance and the accompanying set of reform initiatives. Women were the prime targets of significant reform agendas in the socio-religious, cultural and intellectual contexts, wherein their subjectivities were creatively transformed into opportunities and an alleviated status within the society (Sarkar & Sarkar). These transformations taking place in the colonial milieu facilitated the radical makeover of Indian women from being the passive characters in history to becoming active participants in the dynamic processes leading to the progress of women as well as the society and the nation at large. The outcome of the decades of efforts to uplift and empower women was the development of an ideal entity referred to as the “new woman” who was simultaneously educated in a variety of disciplines, exhibited impeccable taste in arts and aesthetics and at the same time adhered to the traditional mould of a responsible and obedient daughter-in-law, wife and mother. She was the prototype of the *bhadramahila* alternatively living up to the ideal of *sahadharmini* (companionate wife) or *grihalakshmi* (the lady of the house, exuberating abundance and wellbeing).

The reform movements of the nineteenth century in Bengal addressed far-ranging issues including the abolition of the *satipratha* (widow immolation), widow remarriage, illicit abortions, polygamy, female infanticide and child marriage among others. One crucial set of reforms aimed to uplift the female population with the introduction and promotion of formal education for females by opening schools and securing permission for women to enter into institutions of higher learning and professional training. Although statistically speaking the numbers of women who were allowed to obtain any sort of formal education was miniscule, yet the impact of producing generations of educated/literate female population from the latter half of the nineteenth century produced unprecedented advancement for women and the Bengali society. The gendered perspective of analysing opportunities for acquiring education gets further complicated upon focusing on the nature and quality of curriculum that was deemed to be suitable for females. With the objective to highlight the consequences of gendered experience of learning, this paper will analyse the unique impact of educating women in the sciences, especially medicine, and reflect on the development of a characteristically scientific temperament among Bengali women in the larger context of the society. The paper will elucidate the elusiveness of science in terms of the lack of easy accessibility to women

and present the counter-reaction as Bengali women's undeterred perseverance to grasp the nuances and mould the knowledge of modern science to suit their own ends and purposes. Contemporary biographical writings provide rich insights into the intimate details of the trials and tribulations braved by women in the course of consolidating their foothold in the field of medicine as professional physicians. On the other hand the proliferation in the print media in the latter half of the nineteenth century, including the publication of journals in Bengali, created the platform for women to share their opinions and musings regarding living a life guided by the principles of science and hygiene, which in turn was clearly influenced by the instillation of a scientific attitude promoted, endorsed and reinforced in a colonial context. The two sections in the paper will be dealing with these two varieties of sources converging in their argument to suggest the evolution of a unique identity of Bengali women founded in their engagement and appreciation of science and rationality.

Bengali Women's Inception into Medical Profession

A preconceived notion that 'science is "masculine" not only in person of its practitioners but also in its ethos and substance' dominated the attitudes of societies across the world (Kumar xix). This was especially reinforced in the modern era with the emergence of scientific research and discoveries that accompanied the scientific revolution in the West leading to simultaneous institutionalisation of the learning of scientific disciplines thereby making the knowledge of science practically inaccessible to the female population at large. The nineteenth century, however, witnessed the initiative taken by women and reformers to induct women into scientific learning, and medicine became one of the most successful entry-points for doing this. Women's "natural" role of being the caregiver within the family was further extended as an argument as providing her with the aptitude to take up the medical profession. Women themselves challenged the exclusion of females from the medical profession and forged their entry into the field of medicine.

The first "professional" woman doctor, Elizabeth Blackwell was from the USA, who graduated from Geneva Medical College, New York on 23rd January, 1849. Blackwell recounted her experience on the day of her graduation stating, 'The ladies stopped to stare at me, as a curious animal' (Somervill 40). The perceived absurdity of women joining the predominantly male medical profession as trained doctors compounded the difficult struggle of women contesting the rigid reservations of the

society. The trajectory of the opening of the London School of Medicine for Women is integrally associated with the relentless efforts of some of the pioneering women in the medical profession. The list includes Elizabeth Blackwell, Elizabeth Garrett Anderson as well as Sophia Jex-Blake. When Jex-Blake and Edith Pechey were obstructed from receiving their degree in medicine from the Edinburgh University, Jex-Blake decided to fight for the right of women to study medicine. A determined and protracted campaign finally led to the passage of a bill which inspired the opening of the London School of Medicine for Women in 1874 for imparting medical training exclusively to women with Blackwell and Garrett-Anderson as members of the faculty and Jex-Blake and Pechey as students of the first batch (Roberts 134-35). It is interesting to note here that an expressed concern regarding Indian women bolstered the argument of these pioneers. Antoinette Burton argues, ‘the conviction that Indian women were trapped in the “sunless, airless”, and allegedly unhygienic Oriental *zenana* motivated the institutionalization of women's medicine and was crucial to the professionalization of women doctors in Victorian Britain’ (Burton 369). The exact sentiment was echoed by Jex-Blake when she pointed out that ‘Whatever difference of opinion may still exist as to the need for and usefulness of medical women in Europe, I imagine that few people will be bold enough at the present day to dispute the urgent necessity that exists for their services in India and other parts of the East, where native customs make it practically impossible that women should be attended by medical men’ (Jex-Blake 234). Arguments along similar lines were presented later in India from the 1870s when not female but male reformers were determined to procure for women the opportunity to become trained medical professionals.

The attitudes and aspirations of the British colonial regime exerted strong influence over various facets of the Indian society including that of education reform. The establishment of the Bethune School in 1849 with the initiative of Ishwar Chandra Vidyasagar was the first step taken towards promoting formal education for female children without missionary influences or evangelical aims. However, families allowing girls to obtain formal education remained a rarity and it was primarily the Brahmos in Bengal who accessed this opportunity. Even then, a predominantly feminine curriculum was prescribed for teaching girls in which they were taught some basic reading and writing and mostly trained in household skills (as in elements of home science) to equip them to efficiently perform their role as devoted wives, responsible mothers and obedient daughters-in-law.

India under the British rule also experienced the repercussions of the war waged by women in the West to seek entry into the medical profession from the middle of the nineteenth century. However, unlike the West, in India it was male reformers who led the movement from the front to make way for women's entry into the Calcutta Medical College [hereafter CMC]. From 1875 onwards, repeated attempts were made by individuals and groups to secure opportunity for women to become trained doctors. Finally, with the relentless attempts made by Dwarkanath Ganguly and other members of the Sadharan Brahma Samaj, the Government of Bengal granted permission in 1883. CMC admitted its first female student Kadambini Basu (who later became well known as Kadambini Ganguly), in the year 1884 (Bandopadhyay 174). She was the only female student in the first batch admitting women. Subsequently, the Campbell Medical School [hereafter CMS] permitted the entry of women from 1888. CMS trained students to become Hospital Assistants with the VLMS (Vernacular Licentiate for Medicine and Surgery) qualification as license to practice medicine. The latter course was less rigorous and did not require a lot of prior qualification (or the knowledge of English), and thus more Indian women joined the CMS rather than the CMC over the late colonial period. However, VLMS was a less prestigious certification in comparison to the MB (Bachelor of Medicine) degree offered by the CMC.

Poignant biographical works by/on the earliest women doctors illumine our knowledge and sharpen our perceptions of their lives, experiences and the times they lived in. Kadambini Ganguly has not left behind any autobiographical account. Nonetheless, rich biographical details are gleaned from the writings of various contemporary women and reformers from the Brahma Samaj. Moreover, her granddaughter, Punyalata Chakravarty has written about Kadambini in her autobiography, *Chhelebelar Dinguli*. Kadambini was born at Chandshi in the district of Barisal in Bangladesh. Her father Brajkishore Bose was a Brahma zamindar and a schoolmaster. He wanted his daughter to pursue higher education and sent her to Hindu Mahila Vidyalaya and subsequently to Bethune School where she passed the First Arts and the B.A. examinations. Thereby, Kadambini became the first female graduate of Bengal along with Chandramukhi Bose passing out from the Bethune School in 1883. Later, in CMC, Kadambini failed to acquire the MB degree due to the evident gender bias of one of her teachers who failed her by one mark and she had to graduate with the GBMS instead. Although, Kadambini is rightly regarded as the first licensed female doctor from Bengal, Bidhumukhi Bose (Chandramukhi's younger sister) and Virginia Mary Mitra (both native

Christians) were the first women in Bengal to receive the prestigious MB degree from the CMC in 1890. The third among the Bose sisters, Bindubasini also passed MB from CMC in 1891. Jamini Sen, another early student of the CMC was the daughter of Munsif Chandicharan Sen. He strongly supported the cause of women's education but he was not very keen about his daughters studying medicine. Kamini Roy, who later became a renowned poet and writer, had given in to her father's wishes, but Jamini was determined to pursue a career in medicine and was encouraged by her little-educated mother to realize her aspiration. Jamini Sen maintained her personal diary penning down intricate details of her personal and professional experiences, excerpts from which were posthumously published by her sister Kamini Roy in Bengali under the title *Dactar Kumari Jamini Sener Sankhipta Jeeban Charita* (Dr. Jamini Sen's short Biography). This in turn has been sensitively dealt with and quoted by Chitra Deb in *Mahila Dactar: Vin Groher Basinda*. Haimabati Sen was a trained Hospital Assistant from CMS, and she wrote a fascinatingly detailed autobiographical account in Bengali, which was recovered by Geraldine Forbes and translated by Tapan Raychaudhuri and together they have published it as *The Memoirs of Dr. Haimabati Sen: From Child Widow to Lady Doctor*. Haimabati was born in the Khulna district of Eastern Bengal in a family of landlords. Since her childhood Haimabati was very keen to get an education like her brothers. Although the women in her family did not appreciate her curiosity to learn, her father's encouragement enabled her to learn some basics as a child and later as a child-widow. She was married at nine years of age, became a widow when she was ten and she re-married at 23 years of age. After her re-marriage to Kunjabehari Sen, a worker with the Brahma Samaj, she found that her husband was more inclined to live on charity rather than earn a living. Unwilling to live on charity forever, she made arrangements to get herself admitted into CMS in 1891, to be trained as well as earn a stipend to run her family. Haimabati, in fact performed remarkably well in her class to the envy of her contemptuous male classmates. Haimabati's autobiography also mentions Mussammat Indenessa, a Muslim girl of merely 16 years of age who had come from Mymensingh in Eastern Bengal to study medicine. This entry attesting to Indenessa's opportunity to study medicine is significant as she was the first Muslim woman to study medicine in Bengal (Forbes & Raychaudhuri 291).

In the given social milieu, the campaign spearheaded to induct Indian women in the field of medicine by formal institutionalised training and the consequent success of the endeavour was an extraordinary landmark in the history of women in India. Although

there was a steady rise in the numbers of women who joined these institutions for learning, there was a mix of Eurasian, European and Indian women who came forward. In Bengal, it was mostly women from progressive Brahmo families who resolutely made their mark in the early decades of training in medicine. Chitra Deb points out that the society's prejudices against women and female doctors in particular were so deeply ingrained that only by the late 1920s, we find the name of Sarala Ghosh, the first Hindu woman to qualify as a doctor in Bengal from the CMC (Deb 71-73).

With little exposure to sciences in the former years of student life, the Indian women took upon a challenge to acquire theoretical and practical expertise over diverse scientific disciplines in the course of their training in medical school/college. Due to little formal education that a tiny section of *bhadramahilas* received in Bengal, it was a tough challenge for women to clear the entrance examination and subsequently complete the four or five year rigorous course to procure the license to practice medicine. As Geraldine Forbes points out with a hint of exasperation, science was 'a subject not usually considered to be congenial to the female intellect' (Forbes, No Science 8-9). Extracts from the Educational Prospectus issued by the CMC and published in the 1905 Annual Report of Countess of Dufferin Fund shows that women- who presumably had very little prior exposure to scientific disciplines - were expected to gain mastery over subjects as varied as Surgical Anatomy, Chemistry, Zoology, Materia Medica and Medical Jurisprudence alongside practical experience in Surgery and Midwifery among others during their training in medicine.

Haimabati Sen in her insightful autobiography described her experiences as a child, a widow and later as a student of the CMS and as a medical personnel in charge of the Zenana Hospital in Chinsura. She recounted multiple instances of women's struggles to grasp scientific knowledge and develop scientific sensibilities against all odds of their own social conditioning and society's half-hearted approval of women's active role in the medical profession. She pointed towards the female students' constraints owing to their little prior education, lack of knowledge of English and the paucity of funds to procure study materials (Forbes and Raychaudhuri 292). She narrated that the collective diffidence of the female students to voice and resolve their doubts from the professors in class compelled them to seek an alternate means by paying a small amount to the compounder for devoting some extra time to teach them dispensing medicine (Forbes and Raychaudhuri 297).

Even after obtaining the license to practice medicine women encountered more trials to assert their worthiness as doctors. Most of them including Kadambini Ganguly and Jamini Sen failed to establish a successful private practice in their initial career, as the society still did not exhibit sufficient faith in the expertise of women doctors. In addition their respectability was recurrently questioned and scrutinised by the public due to the fact that they were women asserting their identity as doctors (Karlekar WS28). In the late nineteenth century, the Indian society was still unprepared to accept and endorse treatment by “lady doctors.” Eventually, these doctors found grand opportunities to expand their professional acumen with the emergence of several hospitals established exclusively for women under the Countess of Dufferin Fund. The Vicerene Lady Harriet Dufferin had established the National Association for Supplying Female Medical Aid to the Women of India (commonly referred to as the Countess of Dufferin Fund) in 1885 with the objective to provide better healthcare facilities to women in India by creating more opportunities for Indian women to receive training in Western medicine and also by establishing hospitals and dispensaries to exclusively treat (*purdah*) women. Rosemary Pringle, a theorist on the subject of gendered experiences of practicing medicine, makes an extremely pertinent point when she points out that, ‘The meanings of ‘doctor’ are created not just in medical discourse but in wider culture’ (Pringle 21). This was exactly the case for the Bengali women doctors whose qualifications and degrees were not adequate to prove their efficiency in a normatively patriarchal and male dominated profession. The women doctors had to strive many times harder than males in the medical profession to gain the same respect and recognition for the service that they were providing. However, appreciation for their services was steadily rising by the turn of the twentieth century as attested by the sharp rise in the demand for women doctors. Jamini Sen’s service across India in Shimla, Shikarpur and Puri witnessed increase in the numbers of female patients coming to dispensaries and hospitals where she served, thereby indicating Indian women’s growing willingness to receive medical treatment from female doctors especially of Indian origin. When Jamini Sen was serving in an Agra hospital, women came looking for the “*sariwali dactarin*” (female doctor in a *sari*, a reference to Jamini Sen) to receive compassionate medical treatment (Deb 133-34).

As a consequence of their perceived gendered embodiment, the women doctors were subjected to a recurrent case of mistaken/suspicious identity which constituted another facet of their gendered experience of being doctors in late colonial Bengal. The services of the indigenous midwives (called *dhaies* or *dhatris* in Bengali) were

customarily deployed in Bengali households at the time of childbirth. These midwives (typically hailing from lower castes) in turn were notorious for their dangerously unscientific and insanitary methods of providing prenatal and postnatal care (Guha 7-8). When women doctors appeared in the scene to offer the same services as the midwives, they found it difficult to distance themselves from the persistently looming shadow of these midwives and assert their informed expertise in the field of obstetrics. The result was that the women doctors were often disrespected and felt humiliated when they went to private homes for child-delivery. Kadambini's assistant Nagendrabala makes one such reference when she recalls with disappointment that at one instance after Kadambini had delivered a child in a private home and had taken a ritual bath, she was served her meal in a *verandah* with other servants as she was mistaken for a *dhaie* and '*dhaies*' were considered to be (ritually) polluted (Deb 31). This is an exemplary instance of the Bengali society trying to grapple with the distinction between science, pseudo-science and superstition.

Undeterred by such instances of doubt and disregard, women doctors charged forward in their careers, served women in need of medical assistance to the best of their abilities and were actively involved in medical practice for over decades. The practice of female seclusion and segregation in the *zenana/ antahpur* (a reference to the inner quarters of homes reserved exclusively for women), and the general shyness of women, provided unique opportunities for women doctors to offer their service with utmost sincerity. Both Kadambini Ganguly and Jamini Sen were highly sought after by the *Rajmata* of Nepal- who found a friend and a medical advisor in these women. Both of them rendered considerably long durations of service to the *Rajmata* and Jamini also undertook the supervision of the Kathmandu Zenana Hospital thereby extending her services to the other females in the distant land.

Collaboration with Western medical science instilled confidence and assigned autonomy to women doctors to render a noble service while demanding respectability within a patriarchal social milieu. By the same token, the incorporation of women in medicine had the promising potential of providing better health care facilities to women in India at large. The recipients of the Western medical aid on the other hand, benefitted from the proliferation of women in the medical profession and in the hospitals and dispensaries. The Zenana hospitals opened under the scheme of the Countess of Dufferin Fund and missionary hospitals intended especially for women witnessed a steady rise in the numbers of outpatients and in-patients seeking treatment for diverse ailments. The

women doctors were instrumental in the percolation of the knowledge of rudimentary science, principles of hygiene and sanitation and medicine in the Bengali society in the late colonial period. They instilled a novel attitude among the members that steadily became more open and willing to appreciate the benefits attributable to the adoption of a scientific temperament. These doctors introduced a distinctly feminine essence to the profession of medicine in India, fine-tuning the stringent principles of Western medicine to suit the needs and expectations of their patients. In keeping with social norms and expectations, the Indian lady doctors delivered a 'hybrid form of medicine' to make Western medicine more palatable in Indian households and in turn make themselves welcome into the homes of women in need of medical attention (Forbes, *Women* 140). The doctors combined home remedies, recipes and traditional folk remedies along with recommendation of doses of Western medicine. Thus, practices and principles of science and medicine found a new lease of life with the participation and contribution of women which gave them a specialised identity and status within the Bengali society in a patriarchal-colonial milieu.

Bengali Women's Inclination towards a Scientific Temperament

The imparting of professional training in medicine to women in Bengal took place within the larger context of the introduction, spread and popularisation of the knowledge and practice of Western medicine which in turn was a crucial hallmark of modernity. The colonial atmosphere sought to expand and exercise greater control over the colonised population by using the knowledge of medicine as a mechanism to reinforce its hegemony. Without a doubt, this attempt was contested by the multiple pre-existing systems of indigenous medicine, of which *Ayurveda*, *Unani* and *Kaviraji* were particularly relevant in Bengal. The interaction among these different systems of medicine, combined with their propaganda in the print media, the participation of women in the medical profession and a general expansion in the number of literate/ educated women in Bengal, contributed towards the crystallisation of a vibrant social atmosphere which was more receptive and open to scientific ideas. The steady penetration of scientific/ empirical knowledge and a growing appreciation of associated aspects of health, hygiene and sanitation led to the emergence of new discourses on individual habits of hygiene, everyday practices and home-management which in turn challenged some of the extant practices founded on tradition and/or superstition. This section will argue that a growing scientific temperament is evident from the nature of publications in Bengali

medical and women's journals where women were offering and/or receiving advice on how to organise their individual lives and run their households on the basis of scientific principles fostering health and hygiene.

There has been a growing interest in recent scholarship regarding the writings in the vernacular medium as an important allied subject for studying the social history of medicine. Some works including those of Pradip Kumar Bose, Charu Gupta and Kavita Sivaramkrishnan have attempted to draw connections between indigenous systems of medicine and their efforts to create an alternate space and new forms of authority in the colonial milieu. Western medicine with its unique modes of dissemination of knowledge/practice also made a conspicuous impact upon the domain of vernacular production. A proliferation in the writings on the subject of health, hygiene and home science was witnessed in the Bengali journals published from the late nineteenth century. These exhibited an intriguing interaction taking place between the indigenous and Western systems of medicine, all of which had their respective niche of influence in Bengal.

Bengali medical periodicals such as *Svasthya*, *Svasthya Samachar*, *Chikitsa Sammilani*, and *Chikitsak* among others made up an important set, discussing a great variety of topics related to health, social medicine, clinical medicine and clinical procedures. The cited medical journals discussed aspects of health and medicine in the social context of Bengal in a relatable language easily understandable to all readers. There were other medical journals which exclusively discussed medical conditions, diagnosis and cure, thereby addressing a select readership well-versed in the knowledge of medicine. These together provided a fascinating glimpse into the varied medical landscape of late colonial Bengal. These comprise of writings on same or similar subjects from the perspectives of Western medicine, indigenous systems (*Kaviraji* or *Ayurveda* in particular) and even homeopathy in certain cases. Alongside these, other journals published especially for a female readership such as the *Bamabodhini Patrika*, *Bharati* and *Antahpur* also discussed important issues pertaining to the scientific management of home and health for the consistent well-being of all family members.

The articles published in vernacular journals were constructively instructive in its approach rather than being outright cynical of the everyday practices of Bengali women. Their goal was to advise and train women to rely more on scientific rationale rather than blindly abiding by superstitions or tradition-bound habits adversely affecting the well-being of all family members. The print medium became an important platform for medical practitioners, doctors and other informed persons to articulate their viewpoints on different

aspects of health. The journals covered a wide range of subjects relevant to women and their health, including advice regarding healthy living habits, home management, precautions during pregnancy, safe child-birthing practices, childrearing, appropriate food and care for mother and the new-born among others. Bio-medical concerns that intersected with reform agendas associated with child marriage, early motherhood, amelioration of widows' conditions and constraints owing to the practice of *purdah* found articulate expression based on intimate knowledge and first-hand experiences in the writings of educated women in a reform-oriented colonial milieu.

Some examples from these journals would illustrate the nature of advice and caution that they offered. An essay titled "Sati O Shanti," published in the *Bamabodhini Patrika* cautioned women that the health of their children would be a reflection of their own health, thereby, insisting women to take good care of their health especially during pregnancy. The common phrase "*Jemni maa, temni chnaa*" which translates into "Like mother, like child" was used to correlate the health of the mother and the infant/child (*Bamabodhini Patrika* 124). Detailed instructions were provided in numerous articles on how to take care of child, the type of food to be fed, timings of feeding and ways to handle the child. The journal *Svasthya* edited by a doctor, Shri D.D. Gupta, published an essay called "Chheler Oshukh O Matar Gyatabya" (Mother's Knowledge to Tackle Child's Illness) which provided instructions as to how to detect a child's illness and stated the remedies and precautions that a mother ought to keep in mind (*Svasthya* 60-63). Another aspect which found a great deal of attention in the Bengali journals was with regard to the norms of organising and maintaining proper sanitation in the confinement room (called *aantur ghar* or *Sutika griha* in Bengali) for ensuring the good health of the mother and the new born at the time of childbirth. Essays titled "Sutika Griha" (Confinement Room) and "Sutikagare Prasutir Shushrasa" (Care for the Birthing Mother in the Accouchement Chamber) by Nanibala Dasi published in *Antahpur* gave detailed descriptions and instructions with regard to the principles of health, nutrition and hygiene that must be followed to minimise the chances of post-natal ailments in the mother and new-born. These latter set of articles clearly indicate that professional medical care was not accessible to all women and therefore, members of the household were provided with elaborate advice and instructions as to how safe child-birthing practices could be implemented within homes with basic knowledge of science, hygiene and sanitation.

The appeal to women to adopt clean, sanitary, healthy practices both for maintaining their own health as well as the health of their family members was reinforced

by insisting upon the validity of scientific rationality founded on empirical proof. The journal productions reflected a conscious attempt to impress upon the Bengali female readership the benefits of scientific rationality. The articles in the journals, especially in the medical journals, frequently deployed an admonishing tone to drive their point home. Women were simultaneously blamed for their ignorance and carelessness, yet it was evident that they were recognized as the crucial lynchpins in promoting and sustaining norms of healthy living. Therefore, the articles resorted to ridiculing women, criticising their habits, expressed exasperation towards their adherence to superstitious beliefs and practices, but at the same time used a pleading tone (often with a caution or warning) insisting them to mend their ways for the health and well-being of all members of the family. The *grihini* (woman of the household) was thus admittedly the most critical factor determining the health of herself, her family and of the Bengali society by extension. This essence of a woman's role in promoting and preserving good health was systematically instilled in the popular imagination to be correlated with the health and vigour of the nation over the late colonial period.

The enthusiasm of women to explore scientific knowledge regarding health is also reflected in the biographical writings of women. Shudha Mazumdar (born at the turn of the twentieth century), in her memoirs talks about the various events organised by the *Mahila Samitis* (Women's Associations) across places (in Bengal) where she lived as per her husband's postings. A recurrent theme was talks and demonstrations on matters of health and hygiene. She recounts one such instance during her husband's posting at Manikgunge district in Dacca, when she writes, 'Requested by our *Mahila Samiti*, the Publicity Department of Calcutta had sent an officer to give a talk on health and hygiene and exhibit suitable slides. It dwelt on the heart-rending toll of infant mortality with hints on mothercraft and how to avoid malaria and cholera' (Mazumdar 204). Such instances indicate the growing engagement of the Bengali women with scientific values and principles. Women were evidently making sincere efforts to improve the quality of life of their own and their family members as well as inculcating habits which would ensure consistent health and a longer life expectancy.

Conclusion

This paper has argued that women accomplished an extraordinary feat by familiarising themselves with the knowledge of sciences and proved themselves to be proficient in taking up a profession founded on rigorous training in the sciences. As the

title of this paper indicates, women did not find an easy or natural route to engage with the sciences. In fact science's elusiveness with respect to making itself accessible to women fostered the determination and perseverance of women to strive to gain mastery over science and allied disciplines. While on the one hand, the project of inducting Indian women into the medical profession, created fresh avenues for Bengali women to explore their potential as able professionals in the predominantly masculine field, on the other hand, the expediency of women in medicine had the promising potential of providing better health care facilities to women in India at large. In the late colonial period, Bengali women's selective adoption of, adaptation to and propagation of ideals of health and hygiene played an integral role in expanding the popularity and reach of knowledge of medicine. Western medicine found a fertile ground for growth and was able to reach out from the metropolis to the smaller districts and *mofussils* in Bengal due to in large part owing to the relentless zeal of female medical professionals who worked persistently to spread the beneficence of informed medical aid. The second section of the paper has depicted how scientific principles were simplified and then presented to the Bengali society at large through various publications in the vernacular medium. Although, it cannot be denied that it was mostly the upper and middle class sections of the Bengali society who were the select recipients of these ideas, it must be emphasised that there was a steady percolation of ideals and practices rooted in science that were being steadily promoted.

This paper has reflected on how women challenged and negotiated with dominant discourses around science, medicine, health, education and also gender relations. The interplay of modern science with Indian sensibilities- influenced by deep seated belief in traditions and social customs- transformed the attitudes and aspirations of the Bengali society and women in particular. Women became increasingly conscious of relying on sciences rather than superstitions to improve their own quality of life as well as that of their family members by paying close attention to various aspects of health and hygiene on a day-to-day basis.

Works Cited

- Antahpur* vol. 5 and vol. 6. 1902 & 1903.
- Bamabodhini Patrika* vol. 2 Part V. 1893.
- Svasthya: A Bengali Monthly Journal of Health and Sanitation* vol. 2. 1898.
- Bandyopadhyay, Mousumi. *Kadambini Ganguly: The Archetypal Woman of Nineteenth Century Bengal*. The Women Press, 2011.
- Bose, Pradip Kumar. *Health and Society in Bengal: A Selection from Late 19th- Century Bengali Periodicals*. Sage Publications, 2006.
- Burton, Antoinette. "Contesting the Zenana: The Mission to Make "Lady Doctors for India"- 1874-1885." *The Journal of British Studies*, vol. 35, no. 3 1996, pp. 368-397.
- Deb, Chitra. *Mahila Dactar: Vin Groher Basinda*. Ananda Publishers, 2010.
- Forbes, Geraldine H. and Tapan Raychaudhuri (Eds.). *The Memoirs of Dr. Haimabati Sen: From Child Widow to Lady Doctor*. Translated from Bengali by Tapan Raychaudhuri. Roli Books, 2000.
- Forbes, Geraldine H. *Women in Colonial India: Essays on Politics, Medicine and Historiography*. Chronicle Books, 2005.
- "No "Science" for Lady Doctors: The Education and Medical Practice of Vernacular Women Doctors in Nineteenth Century Bengal." In *Women and Science in India: A Reader*, Edited by Neelam Kumar. Oxford University Press, 2009.
- Guha, Supriya. "From Dais to Doctors: The Medicalisation of Childbirth in Colonial India." *Understanding Women's Health Issues: A Reader*. Edited by Lakshmi Lingam. Kali for Women, 1998.
- Gupta, Charu. "Procreation and Pleasure: Writings of a Woman Ayurvedic Practitioner in Colonial North India." *Studies in History*, vol. 21, no. 1 2005, pp. 17-44.
- Jex-Blake, Sophia. *Medical Women: A Thesis and a History*. Hamilton, Adams, & Co., 1886.
- Karlekar, Malavika. "Kadambini and the Bhadrakok: Early Debates over Women's Education in Bengal," *Economic and Political Weekly* vol. 21, no. 17 1986, pp. WS25- WS31.
- Kumar, Neelam. *Women and Science in India: A Reader*. Oxford University Press, 2009.
- Mazumdar, Shudha. *A Pattern of Life: The Memoirs of an Indian Woman*. Edited by Geraldine Forbes. Manohar, 1997.
- Pringle, Rosemary. *Sex and Medicine: Gender, Power and Authority in the Medical Profession*. Cambridge University Press, 1998.
- Roberts, Shirley. *Sophia Jex-Blake: A Woman Pioneer in Nineteenth Century Medical Reform*. Routledge, 1993.
- Sarkar, Sumit and Tanika Sarkar (Eds.). *Women and Social Reform in Modern India* vol. 1 & 2. Permanent Black, 2007.
- Somervill, Barbara A. *Elizabeth Blackwell: America's First Female Doctor*, Gareth Stevens Publishing, 2009.