A SOCIO-CULTURAL PERSPECTIVE ON OBESITY: A STUDY IN KOLKATA CITY

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by

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CERTIFICATE

It is certified that the work contained in the thesis entitled 'A socio-perspective on obesity: A study in Kolkata city' submitted by Ms. A Bhattacharjee (LA14MPHIL11001) in partial fulfillment of the degree of M Philosophy to the Department of Liberal Arts, Indian Institute of Technology Hyd is a record of bonafide research work carried out by her under my supervis guidance. The results embodied in the thesis have not been submitted to an University or Institute for the award of any degree or diploma.

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April 2016

Dedicated to
My parents & Haripriya Mam

CERTIFICATE

This is to certify that Ms. Arunima Bhattacharjee (LA14MPHIL11001) has satisfactorily completed all the course requirements for the M.Phil. Program in Social Anthropology.

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Chapters

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ABSTRACT

Obesity as the cause of all sorts of chronic non communicable disease has been of great concern recently. The present study attempts to understand people's experiences of being obese, their efforts to manage their body weight, and socio-cultural barriers they encounter. For this qualitative study, data was collected through in-depth interviews of middle class and upper middle class informants in Kolkata, the capital city of West Bengal state. The field of the study includes residents, patients in private hospitals and customers in fitness centers. I took the "middle ground" approach of medical anthropology which bridges the gap between economic and largely quantitative understandings of health issues, and changing cultural attitudes and qualitative understandings of health (LindenBaum, 2005 in Nunez, 2008:45). This research will highlight how social and cultural attitudes works in healthy weight management. The individual experience related to excess weight, its management and problems faced by people in the whole process is foregrounded in this thesis by looking at various stakeholders, such as doctors, nutritionists and fitness trainers, and the weight loss industry. This study documents the rise of an emerging social and medical issue, i.e., obesity, and contribute to medical anthropological literature on contemporary India.

In this thesis I have tried to unpack the meaning of food, fatness (*motāhpāh)* and cultural meanings associated with it. I met people trying to lose weight through various

methods such as yoga, exercise and bariatric surgery. The thesis also looks at people's expectations and aspirations of maintaining a slim figure. Most of the informants I enquired are female , but they gave a variety of reasons of their condition. The population I encountered varied from middle class to upper middle class in economic terms. So their approach regarding their health, fitness and exercise varied. This thesis reveals in detail, three major aspects to a socio-cultural understanding of obesity. They are, people's views about food, the kind of stigma they experience, and the subsequent actions they take to reduce weight, and the increasing influence of media, particularly advertising. Overall, the study portrays the social and cultural factors that are in the background of the issue of obesity, thus providing a glimpse into as aspect which is usually overlooked in biomedical discussions on obesity. The thesis argues for a multi-pronged approach to a health issue, and for including social science approaches to medical problems.

SYNOPSIS

Obesity is an increasing problem in India. Though obesity as a disease does not top the list in the charts compared to the world, diseases associated with obesity, such as heart disease and diabetes, are becoming more common. At the same time biomedical responses like surgeries and pills are seen as the only solution by most doctors and ordinary people. As it is a lifestyle disease, behavioral modification is another approach taken towards reducing its risk. But behavior is influenced by socio- cultural attitudes in a person's life. The objective of the study is to look at the key social cultural aspects behind obesity, which has been rarely documented in social anthropology, especially in India. The fieldwork was carried out in two fitness centres in Barrackpore, Kolkata. Apart from that I was also able to carry out part of the fieldwork in a private clinic and a public hospital. I spoke to fifty two men and women.

Chapter One of the dissertation introduces the topic of obesity. In this chapter I have explored the causes of obesity beyond the biomedical paradigm. It provides statistical data about obesity with respect of India, world and Kolkata. Other key topics included in this chapter are objectives, methods and techniques of data collection, field setting, process of fieldwork, limitation of study and tables of the data sample. This chapter will give an overview about the approach of this research.

Chapter Two discusses literature review of the study. Here I talk about history of obesity and how it evolved as a medical problem. It also gives the idea of how obesity changed and the distribution of it in the world. The literature review clearly

points out the lack of studies on obesity in the South Asian region and more specifically India. This chapter highlights some socio-cultural factors affecting obesity such as stigma, gender, and media, through an anthropological lens.

Chapter Three gives ethnographic details about the chief factor mentioned with respect to obesity i.e., food. In this chapter I have explored what Bengali diet means to the informants. The chapter also provides narratives from informants about what they consider to be 'healthy' and 'unhealthy' food and the role of sweets in Bengali food. What to eat and what to avoid, in order to manage obesity, occupies people's minds and those dilemmas have been captured in this chapter.

Chapter Four portrays a key issue associated with obesity i.e., stigma. For those who are seen as plump or fat, stigma is omnipresent, in every sphere of the life, be it family, friends, or in public places. Through two case studies in this part of this chapter, I show how stigma affects people's impressions about themselves. Another topic addressed in this chapter is weight management. I have tried to highlight the issues that arise when a person tries to reduce weight- like time, exercise and diet.

Chapter Five unfolds the role of media and its influence on people with regard to weight management. It covers advertisements in print and digital media from two local newspapers and a Bengali magazine during the period of fieldwork. This chapter discusses the ways in which media covers topics related to obesity, and how advertisements portray simple and often medical solutions to the issue.

In conclusion, I discuss the limitations of this study, possibilities for further research, and some suggestions on actions that can be taken to address obesity.

CHAPTER ONE

Introduction

According to the WHO globally obesity has doubled since 1980. In 2014 out of more than 1.9 billion overweight adults 600 million were obese. Approximately 13% of the world population (11% men and 15% women) were obese (18 years and above). Out of 39% of adults (38% men and 40% women) were overweight (Obesity and Overweight, WHO Factsheet, January, 2015).

In India malnutrition and over-nutrition is a double burden (CADI: Coronary Artery Disease among Asian Indians). According to the National Family Health Survey, Round 3, 13% of total women are overweight in India and of them 24% are urban and 7% rural. Thus 10% of the adult population are obese or overweight (NHFS-3, National Health Profile 2007). According to the National Nutritional Monitoring Bureau (NNMB) 5% men and 11% women are obese or overweight in West Bengal. In 2010 Government of India launched the National Programme for Prevention and Control of Cancer Diabetes, Cardiovascular Diseases & Stroke (NPCDCS). From 2013-14 the programme activities up to district level have been subsumed under National Health Mission (NHM). In the National Monitoring Framework and Action Plan for Prevention and Control of Non-Communicable Diseases (2013-2020) obesity has been identified as a critical issue, needing instrumental action. Programme to Combat Obesity; Press Information Bureau, MHFW, 10th March, 2015).

Obesity can be defined as an abnormal or excessive accumulation of fat that is harmful. In simple terms obesity occurs when energy-expenditure exceeds energy-intake. There are many factors for obesity like: genetic, metabolic, hormonal, socio–cultural and psychological. Several health risks associated with obesity can be grouped into CVD (Cardiovascular diseases). CVD can occur in any of these health problems such as respiratory illness, asthma, pickwickian Syndrome, Metabolic syndrome (Type-2 Diabetes, and Hyperlipidemia, Musculo-Skeletal (Osteoarthritis, and Back pain), Endocrinal and Reproductive Diseases (POS, and Thyroid) [Dunn, 2015: 111-113].

Body Mass Index (BMI) and Waist to Hip Ratio are generally taken for measuring obesity. The most common reasons for obesity these days are dietary transition, globalization, urbanization, sedentary lifestyle, and fast-food. Also the individual's choice of diet and physical activity is influenced by factors such as agriculture, transportation, knowledge, food industry, environment, working condition, food availability, food distribution, food marketing strategies, food politics, migration and etc. Besides these there some more factors like individual's culture, concept of health and wellness, body norms, media and genetics.

Data Collection

In collecting data I was focused on getting qualitative information rather than the quantitative details. In total, I conducted fifty interviews. I recorded some of them. I tried to take in depth interviews. My focus was to know the struggles and problems

that people face while maintaining or reducing weight. The age group covered was 18-60 years. I spoke to both men and women but my sample had more women. All the informants were selected by taking the WHO BMI standard, i.e., whether they were obese in the past or during the time of interview. Informants belonged to middle class. Interviews were undertaken in Kolkata, Barrackpore and surrounding areas.

Table 1 below shows the gender distribution of the interviewed sample:

Categories	**No. of people**
Male	10
Female	41
Total	51

Table 1.1: Sample Details of the Study

Of these the distribution of obesity is given in the table below:

	normal	**overweight**	**At risk**	**Obese I**	**Obese II**
Male	1	1	0	1	7

Female			1	11	29
total	1	1	1	12	36

Table 1.2: Categories of obesity in male and female

In classifying people as obese, overweight and normal, I followed the guidelines given by the WHO:

The above categories are determined by following the proposed classification of BMI for Asian adults.[1]

Classifications	**BMI(kg/ m2)**
Underweight	<18.5
Normal	18.5- 22.9
Over weight	≥ 23

[1] http://www.wpro.who.int/nutrition/documents/docs/Redefiningobesity.pdf

At risk Obese I Obese II	23- 24.9 25-29.9 ≥30

Table 1.3: Proposed classification of weight by BMI in adult Asians

A number of people reported a lot of diseases and ailments as reasons for their obesity. I have given the details in the table below:

Type of health issues	**No. of people**
Diabetes	6
Thyroid	11

High blood pressure	8
Others (knee pain, PCOD, Breathless-ness etc.)	27

Table1.4: Health issues other than obesity

In order to reduce weight, informants took various steps. Some of the commonly mentioned **steps** were exercise and diet. That is given in the table below:

Type of intervention	**No. of people**
Exercise	32
Diet	21
Surgery	2
Alternatives	8

Table 1.5: Types of intervention used to combat obesity

Context of study

The place of research was Barrackpore town and Kolkata city in the state of West Bengal (See map given below). A gym center and a yoga centre were chosen as field site in Barrackpore town, nineteen kilometers from Kolkata. In Kolkata city, a clinic which is one of the premier medical care institutions in the city was another setting of the research. Both the centres in Barrackpore attracted different groups of people seeking help for their body weight. Thus each area of the field catered to a class of people with distinct sets of belief in health, body ideals and weight management. In the gym and yoga entre getting access to network of customers and trainers was done by seeking permission from the administrators. But for clinical setting, where the network is more diverse, without proper guidance and cooperation doing research is quite difficult. So I had to create rapport and goodwill among administration staff, doctors, nutritionists, and assistants in out-patient center of gastroenterology department. This helped to make a conducive atmosphere to carry out research.

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KOLKATA
N
Belanagar RS
Uttarpara
Dakshineshwar
Bali RS
Dakshineshwar Temple
Agarpara RS
Belgharia
Durganagar RS
Bally
Alambazar
Bonhoogly
Rajbari
Netaji Subhas Chandra Bose International Airport
Belur RS
Baranagar
Subhas Nagar
Bhattanagar RS
Eksara
Belur
Belur Math
Liluah
Sinthi
Motijheel
Salap
Liluah RS
Kashipur
Dum Dum RS
Kona RS
Chitpur
Parasnath Temple
Howrah
Belgachia
Tala RS
Baguiati
Bankra
Tikiapara RS
Lake Town
Belgachia
Santragachhi
Jagachha
Dasnagar RS
Bagbazar
Ultadanga
Salt Lake City
Ashoka
Mayo
Jain Temple
Ramrajtala RS
Bantra
Jorasanko
Maniktala
Central Park
St.Thomas's Church
Howrah RS
Baksara
GPO
Marwari
Hyatt Regency
Panchpara
Shibpur
Islamia
Bellaghata
Salt Lake Stadium
Hugli
Sealdah RS
Guabaria
Oberoi Grand
Subhas Sarovar
Shalimar RS
The Golden Park
Tangra
Race Course
Beniapukur
ITC Sonar
St. Paul's Cathedral
Park Circus
Taj Bengal
SSKM
Hindustan International
Dhapa
Khidirpur
Bhawanipur
Garden Reach
Ballygunje
Tiljala
Alipore
Kasba
Santoshpur RS
Chetla
Akra RS
Kali Temple
Kalighat
Dhakuria
Dhakura RS
Rabindra Sarovar
Taratala
New Alipore
Charu Market
Santoshpur
Jadabpur RS
Behala
Tallygunge
Royal Calcutta Golf Club
Jadavpur
Baghajatin RS
Sodepur
NH-117
Paschim Putiary
Garia
Thakurpukur
Garia RS
Sonarpur
Joka
Legend
Major Roads
Other Road
Rail Line
Hotel
Hospital
Religious Place
Vegetation
Water Body
Map not to Scale
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(Updated on 27th December 2013)

Significance of study

Obesity is a perceived as lifestyle disease. Apart from that it leads to several chronic ailments like diabetes and blood pressure. With increase in body weight, behaviors, attitudes and choices gets affected in daily life. The real challenge is in managing obesity along with other medical conditions. The notions of health and fitness of an individual suddenly come into focus for family, friends and medical practitioners. As the condition is seen more as an individual and self- made problem, the mental pressure for the individual is more than any other chronic disease. Various factors that can cause obesity, such as environment, knowledge, awareness, peer pressure, family attitude and values over food and eating, are overlooked. Thus people go through a series of trials and errors with regard to food and diet, weight management and exercise. This affects people's opportunity to seek knowledge and choose interventions. So in this research I tried to look at the factors which do not usually come under the medical lens of dealing with obesity, the socio-cultural and economic factors affecting obesity.

Tools and techniques of data collection

The broad term which will define this research is an empirical study. There are several reasons for choosing this method of study. In anthropological research, it is taken as an obvious fact. But now qualitative methods of research are increasingly used for many other disciplines, like sociology, psychology, cultural studies, media studies etc.

Qualitative research is the most preferred way to study topics that require subjectivity and authenticity of human experience.

Flick (2009) in his book 'An Introduction to Qualitative Research', calls for using qualitative research in today's world. Flick says, "Qualitative research is of specific relevance to the study of social relations, due to the fact of the pluralization of life worlds. Key expressions for this pluralization are the "new obscurity, the growing "individualization of ways of living and biographical patterns", and the dissolution of "old" social inequalities into the new diversity of milieus, subcultures, lifestyles, and ways of living" (Flick, 2010: 12). This leads to the use of inductive techniques rather than using deductive ways to test previous theoretical models with the new empirical data.

The term 'ethnography' is deep rooted in anthropology. The complex history of development of ethnography is the only reason for its wide, but not well defined meaning. The idea of "thick description", "web of meaning" all this leads to "insider's point of view" or "emic" view (Geertz, 1973:27).

Interviewing is an important method of data collection in this research. In the Atkinson and Hamersley (2007) say that in an ethnographic interview "objects are subjects", having their "own consciousness and agency" (Atkinson & Hamersley, 2007:78). This is the reason why interviewing is very important in anthropological research. Semi structured interviews were employed in this study as well. The research included a short period of stay in the field. So I was able to probe the informants to get relevant information.

In the process of interviewing, recording and note- taking is a way to permanently archive your interviews. Bernard (2006) in his seminal work on anthropological research methods gives practical ideas about interviewing and using structured and semi-structured interviews. He says, "Don't rely on your memory in interviewing" (Bernard, 2006: 227). So I informed the informants, that I need to record their voices, beforehand. Some informants were very happy and enthusiastic for recording, while others were suspicious of my work, and purpose.

Bernard also gave another important advice which is note taking. The phrase "recording is not a substitute for taking notes" (Bernard, 2006:232), is true for overall fieldwork. It not only serves as backup, but we can note down something which cannot captured on a voice recorder. Another catch phrase in anthropology is 'participant observation'. The term was first mentioned by the pioneer anthropologist Bronislaw Malinowski, in his book 'Notes and Queries in Anthropology' (Bernard, 2006: 345). So I also went for participant observation where it was possible for me to interview people, like in gym centers. Participant observation helped me to see the relation between doctor and patient, fitness instructor and their customer. I was able to not disturb the natural setting and at the same understand the dynamics of the field.

Case study is also another process which I have used in my fieldwork, and in writing this thesis. The term originated from the case histories collected in the clinical settings of psychology and medicine. In this approach, a few informants' responses

will be discussed in detail, since they represent the majority opinion but in a clearer manner.

I spoke to about fifty people. I analyzed forty six of the interviews. I also looked at doctor patient –interaction, and fitness trainer and customer's interaction I attended the interaction of professionals and trainees, in a commercial food and fitness business. Thus it helped me to see the fitness industry and its approach towards obesity and health.

Process of field work

The idea of researching over the broad topic came from my home itself. At home was when I first noticed the relationship between health, weight loss industry, cultural values towards body, food, and the media. My sister is overweight and her methods to reduce weight brought to my mind many questions about obesity.

Fieldwork was conducted in two phases, from 9th May to 14th July 2015 and from 17th October to 19th November 2015.

The fieldwork was done in two phases. First I started my research in the yoga center where my mother practices. There I got help from 'Sabitri di', the owner of the Centre and a , girl called Polly, Both of them helped me to contact overweight and obese people training in the centre. Sabitri di, learned yoga from Jadavpur University and started a school with her husband, who was referred as ' sir'. The trainees are seen and treated as students irrespective of their age. The centre is seen as a school. In this centre people not only practice yoga, but also form a community , where people share their everyday ,life with fellow trainees.

Women in this centre exchanged gossip about their life with others. At the same time people are more compassionate towards each other. This attitude is completely absent in other health and fitness centres and in medical settings like clinics and hospitals. At the yoga centre, I found that trainees are not looked down upon for their individual failure. Though they do not try to attain the ' perfect' body, they are more happy in their own skin, having high level of acceptance of their body size.

In addition to the yoga centre, I also went to the hospital run by the Ramakrishna Mission. I contacted the matron and superintendent. My aunt who works there introduced me to the concerned staff. I then submitted all documents to distribute the interview questionnaire, to the matron for permission. The hospital allowed me to sit in the cabin of the dietician of the outpatient department. I was not allowed to go outside this cabin without permission. I was also asked to wear the doctor's apron. At the end of each day I had to declare whatever data I gathered from the informants. In this fieldwork I tried to get access to the sprawling fitness center in Barrackpore but after initial permission from the manager access was denied. In the later part of fieldwork I entered another small scale fitness centre, housed inside the owners' own apartment. Here the owner Bandana provides continuous assistance to her clients.

In the next phase of the fieldwork I tried to get access to the Bariatric and Metabolism Department of a posh clinic in Kolkata. From newspapers I collected information about two famous doctors specializing in bariatric surgery. Then I

sought permission for access. One of the doctors rejected but the other doctor gave me permission. Then I got introduced to the assistant nutritionist and administrative staff of the department. They allowed me to work under their supervision. First they gave me contact numbers of different patients but then prevented me from contacting those patients. I was only allowed to contact the persons who were visiting the clinic for surgery, checkup and follow–up. Aside from this I also got access to another fitness centre from one of my informants. I participated in a training session of a food based fitness company.

However I did not get to meet the stake holders of that company.

Field setting

The field setting includes an outpatient centre of a general hospital in Kolkata, which functions under Ramakrishna mission and Ramakrishna Math. It also includes the chamber of the dietician in the hospital. I did some fieldwork at the outpatient centre and chamber of the nutritionist of a bariatric ward in the second phase work. The third field setting was the yoga centre in Barrack pore which was part of both phases of my fieldwork. It consisted of two rooms in the first floor of an apartment building.

The last field setting included a fitness centre inside the owner's house.

Limitation of study

This dissertation is the part of the submission of M.Phil. Degree. So it has been carried out within a limited time. Apart from this access to private clinics and gym centre was also time consuming. The administrative staff fears a researcher as though she is a journalist. So to gain the confidence and rapport of people in the administration took a lot of time in the first phase of the fieldwork. In the second phase of the fieldwork, due to festival season specially Durga Puja, flow of customers , trainees and patients in all the field settings was quite inconsistent. So as a researcher I had to cope with these limitations. In the clinical setting, getting permission from the doctors and hospital administration was another limitation, as already mentioned. I was able to reach many informants through word-of-mouth. With more time, a more thorough research could have been conducted.

CHAPTER TWO

LITERATURE REVIEW

The word health comes from the English word "hoelth" meaning a state of being sound. According to WHO, the definition of health includes," a complete state of physical social or mental wellbeing not just absence of disease or infirmity". However this definition is highly debatable because it varies according to individuals' age, gender, race, culture, and etc. Bircher (2005) defined health as, "a dynamic state of well-being characterized by physical and mental potential which satisfies the demands of life commensurate with age, culture, and personal responsibility (Bulletin of Health: Redefining Health, WHO, 2005).

Non Communicable Diseases (NCD) are a medical condition that are non-infectious or non–transmissible. NCDs can also refer to chronic diseases which last long periods of time but progress slowly. Obesity or overweight do not fall under the top NCDs. However they create risk factors associated with most of the NCDs. NCDs are low in South Asia. Qualitative studies about obesity and overweight are scant in the academia. I am focusing on literature review that is more qualitative to gain a better understanding of the sociocultural factors affecting obesity.

History of obesity

The representation of obesity can be found in the 19th century literature of Charles Dicken's *Pickwick Papers*. The character of "Fat Joe" in the novel represents today's view of obesity (figure 1). Previously fatness was a measure of a wealthy individual.

Economic liberalization, and globalization has redefined obesity. Now fatness has different meanings globally. In countries like India and China it is also a middle-class's condition whilst in developed countries it is associated with the poor and migrants. Thus world over the meaning of fatness, obesity, and good health differs.

Figure 1- Fat Joe, Pickwick Papers, Charles Dickens (photo courtesy :Google mages)

In different times obesity and overweight have persisted through history. The metabolic nature of obesity was investigated in 1930 and the diet culture of 1940s was in the obesity debate. In 1894 Will Kellogg started making machine-based health food in the form of cornflakes (Gilman, 2008:8-9). The health-food industry complex had begun. If we take the issue of obesity, endocrinologists say that obesity is caused by metabolic imbalance, geneticists claim obesity is a genetics issue, and social scientists argue about the availability and accessibility of healthy food.

In 1942 mathematician and statistician Louis Dublin of Metropolitan Insurance Company, USA, developed a scientific classification model of four million people insured by his company, based on height, weight and body index. This led to the

birth of the body mass index, better known as BMI. Today it is the most common method to measure obesity. It is a mathematical formula discovered by Adolphe Quetelet. It is a good tool to measure obesity but it's not the only one. Other ways to measure obesity involve looking at hip to waist ratio, presence of visceral fat, and the Ability to Exercise. BMI cannot brand any race and population. Some studies suggest that people with higher BMI may survive heart surgery and metabolic disorder whilst those with lower BMI may not (Butler, 2015). But, among all sort of measurement of fatness in a human body, "BMI is a convenient proxy for excessive adiposity in global wide routine" (McCullough & Hardin, 2013:29).

This gave importance to numbers and figures, and to the mathematical field of statistics, in understanding health problems. "Statistic is the medium of communication…whose value and veracity accumulates as it circulates" (McCullough and Hardin 2013:11). These calculation got were designed by looking at bodies of men and women in the United States. Implementing the same standard across the world has its problems. But the "western model" is central to the debate that considers risk factors for excess weight among Asian and Chinese populations. The range is now being lowered to include more and more people at risk. In short, the standard of humans are different world over upon which BMI, waist and hip ratio, etc. are fixed. Thus we should be "drawing attention to the ways statistics about obesity reify the universality of fat is not to contend with their 'truth value'" (McCullough & Hardin 2013:11).

Friedman, a geneticist, first isolated the obesity gene in the USA, in 1994. Leptin, a protein secreted in response to fat in the body, curbs the appetite and the gene regulating it was discovered. Leptoprin was then developed and marketed as a dietary supplement (Gilman 2010:119). The discovery of hormones Ghrelin in 1966 and Obestatin in 2005 were important scientific discoveries related to obesity.

In 1990 surgeries were the way to tackle obesity. "Once it was claimed that obesity was genetically determined it was assumed that only such radical cures would override the genetic code" (Gilman 2010:124). The first jejunoileal surgery was conducted at the University of Minnesota, USA, in 1950 (Gilman 2010:123).

Slowly, the cause for obesity began to shift from the physiological paradigm to individual responsibility. "Fat tax" was imposed for conquering the "weakness of will" (Gilman 2010: 127) in hope of pushing people toward healthier choices. But the social disposition and anxiety of finding a single cause and solution around obesity gave rise to, what Gilman termed as 'moral panic' (Gilman 2010:115).

Obesity as Disability

According to different acts and laws in the west such as the American Disabilities Act (1990), and the British Disability Discrimination Act (1995) obesity is a disability. The National Health and Nutrition Survey in 1999 recorded a 54% increase in obesity over three decades in the US. "It intentionally included people with BMI of 30 to compute the figure" (Gilman 2005: 514-515). According to the WHO,

"impairment is the abnormality of structure or function at the organ level." (Gilman, 2005:515)

Disability is the functional consequence of such impairment and handicap is the social consequence of the impairment and its resultant disability (WHO Manual of Classification Related to Consequences of Diseases, 1980). Thus the big question is, are all these terms - disability and impairment- defined without any point of reference, like which organ is impaired in obesity? Or is the problem at the psychological level, such as addiction to food? Or, would people who are found to have particular gene for obesity be also considered disabled? These debates have also been discussed in studies on obesity.

Representing Obesity

Obesity is a multi-layered problem of medical representation. We should know how to represent the disease not only from the medical point of view but also from the social, cultural and moral angle. This representation includes personal experiences related to health, illness, disease and healing. This can be seen at the level of and in institutions like family, hospitals, and schools and the broader level like advertising, marketing, trade policy, and food policy. Such a process would give answers to what is possible and what is done in reality, not by an idealized "normal/ healthy man and woman" but by the "rational man/reasonable man" (Gilman, 2010:73).

This problem in representation can be understood from the American First Lady Michelle Obama's response in 2010 where she stated that as a working woman, she

also sometimes chose what is called junk food, instead of cooking something healthy for her daughters (Gilman, 2010:73). So she urged everybody to be honest with all the options they choose that will affect their children. Gilman (2010), quoted the speech she gave held on February 9, 2010.

> Our kids don't decide what's served to them at school or whether there is time for gym class or recess. Our kids don't choose to make food products with tons of sugar and sodium in super- sized portions, and then to have those products marketed to them everywhere they turn. (Gilman, 2010: 73)

In Michelle Obama's opinion, parents are responsible for what the children eat, and the blame cannot be placed on children. So parents have to be more careful and think about what they are giving to their children. The larger society is also responsible, in the ways in which fatty and sugary food are displayed in shops and marketed in advertisements.

The representation of health and illness in obesity is very important to discuss because it shows us the attitudes and beliefs beyond health sciences. The functional part of it clearly tells us how health is represented and practiced in the public and personal domain.

According to Gilman (2010)

> The study of representation thus is a paramount means of examining both collective and personal responses to cultural notions of health and illness, disease and healing, as well as institutions from the hospitals to the advertising agencies engaged in this world. (Gilman, 2010:73)

> The global notions of health and risk are now perpetuated in our choice of lifestyle by modernity. Health and the healthy are now a social identity and health is a "positive self-identity". (Mishra, 2011: 47)

This notion can be found in the discourse on obesity in the media today. "Taking charge of our health" (Mishra, 2011: 49) is one way of representing most lifestyle diseases. Print media like newspapers, and magazines cite individual responsibility in their talk about health. So health is depicted as achievable, easy and available freely to every individual. It leads to universalization of health as a magic formula. Thus fitness industry, pharmaceuticals, and the food industry are marketing it with readymade and one-pill solution. However this is not true when we study the realities of people's life from everyday life experiences. An empirical study can show how health is performed in our day-to-day life and what barriers come in practicing "healthy" lifestyle (Mishra, 2011:54). Some healthy choices may be desirable but not possible for everyone.

Stigma and Obesity

Stigma attached to obesity is part of the experience of being fat. By stigma we mean specifically negative values placed on fat or large bodies that are socially discrediting, i.e. the Goffman (1963) description of social stigma (Brewis et al., 2011:4)

The negative messaging is part of everyday media, family, work, school and healthcare system. A recent study of 6157 adults showed that those reporting weight related discrimination were 2.5 times more likely to stay obese (Sutin and Terraciano

2013 *in* Brewis 2014). In general women and girls report higher levels of fat stigma and weight discrimination (Puhl et al 2008 *in* Brewis 2014). Stigma is described as a social death (Yang et al 2008 *in* Brewis 2014). It directly affects the behavior of obese people and negatively impacts their eating, exercise and many health aspects.

The first impact in the level of physical activity is the feeling of getting judged for body size by others in public places like gyms, swimming pool, schools, and play ground. The second effect is the least noticed one that is the eating behavior which includes comfort eating, binge eating, and extreme caloric restrictions that are complementary and follow a cycle. A study of 2516 US adolescents boys showed that those who were teased were likely to binge eat for 5 years on and girls were likely to frequent dieters (Haines et al., 2006; *in* Brewis, 2014). A 10 year longitudinal study of dietary behavior and weight gain in 1902 adults suggests a 4.63 BMI increase over a decade (Brewis, 2014).

The other way stigma works in weight gain and maintenance is related to the psychological stress it produces. Stress at different levels like gender, race, class etc activates the neuroendocrine system which increases the adipose tissue, especially the visceral. The activation of Hypothalamic-Pitiutary-Adrenal (HPA) Axis and sympathetic nervous system elevates the level of Catecholamine and Glucocorticoid pathways (GC). The chronic activation of such pathways leads to sugar and fat-seeking behavior (Brewis, 2014)

> Indirectly this affects social relationships at a basic level. The most important point for young people is the peer group which

> influences their diet, physical activity and sedentary behavior. It is a two-way process which creates stress by rejection and isolation (Brewis, 2014).

Though obesity rates are not same everywhere, stigma perpetuates everywhere. Globalization of ideal physical body, and social construction of it, together works in the internalization of stigma. It is carried by negative image of fat bodies in print, media, newspaper and televisions . Thus obesity and 'being fat' (Brewis, 2014).

Becker and Brewis' study about body ideals , proves a major shift in body ideals. Globalization of slim body ideals from 1980s onwards is clearly evident from the study of Azawagh Arabs in Niger by Popnoe's study (2004), and Sobo'study (1994) of Jamaica, and Becker's (1995) study of a Fijian village. These studies show a great transitional shift across the world towards preference for slim bodies, especially for women.

> 'Slimness is associated with beauty, intelligence, self-control, goodness ,attractiveness etc. and fatness is associated with ugliness, undesirability, lack of self-control and laziness (Caputi et al.1983; Becker et al.1995; Brewis et al.2011).

With the wide distribution of obesity , the slim body ideals are getting homogenized , though the traditional cultural notion supports preference for a slightly fuller body. The study of American Samoa by Brewis et al.(1998) shows that fatness was seen as a symbol of beauty, marriageability, and fertility, in some parts of the world. If we look at how stigma affects obese individuals, then

we can identify how it perpetuates the problem of obesity irrespective of geography, culture ,class and gender.

On gender and stigma

Sander Gilman is a historian. His works on how obesity evolved as a disease are very important for my research. He argues that in patriarchal societies, men do not like fat women and that results in women hating their own bodies" (Gilman, 2010; 113). .Gender plays not only a single specific role in obesity and anti-fat attitudes, but in a myriad forms of ways. Most scholars suggest that women are more affected by stigma towards obesity than men. "Women and girls report higher levels of fat stigma and weight discrimination" (Brewis, 2014:152).

Mimi Nichter (2000), anthropologist, analyzed the levels in which women and girls are affected in her book 'Fat talk'. She discussed ethnographically, by studying interaction among girls in schools in the United States, about how fatness is in our daily interaction with others (family, friends, colleagues etc.), and affects our thinking about our own selves.

> Differences between males and females continue across the life span. Adult women are more involved in self-checks on 'physical presentation' and vigilant monitoring of their bodyweight and shape than men (Nichter, 2000: 13).

Nichter pointed out that it is not about single women or adolescent girls. This kind of attitude affects women across spaces- in family and public, and in the workspace. If somebody gets affected due to weight stigma it perpetuates with negative

imaging among others like friends, daughters ,siblings etc. Women face greater problem of social mobility. Women need more social confirmation for the ideal body, because for women, body is used as "interpersonal currency" (Nichter 2000:26) So, the need to attain "the perfect" body and appearance comes from the patriarchal society (Nichter 2000; 56).

Obesity and Class:

Obesity and Socio Economic Status (SES) both influence each other in how people behave, spend and consume energy and expenditure. All these factors are integrated with each other. SES is a ranking and stratification system existing in complex societies. Body volume is taken as a malleable attribute determining social rank and status in many societies (Brown and Konner 1987, Messer 1989). These factors give inconsistent results on obesity. In developing and developed countries it works in different ways. Income and occupation are very important in the relationship between SES and obesity. Both categories of countries are influenced by obesity. However the way of influence varies tremendously and also changes over time. Previously obesity was associated mainly with developed countries. Now development, globalization, and migration has made it prominent in developing countries too, such as India.

> The obesity epidemic isn't a social problem, its economic problem. Your food structure is set and around the world is creating…unhealthy foods. People should be able to eat local foods that are produced fairly and hopefully organic". (Guthmann 2011:140)

In developed countries SES (Social economic status) relationship to fatness for all ages and sex group is specific (Sobal, 1991:236). For women it has inverse relation (Sobal, 1991: 236). While in developing countries it is seen as a sign of betterment, but not for women. Thus we can see that the process works at two levels: physical and social. At the social level there are three systems: cultural, social, and personality. At the physical level, there are organism and environmental systems. (Sobal 1991:234-5).

Asian and Indian Scenario

The scenario of obesity in Asian countries is different from their Western counterparts. Western Pacific and South Asian countries are facing many diseases generally associated with obesity. Morbid obesity is negligible in these countries. A systematic national data and public health policy is absent. Besides, countries are at different stages of development. The highest rate of obesity in Asia is in Thailand and the lowest is in India. India has the world's largest diabetic population and China occupies the second position. It is time to look at Asian people who have diabetes with very low BMI rate. It begins in children. They suffer longer with many complications and die earlier than elsewhere.

Asian populations have a higher proportion of body fat and abdominal obesity compared to the Europeans with the same BMI values (Ramachandran & Snehalata, 2010:4-5). The relationship between poverty and obesity should also be focused on Asians since social inequalities are wider. The poor suffer from malnutrition and underweight while middle income countries are seeing a rise in obesity. This Asian

condition is generally attributed to human "thrifty phenotype (Ramachandran & Snehalata 2010:2, Brewis, 2011:40- 42).

The Chinese, once considered the leanest in the world, is now showing increase in obesity rates. According to the national health survey in China (2002), 184 million were overweight and 31 million obese (23.2%) out of a total population of 1.3 billion (Wu, 2006:362). The explanation for this was their traditional diet, reduced physical activity and increased sedentary lifestyle. In Chinese culture, "there is wide spread belief that excess body fat represents health and prosperity" (Wu, 2006: 363). At both levels it is translated into reality, like increasing number of cars that quadrupled from 1980 to 2003 from 5400 to 2 million (Wu, 2006:362-363). The lack of safe environments in cities and urban areas to encourage physical activity was another cause.

In Chinese traditional medicine obesity is not looked as a sign of illness. Chinese literature represents round body type, while the Greek art represent muscular and slender, svelte men. "With the modernization of China during the late nineteenth century, the question of obesity enters into allopathic as well as traditional medicine" (Gilman.2010:130). Thus fat body as a symbol of degeneration enters the discourse.

According to the Western medical missionaries "China is a famine society". But for the Chinese, 'China is a world at risk from obesity'. The cure of obesity and "Western model of regeneration" is thus embedded in the western biomedical outlook (Gilman 2010; 130-136).

The phenomenon of "dual burden" (Brewis & Jehn, 2009: 28) is another aspect of addressing obesity in developing and middle income countries.

> Especially in the middle income countries, we see dual burden phenomenon exploding… spread of dual burden is tied to the economic changes and nutritional transition both at national and household level and tend to increase with economic development.

In some Asian countries this is very well documented, examples include Philippines, Vietnam, and Indonesia. There are very few such studies on India. The situation of India can be compared with China, "where individuals are simultaneously at risk of obesity and risk of being stunted and wasted, because of lack of food" (Brewis,2011:52). It sounds completely opposite to each other but it is possible if we were to take the lifespan of any person into consideration. Lack of nutrition or poor nutrition in early life will cause stunted growth, but later on, if the person has access to food, excess calories being stored as fat (Frienscho 2003 *in* Brewis 2011:52).

In the case of India the problem is more amongst the urban poor who have easy access to cheap calorie dense food, and less time and resources to become physically active or seek help. The urban elite have more choices for nutrient rich food and fitness centres (Unnnikrishnan et al 2012). In Asian populations the situation is the opposite. The sufferers of obesity are the urban middle class and urban poor. They exhibit malnutrition, over nutrition, other associated CVDs and metabolic diseases.

Wealth and poverty together are present in India. Therefore there is high social and economic inequality. At the household level a modest increase in income results in 'luxury' items (meat, egg, sugar, oil) on the menu. In India industrialization of meat and dairy products have reduced their prices and consequently increased prices of fruits and vegetables (Shetty 2002, Wilson 2010). Increased urbanization has also contributed to the rise in price for fruits and vegetables for both urban poor and middle class (Unnikrishanan et al.2015)

There is very little research on diseases related to lifestyle including obesity among South Asians. Usually, epidemiologists conduct macro studies in large scale populations using quantitative data. In this research I will take a medical anthropological approach. This I feel is a more holistic approach to look at obesity. In the discussion about obesity, we have looked at several areas like SES, globalization, urbanization, food, media, illness representation, notion of health and etc. The qualitative nature of this study will try to give an integrated view to obesity as a problem in a particular community or ethnic population.

Conclusion:

In this chapter, I have explained the historical reasons behind the development of the obese or fat figure in human society. Scholars like Gilman, Brewis and Nichter suggest that obesity also has some historical and social reasons for how and why it is considered a serious problem today. This review also discussed some topics which have become more

important in readings on obesity, such as disability, stigma and social inequality. These empirical studies cited here have influenced me in my research, and are demonstrated in the three major topics chosen for in-depth study in the thesis.

India is facing the dual burden and risk associated with obesity, thought it does not top the chart of obese countries. Apart from the varied levels of social inequalities and cultural diversity, lack of any specific data is a biggest problem. Though the sample size is not large, and this is only a brief study, this thesis adds to the scant data of data available on obesity in India in the present times.

CHAPTER THREE

DISCOURSE ON FOOD

Food is the most important life sustaining commodity for humans. The food we eat contains symbolic meaning for who we are, which fruits, vegetables and meat we consume, are in relationship to the ecology of the place. Considering the variety of foods that is now available in most parts of the world, one question is, how do we choose what to eat? To do this, culture helps and is best explained this way:

> The incalculable advantage of culture which stores the experience and accumulated wisdom of countless human taster before him… Our culture codifies rules of wise eating in elaborate structure of taboos, rituals, recipes, manners and culinary traditions
>
> -Pollan, 2006:5

Food is also about the status of the individual in a society, both social, and economic. This complex relationship between human beings' omnivorous diet, health, and obesity is described in detail in Michael Pollan's book 'The Omnivore Dilemma'. In that book Pollan tried to answer why and how we are facing difficulty in determining what to eat.

Each person's culture, 'whatever native wisdom we possess about eating has been replaced by anxiety and confusion.' (Pollan, 2006:1). Thus we need to investigate another question , stated by him, "How do we ever come to the point where we need investigative journalists to tell us where our food comes from and nutritionist to

determine the dinner menu?" (Pollan, 2006:1). The answer to this confusion may be the variety in our platter. The variety of food available to us makes it difficult to choose the food.

In my fieldwork I heard people discussing food as the most important and difficult everyday thing in weight management. Decision making about what to eat and how to eat and in what portion causes sense of achievement, frustration and habit. In this chapter, I will discuss people's opinions about Bengali food, choosing between healthy and unhealthy food and the continuous relationship between food and body shape and size.

Bengali Diet

Information about Bengali diet exists in colonial literature on food in India. Some information on native Indian diet is found in the book, 'Curried Cultures' (Ray 2012).It is described as consisting, "for the most part, Boiled rice and fruits, highly seasoned with hot aromatics, along with meat items and sauces, with small portion of animal matter" (Curtis 1807 *in* Sengupta 2012:74).

Everyday Bengali food is about rice , lentils, and vegetables along with any fish. Rice is generally part of a three course meal in Bengali diet. But it has changed in course of time. One informant quoted rice as 'comfort food'[2]. But she does not eat it now.

[2] She told her comfort food in Bengali diet, she told it in past tense.

Now in Kolkata, some people eat Indian bread (roti) for dinner , excluding rice irrespective of their weight concerns. Bread or roti is part of the breakfast also. People are trying to reduce rice consumption, even though privately, people wonder how previously different forms of rice, being staple in a Bengali diet never led to condition of obesity.

This paradox is beautifully pointed out by Sumitra (pseudonym), a fifty year old lady. I was privileged to get this interview in her home. She told about the native idea of Bengali food and the change it has undergone.

> In morning at breakfast I take two roti. At lunch small amount of rice. After rice I take any fruit that remains available. I eat rarely in the evening. That may be puffed rice and something else. At night it maybe three roti, and nothing else. Previously people used to eat puffed rice, flatted rice, but then people were not fat at all. Now why this fat is coming? There is fat inside the food. Chow Mein, Maggi, Chinese food, all the food which can be found outside… from those foods only fat comes into our body. Because in earlier days, people used to eat puffed rice, flatted rice, then also people were not fat.

According to one of my informants a typical Bengali is a 'foodie' (*"Bengali ra foodie hoi, foodie type"*). I met one such person, a woman named Reena (pseudonym), at the yoga centre near my house in Barrackpore whose weight was over seventy kilos. When asked about her current weight she reluctantly looked away. She told me that there was no point knowing her current weight by standing on the weighing scale. She was a very popular lady in the centre.

Reena also claimed that Bengali people were not all health conscious *["Bengali ra health conscious thake na"].* Her remark manifested in herself. The more I enquired about her food habits, the more she revealed her love for cuisines beyond Bengal. She claimed to have different food options in her home and the locality. Her family's catering business was the reason; "I am not surrounded by healthy food, but in my home I have lots of vegetables, and the cooking is very light". Thus she had many choices when it came to eating.

Bengal and its association with food is a very prominent in the whole discourse of food. Thus food is not only integrated in nutrition. It has affiliation with other aspect of Bengali culture, like music, literature and discussions. Food and music are closely connected. Food has always been a common topic in street talks or chatters and gossips. Bengalis are known to love good food. Food can also be found in local and regional songs and poetry. The imaginary character of 'Bhojohori manna' (see picture below[3]), can be found in Bengali songs. He is known to make delicious and sumptuous meals.

[3] http://1.bp.blogspot.com/-Y5mYY gsGi4/T5WHFbLb6oI/AAAAAAAAByA/WLP9oovKyCE/s1600/Bhajahari+Manna+by+Various+Artists.jpg

In daily Bengali vocabulary '*khāwa*' denotes drinking and eating together. There are no different words for eating and drinking in conversational Bengali language. "*Khāta pīta bangāli*" (Female, 64) ,claimed by this woman, and even heard personally by me from other Bengali people.

The fact that "the principal crop of Bengal and integral of Bengali identity is rice" (Sengupta, 2012:78) has evoked a lot of criticism. Rice is believed to make Bengali people "faint- hearted, effeminate in the colonial era" (Sengupta, 2012:77-78). In response, during the late 19th century Bengali intellectuals and political leaders emphasized on including large portions of protein in diet. Their emphasis stemmed from scientific proof that Bengali diet had little protein content .Thus the change was a response to the "urban colonial commercial economy" and "rising influence of non-Bengali business communities" (Sengupta, 2012:86).

Food is more than just taste and nutrition. It has its own agency and identity. M.K. Janeja (2010) talks about "agency ascribed to food" in her book, 'Transactions in taste', on Bengali food. 'Rice' as food is therefore more than matter of health. It also

gives a Bengali a daily identity of what should food comprise. I can notice similar comparisons in my study. Many informants said something similar about rice. Below are some quotes:

> I used to feel rice is calling me.
>
> I love eating rice a lot. Whatever you give me, fruits, curd, paneer, nothing matters because I only love rice. But I know only rice is prohibited. Everybody suggests like doctors, 'That I have now control the amount of rice. So of this I measure it now.

It is important to note here that both the quotes mentioned above were said by women, one aged thirty years and another aged sixty. Rice is the main item in a typical Bengali meal. It is a source of carbohydrates and energy. Even though wheat is also consumed, rice is more preferred. But with rising obesity and other health problems, rice is blamed as a cause. So people have to choose between continuing to eat what they like or completely change the way they eat.

Case study:

In this section, I will discuss one interview I had in detail with a sixty four year old woman called Rita (pseudonym). At the time of interview, she had reduced weight from seventy kilos to fifty eight kilos. She suffered from arthritis. She lives in Barrackpore. This interview was conducted in her house.

Rita was trying one or two fitness centers to lose weight. She talked a lot about food. She discussed in detail about her eating habits and how she became so heavy.

> When I gained weight at that time I used to eat lots and lots of rice. I used to eat rice at night. Then before going to school. Apart from that, puchkah... aloo kabli, puchka[4] used to go on. Different teachers used to bring their tiffins, you know, somebody came with chow mein. Everybody used to bring something. I used to eat that also. All this food would go on. Once I used to reach home from school again in the evening I used to take rice. Then my mom would tell "See Rita, I have made this fry." (I will say) "Yes yes, give". Then I used to again eat it with rice. Sweets after that. I would feed rice to her and myself also. Even I ate her portion also at times. In this way at that time eating was like this. Nobody eats fat directly.

Rita worked in a tuition centre. In her own words, she ate rice at home, more food in the school, snacks in between, and again deep-fried food in the evening. Slowly her weight increased. She was also diagnosed with heart problem and blood pressure later. In this case also she emphasized more on rice and mentioned it five times in different part of the day. Though she mentioned other food intake during the day. The above quote signifies her awareness about portion of rice, but not for other foods. The cause can be attributed to the culture of food , for Bengali , which considers rice as a meal , which may not be same for other food she takes in a day. Another aspect of this citation is the portions of food people intake.

Normal Food ("normal khawar"): Healthy and Unhealthy Food

The terms 'normal' and 'regular', *Sadharon'* (normal) were commonly used when I asked informants about their daily diet. So what constitutes normal in food must be

[4] Puchka- similar to Pani Puri

discussed. At the same time there is also evidence of people criticizing Bengali diet. Some of the criticism also falls under the 'unhealthy' food category. Rita is in the process of losing and maintaining her weight. So she has changed her diet a lot. This is what she said about healthy food;

> Now what I eat is sour curd with oats. Then in morning I take green tea, with cream cracker biscuit. Then in egg, only white portion, rest of it is not allowed, but I eat it. I eat it completely. Apart from that, time to time I take two servings of fruit. And at night. And in the evening after coming from gym I take one cup of green tea. With that I take a cup of cream cracker biscuit and little bit of cucumber. And at night, a bowl of vegetables, and soup.

One can imagine how much transformation has taken place here. Earlier Rita was eating rice and *puchka*. She has now started having oats, green tea, cream crackers, soup and fruits. Rita strongly believes that it was her carb-rich diet which caused her weight to increase. She said,

> I was eating more carbs and oily and spicy food. I took more oily and spicy food. , like chips, cold drinks, like ice cream. I have consumed it more. This all increases your weight lot more. At that time all this was going on. Now I have stopped it completely.

The oily and carbohydrate-rich food that Rita is referring to is what is typically eaten by most Bengalis- rice and vegetables, sometimes cooked with lot of oil. Like many other middle class people in Kolkata, she is also moving towards eating non-Bengali food like oats and soup.

Some younger people mentioned foods which were until recently not part of the traditional Bengali diet. A young woman in her twenties who was a student told me that for her,

> Healthy foods are liquids, fluids, juices and home-made foods. My breakfast consists of oats or bread and butter. In office I drink lots of black coffee.

For people in their 20s 'normal' food is not like the typical traditional diet. Normal food varies with age, economy and location of house. I met a woman in a hospital waiting for her gall balder post-operation check-up. She was working and a student. However

'Normal' food was different for her, compared to other informants.

> I eat sandwich, Gujarati dhokla. In Bengali food (I take) some unhealthy foods such as puffed rice, fries and luchiparatha. Regular food is good ("regular khawar ja khai ") and high protein.

The above quote was elaborated by a 32 years old businessman. He took 'regular food' , and other non- traditional Bengali foods as breakfast and listed 'unhealthy' Bengali foods in his diet. It refers to the shift in Bengali food habit.

One informant was a forty-five year old woman, a housewife living in Barrackpore. For her, 'normal' food meant the following,

> Generally we eat normal food. Three rotis at night, two with vegetables and one with milk. We eat fish and rice but less of pulses.

Though she said she eats less rice, she admitted to taking more sweets.

By looking at this discourse on healthy and unhealthy food it is clear that people compare their diet with the diet followed by people they think are fit and slim. Some compared the Bengali diet with the non-Bengali diet from places like Bihar etc. Yet some compared their food habits with celebrities and models.

Some informants mentioned that Bengali food uses more oil. Therefore, there is more attention now on food that is not typically Bengali, but is believed to be healthier. Like this sixty year old woman told me,

> I take 4-5 almonds or walnuts. Almond does not have fat, but generally nuts have fat. Cashew nut has fat, but it keeps the skin in good condition. People who do modelling eat cashew nuts. So you can take 2-3 almonds but only one cashew nut. I eat this kind of food in the evening. Almond fat is good fat!

This woman lived a part of her life in Bihar. Therefore she compared Bengali diet with Bihari diet. She tried to find out how they use fattening items like oils and carbohydrates in their diet.

> What they do in Bihar! The bread they prepare, they make it dry. They don't fry it in oil and eat. You will see fire ash on their bread. They will make *litti* in fire ash then. They will clean and dust it with cloth and eats it with any chutney"

Her point was that Bengali food used more oil compared to Bihari food, which was mostly baked in fire. Most informants who complained about eating too much carbohydrate (rice) generously consumed sweets, oils, and spices in food. But not everyone agrees that Bengali diet is unhealthy. A nutritionist at a government hospital felt that traditional Bengali diet was healthy except for the high content of sweets. The problem, she thought, was that "people eat Bengali diet and junk diet".

On consumption of Junk food

Only some people informed me about their junk food intake. Detailed information about junk food is little. People are more aware of their sweet intake as it is taken for granted as part of the Bengali culture. People think that sweets are an occasional treat in middle class households but they are easily available now. Some quotes about junk food consumption from informants is given below:

> "Problem was that in business we used to take lot of junk food" - Male. 36 years. "Before I used to eat randomly with friends"- Male, 22 years.

The above quotes are from younger, and working male informants. Therefore eating out, and eating junk may not be so common among women as much as it is amongst men. But there is no statistical evidence on consumption of junk food across genders, as far as my research goes.

What is considered ‘junk’ food also is important. Bengalis eat many types of non-Bengali food, but they do not consider it as primary meal. Instead they consider it as snack and think it is ‘junk’. Henrike Donner ,an anthropologist who has worked among middle class Bengalis in Kolkata, remarks that “all-time non-Bengali favorites among children and adolescents I met included Chinese dishes, rich North Indian preparations, and ‘Western’ items… represented as snacks (*jholkabar)* rather than full ‘Bengali’ meals” (Donner, 2008 : 164).

Love for Sweets:

Most informants spoke about their love for sweets. But it seemed to differ based on availability. However detailed examination of the interviews indicates that sweets are part of everyday eating in Bengal, or at least in urban middle class families. Though one would assume that people ate sweets only on special occasions, my data shows that for my informants, consumption of sweets was not dependent on festivals like Durga Puja or special family gatherings. The following testimonials from informants shows the love for sweets that is traditionally associated with Bengali taste/palette:

“Sweets are part of life” -Woman, 38 years.

*“*I often eat sweet. In tea I add more sugar than others”. - Male, 32.

"I eat less rice but when it comes to sweets I take two pieces. In tea everybody adds 1 spoon of sugar but I add 2 spoons. -Woman, 45 years.

"I loved and ate lots of sweets and then friends told me to stop eating them. My friends used to say that by eating too much sweet my body will lose its 'sweetness!' They meant that I will be less beautiful and become fat." - Woman, 50 years.

Conclusion:

In this chapter I have tried to highlight how Bengalis think about food. Food is seen as a source of nutrition, but also as a habit, and as part of Bengali culture and identity. Rice which was eaten in Bengal for a long time is now seen as harmful to health. Instead, people are moving towards eating food which were not available in the region until recently. But at the same time, people also admitted to their love for sweets and what they see as 'junk food'. It is interesting that not many people mentioned Italian food like pasta or pizza. For them 'unhealthy' food is deep-fried items rich in oil, and rice, rich in carbohydrates.

To understand more about the link between food and obesity, we have to go more in-depth and do a longitudinal study. I should also mention here that most of my informants were women. We also need to look at how men understand links between food and Obesity.

We cannot also study people's attitudes to food in isolation. This is connected to the ways in which they think about obesity, causes of obesity, and the stigma obese people face.

This in turn forces them to take some measures towards weight management. That is the focus of the next chapter.

CHAPTER FOUR

STIGMA AND WEIGHT MANAGEMENT

Stigma is an integral part of the discussion about obesity. Stigma impacts people differently, based on factors such as class, age and gender. The term 'stigma' originated from Greek. It means. "The bodily signs designed to expose something unusual and bad about moral status of signifier" (Goffman, 1963: 1). This is true in every sense while talking about obesity.

Stigma is a special kind of relationship between an attribute and stereotype. Similarly fatness is attributed with someone who eats a lot. But this may not be case for every obese person. The following quote from a thirty one year old woman informant is a good example.'

"It is so completely wrong that people who are fat, are assumed to eat more. Yes, many people get fat by eating more, but it is not so in my case. I can also eat nothing in a day". But stigma affects the health seeking behavior of a person. It was evident in the interview I did with one woman who knew dancing, which is a good and recommended form of exercise. She told me that she doesn't like to go for exercise in a gym. But she also faced comments about her body size. "When I joined dance class, they asked me that "you are so fat, will you be able to dance?" Thus the stereotypic assumption of fatness is recreated when an individual defies the usual assumption of obese people.

Erving Goffman was a sociologist who wrote a major work titled 'Stigma' (1963). His theories have since been very influential in how we think about people who are affected by various labels that society gives them. He argues that "we believe the person with stigma is not human, not the ground of what constitutes normal in a society" (Goffman, 1963:5). Once a person is stigmatized, he or she cannot be considered to be part of human society, because there is something in them which is not 'normal'. People with obesity face similar comments from others. For example, below, one woman talks about some comments she heard:

> (I was told) who will carry the dead bodies (of obese people), when they will die. I replied that we are little bit fit and fine with this weight that is more than enough!

The stigmatization also takes place within the family. Even children and fellow members are part of the process of stigmatization. One thirty eight year old woman said, that her own daughter used to tease her about her appearance. "My daughter used to always call me 'fatty mom'. Such comments, from family members and close friends, comes in the way of being accepted by the society. In some instances, obese people themselves have a problem of accepting their own selves. Another woman called it 'self – guilt' and even instructed me to note it down.

> My daughter used to always tell me "fatty mom". Apart from her my son Kaju used to tell me "mom you're so are so fat'. I used to not look good in dress. So I used to think that I have become fat. You should write self-guilty conscious.

Stigma and women

This kind of a feeling, of being stigmatized by family and society for their appearance affects women more than men. This is more so in our society. Even men are aware of this fact. One man told me that his sister went to VLCC (a popular weight loss institute), but he believed that girls are "over-conscious". This young man told me this when I met him in the hospital. Here the person himself was overweight. But his level of consciousness for weight reduction is self-motivated, for the sole reason of individual health. But he indicated that girls are more conscious of their weight and body, and not about health. Even in my own life, I have seen my sister more labelled as fat (*motah*) , than my brother, who had also become fat.

The general notion seems to be that women tend to work towards attaining the 'perfect' body or figure assigned by the society as the ideal female body.[5] But mostly, the focus has been on women. Women and stigma has been clearly depicted in popular culture , especially in movies. I will discuss that in detail in the next chapter.

Case Study:

In this section, I will give a detailed case study of a girl, Anwesha (pseudonym) who talked a lot about how stigma affected her. Her description would may give a picture how stigma works in an individual's life.

[5] But this is not true. Men also work towards attaining an ideal figure, as is evidenced by the popularity of film stars like Salman Khan and Hrithik Roshan who are believed to have more fit bodies.

Anwesha is twenty three years, and weighs ninety one kilos. I met her in a gym centre. She spoke of her struggle with weight management from childhood. She gave details about how she faced stigma in every place. and gave the idea of how stigma adds up to the physical suffering.

> From childhood I was overweight. As I was growing up my weight increased. I weighed around 90 kgs between Class 4 and 5. Sometimes it decreased and at other times it was 90-100 kgs. I came here four months ago and was weighing 98 kgs.

Anwesha tried many things to reduce her weight. As she continues,

> I tried dancing, singing, swimming, whatever would help to reduce weight. However I could not sustain them for long. Every time I quit exercising I gained weight. This routine went on. Thus I have not suddenly gained weight. Like I said earlier from childhood I have been overweight. Whenever the doctor sees me he always asks why I am so fat!

Here the label of fatness is used by her as a 'secondary gain' (Goffman , 1963: 10) i.e., an excuse for why she was never able to reduce weight, in spite of all the efforts. Thus she repeated she is obese from childhood.

But Anwesha did not like being teased for her appearance. She got hurt when people called her or anyone else fat.

> Just like the proverb where if you tell a blind person, "you are blind" and a physically challenged person "you are crippled" they react angrily. Similarly, if I see somebody calling an obese person fat I get very angry. As I am fat myself I feel compassionate for other fat people.

Being judged for one's looks, and not for the person that she is, left her very unhappy.

> If anyone judges another person's looks I get angry. This I experienced with friends. I am fat but always guilty. In reality for friends we see from childhood, I think 'UGLY' is just a word. Besides friends I have also seen teachers remark, "how much more fat do you want to be?" Even though they are teachers they too speak this way.

The above paragraph in which Anwesha states about the acceptance of obese people, can be related to the views given by Goffman (1963) on stigma, about how 'normals' identify and receive them' (Goffman , 1963: 13)

However, Anwesha wanted to lose weight so that her future is secure, such as getting a good job. She said,

> In an interview something may get affected. For example I want to join the corporate world. I think there, looks really matter. If I cannot be slim-trim then how can I shine?

She further said that she has "seen many friends who look good but not capable and still get much" just because they look slimmer. Such act lowers her confidence." This is what Goffman referred to when he talked about 'mixed contacts' where the

stigmatized and normal are in the same social situation i.e. One another's physical presence" Goffman, (1963:12). In such situations, those who are stigmatized, in this case, obese people, are more affected by the presence of 'normal' or non-obese people.

> Yes I always feel very hungry. When tense and depressed I tend to eat a lot. I generally eat what I used to eat before. Sometimes I feel that by just eating and eating I can forget all my problems.

The above statement by Anwesha and her case study explains what a person who is obese goes through when she is constantly told about her body size. It makes them feel depressed. Although in this study I did not pursue the links between obesity and depression, it is possible that many people who are obese and unable to lose weight as much or as quickly as they want, are also depressed.

Weight management

Weight management not only includes food and exercise. It is also concerned with the time available, family structure, and the economic and social situation of individuals. In my study, I found a very common phrase, "lack of time". The question then arises as to why people feel that time is lacking. Lack of time does not mean that there is really no time. It also means presence of other priorities i.e., preferential use of time.

> I don't have time now. Now my child is small, so I have to make him sit for study. I mean, I don't have my own time. So, at night 12:00 clock when I am free

> I do Facebook. Yes I don't have time, yes, but I do that.

Reena also told me more clearly, "my time is my family". She admitted to spend a lot of time cooking because she loves it.

For others, management of time and work, especially for working women, is the difficult task, while investing on fitness at the same time, due to lack to adequate hours and availability. One woman who worked in a school said,

> Time is a factor, as I work in school. So I have to leave in the morning… and I have school the whole day up to 3:00 pm. So you cannot get time there. As I am in administrative job, I am only sitting most of the time. Workout does not happen at all, to say as such".

Thus, in answering the time question, women genuinely felt that time was about "Taking out hours" from the day, with extra effort. She meant not getting time is not the answer. Even if time is available, it is taken up with other tasks, making it particularly difficult for women to concentrate on fitness and weight management.

I interviewed a fifty two year old woman called Rita in her house. She complained about time a lot. But she was also self-critical, and talked about one can get extra hours by taking notice of the activities on which we are spending time. She gives tuitions and is also home maker. But still she manages to take some time off for herself. So she described what she things about time.

> Your time is going out. If you go to a cinema hall for a film it takes three hours, and a total of four to four-and-a-half hours for dressing and make up. Why cannot I be able to take two hours for this? Why I cannot I go in normal dress and run for it?
>
> (When) I am going out I will make my schedule in such a way that after finishing work, I should be able to go to the gym and come back home.
>
> I waste so much of time all day. We waste so much of time watching TV serials for nothing. See, if you watch three TV serials less, you will get one-and-a-half to two hours of time. Is it not far better for you? If you don't see 3 (crying) shows also, it will be ok. If you don't think like this, how can you make it? If you watch TV shows at the same time, this is all nonsense work.

Rita felt that women can get some time for themselves, to take care of their health, if they were to reduce time spent on recreation such as watching TV which she thought was not important.

Dieting and Exercise

Dieting and exercise are the basic ways people most of the people start their journey of weight loss. Most diets were very different from the usual Bengali diet that people eat in their homes daily, such as the one below, in one informant's words:

> They gave me diet. At first they gave me protein diet. Then there was watermelon diet. Another diet was milk-banana diet. I have to stay on banana and milk the whole day. You can eat as many times as you want, but you have to eat banana and milk only. It reduces your weight wonderfully.

While both exercise and dieting are seen as the way to lose weight, informants emphasized on the importance of food and dieting. People not only follow the a diet but also change it in their own way. This informant is a diabetic patient, who maintains a strict diet and told me the diet as suggested by the doctor,. At the same time, she has her own agency in negotiating the diet.

> If I have to take *golgappa* or any fast food, which I generally do not allow, but if I take, then I leave the potato portion and eat it with water only or with *chaana* or *matar*.

This negotiation is mentioned by Mishra (2011) as well, on how people manage the everyday routine of choosing what they think are healthy and unhealthy food. In her view, "managing personal health well and effectively is a moral duty, patients nevertheless experience tensions as they negotiate between managing physical symptoms, performing valued social roles, maintaining positive identities and living out their daily lives" (Mishra ,2011: 58).

Thus obesity and overweight condition is not only about body size. It is also about health and fitness. To quote Mishra again, "patients define health in terms of 'their ability to maintain a sense of integrity as productive, able and valued individuals in their own social spheres despite their physical condition" (Mishra, 2011: 58)

The fifty year old female called Reema has undergone fibroid operation. She spoke about why health is so important to her.

> ”Health is the last (important) statement“. In reality it is tremendously true in today’s time. I am telling this because, I am married, and I have a child. I have to run for her all the time. I have to drop her at school, taking her to tuitions, manage my home, and manage everything outside. I also do some work. I mean I have a tutorial home.
>
> I have to manage that too… for this you really need fitness. When I don’t have fitness, I see I don’t feel like getting up. I think how will I do work all day? What I will do? Most of the mothers are doing this all day. Why I am not able to do? Why I am so weak? They can do this, why I am not able to do so? This complex comes in your mind.”

Another twenty three years old woman weighing 110 kilos, with a height of only five feet and three inches, classifying her as ‘obese class III’ also spoke about difficulty in following dieting. She is married and has a child. She was accompanied by her child and husband at a bariatric clinic where I met her. She was on her way to meet the doctor.

> I haven’t done anything else. I just joined VLCC once. But diet plans they give are not possible to follow in a middle class family, the whole day. I mean, for a whole day, (eating) every at two hours gap, I don’t have that time. It is practically not possible.

So according to Mishra (2011) “the notion of health is constantly negotiated and reconstituted in terms of people’s lived experiences and relational contexts” (Mishra, 2011:58). Many informants here mentioned “practicality” i.e., the practical possibility in

relation to economy and availability, which is also part of weight management and health seeking. Distance to the fitness centre is one factor.

> I continued for 1—1/2months. Then I saw once I can't compete. I could not maintain, weight was increasing more and more. Then I did not continue, because I stay in Barasaat. I have to come so far. I was facing lot of problem. So I didn't continue.

Another important factor in weight loss or is the possibility of outcome in relation to time. Women found it hard to take time off to focus on weight loss programmes. So if their efforts did not work out immediately, they tended to drop the method and trying another way. Like this woman who found weight loss program only short-term.

> It worked at that time. It used to reduce 500 gm, 200 gm. But it used to happen for that day only. Once there would be a break, I used to get back everything. (What did this person do?)

Some informants also talked about side effects of medicines given for weight loss.

> Doctor recommended to use Orlistat[6] once. I used it. But it had very bad side effects. I suffered jaundice. Then I stopped. (Male thirty two years old)

But in the chaotic area of weight loss, search for healthy and unhealthy food, leads many people to look for alternatives such as therapy, curative Ayurveda, and

[6] An allopathic pill

herbal medicines. Many informants believe that western biomedicine does not take into account the concept of an "integrated body" (Mishra, 2011: 56), which comes from an Ayurvedic Understanding of the body.

Many informants talked about switching from biomedicine to Ayurveda and back. A sixty year old woman tried yoga to improve her thyroid condition.

> A doctor told me "you can stop the thyroid medicine in your life time". I took thyroid medicine for 3 years. Then my daughter suggested that I go to yoga school. I have not taken it for so many years. There is no need for it now. And it has been a decade like this.

Some people also mentioned sauna belt, fat cutter, herbal powder etc. But some of these 'Medicines' can also have side effects. One person told me how her blood sugar level increased after she took some medicine bought online. Many people try 'integrated approach' of cure.

Stigma, family, and weight management

The role of family is very important for weight management and healthy lifestyle. Many informants spoke about their mothers' attitude towards health, weight management and food which plays very critical role while continuing their weight loss regime. Talking about her mother's response to her efforts to lose weight, this twenty three year old female informant said,

> \
>
> She will tell in Bengali, 'in home all these things do not work. This is a pattern. These are all a high class society food. Why do you buy so much fish, meat,

> egg, and fruit?' …At home, relatives think that except rice the rest is not food. Mother is very generous but at the same time she makes such remarks. My mom says this often, 'you are becoming thin by dieting and I am becoming thin by cooking for you.' "(23, female)

Role of family members, especially mothers, has been clearly cited by scholars as important when people start to try various methods to lose weight. As Nichter (2006) tells, "Parents can serve as important role models and transmitters of cultural norms and values for their children". But it is the mother who is more important because she serves as a 'gatekeeper', for the child's appearance." Nichter (2006) also pointed out that 'mother's' communication style and speech and rapport is very important if they want to help their daughters eat healthy and not become defiant" (Nichter 2006, 126-129). In the above example, we can see that the mother complains about having to make special food, which is not the traditional everyday food eaten in Bengali homes, but "high class community" food. She also is not very encouraging of her daughter's efforts to lose weight. Instead she talks about how it is impractical.

It was clearly evident among the trainees in the yoga centre, gym centre and with informants I met in hospital and clinic that the level of stigma varied from place to place. In the yoga centre, as the level of acceptance by fellow members and the instructor is very high. There most of my informants told they are fit, irrespective of their weight. But the same does not hold true for informants in gym, clinic and hospital. They are more dissatisfied with their body and complained more about their weight and its related problem.

Thus stigma can significantly hamper one's approach to weight loss especially for those who need to lose weight. At the same time, doctors and ordinary people tend to forget that weight loss is not only about food and exercise. It is more about availability of specific ingredients, and one's ability to buy them, and the time available to follow instructions It also includes what constitutes feeling fit and energetic. In the words of a sixty two year old woman, efforts to lose weight is also about feeling, "I am healthy ... I am fat but I have my fitness."

CHAPTER FIVE

The role of media in health

Analyzing the impact of media on our understanding of obesity and related health problems is important. It not only gives us vital information but also highlights the biases, confusion and host of other possible complexities. The study of media's take on health issues, in this thesis, on obesity, can give us a clear picture about how a society is looking at the condition and what debates it raises on that issue. .

In this chapter I will focus on a collection of advertisements on weight loss and management from different dailies and magazines in English and Bengali. The information is divided into four sections- treatment, medicines, exercise and lifestyle. I looked at two newspapers, *Anandabazar Patrika* (a Bengali daily) and The Telegraph (English newspaper). In addition, I also collected advertisements from a monthly Bengali lifestyle and health magazine called *Sananada*. I also collected pamphlets on weight loss given at the field sites like gyms in the process of my fieldwork. This was done in September-October 2015.

On medical treatments:

There are two main categories of advertisements. One set is the bariatric surgery, and another on liposuction surgery. Below, I will describe some of the advertisements in detail.

'*Medh koman 990 takai*' (reduce fat in Rs 990). Avail fast slim offer. Advance Digital 'lipo- cavitation with scientific and herbal treatment' says this advertisement, by Imagins

Multispecialty clinic. (Anandabazar Patrika, 2nd September 2015, Figure 1)

Figure 1

Another advertisement in the same newspaper proclaims, "*medh koman 990 takai"* (reduce fat in Rs 990). It goes on to say in English some of the services offered- "Advance digital "lipo-cavitation. Free demo and doctor consultation. Lose 3 inches from waist, hips, and thighs in one session." There are many more scientific and herbal treatments.

This ad is also by the same Imagins multi speciality clinic.

Figure 2

The advertisement shown below (Figure 3) creates alarm in the mind of the readers by claiming that "weight is increasing, life is decreasing" ("*Ojon barche, life komche*). It goes on to list that the healers associated with this clinic offer treatments on "weight loss, inch loss, figure correction, face forming, double chin reduction, female breast correction, liposuction, male breast reduction, post pregnancy stretch mark correction, warts, moles and skin tag removal, Meso Sculpting". The

advertisement further goes on encourage readers to ‘reduce 4inch of fat and at the same time reduce up to 10 kg of weight”. Remarking that this is a ‘golden opportunity’, because of the relatively low cost of only ‘Rs 9999/- rather than in Rs 20,000/’, the company, Sabri Healers, also mention that paying half the amount will reduce the weight by half (“Reduce guaranteed 5 kg of weight in Rs 4999/”). If this amount was paid up front, the facility also assures the client that they can lose the extra 5 kg completely free of cost in 10 sessions). Understanding that even Rs. 9999 or Rs.4999 is expensive for most people in India, they offer installment as well.

Figure 3

All the three advertisements discussed above include the ‘before’ and ‘after’ pictures. They also includes strong visuals. The text of the advertisement shows it is one stop solution to make a person slim. Here being slim is equated to being healthy and active.

Figure 4 shows pamphlets from one of the most well-known private hospital chains in

India, Apollo Hospitals., and Apollo Spectra Hospitals whose byline is 'touching lives.' This pamphlet from a facility in Hyderabad city says in bold, "Fight obesity before it starts dictating". It mentions the various health problems obesity can cause- breathless ness and fatigue, diabetes or hypertension, high cholesterol, sleep apnea, and infertility. Featuring a woman who could be called obese, in western casual dress, the advertisement provides information about a 'Fight obesity camp'.

In this camp, a client will get an opportunity to consult a Bariatric Surgeon and free consultation with dietician/Counselor, free BMI & RBS, Podia & Fundus Checkups. After mentioning the date and time of the camp (April 2016), the advertisement refers to ten percent discount available on any surgeries required, for those who register for both days of the camp. Similar Pamphlets are also distributed in Kolkata newspapers. The reverse side of the pamphlet talks about 'Obesity management'. This involves not only 'weight loss and maintenance of body weight' but also measures to control other risk factors. Here, obtaining the correct weight is claimed to be possible by following a combination of lifestyle changes, diet, and physical activity. Some of the methods employed at the Apollo Spectra Hospitals are as follows:

Dietary therapy, physiotherapy, behavior therapy, medical management (Pharmacotherapy), Bariatric surgery (weight loss surgery), all of these validated by a trained surgeon belonging to the hospital.

Figure 4

> "But now the excellent news is that even the simple weight loss can progress or avoid the health related risks that are linked to obesity. However restricted diets, heavy workouts may give you results but you have to wait for a much longer period of time. In such cases, becomes very hard for a person to compromise the mouth-watering food and work harder for so long to get the results. Sometimes the delayed results may also demoralize you too."

The above quote is from a website, www.bmi.com, which is solely dedicated to talking about BMI or body mass index. Personal stories of patients are featured in this website. But neither the personal story nor the website gives any hint of the patient commitment post-surgery. It does not give any idea of post-surgical dietary changes which is life-long dietary adjustment.

Such discussions about body weight are also widely prevalent in online media and social networking sites. For example, the website www.bmi.com[7] gives the following testimonial from a client:

> "I was overweight since many years and could not take care of my health due to strict routine. I got relocated to this place because of work and the bad thing that happened to me was the dependency on junk food for my meals as I was away from family. It not just only added much extra weight on my body but supplemented gastric and cosmetic problems. I was helpless as my job timings and heavy work pressure didn't allow me to cook. It resulted in sickness. I was in a way to leave the job. But I was never the giving type and I decided to give myself a last chance".

In my study also, I came across many such narratives from patients talking about lack of time to do exercise, as discussed in the previous chapter on weight management.

[7] www.bmi.com (Accessed on April 19 2016)

"**Here's a surgical procedure to help you tackle obesity and fight diabetes**". (The Telegraph, September 25, 2016)- The headline of this article from one of the most widely read newspapers in West Bengal, collected during fieldwork, expresses concern about obesity and type II diabetes, and other lifestyle related diseases in Kolkata, indicating it as an urban problem. Two famous bariatric and laparoscopic surgeons' work has been highlighted. Both of them started an initiative called BMI (Bariatric and Metabolism Initiative). The initiative started out in Belle Vue clinic, located in the city. This hospital is focused on completely curing obesity, and type II diabetes, for which there is assumed to be no cure. Thus they are seen to be providing sustainable solutions.

On Medicines:

The advertisements from newspaper Ananda Bazar Patrika, well known Bengali daily, given below, are for oral pills and tonics, which are believed to help in weight loss. The first advertisement (Figure 5) scolds the reader by saying, "Don't ignore excess fat. Be slim smart and fit)" (Anandabazar Patrika, 30 July 2015). One Advertisement -1: 'Jolly Fat-Go'[8], medicine in the form of a pill and oil, which can be taken orally, is claimed to be "very helpful to correct your metabolism, so that we can digest food". The ad uses words known to common people such as 'calories' and 'metabolism' to talk about how this pill will covert food into energy and not

[8] www.jollytulsi51.com (Accessed at April,22, 2016)

allow them to get stored in body as fat. It is believed to increase 'BMR'[9]. This Ayurveda medicine says that the ingredients will not only remove excess fat but that they will reduce 'from each part of your body slowly'

Figure 5: Fat - Go

Advertisement 2: Ayurwin, power of nature, Nutrislim.

The next advertisement in Bengali featured here starts with the question (Figure 6), "Are you fat? To look slim and beautiful, take Ayurbin Nutri slim plus". A testimonial from this fictional 'family' claims that the "whole family" uses this medicine to remain fit.

Nutri slim plus, medicine given in powdered form makes people "slim and active", slim being used as synonymous with being active. Containing Ayurveda ingredients, this medicine is advertised as the answer to people's quest to reduce weight.

[9] BMR means Basal Metabolic Rate is the amount of energy expended while at rest in a neutrally temperate environment, in the post-absorptive state (meaning that the digestive system is inactive, which requires about twelve hours of fasting).
https://www.google.co.in/?gfe_rd=cr&ei=OwAfV5aNEaQ8Qf81YHYAg&gws_rd=ssl#q=BMR Nov 23, 2015(accessed at April 26th , 2016)

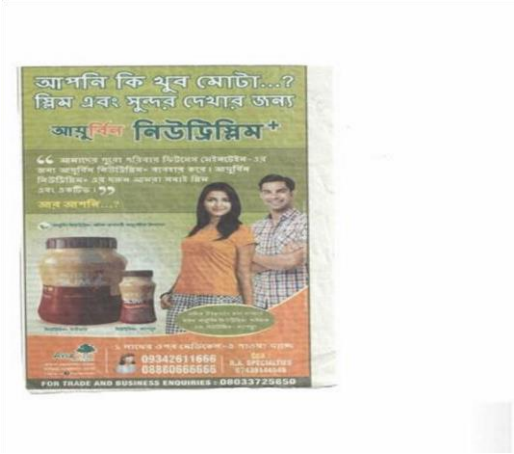


Figure 6

Another weight reducing medicine that some of my informants mentioned, and is popular in West Bengal or at least in Kolkata, among middle class people are Glow slim and Glow zero. The advertisement shows the makers of these medicines claiming that taking these medicines is an "easy way to be slim", and it will make them "be light always". More information can be obtained from the website where the company (Glamour World)'s products are advertised.[10] The powder taken in warm water is said to "reduce cellulite" and thus make a person slim. It is important to note here that Glow Slim is being sold as a cosmetic product and not just as a medicinal product, but the message given is that the cosmetic product has medicinal properties.

[10] http://www.gwayurvedic.com/slimming/glowslim.htm (accessed on April 25, 2016)

Figure 7

Glow Slim

GLOW SLIM
(Slimming Product)

TAKE FOUR TEASPOONFUL OF GLOW SLIM IN WARM WATER AND HAVE IT AFTER EVERY LUNCH AND DINNER. IT REDUCES CELLULITE AND MAKES YOU SLIM IN 3 MONTHS

METHOD OF USE:

TAKE 4 TEA SPOON. MIX IT WITH LUKE WARM WATER. HAVE IT FOR AFTER LUNCH AND DINNER. TAKE IT EVERYDAY AFTER 10 TO 15 MINUTES OF LUNCH AND DINNER.

INDICATIONS:

IT IS VERY HELPFUL TO CONTROL BLOOD CHOLESTEROLITRIGLYCERIDES AND KEEPS YOUR BODY SLIM, ACTS AS A WEIGHT REDUCING AGENT. IT IS VERY USEFUL FOR ANY SYMPTOMS RELATED WITH EXCESSIVE BODY WEIGHT. GET BETTER RESULT HAVING A PROPER DIET AND EXERCISE.

<< Back to Products

On lifestyle activity and exercise:

Apart from medicines and surgical methods, one popular method by which obesity and many other health conditions are addressed in India right now (diabetes for example) is through physical activity, especially exercise. In this section I would like to concentrate on such advertisements. Figure 7 shows a pamphlet from one exercise facility that some of my informants mentioned, Mantra. Called 'Magic Mantra Weight Loss Package', the 'achiever's club' in the gym announces the following:

> "Burn it before it burns you! It's magical! Mantra weight loss achiever's club: we have lost 10 kgs, what are you waiting for?" (MMWL) package adds a magical touch in your life. Unlike conventional weight loss programs, MMWL is a **Lifestyle Modification** Program. This package is scientifically planned to enhance health awareness amongst the members. We encourage in promoting a healthy lifestyle integrated with a unique **hexagonal** approach. We aim to see each other and every member to be healthier, making MMWL package the unique and only for you. The hexagonal approach includes-Cardiovascular and rhythmic aerobic exercise, weight training exercise, diet counselling, sauna bath and steam bath, core stability and toning class, computerized monitoring and evaluation report.

Figure 8

A woman is shown with oversized jeans, telling the viewer how much weight she has lost after coming to this facility. A weighing scale also provides proof in the form of numbers.

Like other advertisements featured in this chapter, here also we see some 'before' and 'after' photos of clients who were successful in losing weight.

Further information can be obtained from their website (Figure 8)[11]. This gym calls itself a "lifestyle club". As the advertisement blurb says, the package involves 'lifestyle modification', and not just weight loss.

'Hexagonal approach' listing some six exercises and programs that will help in their clients losing excess weight. From the website, we come to know that lifestyle modification involves "correct exercises, appropriate nutrition and seamless mind & body coordination

[11] http://www.mantrahealthzone.co.in/about_us.php (accessed on April 25, 2016)

Figure 9

The last advertisement that I will discuss in this chapter is the following clip from Nundy fitness (Figure 9), This Company headquartered in Kolkata sells exercise equipment. Reminding readers that rains might interfere with their plans for exercise, they suggest buying equipment to do exercise at home, so that they do not lose any time. "Workout at home while it rains" it says, also attracting people with a monsoon sale of up to 50 percent off. A treadmill, an exercise bike and some other equipment are shown in the ad. Such advertisements are often found in many newspapers and magazines.

Figure 10

Festival times in India are also about cooking and eating a lot of food, rich in carbohydrates and fat. Durga Puja is a major festival in West Bengal. While doing fieldwork during that time (October- November), many advertisements mention the festival and the need to look good in front of relatives and friends who one will meet during festival times. Another 'Centre for slimming and beauty' which says it will be "the mirror for new you". It goes on to say, that not only will they help reduce weight but specifically "reduce up to 5 inch from your desire area "before Durga puja". Like the other advertisements, this one also shows that a healthy body has a price. "Book for inch loss package and get 5 kg weight loss free" shows exactly how weight loss efforts are being commercialized. The advertisement includes different ways by which the claims can be achieved- "body sculpting, on-surgical lipolysis, trimming, thermo- slim, slim tron and tucks".

Figure 11

One more advertisement on fitness equipment also promises discount, to encourage people to choose from ‘over 200 international branded equipment.

Figure 12

On Health information:

Many magazines and newspaper articles carry a lot of information on health issues. Obesity is one of them. The popular women's magazine Sananda dedicated one issue to the topic of obesity. The 30th January 2016 issue covered a workshop on obesity (Figure 13), organized by a doctor and Sananda club. The work shop was on obesity and bariatric surgery was held at Belle Vue clinic. The workshop started with Dr. Ramana's health tips on overweight and obesity. The members of the Sananda club also gave useful tips on this issue. Apart from this, many patients shared their views on their lives before and after surgery. They emphasized how their lives changed after surgery and how sick they were before surgery. The doctor also gave

information on mini gastric bypass surgery, which helps not only in weight loss, but is also "anti-diabetic". He also told those who have tendency to become obese, should be very careful. To avoid obesity in the future, they should eat the right amount of food and also do a little bit of exercise.


ওবিসিটি ওয়ার্কশপ

Figure 13

In the same magazine, another article starts with a title in English called "weight loss and money". In this article money has been symbolized in many health related ways. Just like how money is hard to earn, health is also projected as a good, a product, that is hard to earn. The doctor suggests that while we fulfill our aims in life, such as work and vacation with money, we should also invest in good and healthy habits to achieve health-related goals. The health goals are highlighted in our everyday aspiration. In his own words,

> Those who are reading this article, all of you want to be slim and light. Now the condition is so bad, that seeing old clothes makes you feel bad. You may also lament, if there is any magic, by which I can fit in this

> clothes. When you stand in front of the mirror, you may feel ashamed, of what you were before and now.

The doctor here talks about the sense of shame that people who are obese, or are not very thin, feel when they cannot get into clothes that no longer fit them or even when they see themselves in the mirror. He summarized it with many tips of developing healthy habits.

Below are some quotes from the article:

"Patients come and tell me, 'Doctor, in the month of March, I have a wedding in my family. I want to reduce 10 kg of weight before the wedding". He suggests to them that they "start a new activity everyday" or "start walking except on Sunday".

These quotes point out the conflicting notion of controlling obesity. The first quote may give the idea of patients' passive reception of the treatment, The other quotes show efforts on patients' part to completely change the condition. Scholars have pointed out "the indirect mechanism modern medicine and technology relocates responsibility for health away from social mechanism onto individuals, through regimes of self-regulated behavior and expert surveillance" (Salant & Santry , 2006:2453).

Figure 14

Representing Obesity:

Moving towards representation of obesity in popular culture, there are several examples in the world of cinema, for instance. Some of the films which have addressed body and weight gain, particularly among women are Bridgette Jones' Diary (English, 2001), *Inji Iduppazhagi*[12] (Tamil movie, 2015) and *Dum laga ke haisha* (Hindi, 2015). All this films show how excess weight not only affects the overweight and obese people but also the people involved in their lives. These films also show how the protagonists struggled to lose weight, and the stigma they faced as obese women. They also had to grow through a method of trial and error with information on health gathered through media.

The hype around losing weight and appearing slim can be dated to the year 2009 when film actor Kareena Kapoor's much publicized 'size zero' created a hype. But

[12] The title means 'Woman with a ginger-sized waist' in Tamil.

in reality, the picture portrayed by the media on weight loss starvation and anorexia was not the real picture. But it was made to appear attainable by any overweight or obese person. We can find evidence of this from various newspaper and media articles later.

In one of her interviews, Kareena Kapoor talks about how she achieved her appearance or figure even while eating well. Referring to the nutritionist Rujuta Diwekar, "First, she told me it wasn't about starving but about eating well, eating right and eating regularly. I said, 'I'm a Kapoor, I love my *parathas*, *paneer*, cheese.' Rujuta replied, 'You can go right ahead and eat all of that and more.' I was like, cool, when can we start"[13]. 'Eat right is boring, anorexia sounds much more happening and can also make breaking news' [14][15].these two statements make it clear that the media has a lot of influence among ordinary people, about weight loss and obesity mean, especially those who may want to reduce weight for any reason. Both the statements gives a clear indication that it is important to eat right, while keeping with one's cultural ways of eating. Many of my informants told me that it is not possible for anyone to get to size zero, and such a size does not exist.

[13] http://www.rediff.com/getahead/2009/mar/02sli1-rujuta-diwekar-book-excerpt.htm (accessed on April 26th . 2016)

[14] 'size zero' https://en.wikipedia.org/wiki/Size_zero

[15] . " What made Kareena a size zero" http://zeenews.india.com/exclusive/what-made-kareena-a-sizezero_2240.html (Last Updated: Thursday, September 24)(accessed on April 26th, 2016)

Healthy habits that you may be overdoing

Figure 15

Conclusion

In this chapter, I selected a few advertisements collected from newspapers and magazines in Kolkata, both in English and Bengali, to discuss the increasing influence of media and advertising on the people. I also collected some pamphlets from fitness centers. The messages given in all the advertisements is about how being 'fat' or 'obese' is dangerous and people have to do something. The companies advertising their pills and oils claim that they can somehow make extra fat disappear from the body. The fitness centers offer attractive discounts to bring more clients. Doctors and hospitals talk about surgical procedures to remove excess fat. It is not given a status of a disease which cannot be cured. But at the same time it is shown to be completely preventable by easy and small efforts. Simultaneously the advertisement on surgeries and medicines gives a picture of lifelong one stop solution their products.

None of them mention any side effects that might happen, or the after effects of surgery.

They do not talk about who can and cannot do exercise. For example, can a person with heart disease undergo surgery? Such caution is not given. The workshop conducted by Sananda magazine also shows how people who are obese are made to feel ashamed of their body size and their lack of interest in reducing it. Lastly, I mentioned the impact of cinema and especially the desire for a 'size zero' among women. In the previous chapters, women informants told about how they felt bad and stigmatized for loving food, eating too much and being obese.

In this chapter I have touched upon one area which has not been very well studied in medical anthropology, that is, the influence of media on health. In the whole paradigm of media information on obesity, health is "capitalizing on individual responsibility" (Mishra, 2011: 50). The most famous work on advertising in India is by Mazzarella (2003). That work shows how much importance goes into making ads and how advertisers come up with their taglines. Now, agencies in Kolkata have capitalized on people's desire to look good, during family weddings and festivals like Durga Puja. Advertisements also mention that.

Economic status, social customs, and education of individuals are completely overlooked in the media representation of obesity. Thus it creates bias and confusion in the mind of obese and overweight people, like the advertisement in figure 15 says, warning people they may be overdoing exercise.

Chapter Six

Conclusion

Until recently, obesity was not seen as an issue of concern for human health. But now it is point of reference for any lifestyle disease. As it is a condition which leads to several other severe medical issues, it's time to look at obesity seriously. But we have very little academic literature from social sciences on obesity in India.

This anthropological study attempts to bridge this gap by depicting the underlying sociocultural factors associated with obesity, like ideas about food, health, stigma, weight management, and time in relation with obesity. There are several stereotypes about obese individuals, such as love for eating. The medical point of view on obesity puts an

'Individual' in the forefront of the obesity. But an individual's social and cultural world is always overlooked in the path of any sort of intervention.

Several methods to deal with obesity includes behavioral i.e., diet and exercise, surgical procedures, medicines, and non-biomedical systems like yoga. But the treatments and interventions are not a one stop solution for tackling obesity. They only give temporary solutions for the most part. They also cause anxiety and insecurity apart from high financial costs. These come in the way of compliance.

This empirical study shows that people are trying to find solutions which may not confirm with their own beliefs, culture and social attitudes. So people are

embarking on regulated and as well unregulated and unstructured fields for a cure for obesity.

One suggestion that has emerged from this study is that governments and policy makers should call for specific programmes to spread awareness about obesity. This should be done in various forums, be it health care, facilities, educations institutions, and workplaces. People should be made aware of foodstuff containing high fat and sugar content. Along with this, we should take the cultural factors in consideration , so that interventions can also be incorporated easily into our daily lives.

A major limitation of this study is the short timespan for fieldwork. There are also constraints of getting access and permission to hospitals and clinics. Many topics that have been highlighted in this thesis can be extended for further research, such as the role of media.

APPENDIX

RAMAKRISHNA MISSION SEVA PRATISHTHAN

99, Sarat Bose Road, Kolkata - 700 026

DAILY RATION FOR DIABETIC PATIENTS MEASUREMENTS OF UNCOOKED WEIGHT

Total Calories ..1800kcal Salt restricted / No restriction / Veg. / Non Veg.

Name : Shri / Smt. ..... Date .....

1. Cereals (Rice / Atta / Maida / Suzi / Biscuit / Sagu / Moori / Chira / Cornflakes / Bread / Bajra / Jowar Ragi / Nodules / Oats etc.) 250gm
2. Dal and dal products 50gm
3. Mixed vegetables (only which are allowed) as desired Plenty
4. Fruits (only which are allowed) 100gm
5. Fish / Chicken 100/65gm
6. Egg (only white portion of egg)
7. Milk (Skimmed milk / Mother Dairy only) 500ml (D.toned)
8. Soyabean
9. Oil 4tsp (20ml)

FOODS TO BE TAKEN

VEGETABLES	:	Patal (Parwar), Jhinga (Torai), Chichinga, Chal-Kumra (Petha), Bhindi (Dherash). Karala (Bitter-gourd), Papaya (Papita) Brinjal, (Begun), Cabbage (Bandhakopi) Lauki (Lau), Cauliflower (Phul Kopi), Peas (Matar), Cucumber (Khira), Capsi cum, Tomato, Onion (Pyaz) Ginger (Ada) Garlic (Rasun), Plaintain Steam (Thor), Tinda and all types of Sak, French beans (Bakla), Fig (Dumur, Anjeer), Seen (Val), Drum stick (Sajna Danta), Kumro (Pumpkin)
FRUITS	:	Orange (Kamla Lebu, Narangi), Musambi (Sweetlime), Kalo-jam (Jammun, Rose-apple (Jamrul), Lemon (Bara nimbu) (patilebu), Ripe Papya (Papita), Deb Water, Amra, Tarmuj (Tarbuj), Kharmuj (Kharbooja), Tal-Shash (Tar), Guava (Amrut).
MILK	:	Skimmed Milk i.e. Anik, Sagar, Sugam and their products / Mother Dairy Milk and its products.
BISCUITS	:	Cream-cracker biscuits only. Britannia Top.

FOODS TO BE TAKEN IN MODERATION

Vegetables	:	Potato (Alu), Sweet Potato (Shakarkand) ol (Zimikand), Kochu (Arvi), Green Banana (Kanchakala), Raddish (Mula), Beat root, Carrot (Gajar), Tender Jackfruit (Inchar).
Fruits	:	Banana (Kala), Apple, Pineapple (Anaras), Bel, Nashpati, Bedana, Safoda (Sapatu), Ata (Seetaphal), Mango (Am), Jackfruit (Kathal), Lichi, Grapes (Angur), Wild Oliva (Jalpai).

FOODS TO BE AVOIDED

Dryfruits & Nuts	:	Raisin (Kishmish). Dates (Khejur) Pista, Almond, Cashewnut. Ground-nut, Coconut (Narikel) and its products.
Others	:	Sweets of all kinds Honey (Madhu) Jaggery (Gur) Sugar-Candy (Talmisri), Ice-cream, Chocolates, Cakes, Pastries, Carbonated beverages like Thums-Up, Limca, Jam, Jelly, Sauce etc. Alcoholic beverages, Mutton, Vanaspati, Sweet and Salt biscuits.
Fried Snacks	:	Luchi Parata, Samosa (Shingara), Kochuri Chop, Cutlets etc.
Milk	:	Cow's and Buffalo's milk (Whole) and their products like ghee, butter, chhana, curd etc.
Nutritious Beverages	:	Horlicks, Viva, Complan, Nutramul, Spart etc. Molted Drinks such as Maltova, Bournvita, Drinking Chocolate etc.

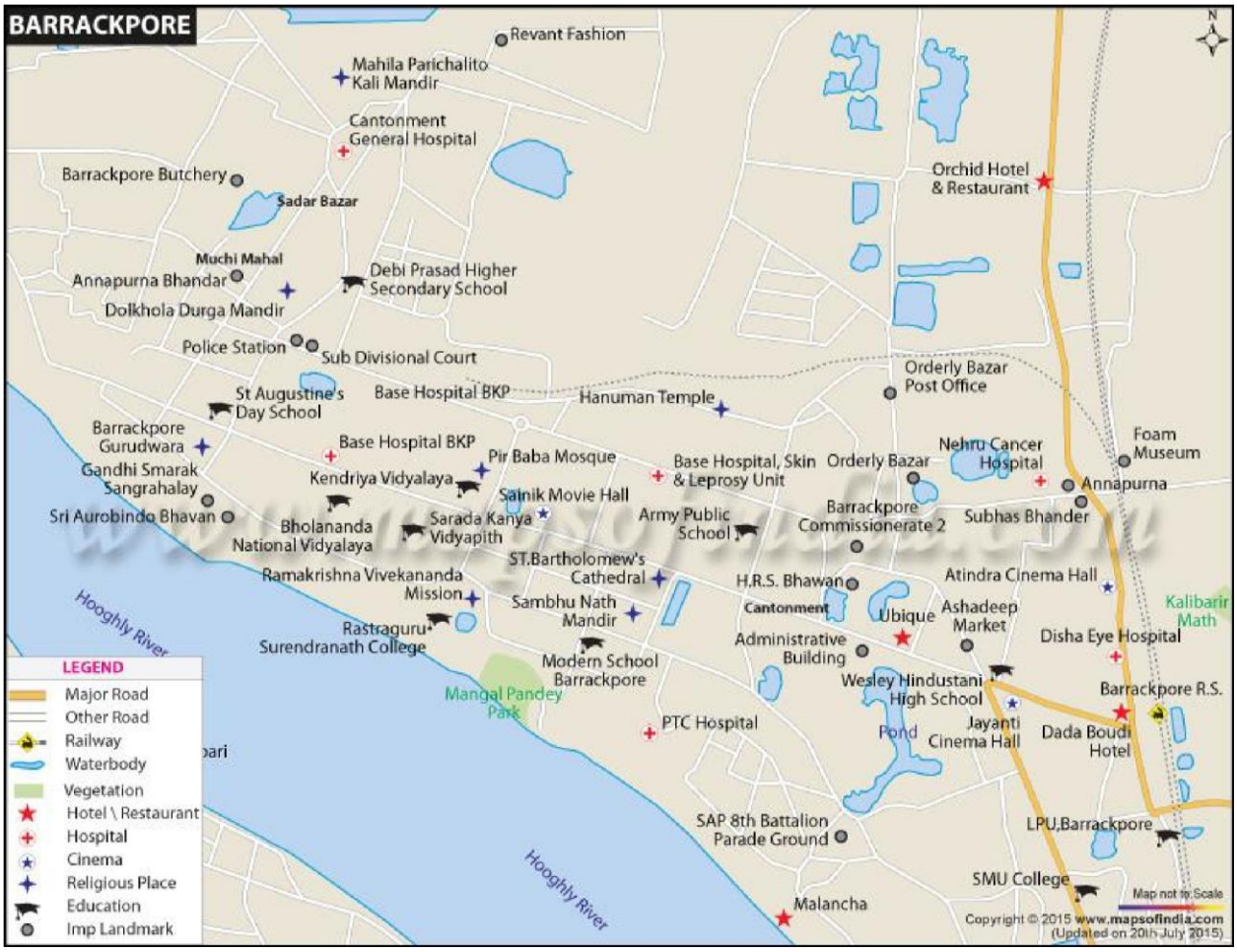
P.T.O.

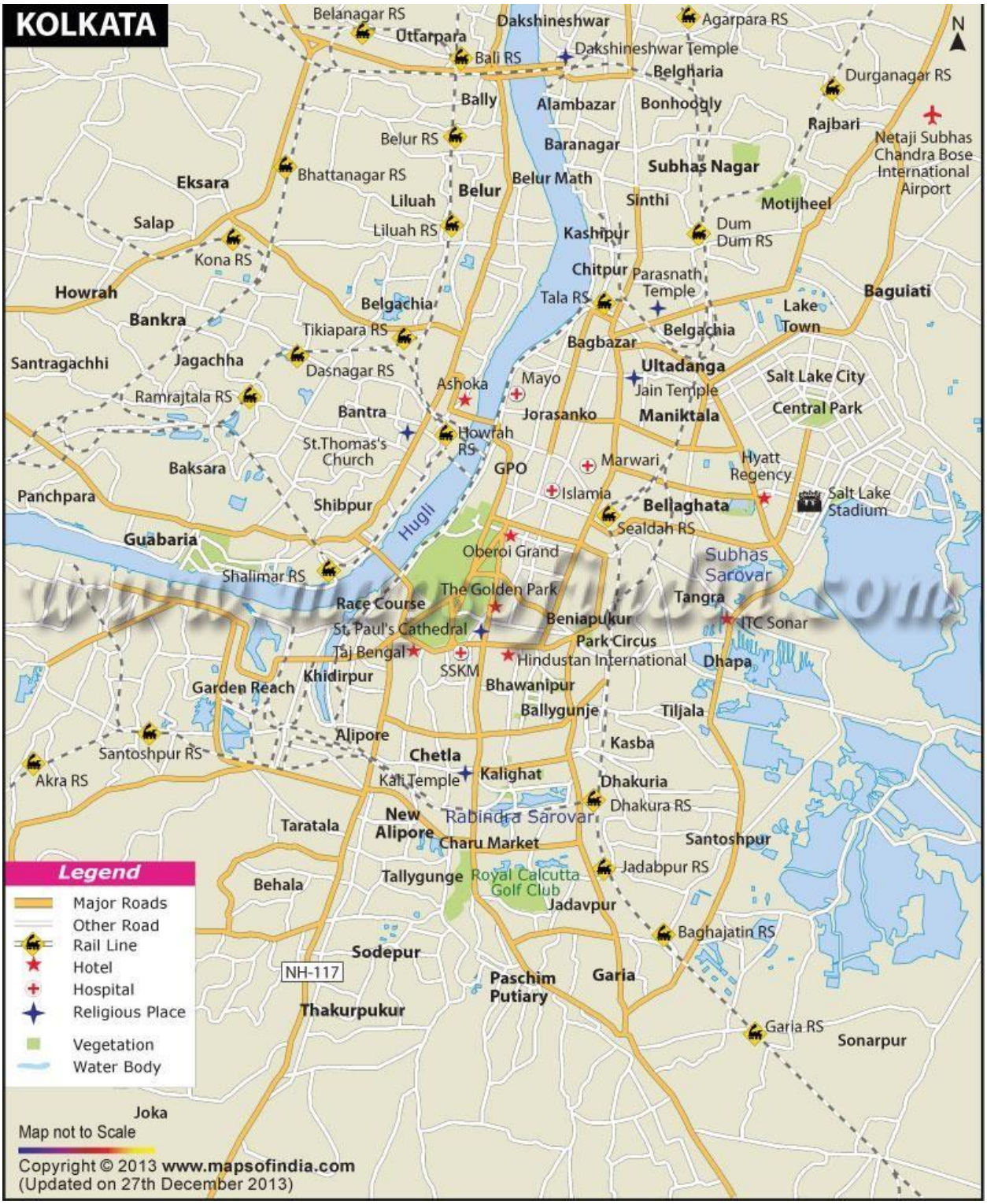
DAILY MENU OF THE DIET

TIME	
Tea -	Tea - 1 cup without sugar
	Biscuits ..... pieces (sugar free) Saccharin
	tablets may be used if necessary
Breakfast-Milk	glass
	Egg white -
	Toast ..... piece / Moori ..... cups /
	Roti ..... piece / Chirra ..... cups /
	Cornflakes ..... cups. etc.
	(Any one from 1st list)
Mid-morning-Fruit - 1	
Lunch	Rice ..... cups / chapaties ..... piece (Any one)
	Dal ..... cups
	Mixed vegetables ..... cups
	fish ..... piece / Chicken ..... gms (any one)
	Salad ..... plate
	Curd ..... cup
Tea -	Tea - 1 cup without sugar
	Biscuits ..... piece
Evening Tiffin -	Chhana ..... piece
	Toast ..... piece / Roti ..... piece /
	Noodles ..... plate
	Moori ..... cups etc. (Any one)
Dinner -	Rice ..... cups / Chapaties ..... piece (Any one)
	Dal ..... cups
	Mixed vegetables ..... cups /
	Fish ..... piece / Chicken ..... gms. (Any one)
Night -	Milk ..... glass

Signature of Dietician

-


BARRACKPORE
Revant Fashion
Mahila Parichalito Kali Mandir
Cantonment General Hospital
Barrackpore Butchery
Sadar Bazar
Orchid Hotel & Restaurant
Muchi Mahal
Annapurna Bhandar
Debi Prasad Higher Secondary School
Dolkhola Durga Mandir
Police Station
Sub Divisional Court
Orderly Bazar Post Office
St Augustine's Day School
Base Hospital BKP
Hanuman Temple
Barrackpore Gurudwara
Base Hospital BKP
Pir Baba Mosque
Base Hospital, Skin & Leprosy Unit
Orderly Bazar
Nehru Cancer Hospital
Foam Museum
Gandhi Smarak Sangrahalay
Kendriya Vidyalaya
Sainik Movie Hall
Annapurna
Sri Aurobindo Bhavan
Bholananda National Vidyalaya
Sarada Kanya Vidyapith
Army Public School
Barrackpore Commissionerate 2
Subhas Bhander
ST.Bartholomew's Cathedral
Ramakrishna Vivekananda Mission
H.R.S. Bhawan
Atindra Cinema Hall
Kalibari Math
Hooghly River
Sambhu Nath Mandir
Cantonment
Ubique
Ashadeep Market
Rastraguru Surendranath College
Administrative Building
Disha Eye Hospital
Modern School Barrackpore
Wesley Hindustani High School
Barrackpore R.S.
Mangal Pandey Park
PTC Hospital
Pond
Jayanti Cinema Hall
Dada Boudi Hotel
SAP 8th Battalion Parade Ground
LPU,Barrackpore
SMU College
Malancha
Hooghly River
Map not to Scale
Copyright © 2015 www.mapsofindia.com
(Updated on 20th July 2015)
LEGEND
Major Road
Other Road
Railway
Waterbody
Vegetation
Hotel \ Restaurant
Hospital
Cinema
Religious Place
Education
Imp Landmark


KOLKATA
N
Belanagar RS
Uttarpara
Dakshineshwar
Bali RS
Dakshineshwar Temple
Agarpara RS
Belgharia
Durganagar RS
Bally
Alambazar
Bonhoogly
Rajbari
Netaji Subhas Chandra Bose International Airport
Belur RS
Baranagar
Subhas Nagar
Bhattanagar RS
Eksara
Belur
Belur Math
Liluah
Sinthi
Motijheel
Salap
Liluah RS
Kashipur
Dum Dum RS
Kona RS
Chitpur
Parasnath Temple
Howrah
Belgachia
Tala RS
Baguiati
Bankra
Lake Town
Tikiapara RS
Belgachia
Bagbazar
Santragachhi
Jagachha
Dasnagar RS
Ultadanga
Salt Lake City
Ashoka
Mayo
Jain Temple
Ramrajtala RS
Bantra
Jorasanko
Maniktala
Central Park
St.Thomas's Church
Howrah RS
Marwari
Hyatt Regency
Baksara
GPO
Islamia
Salt Lake Stadium
Panchpara
Shibpur
Hugli
Bellaghata
Sealdah RS
Guabaria
Oberoi Grand
Subhas Sarovar
Shalimar RS
The Golden Park
Tangra
Race Course
Beniapukur
ITC Sonar
St. Paul's Cathedral
Park Circus
Taj Bengal
SSKM
Hindustan International
Dhapa
Khidirpur
Bhawanipur
Garden Reach
Ballygunje
Tiljala
Alipore
Kasba
Santoshpur RS
Chetla
Akra RS
Kali Temple
Kalighat
Dhakuria
Dhakura RS
New Alipore
Rabindra Sarovar
Taratala
Charu Market
Santoshpur
Jadabpur RS
Tallygunge
Royal Calcutta Golf Club
Behala
Jadavpur
Baghajatin RS
Sodepur
NH-117
Paschim Putiary
Garia
Thakurpukur
Garia RS
Sonarpur
Joka
Legend
Major Roads
Other Road
Rail Line
Hotel
Hospital
Religious Place
Vegetation
Water Body
Map not to Scale
Copyright © 2013 www.mapsofindia.com
(Updated on 27th December 2013)

Louis Dublin

Daniel Lambert by Benjamin Marshall, 1806

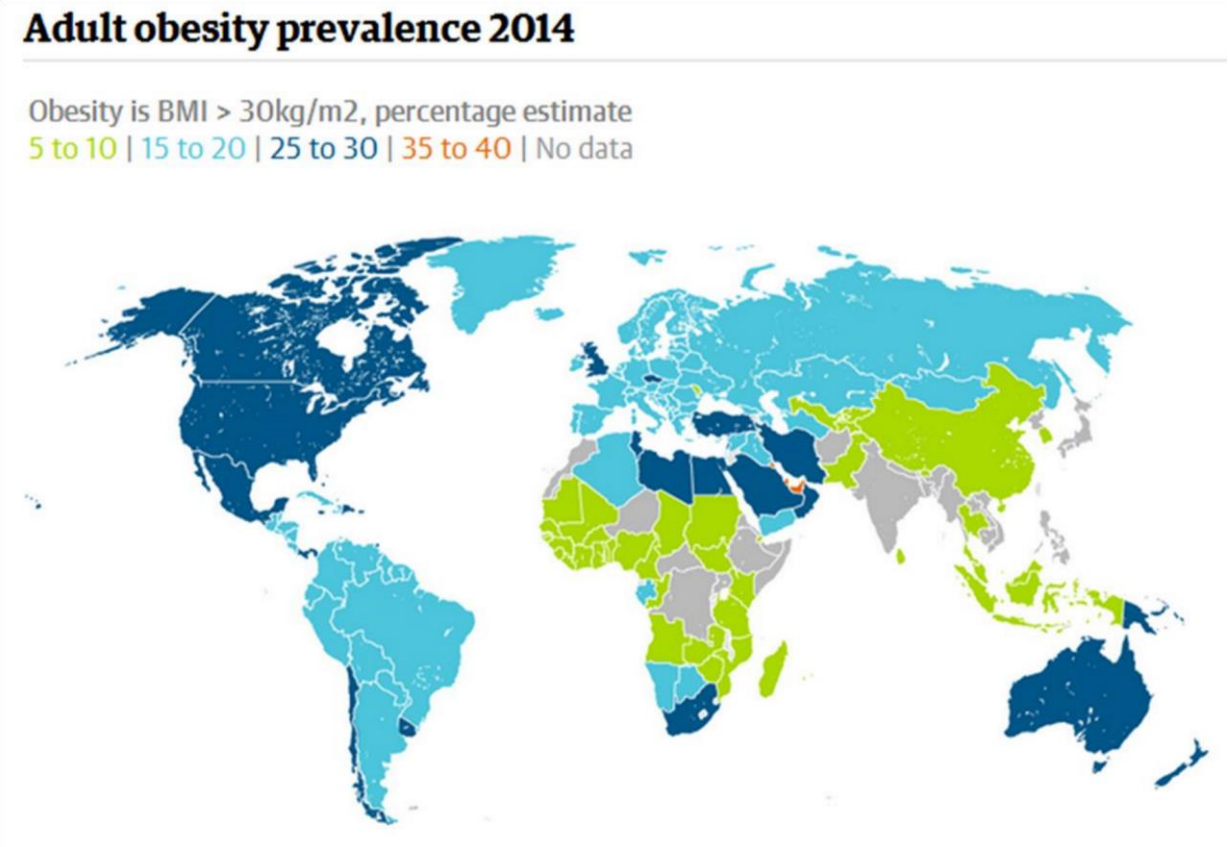
Fat Joe, pickwick papers and charles dickens

Adolphe Quetelet

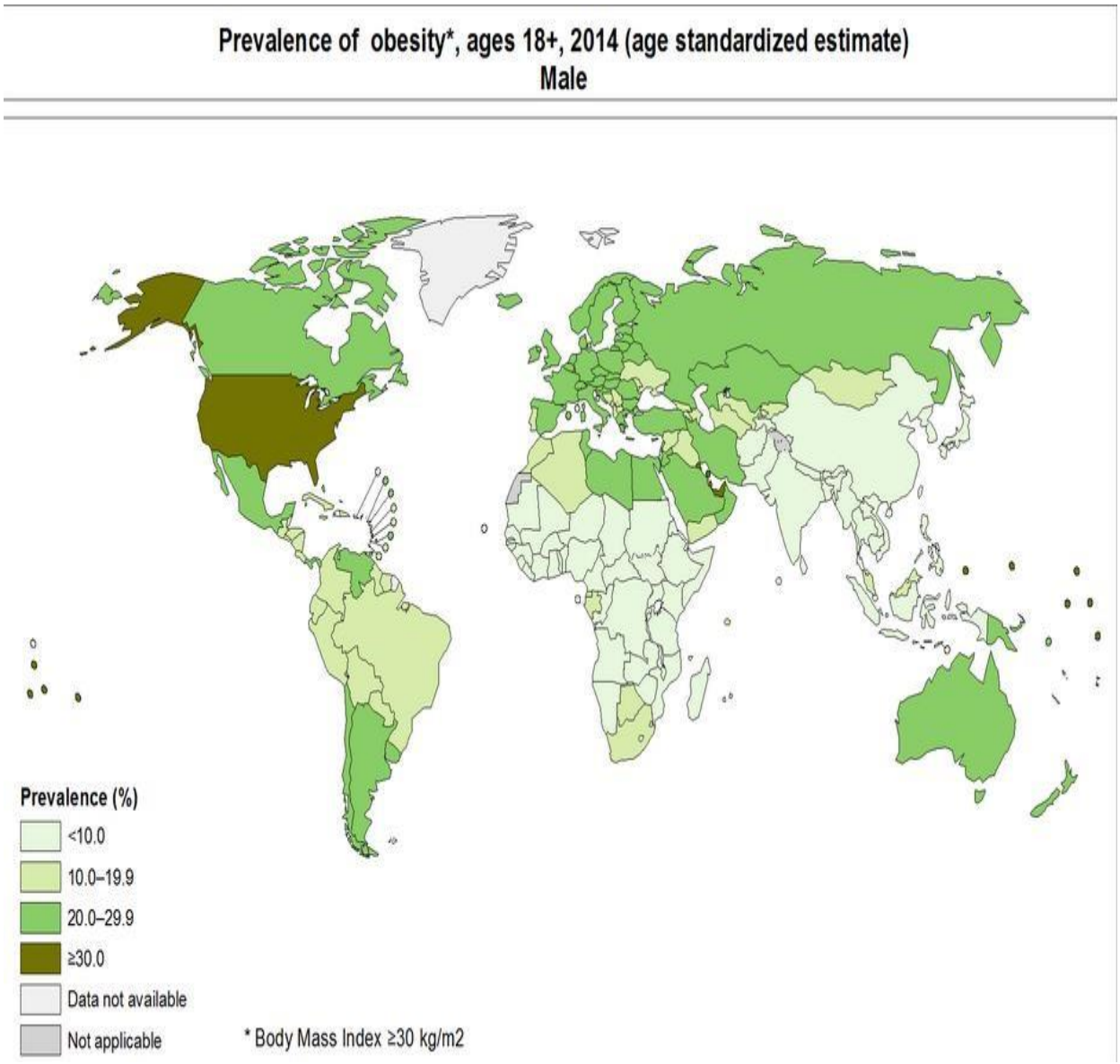
Sources: wikipedia

Height	Small Frame	Medium Frame	Large Frame
4'09"	90-97	94-106	102-118
4'10"	92-100	97-109	105-121
4'11"	95-103	100-112	108-124
5'00"	98-106	103-115	111-127
5'01"	101-109	106-118	114-130
5'02"	104-112	109-122	117-134
5'03"	107-115	112-126	121-138
5'04"	110-119	116-131	125-142
5'05"	114-123	120-135	129-146
5'06"	118-127	124-139	133-150
5'07"	122-131	128-143	137-154
5'08"	126-136	132-147	141-159
5'09"	130-140	136-151	145-164
5'10"	133-144	140-155	149-169

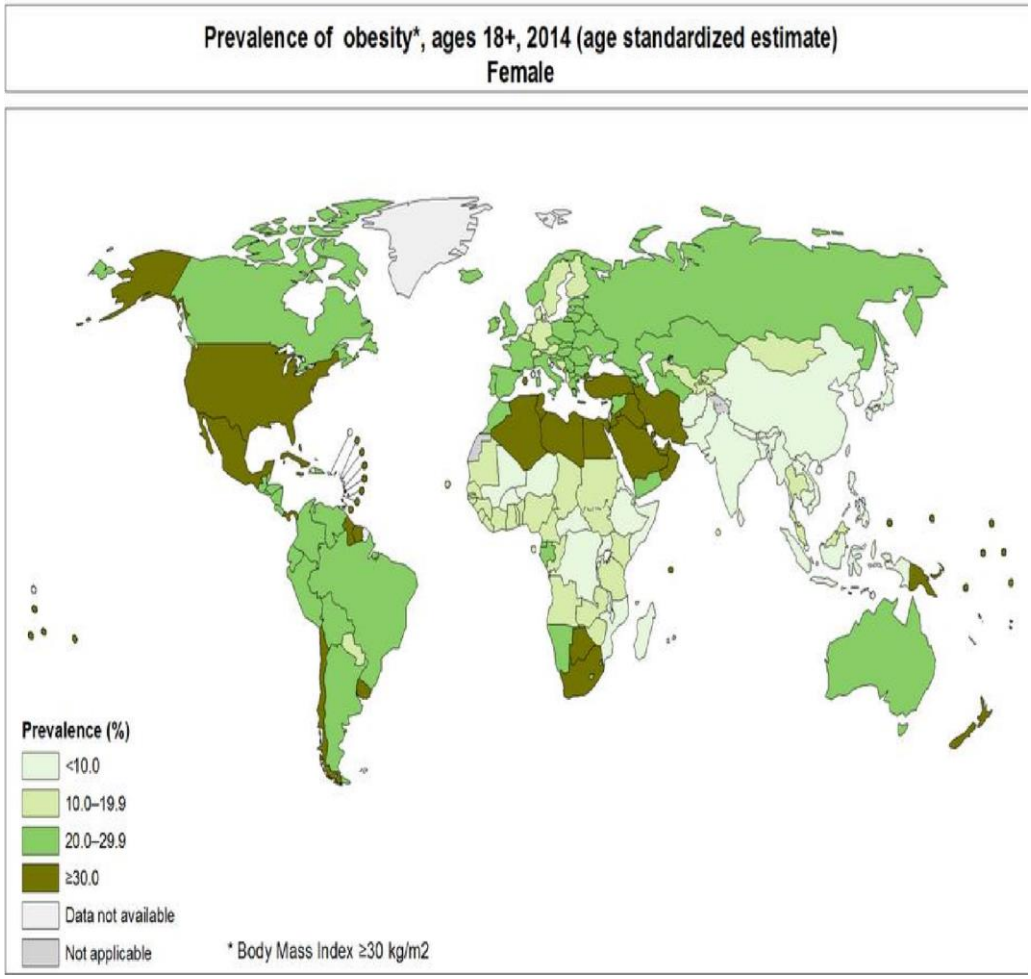
Metropolitan life Insurance Company, 1959, Body Charts for Females



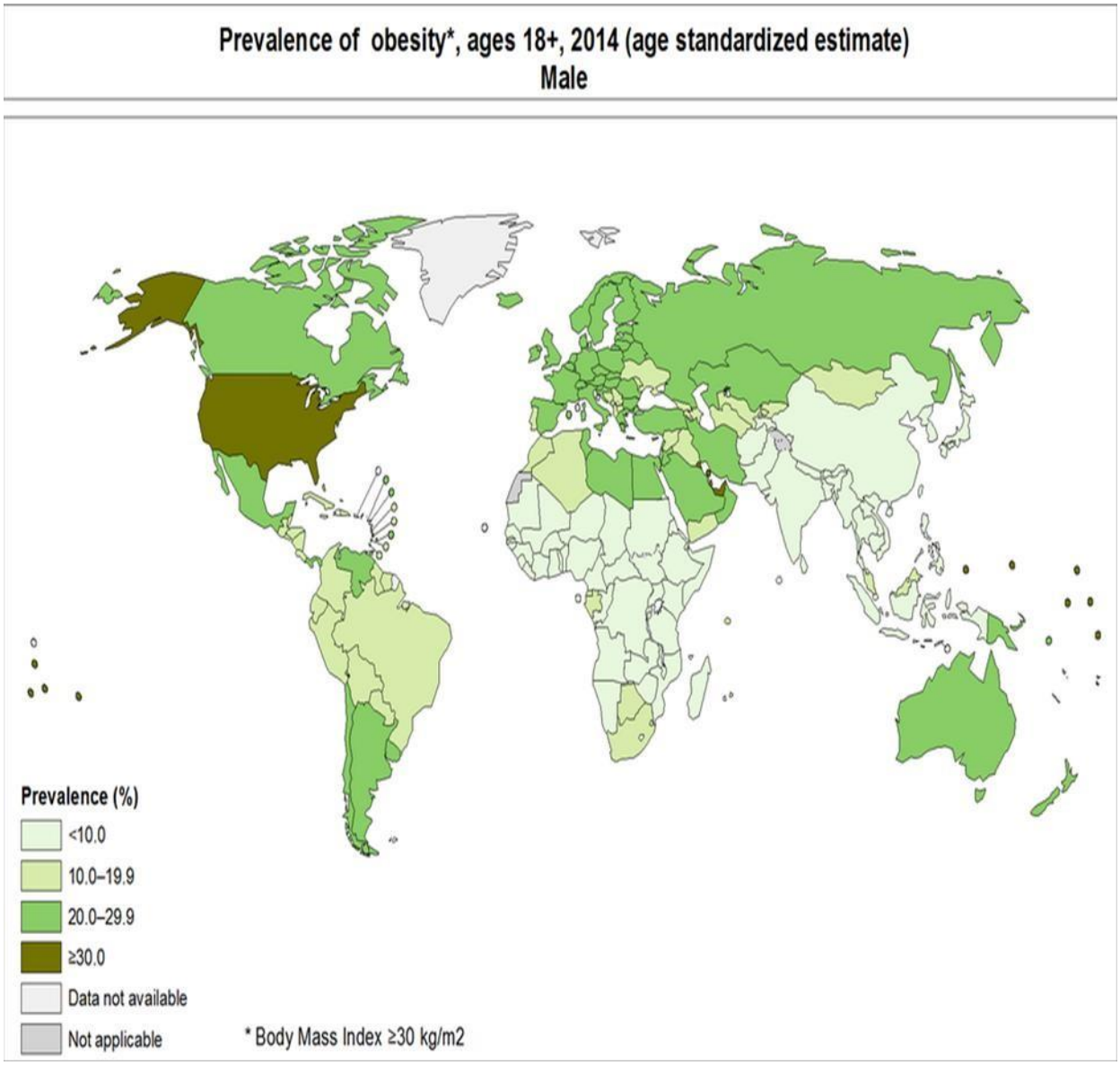
Sources: world obesity federation, WHO (Guardian, October 10, 2015)



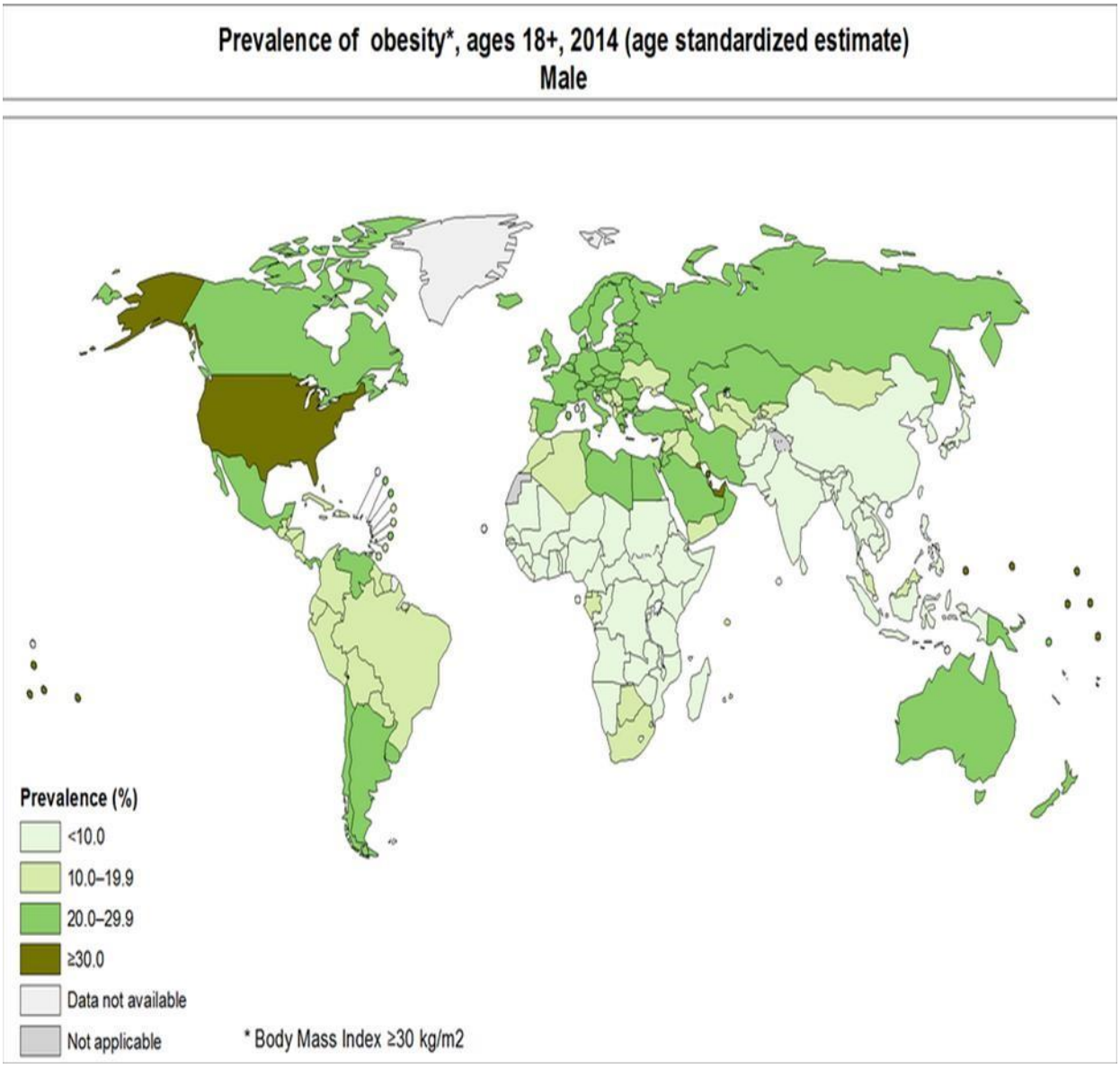
Sources: WHO maps, 2015



Sources: WHO maps 2015.

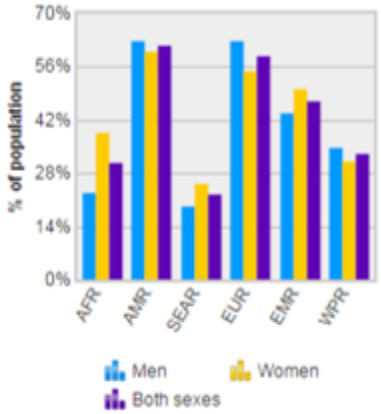


Sources: WHO maps, 2015.

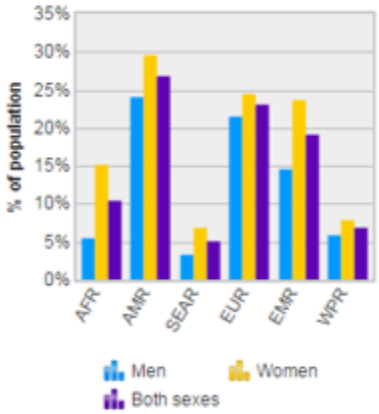

Prevalence of obesity*, ages 18+, 2014 (age standardized estimate)
Male
Prevalence (%)
<10.0
10.0–19.9
20.0–29.9
≥30.0
Data not available
Not applicable
* Body Mass Index ≥30 kg/m2

AMR-America

AFR-Africa
SEAR-S.E Asia
EUR-Europe EMR-E. Mediterranean
WPR-W. Mediterranean

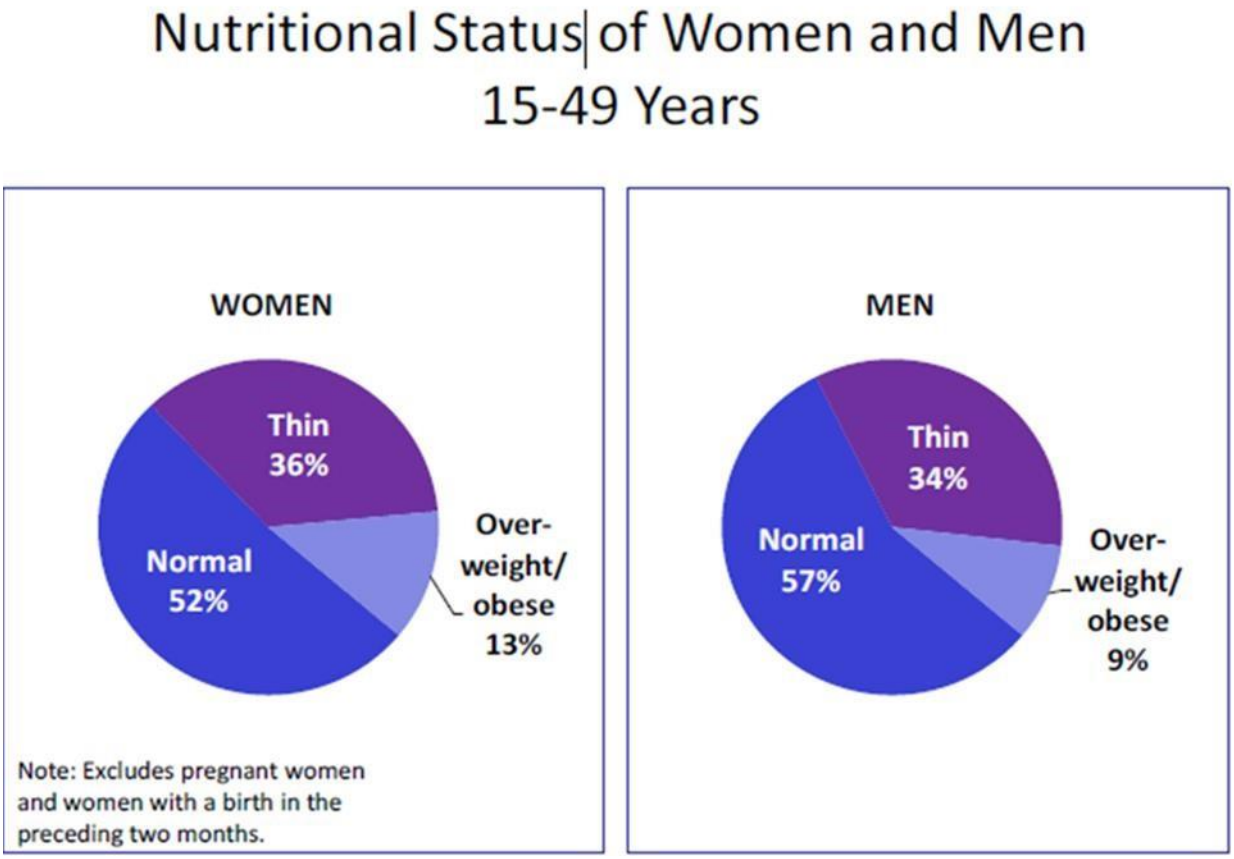


OVERWEIGHT
In 2014, the prevalence of overweight was highest in the WHO Region of the Americas and lowest in the WHO Region for South-East Asia



OBESITY
In all WHO regions women were more likely to be obese than men in 2014

Source: WHO Graphs 2015.



Source: Nutrition in India, NHFS- 3(2005- 2006), Ministry of Health and Family Welfare, India

Nutritional Status of Women and Men 15-49 Years by City and Slum/Non-slum Area

City/area	Percent of women		Percent of men	
	Too thin	Overweight/ obese	Too thin	Overweight/ obese
Delhi	14	27	15	18
Slum	21	20	22	11
Non-slum	13	29	13	20
Chennai	16	39	23	23
Slum	18	34	27	18
Non-slum	15	41	22	25
Hyderabad	21	33	22	25
Slum	21	31	25	22
Non-slum	21	34	21	25
Indore	25	22	21	14
Slum	33	19	26	9
Non-slum	23	23	20	15
Kolkata	16	30	20	18
Slum	21	25	23	15
Non-slum	14	32	19	20
Meerut	20	30	23	19
Slum	22	25	26	16
Non-slum	19	34	21	21
Mumbai	22	27	25	18
Slum	23	25	26	16
Non-slum	21	30	23	21
Nagpur	31	19	35	13
Slum	36	14	41	10
Non-slum	28	23	31	16

Source: Nutrition in India, NHFS- 3(2005- 2006), Ministry of Health and Family Welfare, India

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