



HEALTH, CULTURE and SOCIETY

Engaging with the discourse on lifestyle modifications

Evidence from India

Arima Mishra

Volume 1, No. 1 (2011) | ISSN 2161-6590(online)
DOI 10.5195/hcs.2011.28| <http://hcs.pitt.edu>



This work is licensed under a Creative Commons Attribution-NonCommercial-No Derivative Works 3.0 United States License.



This journal is published by the [University Library System](#) of the [University of Pittsburgh](#) as part of its [D-Scribe Digital Publishing Program](#), and is cosponsored by the [University of Pittsburgh Press](#).

Abstract

Lifestyle modifications through a range of health care practices are considered central to the management, control and prevention of chronic non-communicable diseases. While there is a critical perspective on the epistemologies of such global health discourses in existing literature, empirical evidence on how people engage with such prescriptive lifestyle modifications in different cultural contexts is very limited. The paper in this context draws on illness narratives of heart patients to discuss about the anxiety and uncertainty expressed by patients and others about notions of what constitutes 'healthy' and 'risky'. It specifically unpacks the global-local dynamics in the construction of risk and healthy lifestyle and examines the contexts in which such global discourses are embodied, resisted or negotiated in different cultural contexts. The paper also examines how global health discourses travel to local sites through popular press. The paper draws on evidence collected through analyzing two Indian national English dailies and in-depth interviews with heart patients and their family members in Delhi, India in 2007-2008.

Keywords: *lifestyle; discourse; risk; patients; India*

Engaging with the discourse on lifestyle modifications

Evidence from India

Arima Mishra¹

I. Introduction

Lifestyle modifications through a range of health care practices are considered central to the management, control and prevention of chronic diseases such as diabetes, cancer and cardiovascular disorders which are often termed as ‘lifestyle diseases’. Lifestyle modifications in dominant public health discourse imply that individuals are largely responsible for their *own* health, being able to lead healthy lives by engaging with a range of health care practices including healthy diet; being physically active; managing stress; controlling obesity; undertaking regular screening check-ups, etc., The rationale for a healthy lifestyle lies in the epidemiological evidence on the nature of risk factors for most of the chronic non-communicable diseases. Sociologists however have gone beyond these limits to locate such rationale in the larger context of changes originating from a) disease patterns; b) modernity and, c) social identity.²

Epidemiological transition suggests that chronic non-communicable diseases are the major sources of morbidity and mortality across the world. A wealth of epidemiological evidence additionally demonstrates that these diseases can indeed be controlled and prevented through changes in personal lifestyle patterns that constitute major behavioral risk factors. Some of the commonly known behavioral risk factors are sedentary lifestyle; unhealthy diet; smoking; obesity and stress. The epidemiological transition and evidence on prevention of chronic diseases imply that individuals are largely responsible for leading a healthy lifestyle to avert risks of these diseases.³ Cockerham thus argues: “Greater personal responsibility means that achieving a healthy lifestyle is more of a life or (time of) death question.”⁴

1 Faculty, Institute of Public Health, Bangalore

2 See Cockerham, William. “Health lifestyle theory and the convergence of agency and structure”. *Journal of Health and Social Behaviour*, 46 (2005): 51-67, Giddens, Anthony *Modernity and Self-identity: Self and society in late modern age*, Stanford: Stanford University press 1991, Turner, Bryan *Regulating Bodies : Essays in medical sociology*. London: Routledge 1992

3 See Mishra, A. *Deconstructing self-care in biomedical and public health discourses* In *Health, Illness and Medicine: Ethnographic Readings* London: Routledge 2010, for a genealogical analysis of debates around self-care in management of chronic illness and its risk factors. Also see Lalonde, M. *A new perspective on the health of the Canadians*, Ottawa, Government of Canada 1974, Crawford, Robert. *On a cultural account of health: Control, release and the social body*, in, *Issues in the political economy of health care* ed John McKinley , pp: 60-103, New York, Tavistock 1984

4Cockerham, P. 52 *Health Education and Social Behaviour*, 2005

Along with changing disease burden, sociologists have shown that changes arising from a new form of modernity⁵ pervaded all aspects of life including family; kinship; patterns of stratification and health. More specifically, in the field of health, such changes are marked by the use of rhetoric where we hear, and very much read, of patients as partners who are expected to participate actively in the process of treatment decisions; be well informed about symptoms, risk factors of diseases and possible courses of treatment. The changes following late modernity also include a shift from a cure to care model due to the nature of chronic diseases that cannot be cured but controlled and managed. Many of these diseases need long term care rather than mere cure from specific episodes of illness. The notion of individual responsibility in health is also supported by the neo-liberal ideology promoting the idea of a rational individual/consumer asserting choices and taking responsibility for these choices⁶

Accompanying such large scale changes patterning late modernity is also the argument that lifestyle consumption habits have become an important marker of social identity rather than mere work or occupation⁷. Following Giddens, Cockerham argues that lifestyles “not merely fulfill utilitarian needs but also give particular material forms to a narrative of self-identity.”⁸ Concerns for leading and building healthy lifestyles have been articulated as important values that need to be sought after and developed. Consequently, leading a healthy lifestyle becomes a marker of positive self-identity and classifies groups into ‘healthy’ and ‘unhealthy’. These concerns for ‘health’ are distinctly visible in scientific, popular and political discourses, though the language and rhetoric used to articulate these concerns can differ to varying degrees and impact. In popular discourse, there are a number of magazines that bear terms such as *Men’s Health*, *Women’s Health*, and *Prevention*. There are specific columns in newspapers on ‘lifestyle facts’, ‘health, body and mind’, ‘Mind, Universe and Everything.’ If leading a healthy lifestyle through averting risk is the established norm and ideal, it also implies that normality is constituted not as a state of the body or mind (the normal and pathological were once drawn at the boundary of a diagnosed disease) but normality as constituted through *doing* health – engaging with a range of health care practices to control risk, in order to achieve and maintain health.

A critical perspective on the epistemologies of such discourses is extensively discussed in contemporary literature⁹. However, empirical evidence as to how such discourses travel to local sites and how different communities engage with such discourse on healthy lifestyle is relatively sparse, more so in developing countries. This study seeks to thus fill this gap and analyze the contexts through which such global discourses are embodied and at times reconstructed in different cultural contexts.¹⁰ Following this objective, three sections mark the present

5 Beck Ulrich, *Risk society: Towards a new modernity*, London: Sage 1992, Giddens, Anthony, *Modernity and Self-identity: Self and society in late modern age*, Stanford: Stanford Univ Press 1991

6 Petersen, A *Risk Governance and the new public health* In Foucault, health and medicine eds Alan Petersen and Robin Bunton 189-206, London: Routledge, 1997, Galvin, Rose “Disturbing Notions of chronic illness and individual responsibility : Towards a genealogy of morals”, *Health* 6.2 (2002): 107-137

7 Annandale, Ellen *The sociology of health and medicine: A critical introduction*. Cambridge, United Kingdom: Polity Press 1998, Cockerham, Cockerham, William. “Health lifestyle theory and the convergence of agency and structure”. *Journal of Health and Social Behavior*, 46 (2005): 51-67, 2005, Giddens, Anthony, *Modernity and Self-identity: Self and society in late modern age*, Stanford: Stanford Univ Press 1991

8Cockerham P. 52 *Health Education and Social Behavior*, 2005

9Galvin , Rose “Disturbing Notions of chronic illness and individual responsibility : Towards a genealogy of morals”, *Health* 6.2 (2002): 107-137, Lupton, Deborah *The Imperative of Health: Public Health and the regulated body* , London: Sage 1995; Petersen, A and Bunton, Robin eds. *Foucault, health and Medicine*, London: Routledge1997; Rose, Nikolas, *The Politics of life itself: Biomedicine, Power and Subjectivity in twenty first century*. Princeton: Princeton University Press 2006

10 This study is part of a larger research on ‘Social Construction of Heart Diseases in India’ which the author was engaged in as a faculty member in the Department of Sociology, Delhi School of Economics, University of Delhi between 2004-2009. The study examines the discourse on heart diseases through a number of sites and methods that include life histories of patients, lay

investigation: the first shows how global discourse of risk and healthy lifestyle travels to local sites through the popular press in India, circulating certain ideas and words which may constitute a “common knowledge” or “public awareness.” The second, discusses the experiences of patients and family members with the everyday demands of maintaining and achieving health. The third section to the study, will draw upon key discussion points.

II. The case of India

India like many other developing countries witnesses a double burden of diseases. Epidemiological data show that the incidence of non-communicable diseases, particularly that of cardiovascular diseases (CVD), cancer and diabetes is on the rise in India¹¹. India supposedly earns the distinction of the ‘diabetes capital of the world.’¹² Reinforcing Bulato and Stephen’s study (1992) on the global estimates of mortality, Reddy and Yusuf argue that mortality attributed to circulatory system diseases would rise by 103 per cent in men and 90 per cent in women during the period 1985-2015. By 2015, these diseases are expected to account for 34 per cent of all male deaths and 32 per cent of all female deaths.¹³ Specific community based studies further reveal that there is a high prevalence of Coronary Heart Disease (CHD) in Indian urban areas¹⁴. Moreover, a recent study reports that 60 per cent of the worlds’ heart diseases are detected in India.¹⁵ While most of these studies do point towards the higher incidence of CHD and diabetes among the urban higher and middle socio-economic sections, recent studies do argue that individuals with a low level of income and education (in both rural and urban areas) are also affected by CHD confirming the global evidence that as CVD and its risk factors mature, all sections of society are affected.¹⁶ Even while epidemiological evidence suggests the rising incidence of cardiovascular diseases, diabetes and cancer in India, there is no concerted Government policy and program on the prevention and control of such diseases. However, the market, including an increased number of private, specialized hospitals, mass media, and other public spaces in large Indian cities, are invariably inundated with information on the burden, management, control and prevention of these lifestyle diseases.

epidemiology that follows discussion/social analysis of a particular episode of illness, media coverage on the issue, research dialogue within the medical community through relevant articles in medical journals. Ethnographic field work for the research was undertaken in Delhi and supported by the Department of Sociology, University of Delhi under the CAS-ASSISH program. The paper was presented in the BASAS conference at the University of Edinburgh, UK. I am grateful to the participants for their valuable feedback on the paper. Some parts of the research on media narratives were published earlier as an occasional paper, Department of Sociology, Delhi School of Economics, University of Delhi.

11 Reddy, K.S. and S. Yusuf “Emerging epidemic of cardiovascular diseases in developing countries” *Circulation*. 97 (1998): 597-601; Reddy, K.S. et al “Responding to the threat of chronic diseases in India, *Lancet* 12 (2005): 1744-1749; Sethi, P.K. et al “Stroke: The neglected epidemic, an Indian perspective” *The Internet Journal of Neurology*, .8.1 2007

12 Mohan, V et al, “Epidemiology of type 2 diabetes: Indian scenario”, *Indian Journal of Medical Research* 125 (2007): 217-230

13 Reddy and Yusuf, p. 598, *Circulation* Vol. 97, 1998

14 Reddy and Yusuf, “Emerging epidemic of cardiovascular diseases in developing countries” *Circulation*, 97 (1998): 597-601, Chadha S..L et al “A 3 year follow up study of coronary heart diseases in Delhi” *Bulletin of the World Health Organization* 71.1 (1993): 67-72

15 Xavier, D et al ‘Coronary artery diseases in India’ *The Lancet* 371.9622 (2008) : 1435-42

16 Gupta, R and Gupta, V.P ‘Meta analysis of coronary heart disease prevalence in India’, *Indian heart journal*, 48 (1996) : 241-245 Ramchandran, A et al, ‘High prevalence of diabetes and impaired glucose tolerance in India : National Diabetes survey’, *Diabetologia* 44.9 (2001) : 1094-1101

‘Take charge of your health’: The media representation of risk and healthy lifestyle

In order to examine the representation of the aspects of health and lifestyle in the print media, data was collected from relevant sections in two of the most widely read Indian national dailies (Delhi editions)—*Hindustan Times* and *The Times of India*—over January 2007–December 2008. Focused was given to specific sections in the newspapers reporting medical research findings on health issues and considered to be the legitimate space for ‘expert knowledge’. Thus one comes across validating references of knowledge through headlined phrases such as ‘*Experts speak*’, ‘*says Study*’, ‘*Research shows*’ ‘*This is not pop science but published in the journal [...]*’ etc., With this, is coupled the citation of statistical figures for added scientific clarity, reinforcement and psychological impact value within public consciousness.

The narrative techniques and strategies through which scientific information about ‘healthy life’ is presented in the media vary from (1) the use of oppositional categories; (2) the emphasis of individual responsibility and implicit blame of the victim; (3) the prediction of morbidity patterns and status of control/prevention of diseases and, (4) the generalization of risk to cover increasing aspects of life.

Use of oppositional categories and assigning individual responsibility

Media narratives, as with all narrative forms, are created through the employment of oppositions. These oppositions in the popular press are expressed through series of social distinctions such as you/us, danger/safety, victims/heroes, laypersons/experts, active/sedentary, fit/unfit, life/death and damage/repair (protection). For example, some of the news items (compiled from both the newspapers consulted) read:

Eating breakfast daily helps to keep [us] **slim and healthy**

Eat Breakfast and **avoid obesity**

How to live **14 years longer**

Obesity knocks **13 years off your life**

Such news items (emphases added) oppose slim and obese, as healthy and unhealthy social categories, thereby reinforcing the social norm of slim=healthy. Similarly, damage is contrasted with how to stop and protect against potential health adversities where even choosing to live longer is contrasted with living 13 years less. One could go on with citing more examples of such oppositional interplay that form the rationale of health news articles and the eventual healthy “choice” of the public readership. These oppositions, moreover, help to depict a common plot – why and how, individuals should lead a ‘healthy lifestyle’, which is the ‘norm’.¹⁷

17 The use of similar oppositional categories and the strategic use of adjectives to alert popular consciousness in the media has been discussed in other studies by Lupton, Deborah ‘Analysing the media coverage’ In *The Fight for public health: Principles and practice of media advocacy* eds Simone Chapman and Deborah Lupton London: BMJ Publishing Group 1994 and Seale, Clive ‘Health and media: An overview’, *Sociology of Health and Illness* 25.6 (2003): 513-531

The information to hand clearly spells out individual responsibility and choice through a psychological strategy composed of implicit notions of blame, furnishing guilt on the part of individuals who do not engage in such healthy behaviours or do not care for the risk that might be involved in unhealthy behaviour. Thus some of the headlines in the newspapers read:

'To be healthy, you have got to work up a sweat' 'Strokes among middle-aged women triple: Belly fat to blame'

'Mums, kids binging on junk food and loving it (this is along with a heading in the text box on 'Fast track to obesity'¹⁸

Along with individual responsibility, health is displayed as achievable and diseases preventable largely through modifying individual lifestyle. Health information in the newspapers implies that people's beliefs and knowledge directly impact upon their behaviour and hence health intervention and promotion programs should be oriented towards furnishing people with the correct health knowledge and consciousness of disease management. There is a great deal of public health literature, however, demonstrating the relationship between educational campaigns and the modification of people's behaviour is much more complex than what it is commonly assumed to be¹⁹. Health information in the Popular Press (which is indeed an institution) uses a language that does not merely state that individuals are responsible, but that they can in fact (and hence must) do and perform health. Thus we read:

'Five easy steps to live longer and well' 20 (should be superscript?)

'Being diagnosed with heart disease need not always mean a lifetime of angioplasty, angiographies and bypass surgery. A daily dose of yoga, along with a low cholesterol diet and an active lifestyle can be a recipe for further progression- and in some cases- the reversal of heart disease'²¹

The implication here is that since these practices are easy, individuals should choose to indulge in self-discipline and self-regulation. Capitalizing on an individual's responsibility and choice, the pharmaceutical companies, the fitness industry and the food industry likewise offer a range of readymade packages facilitating a healthy life in a timeframe suited to the demands of modern lifestyles.

18 The Times of India, January 19, 2008, The Times of India February 22, 2008, Hindustan Times, October 27, 2007

19Williams,Simon J 'Theorising class, health and lifestyle: Can Bourdieu help us?' *Sociology of health and illness* 17 (1995): 577-604, Blaxter, Mildred *Health and lifestyle*. London: Routledge 1990, Lawton, Julia 'Colonizing the future: Temporal perceptions and health relevant behavior across adult life course', *Sociology of Health and Illness* 24.6 (2002): 714-733, Dean, K. 'Self-care components of lifestyle: the importance of gender, attitudes and social situations' *Social Science and Medicine* 29.2 (1989): 137-152 to cite a few

20 Hindustan Times August 16, 2007

21Hindustan Times, September. 30, 2007 p. 20

The Language of Crisis

The language of crisis and emergency (with carefully chosen adjectives, superlatives and nouns) is the vehicle carrying data on prevalence, incidence and predictions of the burden of diseases. For instance, the prevalence of heart diseases in India is reported as “3 million people die of cardiovascular disease (CVD) every year, 30% of all deaths are caused by CVD, 5 million will die of CVD by 2020.”²²

Here is how sleeplessness plays **havoc** with your health

More than genes, it is the way we live that determines our risk of heart disease, India’s **number one killer**

You think more and more people around you are being diagnosed with the **dreaded C-word**? Lifestyle changes, increased longevity and higher detection rates have made cancer the **fourth largest killer** disease in India: The Mysterious **Trigger** (emphases added)²³

The use of quantitative data to express the burdens of disease acts as one of the ‘technologies of trust.’²⁴ (this footnote no. should be superscript?) It successfully evokes a sense of threat for the future and creates a situation of crisis, disequilibrium and emergency. It calls for everybody’s attention to the social problems i.e. the threat of disease. And as demonstrated in other studies, the metaphors of war, battle and crisis are frequent with reference to the need for management of health in the media.²⁵

What is risky? Etiologies of diseases

Two points are worth analyzing here to understand what constitutes risky and healthy. The first is identification of risky behaviors that need to be averted. Here one witnesses the reporting of increasing expansion of areas of life that are potentially risky. The risk checklist that is provided in the media includes a wide array of social spaces of the individual. For heart disease, for instance, it includes physical factors such as smoking, high blood pressure, low HDL, family history, diabetes, abdominal obesity and psychosocial factors that include anger/hostility, anxiety, social support and chronic stress²⁶. Hence one must be screened possibly for a range of risk factors to ensure an existence free of heart risk. While men above 45 are considered risky, children are also covered under this risk analysis. Childhood obesity, moreover, and its potential for many of these lifestyle diseases is a much stronger concern reported in the Indian media, reflecting the larger, global trend medicalizing childhood obesity.

22 Hindustan Times September 30, 2007

23 Hindustan Times, April 15, September 30, 2007

24 Shapin, Steven and Scaffer, Simon *Leviathan and the air pump: Hobbes, Boyle and the Experimental life*. Princeton NJ: Princeton University Press 1985 use this phrase to refer to numbers and other quantitative techniques that help to separate facts from opinion, research evidence from anecdotes and render facts a kind of mechanical objectivity.

25 Martin, Emile “Towards an anthropology of immunology” : *The Body as nation state*” *Medical Anthropology Quarterly*, 4.4: (1990): 410-426 Saguy, Abigail C and Almeling Rene “Fat in the fire? Science, the News media and the ‘Obesity epidemic”” *Sociological Forum* 23.1 (2008): 53-83; Halpin, Michael et al “Prostate cancer stories in the Canadian print media: Representation of illness, disease and masculinities” *Sociology of Health and Illness*, 31.2 (2009): 155-169

26 Hindustan Times, September 30, 2007, January 13, 2008

Secondly, despite ever growing risk factors, one also witnesses contradictory and conflicting information on what constitutes “risky behavior”. Some examples are: Obesity on the one hand is projected as a major disease of the 21st century, and is linked to risking several illnesses, more directly high blood pressure, diabetes, heart disease, stroke and cancer. Substantial sections of the information coverage in newspapers are indeed devoted to ways of controlling obesity, assuming that this is a preventable entity. On the other hand, there are media reports to the contrary, namely that obesity can be hereditary. As we read: British and French scientists have identified the gene that causes obesity. “*Obesity can be inherited*”²⁷ and further, “*Indian-origin researcher finds gene behind heart attack*”, where, “*Now Svati Shah, co-author of the study along with colleagues believe they have pinpointed a gene or marker that can help predict in advance whether someone is at increased risk.*”²⁸ Increasingly, research is oriented towards *why* people overeat, seeking to single out genetic and hereditary tendencies rather than unhealthy behavior. And while obesity is identified as a major risk factor, non-obesity is not necessarily less risky. As one headline reads:

‘Fat chance of an attack? Wrong! The lean and slim also need to eat healthy food and exercise to lower their risk of heart disease’²⁹

*‘[The] Non-obese should not consider themselves fortunate/healthy—lean and slim are also prone to risk factors, Your slim kid can have high cholesterol too(Experts at the Children’s Hospital of Philadelphia have recommended that kids should have a complete cholesterol check up if they have a family history’*³⁰.

In the process of claiming to tame the uncertainty that might be associated with the future, the discourse on risk reported in the media creates further uncertainty. Where does one locate the nature and source of such uncertainty? While further research is needed to analyze the reporting of study findings in medical journals and their import to local media, one hastens to cite Saguy and Almeling’s³¹ findings on a comparative framing of social problems in medical science and news reporting. They jointly argue that the media has a tendency not to cite debates surrounding contradictory medical research findings. The analysis on newspaper coverage also shows the process of the globalization of the media as well as the universalization of strategic language. It often reports scientific findings derived from countries with different demographics, sets of risk factors and leisure activities and hence such findings may not necessarily hold true in terms of cultural variance for a specific context like India.

Though the media has its own rhetoric and narrative techniques, it nevertheless reinforces the larger thrust of global risk discourse to which risk management and the modification of one’s lifestyle is central. While such discourse articulates risk and its management with certainty, evidence on everyday contexts highlights a contrasting picture as to what actually constitutes the risky and the healthy. The following section discusses the experiences of patients and their family members with this everyday demand of lifestyle modification.

27 Hindustan Times, August 16, 2007

28 Times of India, January 4, 2009

29 Hindustan Times, January 13, 2008

30 Hindustan Times, February 7, 2008

31 Saguy, Abigail C and Almeling Rene “Fat in the fire? Science, the News Media and the ‘Obesity epidemic” Sociological Forum 23.1 (2008): 53-83

III. The Data

Illness narratives were elicited through in depth interviews with patients diagnosed with heart disease in 2007-2008 (N=50, M= 27 and F= 23). Patients were recruited from both hospital (one private tertiary hospital specialized in research and clinical care of CVD) and community settings in Delhi, India. For the former, patients who were admitted in the general wards (and were recovering) and those in the Out Patient Department (who had come for follow up) were interviewed. Permission to obtain oral testimony was granted through the hospital authorities. Patients in community settings were identified through snowball sampling. The patients interviewed belonged to the middle class who had access to private health care. They were in different stages of their illness trajectory spanning from the recently diagnosed; those recovering in the hospital following surgery; those attending for follow up, and in some cases those patients claiming to have been completely ‘cured’ and thereby agreeing to narrate their illness experience in terms of past episodes. The age group of patients ranged from 30-62.

The analysis additionally draws upon the author’s observations on ‘everyday speech’ (that took place in the author’s networks of families, neighborhoods and offices) with regard to specific episodes of heart diseases which people may have either heard or witnessed.³²

Choosing a healthy lifestyle

Lifestyle discourse is premised upon the notion of individual agency and choice in leading a healthy life by controlling multiple risk factors. Such a choice framework explains failure to engage with this discourse either in terms of lack of knowledge or lack of self-control. Lay illness narratives though emphasizing individual agency highlight a series of constraints in exercising such choice. Such constraints range from the lack of feasibility (lifestyle prescriptions are often considered inconsistent with people’s lived realities); lack of precision (risk factors of specific diseases, information on specific components of lifestyle that need to be modified etc); lack of trust in expert knowledge (as consequence of the first two constraints along with the risk explanations often failing to account for incidence of specific diseases in real life situations), and lack of access to resources (time and money).

I wish I had the magical bracelet to cure my disease!

Many patients shared their experiences of how many of these healthy prescriptions are inconsistent with their daily lived realities even when exerting compliance. A 60 year old woman belonging to a lower middle class family had a history of diabetes and high blood pressure and had been recently diagnosed with acute MI at the time of interview in 2007. The following excerpt highlights the anxiety in her attempts to modify her lifestyle patterns based on her understanding of the doctor’s prescription.

There are elaborate restrictions on food. The doctor says I should have only two whole grain chapatis (Indian bread) per meal. You know, I have been eating four chapatis all these years! I know I need that much to eat to feel energetic and active. The doctor had strictly advised me to avoid all fried and spicy stuff and suggested that

32 See Chaudhary, Nandita Listening to culture: Constructing reality from everyday talk. Delhi: SAGE 2004 for insights into the methodological use of everyday talk to understand culture.

if I feel hungry I should have some roasted snacks. These are so tasteless. Once in a while it is okay but how long one should survive on this? It is so painful! I must feel fit enough to get on with life. If I follow so many restrictions on food, how can I be healthy? I am taking so many medicines (shows her prescription and the bundle of tablets) and to compensate this I must drink 250 ml of milk everyday, and I do. I can't take skimmed milk, it is so bland! I take full cream [...]

I have been advised to go for a daily walk in the morning. I am trying to go in the morning but if I take a walk for some time, my feet swell. If I try to control my heart problem, my sugar worsens. If I control sugar, then my BP goes up for some reason. I go to the park and sit there to take fresh air. It feels good. I am trying my best to follow all prescribed suggestions of the doctor but how long should I do this? I have heard about this bracelet that can cure one's BP and heart disease. I wish I had that!

This embodied experience of the patient entails several tensions which lay bare the series of complex relationships between her role of being a patient and being healthy; the notion of care through lifestyle modifications; seeking cure through wearing a bracelet; a dilemma between healthy and unhealthy choices (the number of breads, skimmed milk vs. full cream), as well as desirable and feasible choices. Here, the prescriptions for a healthy diet are considered personally unfeasible on grounds that the prescribed diet does not conform to the patient's individual bodily requirements. The patient hence renegotiates the prescribed diet in order to make it healthy for herself. In this case, personal bodily experience holds greater value than the universal prescription of a low fat healthy diet.

Talk on healthy diet

One must emphasize here that the significance of a healthy diet is never underestimated in everyday conversations. In the majority of instances, of all the components of lifestyle modifications, what we commonly call "healthy diet" and "physical activity" receive heightened attention of health conscious middle-class people in Delhi. In fact, engaging with such health practices is an important marker of social difference and distinction in everyday contexts. Thus those who binge on junk food most of the time are considered foolish, lazy and lack foresight compared with those who invest their time in preparing homemade food and/or resort to a diet packed with fresh fruits and vegetables. Similarly those who conform to a daily exercise regimen are considered sophisticated in contrast to those who do not devote time to exercise (evoking feelings of guilt and lack of self-determination among the latter population).

Despite the emphasis on the notion of a healthy diet, views on *what* constitutes a "healthy diet" vary. The responses of the respondents on this range from a '*less oily diet with more vegetables and fruits;*' '*all homemade food as necessarily healthy contrasted with outside food;*' '*disciplined eating behavior (not skipping meals, not frequent partying etc) as healthy;*' '*eating everything in moderation is healthy as the body should be used to all kinds of food;*' to, '*sacrificing anything with causing pain to the body and mind is unhealthy.*'. Individuals draw upon a number of sources (doctor's advice; other practitioners and healers; the media; past experiences of one's own illness and that of relatives/friends) to talk about healthy diet.

The discussions on healthy diet among patients and others highlight two important points: a) the significance of individual bodily experiences (as individual body constitution is important to know what suits the body) discounting the notion of a universally prescribed healthy diet implied in global public health discourse and, b) while lifestyle discourse brings together diverse areas of life (diet, exercise, stress, smoking behavior) each component, its meaning and experiences in the local context deserves research investigation. For example, Wilson's work in Kerala, India, discusses the centrality of food to ideas of a 'good life,' the nurturing of social relationships and a principal source of embodied pleasure and health. Such symbolic cultural values of food can consequently override notions of a prescribed healthy diet to control risks of cardiovascular diseases.³³

Limits of the language of certainty: Plural explanations

The discourse on risk and lifestyle modifications employs a language of certainty in terms of its risk factors, management, control and prevention. However what emerges in most of the narratives is the lack of such certainty when trying to comprehend individual episodes of illness (which have resulted in deaths) or individual experiences of controlling and preventing illness. In real life situations, people narrate cases of heart attack which did not succumb to any of the common known risk factors. This is despite the fact that people refer to such risk factors when talking about the incidence of such disease in generalized terms (people who smoke, people who are fat, people with high B.P, diabetes are at risk to heart disease etc.). With these specific illness experiences, however, the limitations of such risk factors are evident, and explanations resonate with the confusion on the over emphasis on risk factors reported in the media. One comes across frequent common parlance descriptions: '*he is so thin and still has high B.P! He is a strict veggie; you know a kind of salad person and yet suffers from heart disease!*' etc., The incidence of illness episodes is comprehended through a number of explanations which include factors that reside in the immediate social context or even moral explanations pointing towards the limitation of individual lifestyle explanation. The following excerpts serve to substantiate this point:

He was highly ambitious. His promotion was due and he was overworked. He never shared his feelings with others. That must have proved costly. It is very important to share and lighten your heart and mind. Of course he also had diabetes but I think it was under control. It is sad, he was so young! He left two young daughters who are not settled yet (Author's interview with a 40 year old male employee in a corporate house reacting to the death of his colleague who died of heart attack)

He is otherwise a disciplined man in terms of diet. He cycles everyday for four km after he goes back from office. But you know he is a very bad boss. He has sacked so many of his employees, created trouble for other subordinates. Don't you think he would not have invited their curses? This was a message sent by God to be a more humane boss (Author's interview with a 45 year old male reacting to his boss's sudden episode of heart attack in the office).

³³ Caroline Wilson "Eating and eating is always there: Food, consumerism and cardiovascular diseases, some evidence from Kerala, South India Anthropology and Medicine 27.3 (2007): 261-275

A 59-year-old highly educated man, belonging to the upper middle class, had been suffering from Type II diabetes for the last ten years. He was admitted to the private heart hospital and was recovering at the time of interview. He shares his experiences:

I have been suffering from diabetes for the last 10 years. I know I have neglected my health for a long time. You know we Punjabis³⁴ tend to eat rich food. In fact, the ration that we get is faulty - adulterated. Also the company where I was working is the culprit. On the slightest provocation, we used to arrange parties. I was a perfectionist at work. I used to get recognition for that. But once my new boss questioned me and doubted my potential, I handed over my resignation. I have never looked back. One must believe in God. He is watching us. At the same time, I feel that one cannot attribute diseases and illness to God only. We have neglected our health by not taking fresh air and by indulging in bad food habits. Everything must be blamed. We have purchased these diseases. It is important to have a positive mind. I believe in Yoga and meditation. They have immense potential to make you calm and peaceful. One should not think too much of illness, the more you think, the more ill you are. I always come here to get myself treated but my heart is okay. In fact the doctors are surprised to learn that my heart is perfectly normal despite my history of complicated diabetes. I am determined to take care of myself. I need to get my two children married off. Life is so uncertain! Disease sees no age. Can you believe this 28 year old man (referring to his co-patient) having a heart attack!

As is evident, the excerpts above yield several explanations to situate the cause of the illness episodes and make meaning of the illness experience. These range from being over-ambitious; poor social relationships (being off hand with fellow colleagues or not being able to share with them); eating rich food (not as an individual but as part of a social community of Punjabis for whom rich food is a marker of rich taste); frequent partying; lack of fresh air; individual temperament (being a perfectionist here is a valuable yet fragile asset because this is subject to recognition/rejection from others with whom one interacts), and, God's will. Yet despite pinning down so many factors, the uncertainty of life (and hence incidence of illness) is accepted.

Such findings on the limits of lifestyle explanations and individual responsibility in accounting for the distribution of illness and misfortune reinforce the findings of other studies³⁵. While the randomness of the distribution of misfortune is accommodated through destiny, fate etc., as with other contexts, in India such accommodation also accompanies a search for more precise explanations from parallel discourses on health and healing. For instance, the recent demand and upsurge of yoga and *pranayam* (breathing techniques) in India is partly explained in terms of these discourses claiming to offer more convincing explanations for cause and cure of specific diseases. These parallel discourses explain many of the lifestyle diseases in terms of the local cultural etiologies conforming to the conception of an integrated body (following the traditional systems of medicine of Ayurveda in India). Diseases, for instance, are explained in terms of the lack of *pranic* (prana is translated as air, the vital energy that includes cosmic energy) energy to the relevant *chakras* (energy centers) residing in specific organs. As a

34 Punjabis are residents of the state of Punjab in India.

35 Davison, Charlie et al ' Lay Epidemiology and the prevention paradox : The Implications of coronary candidacy for health education' *Sociology of Health and Illness*, 13.1 : (1991) : 1-19, Davison Charlie et al ' The Limits of lifestyle :Reassessing 'Fatalism' in the popular culture of illness prevention' *Social Science and Medicine* 34.6 (1992) : 675-685, Mendenhall, Emily et al 'Speaking through diabetes : Rethinking the significance of ;ay discourse on diabetes' *Medical Anthropology Quarterly* 2010

remedial measure, specific breathing techniques are practiced to energize these centers, relevant to the organs, and cure the diseases.³⁶

It is the search for such specificity and an order of meanings to an otherwise chaotic risk discourse that draws many patients and others to complementary and alternative therapies (more importantly drugless therapies) in India³⁷. Risk discourse is considered problematic as neither the risk factors are precise, nor does controlling these risk factors necessarily ensure cure. While these parallel discourses also incite autonomy and self-governance (doing *pranayam* daily, taking care of one's diet and sleep), they are more acceptable, configured by healers in local cultural idioms (breathing techniques for instance are articulated as original, *desi* (belonging to one's own country, simple and scientific).

The search for cure

The search for precision is not limited to explanations of risk, for it also extends to the outcome. The notion of cure contests the idea of control of chronic illness in biomedical discourse. What would cure mean for patients with chronic illnesses such as diabetes, heart disease or high blood pressure? The narratives and oral testimony obtained open up onto a number of meanings:

Cure is: a) when the patient is not on medication as consequence to intervention. Here it refers to biomedical drugs only as these are perceived to be foreign and have potential side effects while Ayurvedic therapies are considered trustworthy; b) when the patient presents no overt symptoms requiring emergency care for at least one year; c) it also means simply 'feeling good' getting on with daily activities, and, d) cure is achieved by developing a positive and healthy mind – not thinking of oneself as ill, for the more one thinks about the illness the more ill one becomes. The efficacy of pluralistic therapeutic practices is necessarily judged through such varied notions of cure, and as evidenced by these meanings, the search for cure (in which the narratives are ingrained) implies the search for an identity of being 'normal'. Many patients, for example, recounted their illnesses in terms of past episodes, their voice embodying a normal identity in the present context.

Prevention appeals mostly with herbal natural remedies (naturopathy is the latest craze among the urban middle class), yoga and meditation which are localized. The notion of prevention in lifestyle discourse is looked upon as the dependence on expert scientific knowledge and professional health care. Such dependence is expressed in terms of resentment towards visiting doctors for frequent follow ups and succumbing to a series of clinical tests in the absence of any visible signs of illness. Thus a 50 year old hypertensive patient, who had come to consult the cardiologist, expressed her refusal to undergo angiography, remaining at variance with the practitioner's suggestions. The reason for her refusal is expressed in terms of '*Bandhjatehein* (one gets tied to the doctor's advice for a series of tests and medical regimen). She expands:

36 To give a specific example, the manipur chakra or Solar Plexus is located in the navel and covers all the organs of the digestive system. The Kapalhatipranayam that includes the forceful exhalation of air energizes this chakra and along with it the relevant physical organs and helps cure diabetes, obesity, flatulence, constipation, acidity etc.

37 See Ruby Bhardwaj's work on 'Medical pluralism in India: The interface of complementary and alternative therapies with allopathy' In Health, Illness and Medicine: Ethnographic Readings ed Arima Mishra 2010, on patients' experiences with such drugless therapies.

There is no limit to tests and scans of the body particularly with so many varieties of medical technologies. One has to do an ECG, echocardiogram, treadmill and it goes on and on. These technologies inevitably will find something wrong in the body. So why tamper the body through these tests when things are going normal and under control?

Negotiating healthy and unhealthy choices

The engagement with lifestyle discourse is marked with continuous negotiations by individuals in terms of what constitutes the healthy and unhealthy as well as desirable and feasible choices. Negotiating the right balance between ‘how much and how less’ orbits a complexity of private and public distinctions be it in terms of diet; physical activity; stress or any other risk factor, to larger concerns of self-control vs. out of control; the complete neglect of health vs. obsession; taste/pleasure vs. sacrifice (in the pursuit of health); universal prescription vs. individual body constitution, care vs. cure, and present vs. future.³⁸

While the value of health is not negated by patients and others, the notion of health is constantly negotiated and reconstituted in terms of people’s lived experiences and relational contexts. What seems problematic in the dominant discourse on lifestyle modifications is a notion of health that is used in a restricted sense of controlling risk factors (though risk includes increasing aspects of human lives but is evidently measurable) and is necessarily linked with bodily practices. Rich ethnographic literature exists in medical anthropology that reflects the varied cultural notions of health. In an interesting ethnographic work with cancer patients, Kagawa-Singer discusses how these 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.’³⁹ Townsend, Wyke and Hunt furthermore, discuss the ethical and practical dilemmas in accounts of patients living with multiple morbid conditions in a study based in the United Kingdom.⁴⁰ While clearly acknowledging that 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. Often, the compulsion to play an expected social role and project a positive identity predominate the need to control one’s physical symptoms.

The notions of health need to be explicated in the context of daily lived realities as well as the larger context which furnish meanings to the individual’s everyday experience rather than the mere objective measurement of life in terms of risk factors. While the patients in the aforesaid cases do not ignore or discount their physical realities, they make sense of them as a means to developing a positive self. One could have different culturally sanctioned idioms to make sense of such realities and perhaps situate them around different cultural conceptualizations of self-hood. Engaging with the discourse on healthy lifestyle is about nurturing a desirable self and identity. Evidence on lived experiences enables us to contextualize a range of responses that one witnesses when people talk about the day-to-day practices of health care and a desirable self with or without diagnosed illness (what is health? What is

38 The endless playing out of moral tensions in the pursuit of health is well discussed in the works of Crawford, R ‘The ritual of health promotion’ In *Health, Medicine and Society: key theories, future agendas* eds S.J. Williams, J. Gabe and M. Calnan, London: Routledge 2000 and Pajari, P et al ‘Negotiation over self-control and activity: An analysis of balancing in the repertoires of Finnish healthy lifestyles’ *Social Science and Medicine* 62 (2006): 2601-2611

39 Kagawa-Singer, M ‘Redefining health: Living with cancer’ *Social Science and Medicine* 37.3 (1993): 295-304

40 Townsend, Anne ,Salle Wyke and Kate Hunt 2006 “self-managing and managing self- Practical and moral dilemmas in accounts of living with chronic illness” *Chronic illness* 2.3 (2006): 185-194

risk? Why engage in health and *how*?). Hence some of the expressions in individual narratives (in the author's study) act as a detailed surface to deeper cultural complexities: *'denial of illness;'* *'the more you think about the illness, the more ill you will be'*, *'reinforcing a notion of cure for chronically ill patients;'* *'I need to be healthy because I need to get my two children married off;'* *'to hell with tomorrow, one should live in the present;'* *'when there is no guarantee for the future why worry about it today;'* *'everybody has to die one day so why not lead life to the full, everything in moderate is good in life;'* *'you must think positive which is what gives you the strength to manage all adversities in life;'* *'whatever has to happen is bound to happen;'* and, *'everything is destined or even luck'*.

IV. Discussion

Our analysis demonstrates the global-local dynamics in the construction of risk and healthy lifestyle, and how the media acts as an important mechanism through which global discourses travel to local sites. Through discursive strategies, the media offers an effective site of bio pedagogies for a series of prescriptions designed to regulate bodies and lives in the name of health and its assurances. The purpose of analyzing the media and its linguistic logistics of communication is precisely to argue that it effectively circulates ideas about the global discourse on risk and lifestyle. Though the media has its own dramatic rhetoric, it nevertheless conveys the larger message – chronic non-communicable diseases can be better prevented and controlled by individuals through lifestyle modifications. Such modifications necessitate the continuous work on one's bodies to eat healthily, to be physically active, to manage stress, to control obesity, and to give up smoking etc.

As the evidence on the lived experiences of patients and others suggests, while there is a larger engagement with such global discourses, there exist several underlying tensions which often lead to the reconstruction of such discourses. The experiences of patients and others contest the limitation of individual choice in resorting to a healthy lifestyle. These experiences highlight several constraints in the exercising of such choice. Qualitative studies on lay discourses of health, mostly in the context of the United Kingdom, have demonstrated *why* and *how* such choice frameworks could be problematic (either due to limits of lifestyle explanations for distribution of misfortune or limits of intentions to colonize the future)⁴¹. The present study reinforces and expands these findings, in order to show how such constraints can be understood in a number of ways i.e. as the search for specificity; the search for cure; the lack of feasibility of prescribed lifestyle in daily lives; the cultural and symbolic values of each lifestyle component; the cultural notions around meanings of life, and other available therapeutic options in the context of medical pluralism (as in India).

The evidence discussed additionally points towards the need for research on unpacking the notion of lifestyle itself and its different components (healthy diet, stress, physical activity etc.,) in varying cultural contexts in order to understand the signification of risk; cure; prevention and health. Such issues are evidently related to issues of self, subjectivity and identity. Chronic non-communicable diseases are looked upon as problems of the developed West despite epidemiological evidence (however limited it be) showing the increasing incidence of such diseases in developing countries like India. Social anthropological research in the Indian context, investigating issues around

41 Lawton, Julia "Colonising the future : Temporal perceptions and health relevant behavior across adult life course' *Sociology of Health and Illness*, 24.6 (2002):714-733

lay discourses of health and lifestyle pertaining to non-communicable diseases, is sparse. This study has sought to fill in this gap and point to a new initiative of research into public health discourse.

Sociologists have recently attempted to present a theory of health lifestyle around the classic agency-structure debate in the social sciences, and to understand the extent to which health related knowledge impacts on health behaviour and actions.⁴² The present study through its analysis of identifying the limitations of individual choice and factors that mediate between lifestyle explanations and actual health behavior, can contribute to these theoretical attempts. As the analysis reveals, lifestyle discourse is mediated through several factors where, along with the circulation of expert knowledge, there is the reality of personal experiences; social contexts, and parallel discourses on health and healing.

Our study, furthermore, thus highlights the need to examine the discourses on healthy lifestyle through the everyday lived experiences of patients and others. Such research on embodied experience and of engaging with global discourses in cross-cultural contexts can enrich the understanding of health and lifestyle, explaining why health promotion programs do not successfully change or at least modify people's behavior. More grounded evidence from the field would no doubt help to show the precise relationships between health, culture and society and the ways in which health promotion and prevention programs could be contextualized, in a culturally appropriate way.

Bibliography

Annandale, Ellen. *The sociology of health and medicine: A critical introduction*. Cambridge, United Kingdom: Polity press, 1998.

Beck, Ulrich. *Risk society: Towards a new modernity*. London: Sage, 1992.

Blaxter, Mildred. *Health and lifestyle*. London: Routledge, 1990.

Bhardwaj, Ruby. "Medical pluralism in India: The interface of Complementary and Alternative therapies with Allopathy", In *Health, Illness and Medicine: Ethnographic Readings* edited by Arima Mishra, pp 30-60. Delhi: Orient Blackswan, 2010.

42 Williams, Simon J "Theorising class, health and lifestyle: Can Bourdieu help us?" *Sociology of health and Illness* 17(1995): 577-604 ; Cockerham, William 'Health lifestyle theory and the convergence of agency and structure', *Journal of Health and Social Behaviour* 46 (2005): 51-67

Bulato, R.A. and P.W. Stephens. Estimates and projections of mortality by cause. Washington DC, Population, health and nutrition department, working paper World Bank no. 1007, 1992

Castel, R. "From dangerousness to risk," in, *The Foucault Effect: Studies in Governmentality* edited by G. Burchell, C. Gordon, and P. Miller, 281-298 Chicago: University of Chicago Press 1991

Cockerham, William. "Health lifestyle theory and the convergence of agency and structure". *Journal of Health and Social Behaviour*, 46 (2005): 51-67

Chadha, S.L. et al "A 3 year Follow up study of coronary heart disease in Delhi". *Bulletin of the World Health Organisation* 71.1 (1993): 67-72

Clarke, J.N and Everest M.M. "Cancer in the mass print media: Fear, uncertainty and the medical model", *Social Science and Medicine*, 62. 910 (2006): 2591-2600

Crawford, Robert. "A cultural account of health: Control, release and the social body" In *Issues in the political economy of health care* edited by John McKinley, 60-103. New York: Tavistock 1984.

Crawford, R. 2000. "The ritual of health promotion". In *Health, medicine and society: Key theories, future agendas* edited by S. J. Williams, J. Gabe, & M. Calnan, 219–235 London: Routledge

Davison, Charlie, Smith G. Davey and Frankel Stephen. . "Lay Epidemiology and the prevention paradox: The implications of coronary candidacy for health education", *Sociology of Health and Illness*, 13.1: (1991): 1-19

Davison, Charlie, Frankel Stephen and Smith, George Davey. "The Limits of Life style: Re-assessing 'Fatalism' in the popular culture of illness prevention", *Social Science and Medicine*, 34.6 (1992): 675-685

Dean, K. "Self-care components of lifestyle: The importance of gender, attitudes and social situation", *Social Science and Medicine*, 29.2 (1989): 137-152

Frankel, S, Davison C and Smith G.D. "Lay epidemiology and the rationality of responses to health education", *British Journal of Medical Practice*, 4 (1991): 428-430

Galvin, Rose. "Disturbing notions of chronic illness and individual responsibility: Towards a genealogy of morals", *Health* 6.2 (2002):107-137

Giddens, Anthony. *Modernity and self-identity: Self and society in late modern age*. Stanford: Stanford University Press, 1991

Gupta, R and Gupta VP. "Meta analysis of coronary heart disease prevalence in India". *Indian Heart Journal*, 48 (1996):241-245

Halpin, Michael, Philips Melanie and Oliffe John L. "Prostate Cancer Stories in the Canadian Print Media: Representations of illness, disease and masculinities", *Sociology of Health and Illness*, 31.2(2009):155-169

Kagawa-Singer, Marjorie. , "Redefining health: Living with cancer", *Social Science and Medicine* 37.3: (1993): 295-304

Lalonde, M. *A New Perspective on the health of the Canadians*. Ottawa: Government of Canada 1974

Lawton, Julia. "Colonising the future: Temporal perceptions and health relevant behaviours across adult life course", *Sociology of Health and Illness*, 24.6 (2002): 714-733

Lupton, Deborah. "Analysing news coverage" In *The Fight for Public Health: Principles and Practice of Media Advocacy* edited by Simone Chapman and Deborah

Lupton. London: BMJ Publishing Group 1994.

Lupton, Deborah. . *The imperative of health: Public health and the regulated body*. London: Sage, 1995

Martin, Emily. . "Towards an anthropology of immunology: The body as nation state", *Medical Anthropology Quarterly*, 4.4: (1990): 410- 426

Mendenhall, Emily, Sligman Rebecca A, Fernandez and Jacobs Elizabeth. "Speaking through diabetes: Rethinking the significance of lay discourse on diabetes", *Medical Anthropology Quarterly*, 24.2 (2010) : 220-239

Mishra, Arima.. "Deconstructing self-care in biomedical and public health discourses", In *Health, Illness and Medicine: Ethnographic Readings*. Edited by Arima Mishra, 75-100 Delhi: Orient Black Swan, 2010

Mohan, V. et al "Epidemiology of type 2 diabetes: Indian scenario", *Indian Journal of Medical Research*, 125 (2007): 217-230

Pajari, Pia M, Jallinoja, Piia and Absetz, Pilviki "Negotiation over self-control and activity: An analysis of balancing in the repertoires of Finnish healthy lifestyles", *Social Science and Medicine* 62 (2006):2601-2611

Petersen, A. and Bunton Robin eds. *Foucault, Health and Medicine*. London: Routledge, 1997

Petersen, A. "Risk governance and the new public health". In *Foucault, Health and Medicine* edited by Alan Petersen and Robin Bunton , 189–206. London: Routledge, 1997

Ramachandran A et al “High prevalence of diabetes and impaired glucose tolerance in India: National Diabetics Survey”, *Diabetologia* 44.9: (2001):1094-1101

Reddy, K.S. and Yusuf. “Emerging epidemic of cardiovascular diseases in developing Countries”, *Circulation*, . 97 (1998): 597-601

Reddy, K.S. et al. Responding to the threat of chronic diseases in India, *Lancet*, 12 (2005): 1744-1749

Rose, Nikolas. *The politics of life itself: Biomedicine, Power and Subjectivity in Twenty First Century*. Princeton: Princeton University Press, 2006

Saguy Abigail C and Almeling Rene. . “Fat in the Fire? Science, the News Media and the ‘Obesity Epidemic’”, *Sociological Forum*, 23.1 (2008): 53-83

Sethi, P.K. et al “Stroke: The neglected epidemic, an Indian Perspective”, *The Internet Journal of Neurology*, . 8.1 2007.

Seale, Clive. ”Health and Media: An overview”, *Sociology of Health and Illness* 25.6 (2003): 513–531

Shapin, Steven and Schaffer, Simon. *Leviathan and the Air Pump: Hobbes, Boyle and the Experimental Life*. Princeton, NJ: Princeton University Press, 1985

Townsend, Anne, Sally Wyke and Kate Hunt “Self-managing and managing self: Practical and moral dilemmas in accounts of living with chronic illness”, *Chronic illness* 2.3) (2006): 185-194

Turner, Bryan. *Regulating bodies: Essays in medical sociology*. London: Routledge, 1992

Williams, Simon J “Theorising class, health and lifestyle: Can Bourdieu help us?” *Sociology of Health and Illness* 17 (1995): 577-604

Wilson, Caroline. “Eating and eating is always there: Food, consumerism and cardiovascular diseases: Some evidence from Kerala, South India”, *Anthropology and Medicine*, 17.3 (2010): 261-275

Wright, Jan and Harwood Valerie eds. *Biopolitics and the ‘obesity epidemic: Governing Bodies*. London: Routledge, 2009

Xavier, Denis, Devereaux P.J. and Chanchung Xie. “Coronary artery disease in India”. *The Lancet* 371.9622 (2008): 1435-42