



Indian cultural practices and health risk

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Abstract

This paper aims to report the cultural lifestyle factors of Asian Indians in Australia in relation to Coronary Heart Disease (CHD). This issue has not been previously explored in the Australian context. This study also seeks to identify factors that could inform health education and rehabilitation programs for migrant Asian Indians in Australia. The qualitative descriptive approach of constructivism was used for this study. Semi-structured, in-depth interviews were conducted with eight patients and five family members. Participants were at risk for coronary heart disease either due to unhealthy diet and/or lack of physical exercise and irregular health checks. Although lifestyle modifications were implemented by participants after the cardiac event, these changes were implemented inconsistently and without continuity. Knowledge of the beneficial effects of a healthy diet did not deter the participants from continuing to follow unhealthy dietary habits. The introduction of any exercise or physical activity by participants in this study lacked consistency. A positive aspect revealed from this study was the influence of culture and religious faith, which helped patients and family members to cope with the illness trajectory. The results of this study suggest that health education and rehabilitation programs need to be designed specifically for this high-risk group would be beneficial when initiated early in life and need to be targeted to the individual.

Keywords: Cultural practices; Ethnomedical health beliefs; Australian Indians; Migrant stress; Heart disease; Diet; Lifestyle; Physical exercise.

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Introduction

Asian Indians (people whose ethnicity originates in India) have a severe and malignant course of Coronary Heart Disease (CHD) with marked prematurity and early onset at ages less than 40 years (Ajay & Prabhakaran 2010; Fox & Shapiro 1988; McKeigue & Marmot 1988; Singh et al. 2008; Yeo et al. 2006). Numerous epidemiological studies have confirmed that this risk of CHD in Asian Indians, who have migrated from India to other countries, is augmented in comparison to Indians in their native settings (Cappuccio et al. 2002; Fox & Shapiro 1988; Guha et al. 2002; Kulkarni et al. 1999; McKeigue & Marmot 1988; McKeigue et al. 1989; Wilkinson et al. 1996; Uppaluri 2002). Very little qualitative research reports on lifestyle of Asian Indians after a CHD. CHD remains the leading cause of death in Australia and has been a significant problem in terms of health and economic burden (Australian Institute of Health & Welfare 2010). Asian Indians are a well-established community group in Australia and this paper aims to report lifestyle factors of Asian Indians in Australia in relation to CHD, as there is a paucity of research in this area. The study also aims to explore factors that could inform health education and rehabilitation programs in achieving lifestyle behaviour changes among Asian Indians with CHD.

Literature review

The excessive risk of CHD in Asian Indians is due to a genetic susceptibility (Ajay & Prabhakaran 2010; Bahl et al. 2001; Enas & Senthilkumar 2001; Huges et al. 2002) and this increased risk is present even in the absence of traditional risk factors (Patel et al. 2006). This genetic predisposition, therefore, makes Asian Indians more vulnerable to the detrimental effects of modifiable lifestyle risk factors such as unhealthy diet, inadequate physical exercise, lack of regular health checks, stress and cigarette smoking and alcohol consumption (Cappuccio et al. 1997; Chandalia & Deedwania 2001; Enas & Senthilkumar 2001; Singh & Sen 2003). Generally speaking Asian Indians have an unhealthy diet, which adds to their predisposition to CHD. Asian Indians consume foods rich in fat, salt and sugar content (Ahmed 1999; Enas 2000). With immigration, the dietary habits of Asian Indians often alter. With addition of full cream milk, cream and cheese to their diet, the fat content in Indian sweets and desserts is further augmented (Chandalia & Deedwania 2001; Enas & Senthilkumar 2001). In addition to excessive fat consumption, a predominantly carbohydrate rich and relatively low protein diet prevails in Asian Indians (Ajay & Prabhakaran 2010;

Heng et al. 2000; Kanduri 2003). Available literature suggests that the majority of Asian Indians have a sedentary lifestyle with a lack of physical activity (Dhawan & Bray 1997; Hughes et al. 1989; McKeigue et al. 1992; McKeigue & Marmot 1988; Singh et al. 1996). This again predisposes Asian Indians to CHD. While no comparative studies with other groups were found in the literature, it is reported that Asian Indians fail to seek regular health check ups and do not visit a doctor unless it is an emergency (Ajay & Prabhakaran 2010; Enas 2000). Usually home remedies are preferred for any ailments or sicknesses and a physician is sought only for serious illnesses (Alagiakrishnan & Chopra 2004; Heng 2000 et al.; Pinto 1998).

Many Asian Indians, especially those residing in the United Kingdom, feel that they are under enormous stress, and perceive stress as an important cause of heart disease (Balarajan et al. 1989; Chandalia & Deewania 2001; Farooqi et al. 2000). Stress and depression in immigrant Asian Indians related to ethnic minority status and changing social structure of immigrant communities has been cited in the literature (Balarajan et al. 1989; Farooqi et al. 2000; Uppaluri 2002; Yeo et al. 2006), but needs to be further explored, in relation to CHD. There is little literature on other lifestyle risk factors in relation to CHD such as cigarette smoking and alcohol. It has been reported that cigarette smoking is generally lower in immigrant Asian Indians (British Heart Foundation 2000; Chandalia & Deedwania 2001) as compared to the Western population or their counterparts in India (Gupta 2000; Pais et al. 1996) and smoking is virtually non-existent among Indian women (Enas 2000; Pinto 1998). A study by Mahajan and Bermingham (2004) reported a more favorable risk profile for a group of immigrant Asian Indians in Sydney, Australia in comparison to a similar group residing in India. While there is some literature on the lifestyle of Asian Indians with CHD, no studies have described the Asian Indian lifestyle and changes made to lifestyle after a diagnosis of CHD in the Australian context. This research aims to fill this gap.

Method

Study design

The constructivist paradigm (constructivism or naturalistic inquiry) described by Lincoln and Guba (1985) was chosen to direct this inquiry. This paradigm theorises that each of us construct our own meaning of reality, which may be common with, or different from others

depending on the nature of shared experiences (Lincoln & Guba 1985). Naturalistic methods of inquiry focus on the topic of human complexity by investigating it directly and attempting to confine aspects of phenomena in their totality, within the context of those experiencing them (Polit et al. 2001). In order to capture the voices, interpretations and experiences of Australian Indians with CHD and their family members in a naturalistic setting, this approach seemed to be the most relevant. As such, this study specifically employed naturalistic inquiry methods.

Setting

Semi-structured in-depth interviews were conducted with participants in their own homes.

Recruitment of participants and selection criteria

The study was advertised through a media release from the University of Western Sydney. Both male and female family members/carers of Indians who had had a cardiac episode/event, who were above 18 years of age, who had lived in Australia for a minimum of two years and were willing to be interviewed were invited to take part in the study. It was a prerequisite that a minimum time frame of six months had elapsed after the cardiac episode to participate in the study. This decision was taken so as not to disturb the participants during the acute and initial phases of their cardiac episode.

Sample

The sample for this study comprised Asian Indians with CHD residing in Australia and their family members/carers.

Data collection

Semi-structured in-depth audio taped interviews were conducted with participants. The interviews focused on experiences of CHD, perceptions of risk factors, diet and lifestyle, impact of CHD on work, relationships, social and family life. This report will discuss lifestyle factors of Asian Indians with CHD within the Australian context.

Data analysis

Transcribed data were entered into the data management software package QSR NUD*IST Vivo (NVivo 1999). Transcripts were read repeatedly and coded for emerging themes.

Through a process of constant comparison and contrast of themes (Glaser & Strauss 1967) a description of participants' experiences of CHD was written. Demographic data were entered into the statistical software package SPSS, version 11.5 (SPSS Inc. 2003), which facilitated the construction of descriptive statistics for patients and family members.

Ethical considerations

The study was granted ethical approval from the Human Research Ethics Committee of University of Western Sydney (UWS).

Results

Profile of patients and family members

Characteristics	Patients (n = 8)	Family members (n = 5)
Sex		
Male	5	1
Female	3	4
Age		
31–40 years		1
41–50 years	3	3
51–60 years	2	
61–70 years	2	1
71–80 years	1	
Country of Birth		
India	6	2
Fiji	2	2
Australia		1
Religion		
Hindu	5	4
Christian	3	1
Education		
Secondary	2	1
Tertiary	6	4

Eight patients and five family members volunteered to participate in the study and were interviewed. Table 1 represents the demographic profile of the research participants. Of the eight patients interviewed five were male and three were female with majority (N = 6, 75%) having tertiary education. The family members/carers group comprised of one male and four female participants and the majority (N = 4, 80%) of them were educated at the tertiary level.

Of the eight patients, two (25%) had a history of smoking before the cardiac event and four patients (50%) consumed moderate amounts of alcohol. Three patients (37.5%) had Type II diabetes and two patients (25%) had hypertension.

Lifestyle of Asian Indians with CHD

This section will focus on lifestyle aspects of Asian Indians with CHD in the Australian context and exemplars from interviews will be used to represent the perceptions of participants. Direct quotes from participants will be presented in *italics* print and without any modifications to English grammar and sentence structure to preserve participant authenticity. Pseudonyms have been used to identify patients (P) and family members/careers (FM) in order to protect their privacy and confidentiality. To obtain a comprehensive understanding of lifestyle factors of Asian Indians in relation to CHD, the findings will be presented under the following headings:

- Diet
- Social and religious customs
- Exercise & stress
- Help seeking behaviour
- Impact of migration

Diet

Participants were aware of their unhealthy food habits and spontaneously admitted their preferences for such foods, as evident from interview statements like: *'Oh yes! I like to eat all these fried things very much and the sweets!'* (George- P) and *'Our food is Indian. In every food we use oil. ... Even in our religious gatherings we eat lot of oily food'* (Arun-FM) and *'I do love eating red meat which is very high in saturated fat (laughs). That could have been a cause'* (Raj-P). Participants indicated that dietary changes were necessary: *'I would like to change our lifestyle. The cooking we do with lots of oil and ghee. Stick to olive oil and I think ... all this butter and red meat puts too much strain on the heart'* (Meena-P) and *' ... we used to have a lot of fried food in India. Sometimes it is only after having the operation that you become aware. You have to change your lifestyle and diet to control it'* (Dev-P). After the cardiac episode, efforts were made by patients and family members to modify their

cooking and eating habits and they became cautious of the fat, salt and sugar content of foods consumed. The following statements portray examples of dietary modifications after the cardiac event: *'I don't eat food cooked in any oil other than olive oil. I don't have full cream milk any more. Red meat is only once a week'* (Raj-P); *'Since my heart problem we have cut down on salt, sugar & fat'* (Pramod-P); and *'He is conscious of what he eats and is aware of the risks now'* (Nisha-FM).

Family members faced difficulties in implementing healthy lifestyle changes after the cardiac episode. It seemed necessary to keep a vigilant watch on the patients' dietary preferences: *"I would say he probably uses less oil and the fact is that he is not cooking meat dishes so much. But, then again he adds salt after cooking. You have to watch him carefully"* (Mary-FM); *'Yes, but you can't moderate the food completely. He likes eating out and the red meat so what can you do? Need to watch what he eats, all the time?'* (Rani-FM) and *'He tries to put two teaspoons of sugar into this tea, but I will give one. When he goes out and people ask him how many sugar he wants he will say two'* (Mary-FM). Although family members acknowledged modifications in dietary habits of patients and in most cases of the entire family, they were concerned that these changes lacked consistency. There were impediments to healthy eating at all times especially at community and social events. This is depicted in the subsequent exemplars: *'He likes fried foods and he wants me to fry it'* (Nisha-FM) and *'he used to eat all the wrong food ... high cholesterol food and I think he liked fried food. My mother in law used to make all these foods. But even now if he visits her you know that he has been having those foods'* (Rani-FM).

Social and religious customs

Patients acknowledged that their sound belief in religion and God provided them with the strength and courage to cope with the illness episode. This is reflected in statements like: *'I have studied a lot of Hinduism before and I strongly believe that God is helping me through hard times'* (Pramod-P) and *'... like our parents, we are pretty religious people and do all the right things ... I think my survival in the hospital and the fact that that I am still alive today is because of my religious beliefs'* (Pramod-P).

Not being religious was perceived to have more negative effects as stated by one of the patients: *'If I had followed Indian culture and not eaten beef, it wouldn't have caused any*

harm. ... I am basically non-religious person and probably that did not give me strength to cope with my health problems' (Raj-P). As acknowledged by one of the family members, it was difficult to follow healthy dietary practices at community and religious events: '*... even in our religious functions we use a lot of fat and sugar in our sweets. Even though we are careful at home with what we eat, when we go there [community events] we eat all sorts of unhealthy foods at functions or get together and in large quantities too'* (Arun-FM).

There was no reference to social or religious customs that helped modify aspects of lifestyle after the cardiac event for all participants in this study.

Exercise

Physical exercise was a matter of concern for patients who were aware that it was inadequate in their lives. This was aptly expressed in the following assertions: '*I mean we don't exercise and you know we do all these kinds of things. We are too much engrossed with our family. We are family orientated and we concentrate on our family more than the exercise'* (Meena-P) and '*... diet is the factor plus the lack of exercise. We had to walk everywhere but here you have cars. The car can do some damage to health and exercise ... so it is the general lifestyle'* (Dev-P). Lack of adequate and consistent physical activity was another issue that emanated from dialogue with family members: '*Oh, he won't listen. He got a gym pass membership, but he won't go. He is lazy. I can't force him'* (Rani-FM); '*... he was going for evening walks, but he has just recently got another job, so since then, he hasn't had any walks or exercise'* (Asha-FM) and '*... for the last few months he was a bit relaxed and his cholesterol level has gone up, so he started exercising again'* (Arun-FM).

Exercise & Stress

Stress was perceived to be a contributory factor for CHD, as expressed by most participants interviewed. Family and job expectations, difficulties encountered in finding a job and family issues were some of the factors that caused stress: '*I was under lot of stress ... I had lost my job and the family expectation of me was very high. I am not able to meet those expectations'* (Raj-P) and '*... it was actually with the school where I worked ... there was a lot of stress ... that's why I retired, mainly due to high expectations at work'* (George-P). Change of lifestyle after migration to Australia was perceived to contribute to stress as expressed by one of the participants: '*Stress, diet, change of lifestyle and I think that is it. And also you see what*

happens coming to a new society the culture and you have to grope your way around and that can cause you some stress' (Dev-P). One of the family members described the stressful situation in her family, which she perceived as contributing to her husband's cardiac problem: *'I have to say the stress because our situation is unusual having a child with autism. That had been stressful for three years having it diagnosed, but having lost his job was the crunch and not finding another one easily. I would have to say the stress because I cannot pinpoint to anything else'* (Asha-FM).

Help-seeking behavior

Patients seemed to put off their visits to the doctor, had a laid back attitude towards seeking health care and sometimes did not follow instructions and advice from doctors. The following excerpts describe this laid back attitude of participants: *'The doctor suggested I go to the hospital straight away because he felt that there was some problem in the ECG, but I didn't go'* (Varun-P); *'I haven't been to my cardiologist for over a year and a half now. I should have gone in February, but something happened and I couldn't go'* (Varun-P). Interviews with family members revealed that patients had a tendency to go through their illness trajectory without talking about their illness as stated in the following statements: *'He was not the sort of person to talk about any illness, he wouldn't go to the doctor in the normal course of events. He would tolerate things and not complain'* (Mary-FM) and *'... he never complained ... he never used to take any tablets even when he needed it, not even the Panadol'* (Nisha-FM).

Impact of migration

Change in lifestyle after migration was perceived as being a shock to the system. This is vividly described by one of participants: *'Back home, we have a more relaxed sort of lifestyle. We don't have to wake up early and rush. Even at work you don't have to rush with what you are doing. At work you have got your friends around you. You are coming into this sort of society and over here it is a big change ... you get a shock to your body and your mind and everything. So maybe those things are having an effect on our health'* (Arun-FM).

The effect of migration on lifestyle included dietary changes, loneliness and lack of support as a result of changes in family structure. This was expressed by all participants interviewed in this study: *'Because of the lifestyle I led in India, I had no stress. But moving here and*

living here in Australia, it is just pressure being put on you from all sides. The hectic lifestyle ... the lack of sleep. Diet does play an important part too. I know that in India, we were only given a small amount of oil for the day and we didn't have the sweets that we have here now. Whereas here in Australia, it is continual nibble, nibble and nibble. We don't give our stomachs a rest' (Rita-P). Another research participant described moving to and living in Australia as follows: *'What happens in this society is that having a nuclear family, not having an extended family the stress builds up. In extended family there is one advantage that the tension can be distributed. But in nuclear family it is not like that, it builds up day after day and that affects my health'* (Dev-P).

Similar to the patients, family members also perceived that migration had a significant impact on lifestyle and on health as depicted in their statements: *' ... here his lifestyle is very sedentary. He doesn't walk. He always drives'* (Rani-FM) and *' I think his separation from India ... it would have been a depressive factor for him. He was depressed for years and years and years ... I think it was the sense of isolation in this country. He was missing the stimulus of conversation. He just wasn't happy here. I think it was just being separated from his friends'* (Mary-FM).

Discussion

This study identified participant' lifestyle patterns and difficulties in modifications to lifestyle after CHD. All participants acknowledged the influence of Indian social and religious customs and the impact of migration as having an influence on adapting to healthy lifestyle behavior changes. These factors identified among study participants informs health education and CHD rehabilitation programs for migrant Asian Indians.

An analysis of the findings from this study indicates that participants were at risk of CHD either due to unhealthy diets and/or lack of physical exercise, as well as having irregular health checks. These findings are consistent with existing research (Ajay & Wang 2010; Dhawan & Bray 1997, Enas 2000, Hughes et al. 1989, McKeigue et al. 1992, McKeigue & Marmot 1988, Singh et al. 1996; Uppaluri 2002; Yeo et al. 2006). It is evident from this study that an unhealthy lifestyle prevailed in this group of migrant Asian Indians in spite of being aware that it was detrimental to their health. Sudden death or silent MI is the first

manifestation of CHD in about half of all Asian Indian patients and two-thirds of CHD deaths occur before reaching the hospital (Ajay & Prabhakaran 2010; Singh & Sen 2003). Therefore, these patients can be helped only through preventive strategies directed at reduction of risk factors. Given the high risk and genetic susceptibility of Indians to CHD, lifestyle changes have been advocated to be beneficial when instigated very early in life (Ajay & Prabhakaran 2010; Enas & Senthilkumar 2001; Yeo et al. 2006).

Unhealthy dietary habits prevailed in the sample of Asian Indians who participated in this study with preferences for foods rich in fat, sugar and salt. This is consistent with existing findings (Ajay & Prabhakaran 2010; Bahl et al. 2001; Enas & Senthilkumar 2001; Huges et al. 2002). These detrimental cooking habits were further augmented at religious gatherings and community events. As apparent in this study, knowledge of the beneficial effects of a healthy diet did not deter the participants from continuing to follow unhealthy dietary habits. Although dietary changes by participants in this study included use of foods low in fat and sugar and the addition of more vegetables, these changes lacked consistency, with an unhealthy diet still being followed at religious and community gatherings and when visiting friends or family. An Indian heart study (Singh et al. 2008) found that a prudent diet enriched with fruit and vegetables in conjunction with moderate physical activity for a period of 24 weeks was associated with significant decrease in mean serum total cholesterol, low density lipoprotein cholesterol, triglycerides and fasting blood glucose.

The implication of these findings for health education programs and population based prevention strategies is that it is necessary to ensure that Indian children adopt early healthy eating habits and maintain an active lifestyle, thus lowering the rise in cholesterol levels with age and creating a new generation with low risk factor levels for CHD (Ahmed 1999; Ajay & Prabhakaran 2010; Enas 2000; Farooqi et al. 2000). However, the role of health education programs in implementing dietary modifications in Asian Indians with CHD remains unclear. Lack of adequate physical exercise and sedentary lifestyle was evident in the sample of Asian Indians who participated in this study and this aspect has been confirmed in a number of studies (Chandalia & Deedwania 2001, Dhawan and Bray (1997), Gupta 2000, Hughes et al. (1989), McKeigue et al. (1992), McKeigue & Marmot 1988, Singh et al. (1996). Regular physical exercise has been advocated by a number of authors to reduce the risk of CHD (Enas & Senthilkumar 2001; Shaukat & de Bono 1994; Singh & Sen 2003).

This study has demonstrated that the introduction of any exercise or physical activity by participants in this study was patchy and lacked consistency. While the results of this study cannot estimate whether Asian Indians are more or less likely to make lifestyle changes than Australian born Indians or Caucasians, it supports the notion that it is essential to integrate adequate exercise activity in day-to-day life of Asian Indians from a young age. Children need to be educated both at home and at school regarding the importance of physical activity in maintaining good health. It is important that cardiac rehabilitation programs regularly monitor the physical activity and dietary modifications in Asian Indians with CHD by developing a group specific monitoring system for this group.

Reluctance to have regular health checks and to seek professional help was another aspect that was customary in the group of Asian Indians in this study and is consistent with existing findings (Ajay & Prabhakaran 2010; Enas 2000; Gupta 2000). This demonstrates a relaxed attitude to health and passive health behaviour and suggests the need for appropriate health education programs which play a significant role in prevention and rehabilitation for CHD (Enas & Senthilkumar 2001; Farooqi et al. 2000; Fox & Shapiro 1988; McKeigue & Marmot 1988; Singh et al. 2008; Yeo et al. 2006)

Participants in this study perceived stress as a contributory and aggravating factor for CHD. Prevalence of stress in immigrant Asian Indians has been reported in existing research (Ajay & Prabhakaran 2010; Balarajan et al. 1989; Farooqi et al. 2000; Gupta, 2000; Yeo et al. 2006). However, there are no confirmatory studies to determine the role of stress as a contributory factor for CHD. The perception, by Asian Indians with CHD, of a link between migration and CHD, as a consequence of stress, loneliness, depression and change in lifestyle, is evident in this study. As revealed by participants in this study, dietary changes which enhance the risk for CHD, such as increased consumption of fatty foods and sugar, came with migration and confirm existing research findings (Ajay & Prabhakaran 2010; Fox & Shapiro 1988; McKeigue & Marmot 1988; Singh et al. 2008; Yeo et al. 2006). Low levels of physical activity in the sample of Asian Indians in this study was further enhanced with immigration due to availability of cars and easy access to other forms of transport. The impact of migration on lifestyle needs to be considered when health education programs are designed. All the above-mentioned factors such as dietary changes with migration, loneliness and lack of support with changes in the family structure need careful consideration when

educating this group. A positive aspect revealed from this study was the perceived influence of cultural and religious faith which helped patients and family members to cope with the illness trajectory.

Recommendations for health professionals

Health care professionals need to be aware that Asian Indians have a higher than average risk of CHD with an onset at young age. Their attitude to health and reluctance to make healthy lifestyle changes needs to be the primary target of change in health promotion programs. Health education and prevention programs need to be directed towards lowering risk factors originating from unhealthy diets, lack of adequate physical exercise and reluctance to seek health care. Family members need education and advice on strategies to improve lifestyle for the patient and family.

Conclusions

This study has revealed that some Asian Indians have a passive approach to lifestyle change after a cardiac event. Knowledge of risk factors for heart disease did not help this group in following a healthy lifestyle. Although, changes in dietary habits towards a more healthy diet, more frequent health checks and improvements in exercise habits were the lifestyle modifications reported by the participants in this study after CHD, these changes lacked consistency and continuity. Therefore, findings from this study indicate that it may be useful to design health education and rehabilitation programs specifically for this high-risk population group and incorporating frequent follow-ups. The importance of regular physical exercise, regular health checks and healthy diets needs to be emphasised in this population. It may also be useful to target local Indian community groups and organisations to ensure that people pursue a healthy lifestyle at home, at work and in the community. The positive influence of religious faith in coping with illness needs to be further explored.

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