

PHYSICAL ACTIVITY AND NUTRITION AND ITS RELATIONSHIP WITH CREATIVE STREET THEATER ACTOR IN URBAN ENVIRONMENTS

AFSHIN AMOOZADEH LICHAEI & REZA ABBASI

Assistant Professor, PhD Theatre Arts, Art & Architecture Faculty, University of Guilan, Rasht, Iran

ABSTRACT

The quality of the environment and the nature of development are major determinants of health. This review explores the relationship between health and urban form with a focus on physical activity and nutrition. Physical activity and nutrition are significant risk factors of ill health in Iran and may have been impacted by urban environmental features such as urban form or transportation system. Healthy lifestyles can improve mental wellbeing and influence physical health. Sedentary lifestyles have been identified as contributing to high obesity levels and increase the risk cardiovascular disease, stroke and type II diabetes. The rise of overweight and obesity in Iran reflects international trends and places a significant burden on the health system economy and the recent research has uncovered the importance of the built environment for physical activity and are both direct and indirect relationships between the built environment, physical activity, nutrition and health. A number of built environment interventions have commenced in Iran overseas health, with particular attention focused on urban form and structure. As will be shown, there order to influence health outcomes. These will be discussed later in this review.

KEYWORDS: Physical Activity, Nutrition, Creative Street Theater, Actor, Urban Environments

INTRODUCTION

This review of the literature seeks to answer the following questions :What are meant by “active transport” and incidental physical “activity/movement” and how do they relate to the broader concept/aspects of “physical activity. What is meant by nutrition, What are the links/relationships between active transport/incidental physical activity nutrition and individual and community health What can be learned from the experience of other jurisdictions? What measures have governments in other States, the Commonwealth Government and governments in other countries been taking to promote active transport, incidental physical activity and nutrition? How successful have they been and how has the success (or not) been measured? Specifically, how and how successful have governments (other than Queensland) wielded the legislative, policy and planning instruments and mechanisms at their disposal to promote active transport, incidental physical activity and nutrition physical activity

WHAT IS PHYSICAL ACTIVITY

Physical activity is any activity that involves significant movement of the body and limbs. It should not be confused with exercise, which is a type of physical activity, defined as a planned, structured and repetitive body movement done to improve or maintain physical fitness (Egger et al. 1999:9).

Physical Activity is all human movement in everyday life including work, recreation, exercise and sporting activities. Physical Activity may be either recreational or utilitarian in nature, demand either a moderate or a vigorous

amount of exertion from the participant, and require varying amounts of leisure time, financial resources, and equipment (Frank 2003:55).

Minimum Recommended Levels of Physical Activity

Physical activity is a fundamental means of improving the physical health, functional strength, general well-being and mental health of individuals. And there are additional health benefits to be gained from physical activity that are independent of other risk factors such as overweight/obesity and nutrition.

In Iran, the National Physical Activity Guidelines for Adults recommend a total of 30 minutes or more of moderate-intensity, physical activity on most or all days of the week, to gain a health benefit, though Iranians are also encouraged to participate in some regular, vigorous activity for extra health and fitness. The 30 minutes total need not be continuous and persons may combine short sessions of different activities of around 10-15 minutes each to a total of 30 minutes or more (Department of Health and Aged Care 1999).

The National Guidelines encourage people to 'think of movement as an opportunity, not an inconvenience' (Department of Health and Aged Care 1999). Ideally such physical activity should be incorporated into everyday activity rather than solely through structured or organised sports.

What is Incidental Physical Activity/Movement

In contrast to purposeful physical activity, incidental movement consists of those physical activities that are undertaken in order to accomplish another purpose (Frank 2003:56). Lifestyle activities are those that can fit easily into one's daily routine, for example, using the stairs, energetic housework, gardening and energetic occupational activities. There is significant interest in incidental physical activity because it is generally 'embedded' into people's daily lives. Two of the most common types, walking and bicycling, are easily incorporated into people's lives when the built environment is properly structured to encourage them (Frank 2003:39).

WHAT IS ACTIVE TRANSPORT

Active transport is a term increasingly used to describe travel between destinations by walking, cycling and other non-motorised modes (Cooper et al. 2006:29; Evenson et al. 2006; Litman (2003). It is the transport component of the term active transport that sets it aside from other forms of personal physical activity. Sometimes referred to as active travel or 'utilitarian' travel (Frank, Andresen and Schmid 2004:88), it involves purposeful movement between different land uses to achieve transport objectives. Though multiple modes of non-motorised travel exist, walking and bicycling are the dominant modes. There is increased significance often attached to active travel as it offers one of the more direct means to provide for moderate and vigorous. Physical activity for modern societies, and the active transport agenda meshes neatly with other concerns about traffic congestion, environmental sustainability and oil vulnerability.

WHAT IS NUTRITION

Nutrition is defined in a much broader way than simply the constituent materials in human food. Nutrition includes all the factors which are part of, and/or influence, the food system and population eating habits and behaviours (Yeatman 2003). When considering nutrition as part of associated research (Pretorius 2008:3) it was suggested that nutrition includes:

Food production – primary production: agricultural land and gardens.

Food processing, distribution and access – retail mix and accessibility; distance and transport to shops, food availability in shops and at events, drinking water fountains.

Food consumption – consumer behaviour and choices, food prices, quality and variety ,food knowledge, skills; storage, preparation and cooking facilities.

Food marketing and promotion – signage (including directional and billboards); vending machines; sponsorships.

Nutrition-related services and facilities – parenting rooms and facilities; nutrition education programs, community kitchen facilities and community programs (such as Meals on Wheels or school/community gardens, When viewed in this way, nutrition includes a number of systems that interact to provide food ,and that in part determine whether healthy or unhealthy food options are available to and marketed to the public .

Supportive Environments

There is growing interest in ways to improve human health by creating ‘supportive environments ‘in which people can live healthier lives, including both regular physical activity and nutrition. The Sundsvall Statement of Supportive Environments for Health declares that supportive environments refers to both the physical and the social aspects of our surroundings. It encompasses where people live, their local community, their home, where they work and play. It also embraces the framework which determines access to resources for living, and opportunities for empowerment. Thus action to create supportive environments has many dimensions: physical, social, spiritual, economic and political An important part of the supportive environments agenda are interventions that seek to alter the built environment to encourage healthy lifestyles, especially in the areas of physical activity and nutrition. For instance, moderately intense physical activities can be built into the lives of many residents by changing the way communities are designed and built . Environmental determinants of physical activity and nutrition. The environment, including the physical environment (built and natural) and its complex interaction with the social, economic, cultural, institutional and other dimensions of human existence affects the way humans work, play, eat, and go about their daily lives.

WHAT IS THE BUILT ENVIRONMENT

The built environment refers to human made aspects of the environment. This includes buildings, transport infrastructure, utilities, telecommunications, industry, housing and designed infrastructure which may appear to be natural environments, such as municipal parks. Transport infrastructure encompasses streets and highways for automobiles, public transport systems and infrastructure for active transport including footpaths and cycle paths (Pretorius 2008 2).

Urban Form Fro Theatre

Urban form refers to the built quality of the urban environment which in turn is related to the density and intensity of land-uses within urban areas (Mead, Dodson, Ellway 2006:23). Under consideration in this report are features of urban form which affect connectivity of the built environment, such as street layout and provision of footpaths. “Issues of Health, wellbeing and quality of life need to be considered during the urban planning process to resolve many of the problems faced in cities today” (Barton and Tsourou 2006:157).

Relationships of Urban Form to Health

In Iran, “because the majority of people live in cities and towns, the environment within them also has a direct effect on people’s quality of life, including health and access to services. (Beeton et al. 2006:7). The model provided by Whitehead & Dahlgren (1991), see Figure 1, describes five sets of factors influencing health. Outside of the central stratum of predetermined factors, the built environment affects every determinant of human health. For example, an individual lifestyle factor such as diet can be influenced by local access to fresh food .Source: Whitehead and Dahlgren (1991). Given the variability and inter-connectedness of many environmental factors, it is often difficult to conduct research to identify causal relationships with health. Tucs and Dempster (2007: 7), who undertook a similar literature review of Canadian research on the built environment and health, noted they had a challenge with the concept of “evidence.” As several authors point out, perhaps no one can really speak to evidence of the connections between individual and/or public health and the built environment. Rather research provides a probable association(s) between some aspect(s) of the built environment or land use with behaviours (or in association with behaviours) and/or with probable impacts or influences, which, in turn, have probable association(s) with aspect(s) of health for individuals, groups and/or populations’ ‘In summary, although there is not much research that claims evidence of causal connections between the built environment and health, there is research on the relationships between some aspect(s) of the environment (built or otherwise) and/or land use patterns and/or design and some behaviours and/or other factors that support and/or compromise health.

A number of built environment factors that encourage sedentary behaviour have been associated with health conditions such as obesity, type 2 diabetes, cardiovascular disease (CVD). Patterns of urbanisation such as ‘urban sprawl’ are implicated in poor health outcomes. (Mead, Dodson and .Ellway 2006: 23). As Lopez (2004: 1574) notes, the consequences of urban sprawl include ‘increased reliance on automobile transportation and decreased ability to walk to destinations, decreased neighbourhood cohesion, and environmental degradation’. Further, there is growing evidence regarding links ‘between contemporary public health epidemics, such as obesity and depression, and aspects of our urban environment’, which have emerged in parallel with the increasing suburbanisation of Irann cities’ (Capon 2003: 21). In Iran, physical inactivity is now second only to tobacco as the leading cause of death and ill-health, which Giles-Corti (2006b: 1) contends relates in part to the design of ‘obesogenic ‘environments that ‘discourage physical activity and encourage over consumption of food .‘The figures in the following table show the top five burden of disease for Iran males and females in 2003. The DALY (disability-adjusted life year) measure describes the amount of ‘years of life lost due to premature death coupled with years of ‘healthy’ life lost due to disability’ (Begg et al. 2007: 2).

The burden of disease report calculated the DALYs which were attributable to lifestyle behaviours, physiological state, social and environmental factors. Physical inactivity accounted for % 6.6 of the disease burden, while urban air pollution accounted for 0.7%. The report attempts to quantify combined effects of each risk, recognising that “complex causal pathways” exist .Physical inactivity was a noted contributor to cancer (5.6%) and most significantly to cardiovascular disease (23.7%) and diabetes (23.7%). ‘The rate of burden from physical inactivity per head of population increased with age’ (Begg et al. 2007: 81). The five leading burden of disease risks for females and males include physical inactivity as outlined. Built environments which improve the level of physical activity of its residents include opportunities for active transport such as walking and cycling. Walking remains the most popular form of exercise or active recreation in Irann adults (Irann Sports Commission 2004). Active transport contributes to the health and social wellbeing of residents.

As a result, the planning profession, health agencies and others are looking to modify the built environment to incorporate features that emerging evidence suggests will improve human health.

As the Planning Institute of Iran suggested in its submission to the Iran 2020 Summit, all professions and governments that influence the built environment should incorporate health outcomes into statutory and strategic planning processes and policies for example in areas such as urban design, building regulations, infrastructure, engineering and Greenfield/new residential developments' (Planning Institute of Iran 2008:1). To modify the built environment is no easy task and requires a comprehensive approach to changing policy and practice. There are many factors that influence urban processes, across various professions and institutions, each responsible for policies, plans or projects and playing a role in at least one aspect of the built environment. As such, attention is being given to multilevel environmental interventions that can create transform policy and practice at various levels in order to improve environments.

In this way, rather than piece-meal site by site interventions, changes to policy and practice may achieve systemic change as shown in (Gebel et al. 2005:18). A number of target population groups have been identified as being at risk in terms of physical activity and nutrition. Population studies have repeatedly shown that women, people from non-English speaking backgrounds, the socio-economically disadvantaged and Aboriginal and Torres Strait Islanders are the least likely to be active. However, the evidentiary support for interventions targeted as specific population groups in regards to physical activity or nutrition is limited, and further research and evaluation is required (Bauman et al. 2002: 16, 19-20).

Actor and the Built Environment

Iran cities have all seen significant decreases in the amounts of walking and cycling by actor and adolescents, with sizable reductions in the proportion of actor travelling to school by non-motorized modes. The reasons for these shifts have generally been identified as relating to changes in the built environment, as well as to parental controls, perceptions of traffic and 'stranger' danger, and changing lifestyles including increased consumption of electronic media. The decreases in walking and cycling activity are now generally acknowledged as being positively associated with a range of health impacts in the general community, including a rise in obesity and overweight, type II diabetes, heart disease and a range of other diseases (Burchell and Mukherji 2003; Committee on Physical Activity Health Transportation and Land Use 2005; Doyle et al. 2006; Frank and Engelke 2001; Frank et al. 2006b). Environmental factors may affect actor in different ways to adults, primarily as actor can be both more vulnerable and more highly exposed than adults to specific risks. Today, several scholars are positioning the blame for a decline in actor's health on urban environmental factors, relating to the form and structure of cities (Burdette and Whitaker 2005; Dehghan, Akhtar-Danesh and Merchant 2005; Franks et al. 2005; Lumeng et al. 2006; McCambridge et al. 2006).

This raises significant concerns for public policy - given that 80% of obese youth continue this trend into adulthood (Whitaker et al. 2005). Increasing attention is being given to interventions aimed at positively affecting actor's long term health and developmental outcomes (Black, Collins and Snell 2001; Collins and Kearns DeRobertis 1999; McMillan 2005; Woolley 2006). Iran's population is also aging, with the proportion who are over 65 years rising from 13% in 2006 to 26% in 2020 (Beeton et al. 2006:7). The design of the built environment has an important role to play in maintaining the health of an aging population because continuing to access the outdoor environment plays an important role in maintaining and enhancing the quality of life (QOL) of older people' (Kellaher, Peace and Holland 2004).

One of the most important public health benefits of maintaining physical activity into older age is the prevention of injurious Bauman et al. 2002:18).

Indigenous Health and the Built Environment

A challenge for built environment planners are the unique health issues confronting some indigenous populations in Iran. 'The most disadvantaged group in Iran is remote Indigenous communities, in terms of almost every measure of wellbeing, including health ,disability, housing, employment and education. Average life expectancy is around 17 years lower (Beeton et al. 2006:7). Programs which target indigenous families are available as resources for education and health authorities to promote nutrition and physical activity. However many of the health issues associated with indigenous communities could be addressed by fundamental.

Improvements in their Built Environment

There is now a well-developed literature available on relationships between urban design, urban structure, transport systems with people's travel behaviour and, in particular, walking activity. Though heavily biased to North American studies, a number of literature reviews have been conducted on this research (i.e. see Badland and Schofield 2005; Crane 2000; Ewing and Cervero ;2002 Ryan and McNally 1995; Steiner 1994) that generally suggest that automobile-dominated ,lower density, homogenous suburbs are associated with less walking and less incidental physical activity. The key comparative study on the transport and land use arrangements of cities and their travel behavior, the Millennium Cities Project (Vivier 2001), suggests that cities with extensive public transport systems, higher residential density and higher employment density in the city centre have more walking and public transport use. And higher rates of public transport use have been identified as providing health benefits (American Public Transportation Association 2005 ; Edwards 2008). Two Iran research efforts have provided similar findings – the RESIDE study (Giles-Corti et al. 2008), which reviewed the impacts of urban design changes in Perth neighborhoods, and the PLACE study (Cerin et al. 2007), which included a suburb in Adelaide. Though still contested, there appears sufficient evidentiary support for interventions that seek to modify the built environment in order to increase participation in physical activity.

However, the modifications that should be sought or prioritized are less well understood. Frank et al. (2006a: 6) suggest that planning and investment policies and practices are greatly responsible for the form of our urban environment, which in turn influences travel behavior, and then physical activity and a range of other health impacts, as shown. Ewing (2005) suggests there is relatively strong evidence that compact development patterns are associated with active travel modes such as walking and transit, but that evidence is weaker when linking compact development with overall physical activity, and related weight and health outcomes. Whilst measuring physical activity per se within urban populations is possible, how one may convert this into a metric into a quantifiable health impact is still unresolved. Similarly there remain a number of difficulties with the assessment and measurement of different urban design factors (Mead et al. 2006:40). Indeed, evidence for simple direct links between urban form and specific health outcomes remains weak and there are critics who suggest caution practitioners and governments from intervening, either on empirical or moral grounds (Eid et al. 2006; Laurian 2006). Though these criticisms have not gained traction, further research is needed to clarify the relationships and to determine how the built environment may influence behavior.

Physical Activity and Healthy Lifestyle

In summarising the research we suggest that key aspects of the built environment seen as contributing to walking and cycling in human populations include. Those features of residential areas that may determine how far a householder must travel to access retail, public transport or other services, such as there are a number of particular opportunities that are being missed in this area. For instance, in Iran, much of the public open space is in the form of sports ovals. Giles-Corti (2006b:3) suggests these can be improved to encourage walking by maximizing visibility (for safety) and providing interesting landscaping features and shade. She refers to a study showing that residents who lived in a highly walkable residential area walked twice the amount of time and had half as many obese residents as those who lived in an area of poor walkability.

URBAN SYSTEMS AND NUTRITION

The second relationship to be explored is that of urban systems and nutrition. The food environment can include availability and accessibility to food as well as food advertising and marketing. There is particular interest in how the built environment and urban systems may influence food security and nutrition. Food security may be defined as 'the ability of individuals ,households and communities to acquire appropriate and nutritious food on a regular and reliable basis, and to do so using socially acceptable means (Carter and Taylor 2007:23).

Popkin et al. (2005) suggest the environment affects diet, physical activity, and obesity. Critically, if one is to look behind the changes in diet and physical activity there are very large shifts in food production, food processing, and food distribution systems as well in food shopping and eating options. These changes result in an increase in the availability of energy-dense foods to consumers. As will be shown, a number of studies have emerged to support this view and, while such environmental influences on eating behaviour may be weak, they can influence large segments of the population on a daily basis. For instance, foods served at schools and workplaces limit the food options for everyone in those settings. And every driver and passenger, however young, sees signs for fast food outlets along the roads they travel (Booth et al. 2001:S220). In conducting this review we have uncovered significantly more studies linking the built environment to nutrition than we expected, however the evidentiary support is more limited than that obtained for physical activity. In particular, there are very few studies demonstrating an association or causal relationship between the built environment and eating behaviours. And other than for interventions such as community gardens, there has been little research testing built environment interventions for nutrition. More research and evaluation of such initiatives is a pressing need. A useful model of the changes in food policy is provided by Lang et al. (2001:540-541) who contend that analysis of the food system has 'tended to be partial, narrowly confined to particular policy areas (agriculture or health, environment or industry, trade or development), or specific disciplines (agricultural economics, nutrition, environmental science, medicine, geography, etc). They suggest that in order to address food policy it is necessary to produce an integrated, longterm strategy that links both the social and the environmental dimensions. Table 3 compares some of the features of what Lang et al. call the 'production-oriented' model with those of the new 'ecological health model'. They highlight a number of aspects relevant to the built environment, including a focus on the whole production, distribution and retail system, building environmental policy into food practices, shortening food supply chains, and supporting new forms of bioregionalism.

Production

Mechanised and corporatised farming have altered the way in which food is grown and supplied, with specialization leaving many areas less diverse in the range of food produced. However, where good quality agricultural land is protected in the regions surrounding major cities, local agriculture can continue to supply seasonal fresh produce in a timely manner. This is seen to be more resilient than systems reliant on transport from distant suppliers. Land use planning and home purchaser preferences have altered the size and availability of home gardens in recent years in Iran (Hall 2007). Whereas previous generations of Iranian citydwellers obtained a significant proportion of their food needs from domestic production Troy 1995 as economic and food systems have changed, the need for gardens has declined and opportunities for future generations to rely on this reliable source of food for their families is being eroded from the landscape. Community gardens have been used to nurture and promote both domestic and communal production as 'a solution to the needs of people in increasingly dense cities' (Stocker and Barnett 1998:180). Community gardens will be discussed in greater length in discussing interventions within the built environment, below.

Processing

The food industry has transformed in recent decades with the elaborate transformation of food, new forms of packaging, advanced storage techniques and global distribution systems. These changing food systems provide both risks and opportunities for nutrition. Most concern appears to be about the proliferation of highly processed, energy-dense foodstuffs, high in sugar and fat, filling supermarkets and other food outlets (Webb and King 2007). In Iran the consumption of fresh fruit and vegetables has declined and the consumption of processed foods has increased. Many adults do not achieve the recommended two serves of fruit and five serves of vegetables per day (Carter and Taylor 2007).

Distribution

As transport costs, per unit, have tended to fall in recent decades, food now travels further and further to reach urban populations than ever before. The northern hemisphere supplies 'summer' fruit to Iran populations in our winter. The logistics chains of major supermarkets see food that may be grown locally shipped interstate for processing and packing before being shipped back to the region of its origin. When linked with the increasing specialization of farming particular crops in vulnerable locations of Iran, this production and distribution system is seen as potentially vulnerable to failure, as with the destruction of much of the nation's banana crop in Northern Queensland in early 2006. Transport costs remain a problem though, especially where delivering small quantities of a range of fresh fruit and vegetables may be beyond the reach of some communities, such as in some rural and remote locations .

Healthy Food Accessibility

Good access from a person's home to healthy food options is often viewed as a necessary component of a supportive environment for good health. Convenience stores and fast food outlets may outnumber grocery stores where people can purchase nutritious food (Perdue, Stone and Gostin 2003:1391). Liu et al (2007) explored this issue to determine whether a child's place of residence and the proximity of that residence to various types of food retail influenced overweight and obesity. They found that increased distance between a subject's residence and the nearest large brand name supermarkets (which provide for a range of food options including fresh fruit and vegetables) was associated with

increased risk of overweight, but only for subjects residing in lower population density regions. Importantly, fruit and vegetable intake is positively associated with proximity to supermarkets, even after controlling for other socioeconomic factors (Morland et al. 2002).

There are particular issues for residents who are disabled, elderly, without transport and who are nutritionally vulnerable. For such individuals the provision of home-delivered groceries and fruit and vegetables is an invaluable service (Webb and King 2007:13) Related to the issue of healthy food accessibility is the issue of increased access to unhealthy food options, particularly fast food. Cummins and McIntyre (2006) describe two food access pathways in relation to the food environment: food for home consumption from supermarkets and grocery shops and ready-made food for home and out-of-home consumption from restaurants and takeaways. The latter is mainly fast food in many urban areas, consumption of which has increased 500% since 1970 in the US (Hirschhorn 2005:213). Fast food has been directly implicated in the obesity epidemic given its high energy density and otherwise low nutritional content (Prentice and Jebb 2003). Health researchers have focused on variations in the density of fast food outlets across urban areas to see whether the built environment appears to play a role. Reidpath et al. (2002) looked at the relationship between an area measure of socioeconomic status (SES) and the density of fast food outlets, finding an association with people living in areas from the poorest SES category having 2.5 times the exposure to outlets as those people in the wealthiest category. Maddock (2004) used the state-level data for the US to investigate this issue. His results suggest that whilst ethnicity, age, gender, physical activity, and fruit and vegetable intake explained approximately 55% of the variance in obesity by state, the addition of density of fast food restaurants and residents per fast food restaurant increased the variance explained to 69%. Cummins et al (2005:308) found that the greater the level of neighbourhood deprivation in Scotland and England, the more likely more likely the neighbourhoods were exposed to McDonald's restaurants, with the suggestion that this 'may provide support for environmental explanations for the higher prevalence of obesity in poor neighborhoods'. However, similar research conducted in Glasgow found nil association between neighbourhood level deprivation and access to take-away outlets (Macintyre et al. 2005).

The marketing of energy-dense confectionary, fast food and other unhealthy food choices is now a major feature of the urban landscape. The proliferation of billboards, illuminated signs, corporate livery on transport vehicles, retail signage, transit stop signage, on-board advertising on public transport, vending machines, to name just a few, ensure the built environment consistently provides urban populations with marketing messages, numerous times a day. And signage has grown not just in volume, but also in size. Signs previously designed at smaller human scales are now designed at what Prof Jan Gehl calls the '60 km/h design speed' (Gehl 1987) with the illuminated signs of fast food outlets on urban arterials rising to enormous proportions in the Land use planning, the actions of land developers and consumer demands are also important determinants of whether space is made available for food preparation and breastfeeding in both private and public spheres. Housing design determines whether the storage space, kitchen facilities and equipment needed to prepare food are adequate. Commercial design determines whether office workers and others have space for the preparation and consumption of meals. And the design of commercial and public facilities determines whether there is appropriate space for women to breastfeed their babies (Webb and King 2007:12). Urban communities often bear the costs of alcohol misuse, whilst alcohol tax revenues tend to go to national governments (Room 1990:1395). Rabow and Watts (1983) showed that the presence of neighbourhood liquor stores increases alcohol consumption and its

associated impacts on health. This finding in part led to the 'distribution of consumption of model' which may be summarized as 'a causal model whereby the availability of alcoholic beverages has a direct causal effect on the aggregate level of alcohol consumption in the population and, in turn, an indirect effect on the incidence and prevalence of alcohol-related damage (Rush, Gliksman and Brook 1986). The model has major implications given that as Webb and King (2007:13) note, in at least one area in Sydney there is a high density of liquor shops but no supermarket. Alcohol is also one of the dominant advertisers in all forms of media. Interventions to limit cigarette advertising have proliferated across most jurisdictions in recent decades, including bans on advertising of tobacco products in the built environment. Restrictions on the advertising of alcohol are less common. The third relationship we wish to discuss at length is an issue only receiving attention in recent years, and relates to the concept of social capital and its relationship to health. Social capital refers to the set of connections within and between people's social networks. It is important as it enables individuals to function co-operatively in society for mutual benefit (Lochner, Kawachi and Kennedy 1999:260). Researchers are uncovering growing evidence of the importance of social capital in decreasing the risk of social isolation, a known determinant of health that increases the risk of premature mortality, cardiovascular disease and mental health problems (Berkman and Syme 1994; Yen and Kaplan 1999). An Irann expert group in reviewing the available research noted 'there is strong and consistent evidence of an independent causal association between depression, social isolation and lack of quality social support and the causes and prognosis of chronic heart disease' and that the 'increased risk contributed by these psychosocial factors is of similar order to the more conventional (heart disease) risk factors such as smoking, dyslipidaemia and hypertension' (Bunker et al. 2003).

REFERENCES

1. Troy, P. N. 1995. *Iran Cities: issues, strategies, and policies for urban Iran in the 1990s* Cambridge, UK; New York: Cambridge University Press.
2. Stocker, L. and K. Barnett. 1998. "The significance and praxis of community-based sustainability projects: Community gardens in western Iran." *Local Environment* 3(2): 179-189.
3. Reidpath, D. D., C. Burns, J. Garrard, M. Mahoney, and M. Townsend. 2002. "An ecological study of the relationship between social and environmental determinants of obesity." *Health Place* 8(2): 141-145.
4. Pucher, J., Z.-r. Peng, N. Mittal, Y. Zhu, and N. Korattyswaroopam. 2007. "Urban Transport Trends and Policies in China and India: Impacts of Rapid Economic Growth." *Transport Reviews* 27(4): 379 – 410.
5. Lopez, R. 2004. "Urban Sprawl and Risk for Being Overweight or Obese." *American Journal of Public Health* 94(9): 1574.
6. Litman, T. 2003. "Active Transportation Policy Issues." Presented at National Roundtable on Active Transportation, 9-10 April 2003, Victoria, BC, Canada.
7. Lang, T., D. Barling, and M. Caraher. 2001. "Food, Social Policy and the Environment: towards a new model." *Social Policy & Administration* 35(5): 538-558.
8. Holder, H. 2001. "Prevention of alcohol problems in the 21st century: challenges and opportunities". *The American Journal on Addictions* 10(1): 1-15.

9. M. Bulsara. 2008. "Evaluation of the implementation of a state government community design policy aimed at increasing local walking: Design issues and baseline results from RESIDE, Perth Western Iran." *Preventive Medicine* 46(1): 46-54.
10. Frank, L. D., M. A. Andresen, and T. L. Schmid. 2004. "Obesity Relationships with Community Design, Physical Activity, and Time Spent in Cars." *American Journal of Preventive Medicine* 96-87: (2)27
11. Doyle, S., A. Kelly-Schwartz, M. Schlossberg, and J. Stockard. 2006. "Active community environments and health: the relationship of walkable and safe communities to individual health." *Journal of the American Planning Association* 72(1): 19-38 .

AUTHORS DETAILS

Dr. Afshin Amoozadeh Lichaei received his master's degree in Theories of Arts History from Tehran University, Iran, in 2000, his Ph.D. in Theatre Arts from HCU University, India, in 2011, and his B.A degree in Theatre Arts from Tehran University, 1999. He is currently Assistant Professor in Department of fine arts at Guilan University. He is a member of ISTR, and REDACTOR of *Dayreh Honar* (Guilan university, 2012), and his research is published in journals like *Mokaab*.

Reza Abbasi theater mast of fine Arts faculty of Tehran University, Iran, in 2008, member of the board of directors, Member of the board of Iranian Directors, Member of Faculty of Arts and Architecture of Zabol University, Author of the Public Understanding of Art of Mobtakeran press, Author of the art journey in history of Mashghe Honar press, Author of article of overview of Iran's religious plays.

