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Ecological Model of Australian Indigenous Men's Health

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Abstract

This study was designed to examine the health behaviors as well as the enablers and barriers to health behaviors among Indigenous Australian men. One hundred and fifty Indigenous Australian men in rural, regional, and urban locations were interviewed about their health behaviors. The results revealed several themes of importance: (a) role of community activities, (b) the Indigenous man as a leader and role model, (c) negative impact of discrimination/racism, (d) importance of partner and family, (e) positive and negative role of peer relationships, (f) central role of culturally appropriate health care facilities, and (g) association between employment and health care problems. These findings highlight the importance of broad community-based (rather than individualistic) approaches to promoting health behavior in Indigenous men.

Keywords

Indigenous Australian men, Australia, health and well-being, health care disparities, men's health, psychology, qualitative study

Introduction

Indigenous men's health has been reported to be extremely poor when compared with Anglo-Saxon men and comparable to the health status of a Third World nation in a First World country (Carson, Dunbar, Chenhall, & Bailie, 2007). Life expectancy of Indigenous men in Australia is 11.5 years shorter than that of non-Indigenous Australian men (Australian Bureau of Statistics, 2009) and their disease burden is two and a half times higher (Vos, Barker, Stanley, & Lopez, 2007). Nontransmissible and preventable diseases are major factors that contribute to the poor health of Indigenous men, with cardiovascular disease, the main contributor. Indigenous people are at 5.1 and 4.6 times greater risk of diabetes and cardiovascular diseases than non-Indigenous members of the Australian population. Obesity and sedentary behaviors are major causes of this ill health, accounting for 11% and 8% of the total burden of disease, with 16% and 12% of Indigenous deaths attributable to this burden (Vos et al., 2007). It is important to better understand the enablers and barriers to good health among Indigenous men.

It has been argued that the Westernized lifestyle introduced by European colonization is a major factor contributing to poor Indigenous health in Australia (Gracey, 2007). Traditionally, Indigenous people were nomads who hunted and fished for foods, with plants, seeds, and roots being essential elements of their diet. Hence, not only did Indigenous Australians spend considerable amounts of energy accessing and gathering their water and food supplies, their nutrition was low in fat, energy, salt, and sugar, and high in fiber, vitamins, and minerals (Gracey, 2000; Lee, 1996). However, the introduction of a Westernized lifestyle led to more sedentary time, a transition to a diet low in fruits and vegetables (Australian Bureau of Statistics, 2009; Vos et al., 2007), and high in salt, sugar, and fat (Australian Bureau of Statistics, 2009; Ricciardelli et al., 2012), and exposure to alcohol and tobacco. It has been argued, however, that these lifestyle changes cannot solely account for the Indigenous burden of disease in Australia (Gracey, 2007). Factors such as poverty, high unemployment rates, house crowding, inadequate education, as well as a lack of health infrastructure and primary care access by Indigenous Australians have

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been suggested to be major public health factors that contribute to their poor health status (Australian Human Rights Commission, 2007; Carson et al., 2007; Gracey, 2007; Marmot, 2011; McDonald, 2006; Zhao, Wright, Begg, & Guthridge, 2013).

It is important to note that the Indigenous concept of social systems and social determinants of health differ from the Westernized concept (Australian Human Rights Commission, 2007; Mungabareena Aboriginal Corporation & Women's Health Goulburn North East, 2008). Specifically, whereas a Western perspective includes poverty, employment, social status, and support as social determinants of health, an Indigenous perspective includes cultural values, spirituality, racism, discrimination, social exclusion, land dispossession, the stolen generation, and policies of acculturation, and protection (Mungabareena Aboriginal Corporation & Women's Health Goulburn North East, 2008). Therefore, to be effective, health intervention and prevention programs need to address the social system and social determinants of health from an Indigenous perspective, and so health intervention approaches need to be specifically tailored and targeted to the needs of Indigenous people. In particular, they need to target both social systems and social determinants that influence the dietary patterns and physical activity of Indigenous people.

Given the breadth of psychosocial factors potentially relevant to Indigenous health, an ecological approach is likely to be useful in informing health intervention and prevention programs. Such an approach, for example, Bronfenbrenner's (1994) ecological model, recognizes that both lifestyle and societal factors contribute to poor health. According to this model, development and health behaviors occur within the context of interactions between and among five nested social: an innermost microsystem consisting of an individual's immediate environment, such as their partner *or* family; a mesosystem consisting of the interaction between at least two settings of an individual's immediate environment, such as that which occurs between their partner *and* family; an exosystem which links two or more settings of one's environment, one of which, however, does not directly involve the individual, such as their partner and their partner's workplace; a macrosystem consisting of the individual's culture or subculture; and, finally, a chronosystem which constitutes the transition of an individual and the environment over time (e.g., a change in residential place, in employment status, or an economic crisis). Hence, an ecological approach to improving Indigenous men's health in Australia would consider their change of lifestyle and the social factors, both within the immediate environment and the broader community, that contribute to poor nutrition and sedentary behaviors. This would enable policy makers and health care workers to design intervention and prevention programs that are socially and culturally appropriate, rather than attempting to implement programs that have been designed for the broader Australian population.

A review of the literature on physical activity among Indigenous Australians was recently conducted, applying a socioecological framework to the current research (Nelson, Abbott, & Macdonald, 2010). It was concluded that there is a lack of understanding of the meaning and impact of physical activity from an Indigenous standpoint, and that future health programs need to acknowledge the social determinants of Indigenous physical activity when targeting these communities. Other qualitative research has further suggested that understanding the social/ecological factors of Indigenous health (e.g., diabetes; Thompson & Gifford, 2000) is imperative to designing culturally relevant and effective intervention and prevention programs (Reilly, Doyle, Bretherton, & Rowley, 2008; Thompson & Gifford, 2000), rather than programs designed for other communities. In order to address the discrepancy in the life expectancy between Indigenous and non-Indigenous men in Australia, it is important to conceptualize the enablers and barriers to health behaviors within a conceptual framework, so that government and community-based policies and programs can be developed.

The aim of this study was to assess Indigenous Australian men's lifestyle and societal systems in relation to Bronfenbrenner's (1994) ecological model to determine how each of the systems interact to affect health. In particular, the focus was on how this model operates from the perspective of those lifestyle and societal factors that shape healthy eating and physical activity among Indigenous men.

Method

Research Framework

The study was conducted using a participatory action research (PAR) framework (Baum, MacDougall, & Smith, 2006). PAR involves critical reflection and action that "aims to improve the health and reduce health inequities through involving people who, in turn, take actions to improve their own health" (p. 854). This approach values the knowledge of members of the target community and attempts to view problems from their perspective. As such, this framework appears particularly suitable to adopt when working with the Indigenous population (Esler, 2008; Reilly, Doyle, & Rowley, 2007). A PAR framework recognizes that researchers have certain technical expertise and that community members have particular knowledge of their community's needs and perspectives. Therefore, both researchers and participants

Table 1. Aims of the Two Stages of Study.

Stage 1—Focus groups
Clarify areas of concern around physical activity, diet, and body image
Examine the importance of these concerns for the Indigenous men, and the extent to which they are concerned about unhealthy practices
Identify factors related to these concerns (e.g., cultural identity, level of acculturation; pessimistic vs. optimistic explanatory styles)
Observe healthy and unhealthy practices, and differences between the men
Stage 2—Individual interviews
Determine the meaning and importance that Indigenous Australian men attach to their health and body
Understand the role of risk and protective factors in determining eating and physical activity patterns
Find ways of promoting healthier eating and physical activity patterns
Examine how each of the above differs in the three locations

contribute unique strengths and share responsibilities (Pyett, 2002). Further to this, researchers aim to build on the strengths, resources, and relationships that already exist within communities (Israel, Eng, Schulz, & Parker, 2005).

In accordance with the PAR framework, young Indigenous men in each location were recruited to directly assist with data collection. Research questions were developed through consultation with leaders in each community, and advisory panels were set up in the three locations comprising university researchers, Indigenous leaders, and young Indigenous men. Meetings were held with these advisory panels at crucial stages of the study to inform the future direction of the research.

The academic researchers worked collaboratively with the Indigenous partners in each location to develop the interview protocol, recruit participants, collect, analyze and interpret data, and identify appropriate and sensitive ways of disseminating the findings for each stage of the research. An interactive process was adopted between the university researchers, Indigenous leaders, and young Indigenous men. Through this approach, information gained from the study was shaped, researched, and analyzed in partnership with Indigenous men living in these communities. The information from the study (see Table 1) was used by the community leaders to inform on action plans to improve the health of young Indigenous men.

Sample

The sample consisted of 150 men aged between 18 and 35 years. The team intentionally targeted young Indigenous men, as men generally demonstrate poorer health habits than women. Furthermore, it was expected that targeting young men would be likely to result in the greatest potential for change to the disease burden and life expectancy of Indigenous people. In recognition of the diversity of Indigenous communities across Australia, these participants were recruited from three locations: Broome, a remote town in the north of Western Australia; Mildura in regional Victoria; and in metropolitan Melbourne, the capital city of Victoria.

Materials

The participants engaged in a semistructured interview about health as described below. The interview schedule included questions that probed each participant's (a) eating attitudes and behaviors; (b) type and frequency of physical activities; (c) attitudes to health and the body; (d) body change strategies currently used, used in the past 12 months, and planned for the future; (e) factors influencing men's health (i.e., identification with cultural traditions, relationship with mainstream culture, masculinity, identification with sport; intergenerational and interpersonal relationships; explanatory styles); and (f) men's acculturative experiences (i.e., culture clash, expectations to conform, conflicting cultural values).

Procedure

Ethics approval for the study was obtained from the university ethics committee and the ethics committee of each of the collaborating service organizations in each of the three locations (see Acknowledgments). Purposive and snowballing processes were used to recruit participants, with potential participants in the target age range being identified by our Indigenous research partners, and these participants then suggested others who might be willing to take part in the project. For the focus groups and interviews, potential participants were invited to meet with two members of the project team, an academic researcher, and an Indigenous collaborator. The presence of the Indigenous researchers was designed to help the participants feel secure and safe. All participants were given a written and verbal explanation of the purpose of the study

and the requirements of participants. On agreeing to participate, they signed a consent form, and proceeded with the focus group or interview, which was digitally recorded. Each participant was offered a $30 shopping voucher to compensate them for their time.

Results

In terms of Bronfenbrenner's (1994) model, the findings from the current study demonstrated that the system that was identified to be overarching and shaped each of the other systems was *role of community activities and programs*, which fits most closely with the exosystem. The Indigenous man as a leader and role model, also aligned with the macrosystem came next. Similarly, the third overarching theme *negative impact of discrimination/racism*, fitted best within the macrosystem. These were followed by importance of partner and family support across generations (microsystem/mesosystem), *positive* and *negative* role of peer relationships (mesosystem), central role of appropriate health care facilities (exosystem), and *association between employment and health care problems* (exosystem). Thus, the themes that had most meaning for Indigenous men moved from outer to inner systems, rather than from inner to outer as originally conceptualized by Bronfenbrenner (1994). In addition, although it was not possible to isolate a separate theme pertaining to the chronosystem, there was certainly discussion by the men of how health behaviors for Indigenous men had changed over time. Each of the main themes are discussed below and are illustrated with quotes.

Role of Community Activities and Programs

Community was a strong influence on Indigenous men, and this central role of community was a strong theme running through the interviews in all three locations. In particular, community-based programs that were targeted specifically at Indigenous men were seen as a good way of incorporating health information and checkups as well, getting men to engage more at a cultural level. Often, a meal or activity was put on at no cost to the men in order to engage them and provide an opportunity for health promotion. However, some of the men interviewed felt that there were not enough of these groups and programs.

> More community activities in well-being and giving men advice into going to the clinics are proving their help. Even ten years ago, we didn't have a men's group here [changes over time]. So we are sort of getting better, finding better ways and trying to educate our people to improve their life and improve themselves as well. [Broome, Interview #7]

Participating in sport either through watching or spectating was important for socializing and in fostering a sense of community among Indigenous people. Many of the men also commented that it was beneficial in encouraging people to engage in a healthy lifestyle.

> All my family do it [play sport] and I socialise with them more than anyone else really. I've got mates, I've got friends and that that aren't family, but I socialise with my family a lot and if you're not playing footy, you're pretty much left out of the circle. Yeah it gets like that sometimes, and it's encouraging a bit too cause some of my brothers, they don't want to play but they want to socialise and they just want to drink and stuff like that. [Melbourne, Interview #27]

The Indigenous Man as a Leader and Role Model

Many of the Indigenous men strongly felt that the role of an Indigenous man was to be a leader, a positive role model and a provider for their family. In addition, their role was seen as being a teacher of traditional ways to younger generations. However, some of the men pointed out that issues such as alcohol and substance use, legal problems, broken families, and the higher morbidity and mortality among Indigenous men affected their ability to fulfil their roles in their communities and families. Consequently, women have had to take on more of these traditionally male roles.

> Our role is weakening I suppose. Especially with health and a lot of Indigenous men don't last to 50 or 60. Depending on what area they grew up in. If they grew up in the hard life, they're diagnosed with health issues. Diabetes. More issues we get the more problems. [Broome, Focus Group #1]

This breakdown in the family structure and change in roles was demonstrated by the deficits in knowledge about food and food preparation. This lack of knowledge led to poor food choices.

> Sometimes I don't know what to do. Eating fast food is just easier. You just go out and grab it. Sometimes I wander around the supermarket and just don't know. It's just you are not used to getting the stuff and cooking it. I spent a few years in the system so they just cook for you. You don't have to worry about it I guess. [Mildura, Interview #8]

Negative Impact of Discrimination/Racism

Many of the Indigenous men interviewed reported that discrimination and racism had negatively affected aspects of their health. Some reported that this was one of the factors underlying the alcohol and drug problems prevalent in the Indigenous community. Others had experienced

racism in sport that had led them to quit and subsequently engage in unhealthy behaviors.

> Probably being respected and not rubbished like being classed. Some of the government calls Aboriginal people as lazy, but deep down if they bought up and know how to talk properly and talk in a language that can get to their heads, then they're not. Where is our justice? Aboriginal people rape other Aboriginal people because it happened to them. They think they're normal. It is all that old stuff carrying through, all that colonisation stuff carrying through. Because it just goes from one parent to the next. It's just all that cycle that's what's wrong. That's why they drink. [Broome, Interview #9]

Several men also commented that negative stereotypes of Indigenous men as being lazy, drunk, and violent affected their employment prospects and opportunities to participate in healthy behaviors such as playing sports or engaging with health services.

> Racism, that's a big issue. Especially in Australia. It's like if you even go into a shop you get looked down as nothing. That's why half the people don't go to the supermarket. So they could sit home for a week and make one of the young ones to go to the supermarket and do their shopping. . . . It's pretty hard walking up the street when you want to do a shop and you get looked down on. So they'll just eat what they've got at home until it's gone. [Melbourne, Interview #22]

Importance of Partner/Family Support Across Generations

Another main theme to emerge was the need to stay healthy so that the men could live longer and be around and care for their families, usually with reference to children and grandchildren. Being physically fit and healthy was also important to the men so that they could participate in activities with their children such as playing in the park and participating in sports.

> 'Cause like I said, I've got kids, it's no longer about me. I'm 40 and that, it's no longer about me, it's about them. So I want to stay alive, 'cause they're meant to have a father. I should've thought about that when I was young and in jail and everything like that, with age comes wisdom and knowledge. [Melbourne, Focus Group #1]

Many men spoke of "closing the gap," referring to the discrepancy in life expectancies for Indigenous versus non-Indigenous Australians. This was a motivating factor for many to live healthily. In addition, many of the men understood that the key to avoiding many chronic illnesses and not getting sick was staying healthy.

> Healthy eating, there's no doubt about it mate, you gotta eat the right food, I'll tell you what . . . you definitely gotta watch what you're eating cause, you know, cause of your kidneys. . . . Cause my mother passed away because of kidney problems. [Melbourne, Interview #12]

Many of the men commented that the prevalence of broken families in their communities was a big factor that contributed to the use of alcohol and drugs, early school dropout, which in turn adversely affected their health.

> Well it turns around physically because when you don't have that support . . . because a lot of us people, we don't have the support, and for men . . . for us especially, we don't have that support. And for us we take it to the next level and that's how we get into drinking, into drugs, we start taking it out on our families and then it turns into violence. [Broome, Interview #4]

The support of family was very important for many of the Indigenous men in encouraging them to look after their health better.

> Yeah I think that would have a big effect . . . well I've got a lot of cousins that still go hunting and all of that, like to play football still and yeah . . . also that support system that you spoke of earlier. You know, if they realise that they are going through a rough time, they can come over and help you, take you to the bush and go shooting, camping or hunting, fishing to take your mind off things. [Broome, Interview #15]

The men also understood that it was important to raise their children with a healthy lifestyle and to teach them the difference between what is unhealthy and what is healthy. It was important for many of the men to be seen as a healthy role model for their children.

> It is quite important so you look after yourself so that you can look after the rest of your family. . . . If you teach your kids to eat the healthy stuff so as they grow up they work at the difference for themselves, so they tend to want to eat more at home and eat the healthy good food. [Broome, Interview #6]

Positive and Negative Role of Peer Relationships

Peer pressure from friends and family members meant that it was difficult for some men to stop drinking or remain sober. Similarly, if men did not have peers who ate healthily or engaged in sports and physical activity, they reported it harder to participate themselves.

> Oh yeah umm things like peer pressure. There's more peer pressure in aboriginal society. [Smoking] makes them look cool, their mates are doing it so they copy it. Probably the same goes for drugs. [Mildura, Interview #17]

But a positive aspect of peer pressure was that it encouraged participants to engage in healthy behaviors.

> I mean it's really difficult when you are overweight doing it by yourself. I found it very difficult. If I didn't have the boys with me I probably wouldn't done it. We used to go for a run, kick the footy, play footy with each other, do weight sessions, and just keep each other busy. We would all go somewhere like the beach or whatever. It was really good having those mates physically for my wellbeing. [Broome, Interview #12]

Central Role of Culturally Appropriate Health Care Facilities

Another theme to emerge from the interviews was the feeling that many health care professionals and organizations are not aware of cultural issues when it comes to working with Indigenous Australians. Many reported being treated poorly by health care professionals and that many mainstream health care organizations were not in tune with aboriginal health concerns.

> They [doctors] already sort of have a mindset that the aboriginal people are going to give them a hard time, and when that happens we can pick up on that . . . so yeah I think there needs to be more cultural awareness training around the doctors so they're not . . . making the aboriginal patient feel uncomfortable and maybe make them feel more welcomed. [Melbourne, Interview #31]

Association Between Employment and Health Care Problems

Employment was an important factor that contributed to the self-esteem and confidence of many of the Indigenous men. Many stated that unemployment was directly linked to the problems in Indigenous men drinking and using drugs, as well as hanging around the streets.

> If you haven't got employment like you know, cause of the sky high food [cost] and that, you know, you're just buying the cheap brand or can't get like fruit and vegies or that as well. [Mildura, Interview #12]

Discussion

The results of this study demonstrate the central role of community, social networks, and culture on the health of Indigenous men. Bronfenbrenner's (1994) ecological model includes five social systems that build from the inner system of the partner and family to the outer systems of changes in both the individual and the environment over time. For Indigenous men, the outer systems of culture, as represented by community, racism, and the role of the Indigenous man, were particularly emphasized. The inner system of partner/family as well as broader relationships and employment were important, but they nested in the outer systems rather than vice versa. That is, the chronosystem and macrosystem, which focused on the sociocultural context within which Indigenous men lived, shaped the health-related behaviors of Indigenous men. This then had a "trickle down" effect to the inner systems of the ecological models.

The central role of social roles and interpersonal relationships (microsystem) was evident in the importance placed on Indigenous men as role models within the family and community. In fact, it was this aspect of the model which was vital for the positive functioning of the other systems. The link between the microsystem and mesosystem was also evident, with Indigenous men highlighting the importance of strong links between family and community. The exosystem, which encompasses a link between the immediate setting for the person (e.g., family) and a setting which does not directly affect the person (e.g., community health practice) was also important in shaping the health of Indigenous men. However, the macrosystem was most apparent in terms of its influence on health. This included factors such as bodies of knowledge, role expectations, customs, lifestyles, and opportunity structures. These were represented in both protective factors for health as well as impediments for good health. Finally, there was evidence of the importance of the chronosystem. This system represented changes in the environment in which the person lives. Changes were apparent in the extent to which the Indigenous men accepted responsibility over time for their position as a role model, and so modified their health choices accordingly.

The overriding role of culture or community was also important for Indigenous men. This theme emerged in its own right but was also a component of each of the other themes. If an Indigenous man did not have a strong sense of community, this then affected each of the other systems that shape his health behaviors. This indicates that, as for non-Indigenous men, physical activity and healthy eating are important for good health. However, there were many barriers identified by Indigenous men to them engaging in these behaviors. Many of the barriers were not focused on the individual but rather on the broader community. Both positive and negative aspects of this community were seen to affect the various aspects of health. Many men were not employed and perceived that they did not have sufficient money to purchase healthy food. Furthermore, they indicated that they had not learnt to cook, and so, they felt they had little control over the quality of the food that they ate. There were also many reasons advanced for their failure to engage in physical activity such as not having appropriate facilities.

There was a strong emphasis placed by the men on the importance of them being a positive role model for the family. They were strongly aware of the shorter life expectancy of Indigenous men (Vos et al., 2007) and did not want to die at a young age. However, they were also

aware of the fact that they frequently engaged in unhealthy behaviors. They felt that employment gave a structure to their life and was important in assisting them to engage in health behaviors. More important, the support of their family and broader community, and the sense of responsibility that the men had to these relationships, were central factors shaping their positive health behaviors. These were strong themes emerging from Indigenous men in each of the three locations. They were both dependent on the support of family and community, and felt a responsibility to family and community to provide support or act as a positive role model. This support went beyond the emotional or instrumental support reported in Western societies. It extended to a much broader sense of encouragement, engagement, and affirmation for the men: It revolved around community, recreation (e.g., hunting, sport), as well as a boost to confidence and self-esteem. There was a sense that the health of an Indigenous man was not an individual responsibility but that it was strongly bound up in his relationship to his family and broader Indigenous community. Although there was some difference in the emphasis of the various components of the model in each of the three locations (urban, regional, rural), the above themes were apparent in each of the three locations.

These findings have implications for the types of health programs that need to be implemented for Indigenous men. They are not only consistent with previous research but also identify other areas that need to be targeted for Indigenous men. For example, Marmot (2011) indicated the central role of employment and communities for health among Indigenous Australians. He was strongly of the view that these were two of the six necessary conditions to ensure the health of these Australians. Furthermore, McDonald (2006) highlighted the importance of health programs for Indigenous people focusing on social, relational, and family factors rather than the individual. Health education and practice, according to McDonald (2006), need to be taken out of a narrow biomedical framework, if they are to become accessible to Indigenous communities, because health is conceptualized more broadly within community rather than being narrowly and individualistically focused.

This notion of Indigenous health sitting within a broader social, political, and economic framework is discussed in a report by the Mungabareena Aboriginal Corporation & Women's Health Goulburn North East (2008). This report highlighted the importance of cultural and spiritual factors, as well as employment, poverty, and social support as determinants of health among Indigenous people. Importantly, it also highlighted factors related to ill health, in particular, discrimination and social exclusion. These themes also emerged in the current study. Health care programs, therefore, need to more closely focus on the community rather than the individual.

Discrimination/racism was highlighted by many of the men as being associated with high levels of drug and alcohol use. In addition, it was seen to be evident in sport, with a number of the men in all locations highlighting racism as a reason for them discontinuing engagement in organized sport. The Indigenous men indicated that the lack of availability of appropriate sporting facilities (which were generally seen to be facilities that were restricted for the use of Indigenous men) was responsible for their low levels of physical activity (Nelson et al., 2010).

There are a number of limitations to the study. Although the study was conducted in three diverse locations (urban, regional, and rural centers) the results cannot be generalized to all Indigenous Australian communities. Furthermore, the findings are based on interviews with 150 men, and so may not represent the views of all Indigenous men in the particular communities that participated in the study. However, the results do provide a useful launching pad for further study of the factors related to health as well as the needs of Indigenous men to improve their diet and physical activity.

Conclusion

The findings highlight the importance of ensuring that health is reconceptualized from an Indigenous perspective, and so, the need to present opportunities to consider a new range of options for positive health outcomes for Indigenous men (Smith, 2005). The findings of the current study highlight the importance of a community-based rather than individual-based approach to Indigenous men's health. It also demonstrates that any form of intervention needs to adopt a multifaceted approach, if Indigenous men are to improve their eating and physical activity and extend their lifespan.

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