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Report on the Traveller Women's Food, Physical Activity and Health Study

Compiled by Mary Cronin, Aideen O'Leary & Jennifer Russell
of the Department of Epidemiology & Public Health,
University College Cork
in conjunction with the
Southern Traveller Health Network





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Finally and most importantly, we wish to sincerely thank the Traveller women who participated in the study. We hope that the findings and recommendations will make an effective contribution to a better understanding of Traveller women's determinants of health and lead to positive changes in their health status.

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1 Introduction

1.1 Study Background

The idea for this study came from the members of the Southern Traveller Health Network (STHN), a network of Traveller women in the Cork/Kerry region which meets monthly to discuss health related issues important to them and to their families. STHN members decided they wanted to explore issues related to eating, excess weight, obesity, physical activity and exercise among Traveller women as they had noted that, despite having received health education on healthy food and physical activity / exercise, STHN members still found it very hard to change their behaviour and lose weight. (Appendix 1 gives information on the health education / training received by participants).

The study was undertaken through a partnership between the STHN and the Department of Epidemiology and Public Health of University College Cork which were introduced by the HSE South Health Promotion and Improvement Department. STHN participation was funded by the Traveller Health Unit of the HSE South. The research planning team consisted of 2 STHN workers, Anne Burke and Ann-Marie Rogan; 2 UCC academic staff, Mary Cronin and Jennifer Russell; a Master of Public Health (MPH) student, Aideen O'Leary and a staff member of the HSE South Health Promotion Department, Denise Cahill.

Note: This study began as a small scale project undertaken through a Master's thesis during which preliminary analysis of half of the data was undertaken. To fulfil the partnership agreement the academic staff voluntarily undertook further literature review, analysis and reporting to deepen and extend the work.

1.2 Introduction to the Research Topic and Study Rationale

This study explores food choices and food consumption, as well as participation in physical activity and exercise, among a sample of Traveller women.

Research with disadvantaged women around the world acknowledges that a range of inter-related factors influence the food choices of poor women. Ochieng (2013) has argued that the complex relationship between a healthy lifestyle and the ongoing life of visible ethnic minorities has received little attention from scholars (1). There is little published research on the factors influencing food choices, food consumption, participation in physical activity and exercise among the Irish Travelling community and this study, focusing on Traveller women, aims to make a contribution to filling this gap in the literature while also assisting the STHN members to answer their reflective question. It is worthwhile exploring and understanding these health determinants of health among Traveller women as they impact not only their personal health but also that of their family and community. As outlined below, the Travelling community in Ireland experiences significant health inequalities and inequities; research which can aid in identifying root causes of health inequity and potentially contribute constructive information on how to ameliorate the is urgently needed.

1.3 Travellers Health Status and Determinants of Health

The All Ireland Traveller Health Study (AITHS) describes Irish Travellers as a small indigenous ethnic minority group which has been part of Irish society for centuries (2). Travellers have a value system, language, customs and traditions which make them an identifiable group both to themselves and to others. Their distinctive lifestyle and culture, based on a nomadic tradition, sets them apart from the general population. It is estimated that there are over 36,000 Travellers in the Republic of Ireland with about 4,000 more living in Northern Ireland (2). Over the centuries Travellers have endured high levels of discrimination and exclusion in Irish society; Traveller culture has yet to be widely accepted. Hodgins *et al* described Travellers as a marginalised group which experiences widespread discrimination, racism and cultural erosion (3). This is reflected in Travellers health statistics which are significantly poorer health than the general population (2).

The poor health status of the Travelling community has clear parallels with other minority ethnic groups and nomadic groups. Hodgins *et al*. state that similar infant mortality, life expectancy and suicide rates are evident throughout the academic literature on Irish Travellers, Canadian and Australian Aboriginal people and Italian gypsies (3). O'Connell summed up the inequalities endured by the Irish Travelling community as follows:

"Travellers fare poorly on every indicator used to measure disadvantage: unemployment, poverty, social exclusion, low status, infant mortality, life expectancy, illiteracy, education and training levels, access to decision making and political representation, gender equality, access to credit, accommodation and living conditions" p.49(4).

1.3.1 Life Expectancy and Suicide Rates

Public concerns about the poor health status of the Traveller population first emerged following publication of the 1987 'Travellers Health Status Study' which revealed that mortality rates among adult Travellers were three to four times higher than the general population along with infant mortality rates which were double that of the general population (5). The All Ireland Traveller Health Study, published in 2010 highlighted the extent and persistence of health inequalities between Irish Travellers and the general population (2). It measured the life expectancy of a Traveller man at 61.7 years, 15.1 years less than men in the general population and equivalent to the life expectancy of the general population in the 1940s. The life expectancy of a Traveller woman was 70.1 years, 11.5 years less than a woman in the general population. Disturbingly, the suicide rate among Traveller men is 6.6 times higher than the general population; the rate among Traveller women is also higher than the general population but not at a statistically significant level (2).

1.3.2 Travellers Determinants of Health

The AITHS provided useful information across a range of health determinants some of which is outlined below. It didn't gather clinical data on weight but a small study by Slattery *et al* published in the same year provides some insights on that topic (6). Further information on determinants of health and demographic profile was sourced from Economic and Social Research Institute (ESRI) and Central Statistics Office (CSO) publications.

Legal Status in Ireland:

Social position is an important determinant of health. Irish Travellers are not recognised as a distinct ethnic group by the Irish state although they are named within Ireland's anti-discrimination legislation – the Employment Equality Act (1998) and the Equal Status Act (2002). They were recognised as an ethnic group in Northern Ireland and Great Britain under the UK Parliament Race Relations Order (1997) which confers them with particular rights and protections. The UN Human Rights Committee, the ICCPR (the International Covenant on Civil and Political Rights), has repeatedly recommended that the Irish State recognise Irish Travellers as an ethnic minority group but it has failed to do so to date (www.itmtrav.ie).

Education:

Education has long been acknowledged as a key determinant of health. According to the Growing Up in Ireland study, only 13% of Traveller children complete secondary education by comparison with 92% of the general population (7). The 2011 census found that 55% of Traveller children have completed their formal education by the age of 15; 90% have completed formal education by the age of 17 and less than 1% of Travellers participate in third level education at present (8).

Health Service Access, Usage and Satisfaction:

The AITHS compared its data from Travellers with data from the INSIGHT '07 survey (7). Most Travellers stated they had access to health services which was similar to others in the population (2). However, the AITHS reported that satisfaction with quality of health service care was *"appreciably higher"* in the INSIGHT group than among Travellers, indicating a perception or a real experience of poorer care (2). 41% of Travellers *"completely trusted the health care professional treating"* them by comparison with 81.8% among the medical card holders in the INSIGHT group (7). The GP is the primary source of health information for the majority of Travellers, as s/he is in the general population but Travellers in the RoI also reported sourcing it from Traveller Community Health Workers (29.4%) and Traveller organisations (14.3%)(7).

(NOTE: The INSIGHT '07 study was an independent study of consumer satisfaction with health and social care services commissioned by the Health Service Executive).

Experiences of Discrimination / Racism

In the AITHS Travellers experiences of discrimination was compared with experiences of Black, Latino and White working class adults in Boston USA (Krieger et al); the Traveller data was gathered using the same methodology (8). Table 1 below, reproduced from the AITHS, clearly indicates that Travellers as an ethnic minority group in Ireland reported much higher levels of discrimination across a wide range of social settings than Black, Latino and White working class adults in Boston in 2005 (2).

Table 1 Experience of discrimination in Travellers in the AITHS, compared with a survey of Black, Latino and White working class adults in Boston, USA (2)

Ever experienced discrimination, once or more than once:	Travellers (ROI) (n=1,604)	Travellers (NI) (n=398)	Black Americans (n=156)	Latino Americans (n=299)	White Americans (n=205)
At school	62.1%	67.0%	20.5%	8.7%	9.8%
Getting work	55.1%	63.9%	27.6%	19.6%	14.2%
At work	43.9%	52.8%	19.2%	14.4%	11.7%
Getting accommodation	5.6%	75.6%	25.6%	10.5%	10.2%
Getting healthcare	39.6%	54.0%	17.3%	14.0%	5.8%
Being served in a shop or pub/ restaurant	60.7%	72.3%	41.0%	19.6%	10.2%
Getting insurance or a loan	39.3%	60.2%	25.6%	16.2%	7.8%
On the street or in a public setting	49.7%	70.1%	38.0%	24.0%	15.1%
From the guards or police, or in the courts	52.3%	64.7%	21.8%	17.5%	6.3%

Accommodation:

24.4% of ROI Travellers rated their living place as 'unhealthy' or 'very unhealthy' and 26.4% rated it as 'unsafe' (AITHS, 2010, p. 46).73% of Traveller families in the ROI live in houses and 18.2% in trailers or caravans; their family homes are smaller with 81% living in a house or flat having 4 rooms or less compared with 25% of all private permanent households (Census 2006 cited in AITHS, 2010, p. 47).

Social Supports:

Spouses / partners and parents were identified as major sources of support by participants with Travellers rating support from parents, child(ren) and other close relatives notably higher than the general population in the SLÁN 2002 study (2). This appears to be indicative of the strong kinship networks traditional among the Traveller community; it may also indicate the low level of positive interaction and trust between Travellers and settled people.

(NOTE: SLÁN is an acronym for the Survey of Lifestyle, Attitudes and Nutrition, a national study of the general population in the Republic of Ireland which has been completed at intervals since the first survey in 1998).

Diet and Food Choice:

The AITHS gathered some data on diet and food consumption. 23% of Traveller women reported eating fried or fast foods 4 or more times per week by comparison with the 6% rate of consumption among the female population in SLÁN (9). Among Travellers in the ROI "butter was the most popular spread (56.2%) and was consumed at least most days by both men (56.9%) and women (55.8%); there was no strong age trend. In the ROI a majority of respondents either usually (11.7%) or always (38%) added salt to food at table, men more so than women, and younger respondents more than older people" (9). 58.4% use extra salt when cooking children's food (9).

The AITHS reports only 45.3% of Travellers in the ROI eating at least 5 portions of fruit and vegetables per day (2); this is almost 20% less than a reported 65% of adults in the general population in the SLÁN 2007 report (9).

Weight:

The AITHS did not collect clinical measurements of weight but some limited information on weight / overweight and obesity among Travellers is available from a small pilot study by Slattery *et al*; (n=187; 60 males and 127 females with a mean age of 38 years) (6). It found that 34% of Travellers in the sample were overweight and 49% were obese (2). Data for the general Irish population isn't available for that year however overweight and obesity data is available from the SLÁN 2007 study. It found that in a sub-sample of 18-44 year olds BMI measurements indicated that 41% of men were overweight as were 24% of women. Levels of obesity were similar among men and women at 16% and 17%

respectively (10). While these data are not directly comparable nonetheless a 16/17% obesity rate among a general population sample of 18-44 year olds in 2007 and a 49% rate among a sample of the Traveller population with a mean age of 38 years in 2010, may indicate a significant health inequality in this important health indicator.

Physical Activity:

Most Traveller adults reported participating in physical activity fewer than 3 times a week but Traveller women report rates of strenuous and moderate exercise which are notably higher than those reported by female medical card holders (a comparable socio-economic group) in the SLÁN 2007 report (2).

A majority of Traveller respondents (70.2% in ROI) used a vehicle when going shopping. "Rates were comparable between men and women, but were inversely related to age, with older respondents less likely to use a car and more likely to go on foot" (2). Over 70% of Traveller adults stated that they spent significant amounts of time engaged in the sedentary activities of watching TV or playing computer games (2).

Family Size and Marital Status:

Early marriage is common among Travellers with 33.4% of 15-29 year olds married by comparison with 8.2% of the general population (11). Travellers across the Island of Ireland (Iol) have a fertility rate of 2.7 by comparison with a rate of 2.1 for the general population (2). Among Traveller women aged 40-49 who are likely to have completed their family, "26.9% had 5 or more children in stark contrast to just 2.6% of the overall population" (11) and 13% had 7 or more children (11).

Health Issues Specific to Women

The AITHS reported that rates of breast screening among Traveller women were similar or greater than those in the corresponding age groups in the SLAN 2007 Medical Card Holder group and rates of cervical screening were considerably higher (2). The latter is an interesting finding and likely indicates the success of Traveller Primary Health Care projects in providing health education and supporting Traveller women to avail of cervical screening. Breast feeding rates however are falling rapidly across the generations. Among female participants 50% of those aged 65 years and over had breastfed, but only 16% of those 45-64 years and 7% of those 30-44 years (2). This may effect post-partum weight.

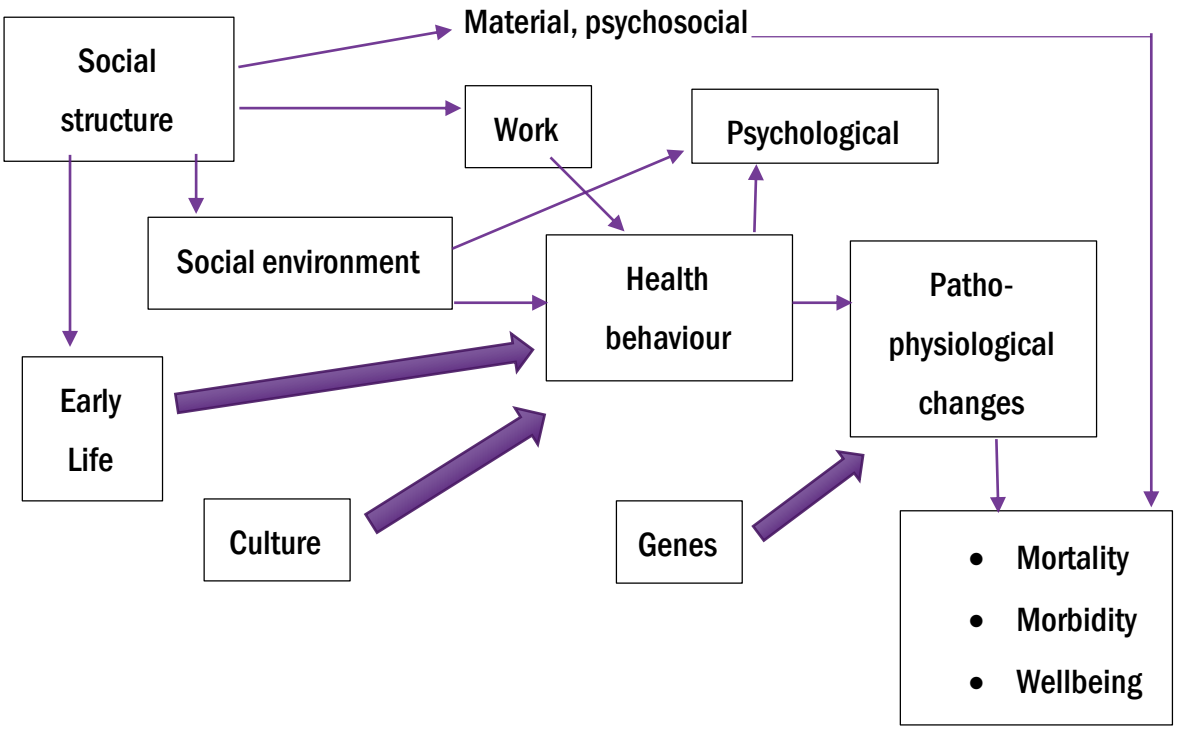
1.4 Theoretical Framework

The study is grounded in the discipline of Health Promotion and informed by 4 key concepts.

I. **Travellers are understood to be an indigenous ethnic group in Ireland**

II. **A Social Determinants of Health perspective**: health is created and influenced by a broad range of factors many of which are socially constructed and therefore amenable to social change. The Social Determinants of Health are understood to operate in a dynamic fashion as illustrated in Figure 1 below a 'Socio-Economic Model of Health' from the Report of the Independent Inquiry into Inequalities in Health (1998) (usually referred to as the Acheson Report). Geoffrey Rose's concept of the 'causes of the causes' (12) is valuable to this perspective as it encourages deep analysis of the processes which lead to health outcomes.

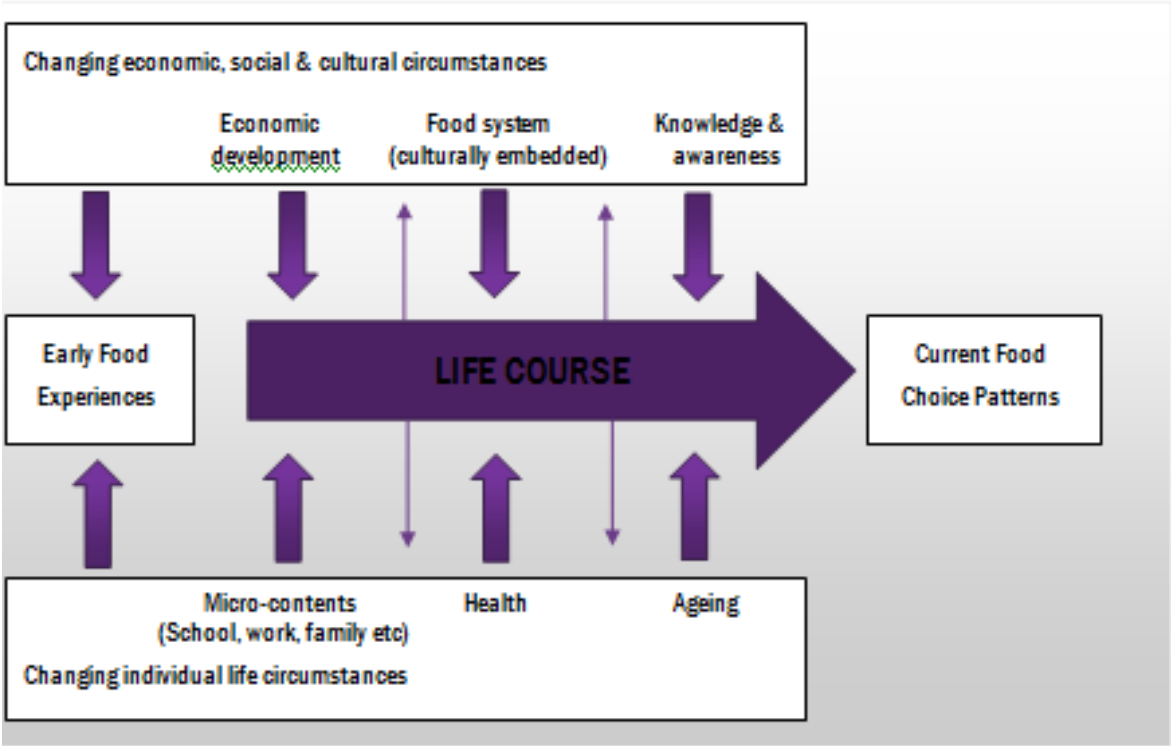
Figure 1 'Socio-Economic Model of Health' from the Acheson Report into Inequalities in Health (16)



III. **The Life Course Perspective on Health Inequalities:** proposed by Wadsworth (13), Graham (14, 15) and others, this perspective argues that over the course of one's life one accumulates positive or negative exposures to important health determinants arising from lived experiences, with the cumulative effect reflected in one's health outcomes.

IV. A Life Course Perspective on Present Food Choice: this takes account of cumulative life experiences along with current social, cultural, physical and environmental influences. Figure 2 below illustrates this perspective (Delaney and McCarthy, 2011, p. 120).

Figure 2 Key life course influences on present food choice patterns



1.5 Aim and Objectives of the Study

The study had one main aim: to explore with members of the STHN why they find it challenging to make lasting changes to their food consumption, physical activity and exercise norms, despite having received health education on these topics. The study had 3 objectives:

1. To identify and explore factors influencing Traveller women's food choices and food consumption.
2. To identify and explore factors influencing their levels of physical activity and exercise
3. To explore the relationship, if any, between the above factors.

The research process had 2 strands – (1) undertaking a review of selected published literature related to the topics and (2) undertaking a qualitative study with STHN members. The fact that the research question had been identified and was 'owned' by these Traveller women was important as it enhanced

the likelihood of good participation in the data collection and analysis; it may also mean a greater level of ownership of the findings and potentially a desire to act on them by the STHN. Beyond that it is hoped that wider dissemination of the findings will prompt discussion and reflection among the wider Traveller community in Ireland and equally importantly, among health professionals, civil servants, politicians and the Government who have an interest in, commitment to and responsibility for improving population health including Travellers health.

1.6 Structure of the Report

The remainder of the report is organised as follows:

- Chapter 2: Methodology and Methods
- Chapter 3: Literature Review
- Chapter 4: Findings
- Chapter 5: Discussion
- Chapter 6: Conclusion and Recommendations

2 Methodology and Methods

2.1 Methodology

A Community Based Participatory Research (CBPR) approach was employed in this study. CBPR has been identified as a promising strategy for research aimed at studying and reducing health inequalities (16). As Lantz *et al* argue *"even if research is purely descriptive (for example, if it is attempting to identify patterns and differentials in some phenomenon by race, ethnicity or class) a participatory approach can help reframe or refocus the research questions in a way that improves the research"* (16) p.8.

Planning meetings were held in March and April 2013 involving representatives of the STHN, UCC and HSE South Health Promotion Department; the methodology and data collection methods were discussed and selected with a view to ensuring maximum participation by the STHN members.

2.2 Data Collection Method

Focus groups were the data collection method of choice. They *"can be useful when working with groups of individuals not previously studied in the literature and who are likely to hold beliefs or attitudes that differ from those of the 'dominant' culture* (17) p. 39.

The focus groups employed the use of a vignette. According to Hazel, vignettes are stories that provide *"concrete examples of people and their behaviours on which participants can offer comment or opinion. The researcher can then facilitate a discussion around the opinions expressed or particular terms used in the participant's comments"* (18)p. 2. Benefits of vignettes include flexibility, allowing the researcher to design a 'story' unique to the topics under exploration and also, depersonalisation, which is helpful when discussing sensitive issues (19). Hughes described how *"vignettes highlight selected parts of the real world that can help unpackage perceptions, beliefs, and attitudes to a wide range of social issues. The relative distance between the vignette and the respondent can facilitate this"* (20)p. 384.

Hodgins et al used a vignette when they explored illness causation and health inequalities among Traveller women, finding it very effective as participants very quickly identified with the scenario and provided rich and in-depth data (3). The vignette designed for this study depicted a Traveller woman called Margaret, the mother of four children, who has steadily put on weight over years and, despite being educated around the value of healthy eating and physical activity, finds it difficult to change her behaviour (Vignette attached as Appendix 2). Two topic guides were developed based on the aim and objectives and the literature review; the first dealt largely with food choices and consumption; the second with physical activity and exercise (Appendices 3 and 4).

2.3 Ethical Considerations

The Clinical Research Ethics Committee in University College Cork granted ethical approval for the study. A study information sheet (Appendix 5) and consent form (Appendix 6) were disseminated prior to the focus groups via the STHN so participants could give informed consent; the study was also discussed in detail verbally as some potential participants were not literate. As discussions around the women's experiences were potentially a sensitive subject each participant was assigned a Traveller Community Health Worker based on where they lived, whom they could approach for support following participation. All data files were encrypted and stored in a secure location with only the interviewers and professional transcriber having access.

2.4 Pilot Focus Group

The topic guides, vignette, information sheet and consent form were piloted with a group of Traveller Community Health Workers to ensure the language was accessible as many adult Travellers have low levels of literacy. The pilot also provided an opportunity to check the flow of questions and identify any gaps within the topic guides, and to estimate the likely duration of a focus group.

2.5 Recruitment of Participants and Setting

This was a reflective research process by STHN members and therefore participants were recruited from the STHN membership who had expressed an interest in the topic. A total of 20 women were recruited by the 2 STHN workers and were then divided into two groups of 6 and one group of 8; the groups were named A, B and C.

2.6 Data Collection Procedures

Data was collected through focus groups on two days – June 5th and June 19th 2013. The Gilbert Centre, Mallow, Co Cork was used as it is familiar to the participants.

On June 5th the topic guide explored factors influencing the food choices of 'Margaret' in the vignette and on June 19th it focused on facilitators and barriers to 'Margaret' participating in physical activity and exercise. Each focus group lasted between 60-75 minutes and was facilitated by Mary Cronin with Aideen O' Leary acting as note-taker. The information sheet and consent form were read aloud giving participants an opportunity to ask questions which were answered by the facilitator. All agreed to sign the consent form and to complete a brief demographic questionnaire which gathered information on their age and accommodation type (Appendix 7). Accommodation information was sought as this could possibly impact on cooking facilities and food choices.

Of the twenty participants on the first day 4 were in their twenties, 2 in the thirties, 7 in their 40's, 4 in their 50's and 2 in their sixties; one participant didn't give her age. 43 years was the average age among the 19 participants who gave age information. The academic researchers had suggested having an age range from 30's - 60's on the basis that these participants would have more in common but the STHN workers wanted the process to include all interested members. On the second day 4 participants didn't return 3 of whom were in their twenties. 3 participants lived in halting sites, 1 in a rented apartment and 16 lived in a house.

2.7 Data Analysis Process

Audio-recordings of the 6 focus groups were transcribed verbatim and an inductive thematic analysis approach was employed. Thematic analysis allows for inter-rater reliability to be established through a consensus approach, based on discussion of the data and interpretation of the identified themes (21). In June 2014 preliminary findings were presented to the participants to check the accuracy of the analysis to date. Draft reports were subsequently reviewed and revised by the research team over a period of time.

3 Literature review

3.1 Introduction

As previously outlined this was a small scale study with limited resources, therefore it wasn't possible to undertake a systematic review of the extensive literature on influences on food choice / consumption, overweight / obesity and physical activity / exercise. This literature review is indicative of some current debates and is largely focused on selected studies on Irish Travellers, women from other ethnic minorities and populations from lower socio-economic backgrounds in Ireland and other countries, on the basis that they hold similar social positions in their societies. A significant number of articles were reviewed prior to data collection however during the analysis process themes identified within the data prompted review of some additional literature on (1) the relationship between stress, food consumption and weight and (2) on the physiological challenges of weight loss.

3.2 Literature Review of Influences on Food Choices and Food Consumption

This section of the review presents evidence on Social, Psychological and Environmental Factors known to impact on food choice and consumption, as well as Biological / Physiological factors which are believed to play a role in weight gain and loss. There is compelling evidence to support the suggestion that ethnic minorities and people of low economic status are at a disadvantage when it comes to consuming a healthy diet (22-24).

Food choice is *"a complex phenomenon incorporating myriad influences that may be subject to change according to life experiences and external social and historical circumstances"* (25) p. 117. A life course perspective on food choice takes account of cumulative life experiences over time as well as the range of current social, cultural, physical and environmental influences, when examining current food choices (25-29).

3.3 Social Factors

3.3.1 Traveller Women's Roles including the role of Mother

Hodgins *et al.* undertook a study with 41 Irish Traveller women exploring their perceptions of illness causation and health inequalities in their community(3). It found they considered their role as a Traveller woman and especially as a mother, to be detrimental to their personal health. Life was experienced as hard, involving a constant daily struggle. Traditionally Traveller women have more children than their settled counterparts; some participants in this study described feeling solely responsible for their children and being stressed as a result, for example

"Children always depend on their mother.....the main worry are the children....are they alright...mothers worry...fathers can walk off and go away" (3)p.1982.

Contributors reported compromising their own health in favour of their children and husband (ibid); this was also understood to contribute to ill health. Evidence of this behaviour, sometimes called 'maternal deprivation' and sometimes with a focus on food, has also been found in studies on women from other ethnic minority and lower socio-economic groups (30-32). De Vault suggested that *"[t]hese women seem to be expressing a heightened sense of the notion that women's own food is less important than that prepared for others"* (32, 33).

Traveller women described multiple roles causing stress which was regarded as a contributor to ill health; however they were generally reluctant to engage with health professionals. Participants also identified domestic violence as *"fostering ill-health"* and it was considered to be *"a direct cause of depression"(3)*.

3.3.2 The Family

The influence of family is discussed in relation to (i) the phenomenon of 'familism' and (ii) the preferences / influence of spouses and children.

'Familism' is a concept employed in a number of disciplines to describe where a belief is held that the needs of any individual in the family are subordinate to needs of the family as a group (34). Familism is in direct contrast to individualism. Rajkai also cites Dupcsik and Toth who describe two types of familism "1. familism understood as a cultural ideology (internal aspect), and 2. familism regarded as a result of specific social conditions (lack of interpersonal trust) (external aspect)"(34). Familism

is described as more common in traditional or collective cultures. According to Vega (1990), values associated with familism include a tendency to live near family members and for family to provide social and emotional support. Among Hispanic communities *"Family has been described as a protective mechanism for negative environmental influences"* (35) p.448. Austin *et al* have suggested that *"familism has a varied and context-specific influence on health and psychosocial outcomes"* (36)p. 266.

In many households preferences of spouses / partners and children strongly influence food choice and consumption despite the woman being responsible for managing the costs and monitoring the supply of food, meal planning, shopping and cooking. Barker *et al* found that partners of some participants in their study were making food choices for themselves and their family of which the women did not approve (37). Studies have also found that living with children can have an adverse effect on a woman's diet (38, 39). Women participating in Lawrence *et al's* study (2009) discussed the 'pester power' of children while shopping (40); Barker and colleagues also described stress arising while shopping for food with small children (37).

3.3.3 Food Insecurity and its Impact on Women and Mothers

Food insecurity among mothers has been identified as an important social / psychological factor influencing food consumption. There is a growing body of research providing evidence that food insecurity among women is positively related with an increased risk of being overweight (41-43). Food insecurity exists *"whenever the availability of nutritionally adequate and safe foods or the ability to acquire acceptable foods in socially acceptable ways is limited or uncertain*" (44)p. 1952.

In 1995 Dietz proposed a link between hunger and obesity triggering ongoing debate and research (44). When discussing the 'Food Insecurity-Obesity Paradox', Dinour et al. stated that a correlation in these two apparently contradictory states has been seen among women, but with less evidence in relation to men and children (44). It has been suggested that the Food Insecurity-Obesity Paradox is caused by experiences of food insecurity in childhood which are magnified in adulthood. The authors cite a number of studies in which it's been proposed that those on low-incomes buy low-cost energy dense foods to ensure they have sufficient energy to meet their bodily needs (44). Martin and Lippert also raised the issue of food poverty / insecurity arguing that mothers fare less well than others in

these circumstances as there is a significant relationship between *"food insecurity and being overweight or obese for mothers, but not child-free women or all men"* (32).

A study of low- income mothers in Canada by Dammann and Smith (2009) highlighted the stress of being a mother and living in poverty. Some participants spoke about having to fast to ensure their children had something to eat and putting their own health at risk by putting their children's nutritional needs before their own (31). These authors highlight the paradoxical nature of maternal deprivation, when one takes into account the high rate of overweight/obese women among disadvantaged, low-income groups.

In summary there is evidence suggesting that women and particularly mothers, experience more negative weight outcomes than others, when they have experience of food insecurity.

3.3.4 Culture, Identity and Food

Culture is one of the strongest influences on food choice and consumption; food choices *"express preferences, identities and cultural meanings and are based on an individual's lifetime experience of food and expectations for the future"* (45). Delaney and McCarthy citing Birch (1999) and Lien, Lytle and Klepp (2001), argue that the foundations of long-lasting food choice patterns are strongly established during childhood (25). A study by Devine and colleagues on factors influencing adult's changing fruit and vegetable intake over time, identified *"food upbringing, roles, health, cultural traditions, resources, location and the food system"* as influential (27). According to Kittle and Sucher *"many aspects of food purchasing, preparation and eating are culturally defined and individuals may consciously or unconsciously participate in these activities to preserve traditions and maintain group identity"* (46)p. 351.

Ochieng (2013) reported on a small qualitative study of African Caribbean people in Britain in which participant's socio-economic status was not stated. It highlighted the importance of health messages being culturally appropriate and respectful of cultural identity -

> *"you have to understand us and understand our lifestyle; that is important....whether it is healthy or not is not important...it is who we are..."* (1)p.12.

Identity is not only linked to culture. The work of Bisogni, Connors, Devine and Sobal (2002) helped to develop the concept of 'food identities' and its role in food choices (47). In their study of low/middle income mothers in the US, Johnson et al proposed that those with a more defined 'health identity' made *"healthier food choices for themselves and similar choices for their children"* (47)p. 220 while also acting as positive role models for their children in terms of food choice.

3.3.5 Culture and Body Image

Culture is known to influence body image and a number of studies have identified that some cultures seem to be accepting of larger body size. In her mixed methods study of 36 middle-income African American women Walcott-McQuigg cites previous research as showing cultural influences indicating that African-American women don't feel they need to be slim to be attractive, they don't share white women's worries regarding diet and weight control and are less likely than white women to take exercise or to diet in an effort to lose weight (48). In her own study the majority of participants were attempting to manage their diet to stay healthy, rather than to change their body. In Lawrence et al's (2007) study of girls and young women from minority ethnic groups in the UK, Zimbabwean participants reported not worrying about their body image prior to living in the UK (49). Caradas et al proposed that black girls in South Africa *"may live in an environment that is more permissive of overweight"* (49)p. 317.

3.3.6 Level of Education

Education has been identified as a key factor influencing healthy eating. According to Ericson and Goldthorpe, *"Level of education significantly influences occupational attainment, social class and therefore income"* (50) p. 2172. Barker and colleagues state that research from a range of European countries has identified an association between diet and educational attainment (37). Based on the Irish SLAN 2007 study, Harrington *et al.* reported that those with higher educational attainment and of higher social class had a healthier diet (9). In a large study of young women in Britain Robinson and colleagues found *"educational attainment to be the most important single determinant"* (39)p. 1178 in the consumption of a "prudent" diet i.e. one following dietary guidelines from Department of Health. According to Kearney *et al.* education level is related to change in adults eating habits; but, interestingly, nutritional knowledge of itself is not strongly associated with dietary habits (25).

Barker *et al*. identified a difference in partner support available to women with higher educational attainment and those with lower educational attainment, finding that partners of the former more supportive of the woman's attempt to make healthier food choices (37). These partners were also more involved in food planning and cooking. These authors proposed that children had a considerable amount of control when it came to food choices but they also identified evidence of social stratification because children whose mother had higher educational attainment were not as involved in making their own food choices. Further literature related to this issue is reviewed in the upcoming section on 'Sense of Control / Lack of Control'.

3.4 Psychological Factors

3.4.1 Sense of Control / Lack of Control

This section first reviews some literature on control over life circumstances for members of ethnic minority groups and second, literature on control over food choice and consumption.

In Hodgins *et al's* study some Traveller women described having no sense of agency or power to improve things. The term 'helpless' was used by the authors to describe participants attitude to health and illustrated by the quote *"what chance do I have? I don't have any chance! All that's ahead is a struggle with no help"* (3)p.1987.

In Ocheing's study of African Caribbean people in the UK, participants felt they had limited control due to societal oppression (1). They believed the government or 'ruling class' (as they referred to higher income groups), made all the decisions with regards to healthy eating advice and exercising and did not take into account the life experiences and priorities which are important to African Caribbean people. Health messages / campaigns were considered to be hard to comply with, costly, and not necessarily relevant or important as they struggled with other priorities.

> *"When the government and ruling class people make all this advice, about healthy eating, exercise, relaxing…they think we're all the same; some of these things are not important to us because we are and feel oppressed. Therefore, although they tell us these things are good for our health we still cannot reach them…I mean, living a healthy lifestyle is easier for the people with money"* (1)p.9.

In Van Cleemput et al's study of health-related beliefs and experiences, Gypsies and Travellers discussed self-reliance and its association with a need to maintain control, stating that high levels of stress develop for them when they can't be self-reliant and in control (51).

Control in regard to food choice is seen as a key concept in the psychology of health. Lawrence and Barker found *'lack of control'* to be a common theme among women with low educational attainment when it came to making food choices for themselves and their family (52). Spouses and children show little support for making healthier food decisions and exercise a lot of control when it comes to foods purchased and meals prepared for the family. James also found partners and children tended to act as barriers to healthy eating with women worrying about possible food waste and the cost of introducing new food which may be rejected (46). In her study, women spoke of how their husband worked all day and believed they were entitled to whatever they wanted regardless of how it affected others' eating habits (46). This resonates with some literature on the influence of the family.

3.4.2 Emotional State and Food Consumption

It has long been understood that one's emotional condition can impact on food consumption with the term 'emotional eating' sometimes used to describe food consumption driven primarily by feelings other than hunger. Emotions such as depression, boredom and stress are all known to contribute to changes in eating habits and long-standing experiences with such emotional states can create new patterns of food consumption. In Hodgins et al's study Traveller women reported high levels of stress and worry which were associated with a range of health problems including not eating properly, not eating at all and also with depression (3). The authors cited evidence of a high rate of mental illness among some nomadic communities, particularly depression and suicide in Canadian Aboriginal people and reported high levels of perceived depression among Traveller women in their Irish study.

3.4.3 Stress: its Causes and its Impact on Food Consumption and Weight Control

There's a growing literature on the topic of stress, its impact on health, food consumption and possible impact on weight control. This section first presents some information on causes of stress as experienced by ethnic minority women and second, information on the growing scientific understanding of the role of stress in overweight and obesity.

Causes of Stress for Ethnic Minority Women

Racism, social exclusion, socio-economic disadvantage, family illness and death, threats to cultural identity, the roles woman and mother and sexism have been identified as causes of stress for ethnic minority women. Traveller women in Hodgins *et al's* study reported high levels of stress and worry and identified a pathway from these negative emotions to depression and heart disease. They named pervasive discrimination and poor living conditions as being incompatible with health and described feeling they are *"disliked or even hated by society at large"* (3)p.1987.

In Van Cleemput et al's study, Gypsies and Travellers stated they felt policies constrained their self-determination, that authorities excluded and oppressed them and tried destroy their cultural identity:

> *"We haven't asked anybody to change their ways....why should they ask us to change ours? That's what the government is trying to do"* (51)p.207.

Racism was identified in Ochieng's study of African Caribbean people as a factor which *"permeated nearly all aspects of their lives which resulted in them being excluded from not only the labour market but also a much broader spread of social and economic life chance"* (1)p.10. Participants held racism accountable for high rates of morbidity and mortality in their community believing it discouraged an individual's ability to maintain a healthy lifestyle. Ochieng argued that for people who suffer from racism / discrimination to sustain a healthy lifestyle, governments and stakeholders need to create equal and fair environments when it comes to education and the labour market.

In the 1990's Walcott-McQuigg's research with African American women identified a positive correlation between body weight and stress where *"more than 50% of the women thought that stress negatively affected their weight-control behaviour"* (48)p.427. The more recent *Sister-Talk* study of 350 African-American women in US (76% had a college education and 75% were employed outside the home), found a strong association between perceived racial discrimination, emotional eating behaviours and perceived stress levels (53); these findings echo those of many other studies (53).

Chronic Stress: Its impact on Physiological Responses and Weight Control

According to Davis et al *"evidence from over forty years of basic science and clinical research shows that chronic stress disrupts the complex neuro-endocrine pathways in the human stress response system which impedes the ability to maintain homeostasis"* (54)p.113. Chronic stress leads to persistent high levels of cortisol which in turn *"promote insulin storage, central fat storage (abdominal adiposity) and increase intake of nutrient dense foods creating an energy imbalance, which overtime results in obesity"* (54)p.114. The authors present evidence that other unhealthy behaviours such as poor diet, low levels of physical activity and poor sleep patterns are secondary to this underlying impaired biological process but they nonetheless contribute to increased energy consumption and / or a reduction in physical or mental activity.

The *Sister-Talk* study previously described, concluded that culturally appropriate stress management interventions could be created that specifically teach stress management techniques and coping skills that do not involve eating (53).

Childbearing, Maternal Stress and Risk of Obesity

In the US the *"five year risk of developing obesity for women giving birth to at least one child was 3.5 times that of women who had never given birth"* (54)p.110. The risk was found to be significantly higher for ethnic minority women and those of lower socio-economic status (54). These authors explored *"under-appreciated modifiable factors contributing to obesity including maternal stress"* (54)p.111. While they acknowledge there isn't a clear association between maternal stress and weight gain or maintenance, they cite the work of Epel *et al* (2000) which found higher levels of abdominal fat among women experiencing high levels of life stress and stronger stress reactivity, and lower levels among women experiencing less stress (54). They propose that public health should seek to work with ethnic minority and disadvantaged women during the perinatal period to attempt to reduce their stress which could result in better health outcomes for the mothers and their babies.

3.4.4 Chance, Fatalism and Stoicism

Chance or luck is considered by some to have a role in health creation. Lawrence and colleagues highlight that people in lower socio-economic classes, who they suggest are much more likely to engage in health-damaging behaviours such as smoking, inactive lifestyle and poor diet, frequently believe that good health is a result of chance (40).

Fatalism, or the idea that 'you have to die of something', is evident in some studies on ethnic minorities and disadvantaged populations. James' (2004) study of African American women identified fatalism within their attitudes to health (46). Van Cleemput et al's study of Gypsies and Travellers identified stoicism and fatalism in relation to their ill health (51). Hodgins et al indentified a stoic attitude among Traveller women who said *they would have to be very, very bad before they'd go to a Doctor"*(3)p.1984.

3.5 Environmental Factors

Environment can be understood in a number of ways including economic, social, political, cultural and physical conditions.

3.5.1 The Global Food System

Contemporary research and debates on overweight and obesity acknowledge significant influences, far removed from the individual and the family, which are driving the global obesity epidemic and food choice. Lawrence and Barker cite the global influence of the "*productionist paradigm of food provision*" as well as macro and micro-environmental factors i.e. environmental, social, historical and psychological influences on food choice (40). In an important Lancet series on Obesity in 2011, changes in the global food system were identified as major drivers of the global obesity epidemic; it argued that *"governments have largely abdicated the responsibility for addressing obesity to individuals, the private sector and non-governmental organisations, yet the obesity epidemic will not be reversed without government leadership, regulation and investment"* (55)p. 804.

3.5.2 The Obesogenic Environment

Recently much attention has been paid to the 'obesogenic (or obesity-promoting) environment' (56). Factors such as the greater availability of high energy fast foods and drinks, work demands putting pressure on the availability of time to shop for and cook fresh foods, the subsidisation of less healthy foods and the increasing use of transport to travel even small distances, to name a few, is creating an environment where it is increasingly challenging to maintain a healthy weight. Overweight and obesity are on the increase in Ireland closely resembling international patterns with 2 out 5 Irish adults (38%) overweight and 1 in 4 (23%) obese (9).

3.5.3 Food Cost and Food Waste

Family economic circumstances are important in determining a woman's food options. The amount of money available, together with access to and affordability of good quality food, are undeniably important factors (40). *"Unbalanced, unvaried diets are more common amongst poor and disadvantaged women, which in turn has an effect on the long term health of their offspring and family"* (40)p.1004.

Irish research in 2004 showed that a large percentage of the income of low-income families was needed to purchase a 'healthy' food basket based on healthy eating guidelines (57). Since the onset of the economic recession in 2008 many Irish families living on social welfare payments, including Traveller families, have had even less disposable income. Studies elsewhere have found cost to be a major barrier to consuming a healthy diet because healthy food is more expensive then foods high in saturated fats and sugars (23, 32).

In Antin and Hunt's qualitative study with African-American young women cost is clearly identified as a structural barrier to healthy eating; the authors proposed that healthy eating campaigns and the cost of healthy foods may lead to low self-esteem among disadvantaged populations because social reality prevents them from putting their health first. One participant stated

> *"I feel like for [the government] to be putting bulletins and having health alerts and stuff, its making people more depressed knowing they can't afford that"* (58)p.861.

Barton et al found that take-away foods were believed to be more cost effective then a home cooked meal (23). Antin and Hunt had a similar finding; one participant commented

> *"I love salad [but] I can't afford it. Expensive. It's cheaper to eat fast food. That's why everybody eats fast food, because it's cheaper. It's like they put all the healthy foods and nourishing foods expensive and then they take the cheap foods, the bad food, and put it cheaper"* (58)p. 861.

In Barker et al's study for some women, *'shopping healthily meant upgrading the quality of the processed foods"* ....for others "*it was the relative cost of fruit and vegetables"* (37)p1233.

However not all studies agree that healthy food is more expensive. In James' (2004) study some participants believed that poor people could eat healthily if they knew what to buy, citing personal experience of being in a poor family as a child but still eating well (46).

Balancing the issues of food cost and food waste was a recurring theme in Barker *et al's* study (37). Participants felt that they could not afford to have food not liked, go 'off' and then be thrown out; they buy what they knew their family would like and eat, and this often meant selecting convenience food.

> *"I stick to what they like, you know, 'cos I know that it's not gonna get wasted"* (37)p.1233.

Women in Lawrence et al's study were also concerned with food wastage and avoided buying fresh quality produce such as fruit and vegetables due to the fear that the family would not eat them (52).

3.5.4 Access to Food – Local Retail, Built and Home Environments

As well as affordability access is an important factor in achieving a healthy diet. Access can be interpreted in a number of ways - it can be understood in geographic terms related to what kind of food is available locally and it can be understood in relation to availability within the household.

The food choices people make are strongly pre-determined by what retailers offer the consumer (59). A common term debated in the literature is the concept of 'food deserts' and whether they exist or not (60). 'Food deserts' can be understood as urban areas populated by residents who have little or no access to affordable healthy foods. These are often areas where leading superstores have opened on city peripheries causing the closure of smaller, local food shops. Consequently those without access to private transport may only have access to outlets which are not primarily food retailers (e.g. petrol stations) where there may not be a variety of fresh and / or healthy produce.

An Irish study found that the local food environment can significantly shape the *"availability of various foodstuffs, their cost and quality net of individual and household characteristics"* (61)p.5. This implies that even households which are economically more advantaged but live in poorly served communities may have a less adequate diet than their economic peers in better served communities. Thus socioeconomically disadvantaged households in poorer areas would potentially be doubly deprived in relation to diet and nutrition. North American studies have found *"variations in the number and types of shops across communities which differ by socioeconomic status, and that these variations independently contribute to differentials in diet and nutrition at the individual level"* (61).

The built environment is also important. High concentrations of fast food outlets which are common in some poor neighbourhoods, may lead to an increase of consumption of cheap, nutritionally poor foods (58). Barker et al identified challenges and stress for women with children who didn't have a car and / or were living in upstairs accommodation where lifts may sometimes be out of order (37). These factors meant women were unlikely to purchase goods such as fruit and vegetables which were perceived as being costly, heavy and wasteful, in turn affecting the woman's diet and her children.

Access can also be understood as having easy access to food when spending a lot of time at home. According to Barker *et al* women with lower education qualifications are more likely to be caring for small children at home and argue that this is critical to the way they eat and linked to boredom (37). Lawrence *et al's* study echoes this discussing the combination of boredom due to being at home all day and having constant opportunities to eat, with many finding it difficult to resist temptation (52). In this circumstance access and emotional state combine and compound each other.

3.6 Physiological Factors influencing Weight Control

Scientific understanding of the physiological factors impacting on weight gain, retention and loss is growing; it is also becoming better understood by the wider public.

3.6.1 The Role of Leptin in Regulating Body Composition

Although it is widely acknowledged that cheap convenience foods augment the risk of increased adiposity (62, 63), it is perhaps less appreciated that for overweight and obese individuals, weight-loss may be extremely difficult to achieve (64). Partly this is due to biological processes and the hormone Leptin is understood to have a key role.

Leptin, a hormone produced by fat cells (adipocytes), regulates body composition by both modulating appetite via the sensation of hunger, and by enhancing the body's ability to utilise stored fat (65). As fat (adiposity) levels increase, fat cells release leptin, signalling to the brain that fat stores are adequate, thus producing feelings of fullness. Consequently, research has demonstrated that an absence of leptin leads to uncontrolled hunger and resulting obesity.

Paradoxically, however, overweight and obese people generally display higher concentrations of leptin than normal weight persons due to their higher percentage of body fat (66). It is thought that fat cells

exposed to chronically high levels of leptin progressively lose sensitivity, leading to *leptin resistance* (67). This has a number of consequences including reduced fatty acid oxidation, and fat cells which are less inclined to absorb free fatty acids from the blood, potentially contributing to insulin resistance (68); this in turn may lead to Type 2 Diabetes. In addition, neurons in the hypothalamus in the brain also show decreased responsiveness to leptin levels in the blood, with high levels of leptin failing to control hunger and modulate weight (69).

3.6.2 Genes and Weight

According to Davis et al genetic research has *"provided evidence for the role of genes in appetite, eating behaviour, energy metabolism, energy expenditure, adipogenesis, fat distribution and predisposition to chronic diseases (e.g. diabetes)* (54)p.112. Therefore some individuals and / or ethnic groups may have genetic predispositions which are not amenable to modification.

3.6.3 Conclusion of Literature Review on Food Choice and Food Consumption

Evidently food choice and food consumption by ethnic minority and socio-economically marginalised women is very complex with many social, psychological and environmental factors inter-linking.

3.7 LITERATURE REVIEW of INFLUENCES on PHYSICAL ACTIVITY and EXERCISE

This section presents evidence on Social Environmental, Individual / Personal and Physical Environment factors known to influence physical activity and exercise. It includes research findings on both general populations and also on ethnic minority and poor women from a range of countries.

In 1996 the U.S. Centers for Disease Control (CDC) and Prevention recommended a minimum of 30 minutes of moderate intensity physical activity daily for everyone (70). A Cochrane review concluded there was evidence to support the hypothesis that exercise has a positive effect on body weight when combined with diet, and that exercise improves health even if no weight is lost (71). When compared with no treatment, exercise resulted in small weight losses across studies. Exercise combined with diet resulted in a greater weight reduction than diet alone. Increasing exercise intensity increased the magnitude of weight loss. Exercise and diet was found to affect other measures positively including serum lipids, blood pressure and fasting plasma glucose. Exercise as a sole weight loss intervention resulted in significant reductions in diastolic blood pressure and triglycerides. Higher intensity exercise resulted in greater reduction in fasting serum glucose than lower intensity exercise.

According to Poirier and Després even if weight loss is minimal, obese individuals showing a good level of cardio-respiratory fitness are at reduced risk for cardiovascular mortality than lean but poorly fit subjects (72). They suggest that clinicians should focus on the improvement of the metabolic profile rather than on weight loss alone and that realistic goals should be set between the clinician and patient, with a weight loss of approximately of 0.5 to 1 pound per week. They add that the use of physical activity as a method to lose weight seems inversely related to patients' age and BMI and directly related to the level of education.

Aguiar et al. reviewed 23 articles from eight studies which included five randomized controlled trials, one quasi-experimental, one two-group comparison and one single-group pre-post study (73). They concluded that multi-component lifestyle type 2 diabetes prevention interventions that include diet and both aerobic and resistance exercise training are modestly effective in inducing weight loss and improving impaired fasting glucose, glucose tolerance, dietary and exercise outcomes in at risk and pre-diabetic adult populations. Several of these studies noted that exercise is unlikely to be effective as a stand-alone strategy for weight loss, however exercise alone can have additional health benefits as well as inducing mood elevation.

3.8 Factors influencing Physical Activity

Factors known to broadly influence physical activity can be described under three broad headings - Social Environmental factors, Individual / Personal factors and Physical Environment factors. Giles-Corti and Donovan found that social environmental and individual factors are most important (74).

3.8.1 Social Environmental factors

In 2006 McNeill, Kreuter and Subramanian published a comprehensive review of concepts and evidence on the relationship between the social environment and physical activity (75). They cited an Institute of Medicine explanation of how the 'social environment' shapes *"norms, enforcing patterns of social control, providing or not providing environmental opportunities to engage in particular behaviours, reducing or producing stress, and placing constraints on individual choice"* (75)p.1011. According to McNeill, Kreuter and Subramanian the five social determinants which appear most frequently in published research are: (1) social support and social networks; (2) socio-economic position and income inequality; (3) racial discrimination; (4) neighbourhood factors; (5) social cohesion and social capital (75). These are explained in Table 2 on pg. 29.

Table 2 Five Social Determinants of Physical Activity McNeill, Kreuter and Subramanian(75)

Social environment dimensions, descriptions and key elements, and mechanisms by which they influence behaviour		
Dimension	**Description/key elements**	**Mechanism**
Social support and social networks	The presence and nature of interpersonal relationships and interactions; extent to which one is interconnected and embedded in a community; interpersonal level characteristic	Enables or constrains the adoption of health-promoting behaviours; provides access to resources and material goods; provides individual and community coping responses; buffers negative health outcomes; and restricts contact to infectious diseases
Socioeconomic position (SEP) and Income Inequality (II)	*SEP:* Reflects one's social standing in society; commonly measured using educational attainment, occupation, and individual income *II:* Reflects the unequal distribution of income; signifies the gap between the rich and poor	*SEP:* Increases biological stress and subsequently adverse health; reduces accumulation of and access to material resources that can protect against stress *II:* Creates less socially cohesive communities through disinvestments in social capital; reduces social spending on programmes and services; and increases psychosocial conditions (e.g. frustration, social comparison)
Racial discrimination	Interpersonal or institutional bias that results in psychological harm; limits opportunities for advancement	Produces economic and social deprivation; increases exposure to harmful substances; and creates psychological trauma. Inadequate healthcare and targeting of harmful substances to marginalised groups is also a by-product of racial discrimination
Neighbourhood factors	Also described as neighbourhood deprivation; represents independent environmental factors of "place" rather than the aggregation of individuals living in an area	Exposure to harmful elements of the physical environment (e.g. water quality), availability of health, social and community support services, community reputation and other historical and cultural features
Social cohesion and social capital	Extent of connectedness and solidarity among groups; shared resources that allow people to act together; area or community-level characteristic	Ability to enforce and/or reinforce group or social norms for positive health behaviours' provision of tangible support (e.g. transportation)

In a Swedish study of psycho-social factors influencing leisure-time physical activity, "*social participation was strongest predictor of low physical activity and a strong predictor for socioeconomic differences in low leisure-time physical activity"* (76)p.441. The authors defined social participation as "*several social activities within the life of modern society"* (76)p. 448.

3.8.2 Individual / Personal factors

A large US population based study (n=2912) of women aged 40 years or older reported that *"for all ethnic sub-groups caregiving duties and lacking energy to exercise"* were high among the barriers to physical activity (77)p.354. Other factors linked with low levels of activity included American Indian ethnicity, older age, lower levels of educational attainment, lack of hills in locality, unattractive physical environment and the absence of local visible role models (77).

According to Wilcox et al socio-economic status is a consistent correlate of physical activity (17)p. 39 with lower socio-economic groups participating less. In an EU wide survey of benefits and barriers to physical activity (78), increasing levels of educational attainment led to better appreciation of the health benefits of physical activity. In an Australian study *"self-efficacy and social support for physical activity explained virtually all of the differences in physical activity across educational attainment groups"* (79)p. 2596.

3.8.3 Barriers to physical activity /exercise for Ethnic Minority Women

An early American qualitative study on physical activity and minority women identified lack of time, motivation and social support, as well as health concerns, as individual level barriers. Traditional gender roles were thought to contribute to the lack of time (80). Environmental barriers included safety / fear, lack of culturally appropriate programmes and cost of organised activities.

A mixed methods study of 143 low-income Latina women in Southern California aged 40-79 years revealed their roles as women within their culture to be a barrier to participation in physical activity (81). Their roles were described as complex with continual demands on their time arising from multiple responsibilities leading to fatigue, tiredness and a lack of motivation. The term 'flojera' was used by participants and the authors explain that it describes a *"feeling of overall inactivity that could be the result of fatigue, tiredness or a general sense of physical and emotional inertia"* (81)p.878. They elaborated saying that 'flojera' may also be used to refer to laziness and *"is associated with lack of perseverance and persistency for personal actions"* (81).

Personal health concerns such as existing health issues and/or disability were also identified as barriers and it was reported that physical activity was not a priority for participants. External factors inhibiting participation in exercise included lack of transport and distance, cost, safety, the weather and lack of space in the home (81).

Wilcox *et al's* study of African American rural women also found tiredness, low personal motivation, laziness and lack of commitment to be personal barriers (17). Their roles as women also featured and exercise was not a priority as a result of multiple family and work related responsibilities and a lack of free time. One participant summed this up saying *"[we] take care of everybody else and we don't take care of ourselves"* (80)p.46. African American rural women often have more children than other ethnic groups and the issue of lack of time was very evident among them. These findings mirror many of those previously described in Juarbe, Turok and Perez-Stable's Latina study (81).

Cultural resistance was identified as a barrier by African American women by which they meant that if an idea (such as being physically active for 30 minutes a day) is perceived as an imposition of White culture on Black people, they are likely to resist it. If it is seen as a Black woman's 'thing' or a church 'thing', then they would be more willing to accept it (23)p.46.

3.8.4 Facilitators and Motivators for physical activity / exercise among Ethnic Minority Women

In a review of 91 studies of women from diverse ethnic backgrounds, Eyler *et al*. found social support to be the strongest factor supporting physical activity (82). This finding mirrored an earlier study by Eyler *et al.* which identified social support as a key enabler and convenient access to an exercise setting as important; being in a culturally familiar group was helpful for many minority groups (80).

In their study Juarbe, Turok and Perez-Stable reported that perceived benefits of physical activity and exercise were linked to improving the woman's role in the family as opposed to being of benefit to them as an individual (81). This reflects the concept of 'familism' mentioned earlier which is considered to be strong among Latino communities.

Personal enablers identified in Wilcox *et al's* study of older African American and White women in the rural south included the possibility of improving health, feeling better and losing weight. Interestingly White women referred to the potential to enjoy the physical activity and how this could motivate them but this was far less a feature of African American women's discussion (17).

3.8.5 Some Evidence of Outcomes of Physical Activity and Nutritional Education Interventions with Ethnic Minority Women

A small case control study of Aboriginal women (n=100) in Australia by Canuto *et al.* compared a control group and an intervention group at three and six months. It found only a modest weight loss at twelve weeks following increased physical activity and nutritional education; there were also modest improvements in biomedical markers in the intervention group (83). There was significant loss of participation in both groups which the authors described as particularly prevalent in 'vulnerable groups' (83). Austin *et al.* discussed familism in a study of Mexican-American women and found the higher the level of commitment to family, the lower the level of achievement of physical activity and calorie goals within weight management programmes (36).

3.8.6 Conclusion of Literature Review on Physical Activity and Exercise

The literature clearly shows that a broad range of factors influence participation in physical activity and exercise with Social Environmental and Individual / Personal factors being the most important.

4 Findings

4.1 Introduction

To preserve anonymity and confidentiality, participants are identified only by the code 'FG' and a capital letter indicating the focus group in which they participated.

4.2 Findings on Food Choice & Food Consumption

The main themes within the findings are presented under the headings 'Social Factors', 'Psychological Factors' and 'Environmental Factors'.

4.2.1 Social Factors

4.2.1.1 Roles of the Traveller Woman and Mother

In this study Traveller women described themselves as having multiple, demanding roles within the family; no mention was made of roles outside of the family or community for example in work or wider society. Being a Traveller mother was considered to be very onerous but other roles such as daughter, sister, aunt, cousin and grandmother also placed significant demands due to the cultural tradition of living as an extended family. Three quotes below illustrate the various roles.

"It's your obligation…the majority of problems are placed on the mother…it's something that's instilled into us when we were younger". (FG-A)

"You might get a phonecall that there is something wrong with your mother or your father, your sister might ring you up and say that she needs such a thing. You're pulled in an awful lot of directions". (FG-A)

"You carry your brothers, sisters, mothers, aunts and uncles, nephews and nieces"……."Do you know, such a one is coming and telling you their problems, you're still here and you're still like unconsciously carrying it too". (FG-B)

Traveller girls are socialised into a responsible role at a young age. An example was given of a young girl being told about a family member's serious illness while her older brothers were not. Contributors firmly believed that family expectations are different for Traveller woman than Irish 'settled' women.

Group discussions highlighted how a Traveller mother is the sole parent responsible for the upkeep of the home, taking care of her children and cooking duties; men were said to not be involved. Traveller mothers are regarded as being very busy with family duties and issues. Participants used words like "isolation", "hard life" and "depressing" when discussing the life of 'Margaret' in the vignette. They broadly agreed that the most important thing to a Traveller woman is her children, including in relation to food. One contributor said

> *"I think for a lot of them, Travelling mothers, their children come first. They're all for their children, food wise, feeding the children first and maybe the husband first, always". (FG-C)*

The participants agreed that the emphasis on others often results in women neglecting her own needs.

> *"That's her role to look after the home, to look after the children. You don't think of yourself for having the breakfast you give it to the kids if you might have a quick cup of tea or coffee and you don't even drink it". (FG-A)*
>
> *"By the time they have dished out to everybody else in the house they haven't had a full dinner themselves, they're picking away while they're doing it". (FG-B)*

They described how they would feel they were a 'bad mother' if they looked after themselves and didn't put everyone first; participants spoke of a very real sense of pressure both from oneself and also from other Travellers. This is well illustrated below:

> *"You have to be a certain way, you don't think about yourself, you think about everyone else and after they are all looked after there is no time to think about yourself". (FG-A)*

The issue of stress arising from multiple roles is discussed further in section 4.2.2.

4.2.1.2 Influence of the Family on Food Choices

Participants described little support from their families when it came to eating a healthier diet and largely put the food preferences of their family first. It appeared that children and perhaps male family members in particular, exercise a high level of influence / control over family food choices with one participant stating "*We buy whatever the boys want*" (FG-C) and another stating

> *"I know a Traveller woman and she has to have a fry every morning, he wants a fry every morning and where she knows it's bad for her she said I would rather make a pot of porridge but if the fry is there and I have to make it anyway so I'm going to eat that rather than making something else for myself. So it's simpler for her to eat whatever the children are eating or he is eating". (FG-A)*

Many participants believed that their family see no reason to change their food habits and are therefore unlikely to support a woman's attempts to improve the family's diet. Consequently a Traveller woman may sacrifice her own desire to eat healthier food due to the challenge involved in successfully introducing dietary change in the face of resistance and / or the additional work involved in preparing two meals, contrary to the health education she has received and understood.

A lack of routine around mealtimes was identified as a source of stress, as well as impacting on food habits, with family members often coming and going as they please. (This may reflect the nomadic and responsive nature of Traveller economic activity in which opportunities to earn money are taken as they arise). Participants described how a Traveller mother may have to cook two or three different meals at various times to suit everyone's preferences.

> *"There's no time limit because the young fellas are out and they only come back when they want to come back. It could be all hours. I've often had a grand dinner there like cabbage spuds and bacon and they'll come in saying no I want something else, do something else". (FG-C)*
>
> *"..so you go for convenience all the time, you have to for the sake of sanity". (FG-B)*

Contributors described how a Traveller woman could be in the kitchen for hours cooking various meals, feeling bored, fed up and worn out; they identified that this facilitates her to eat too much through 'picking at' food over the course of hours.

4.2.1.3 Culture, Identify and Food Consumption

Traveller customs of visiting each other and of cooking extra food provided an interesting theme within the data. Participants explained that historically Travellers travelled long distances to visit relatives and food was prepared for their arrival. Today however many Travellers live in close proximity to their extended family but the tradition of having food prepared for visitors still prevails on a daily basis, though not among young Travellers. Participants discussed what would typically be available; one participant mentioned cakes and biscuits but the vast majority agreed that there would always be a pot cooking on the stove, as this is the tradition passed down from their mothers.

> *"You always put on a big dinner just in case because you're always expecting other people are going to be there so you want to share it". (FG-A)*

Many participants agreed that their adult children come with their children for dinner and therefore they feel they must always cook extra food. They also discussed how through visiting extended family Travellers might eat two or three dinners some days because it would be rude to refuse food.

4.2.1.4 Culture, Body Image and Historical Experiences of Food Poverty / Insecurity

Participants described how among Travellers an infant or child who is chubby is considered to be healthy and they acknowledged that there is probably a degree of over-feeding of children. A number of participants referred back to food being scarce during their childhood and they didn't want their own children to have that experience. One woman spoke of her mother begging for food (FG-A). Others spoke of eating food which was growing wild as they didn't have anything else (FG-B) and of living from day to day not knowing from where their next meal would come.

> *"You ate what was there because if it wasn't there you done without it. Sometimes you wouldn't know when you'd next get a dinner. So you ate what was there, when it was there, when it was given to you". (FG-B)*

One participant remarked how some Traveller women had the experience of burying a number of their children. Two women used the word "survival" when explaining the behaviour of overfeeding children with one saying

> *"I think its survival instincts among Travellers, the more you feed them when they were small the stronger they are and the more chances they have of, dya know, of actually surviving". (FG-A).*

For some participants providing food is a way of showing love. They discussed the importance of knowing their children were fed, so they as mothers could sleep easy at night.

Participants also discussed body image and married women. Early marriage and motherhood has been the cultural norm for Traveller women; participants discussed how putting on excess weight during pregnancy was expected and was even a source of pride. Losing weight after pregnancy was not a priority; gaining weight over a number of pregnancies was largely regarded as inevitable and not considered a problem. Community acceptance of overweight was evident with descriptions of overweight people being strongly encouraged to eat bigger portions (FG-B). In this focus group participants described how for older generations, weight loss was associated with sickness.

4.2.1.5 Level of Education and Food Choices

While data wasn't gathered regarding participants' level of educational attainment it became apparent during data collection that it varied widely with at least one participant having a 3rd level qualification and others who could not read and write well. As already outlined in Chapter 1, educational attainment continues to be low among the Travelling community; literacy levels are also known to be low, particularly among older generations. FG-B discussed how poor literacy impacts on making food choices and understanding food labels.

4.2.2 Psychological Factors

4.2.2.1 Emotional State and Food Consumption

From the outset the Traveller women identified with "Margaret" in the vignette. They felt she was "*a bit down about something*" (FG-C) or *"she could have a hard life"* (FG- A) *and "she has very little help, she has to do it all by herself"* (FG-A). All agreed that Margaret was likely to be stressed, depressed and fed up.

> *"I suppose you'd feel kind of isolated. You know, kind of feeling depressed and fed up and she's at home with four kids every day. You're bound to feel down and depressed". (FG-B)*

These kinds of emotional states were recognised as promoting comfort eating. Many agreed that when they are feeling 'fed up', depressed, stressed or bored they turn to food.

> *"I know anyway if there is anything bothering me I'll ate all around me. I just keep sitting down and anything at all that will come to my mouth I'll eat". (FG-C)*
>
> *"If I'm bored at home, I've done all my work, I'd be eating; I'd be craving for food with bored". (FG-A)*

This was recognised as overeating and could provoke a sense of guilt and asking oneself 'why did you eat all that?'

4.2.2.2 Stoicism, Fatalism and Chance

When asked about taking a step back from their demanding roles or asking for help, the vast majority of participants agreed that it was unlikely to ever happen. A personal health problem needs to be serious before they act on it. They described themselves and Traveller women in general, as very proud people and said asking for help would feel like an embarrassment to them.

> *"I think a Traveller woman would actually have to be at melt down, breakdown point where people would actually know that she is sick or that she is depressed. It would take that much like". (FG-B)*
>
> *"We definitely think we are robots, invincible that we can't be shut down". (FG-B)*

They would feel they had failed as a woman and more importantly as a mother. There was evidence of fear of taking medication for mental health problems in case it would result in not being able to do all that needed to be done (FG-B).

Only one participant gave an indication of a sense of fatalism (she had a history of a serious illness); there was no data related to a belief in chance as a determinant of health.

4.2.2.3 Pressure to Conform to Cultural Norms

During discussions it emerged that Traveller women can experience pressure from their extended family and from the wider community to conform to certain beliefs, attitudes and behavioural norms. This is well illustrated below:

> *"I think it's different for settled people because they are not under so much pressure. They're not being watched all the time by their mother, their sisters. I think you are more under the microscope when you are a Traveller woman and when you try to do something different with your child, it's very hard if all the rest of the mothers are doing things the way they always did it with their children because you do come under pressure". (FG-C)*

A woman who looks after herself is likely to be judged by other Travellers and spoken of as *"selfish", "greedy"* or someone who doesn't *"care about nobody but themselves"* (FG-B).

4.2.2.4 Sense of Control and Effort

It became evident that participants find it difficult to motivate themselves to change their food habits for a number of reasons. They are conflicted in trying to keep their children healthy while also giving them what they want. Contributors mentioned making efforts to change the family's diet for the better but after a few weeks returning to the old diet due the effort involved in dealing with resistance, complaints and food waste, as illustrated below.

> *"It's simpler for her to eat whatever the children are eating or he is eating, you know. It's easier just to go along with things". (FG-A)*
> *"..it'd be easier for me to stick to a routine". (FG-C)*

4.2.2.5 Motivation to Change Food Choices

Participants described being motivated to change their behaviour if a special occasion was imminent, for example a wedding. However they said that typically Traveller women try short term 'quick fixes' when it came to losing weight for an occasion, taking up walking and / or dieting for a few months in advance and abandoning it afterwards. Contributors reflected that social occasions are quite few and

can be stressful for Travellers due to racism limiting their opportunities to socialise regularly. The impact of racial discrimination is discussed further in sections 4.2.2.6 and 4.4.2.2.

A number of women described how they had made changes to diet and routine because of a child's health. One participant was motivated to improve her own diet following serious illness because she wanted to be there for her child; another discussed how she and her overweight son agreed to lose weight together; adhering to a strict diet he lost 4 stone and she also experienced positive results. Another participant changed her behaviour when her son was diagnosed with diabetes, becoming more conscious of the family diet and reading food labels. Another described how her daughter lost weight when she replaced buying confectionery with buying her a toy in a 'Pound Shop' instead. This participant described that she could still show her daughter love but just not through food.

4.2.2.6 Undermining of Motivation - Experiences of Discrimination and Fear for the Future

In discussions it was clear that racial discrimination is part of the lived experience of Travellers in contemporary Ireland. Participants described how they have little motivation to change their ways as there is nothing to look forward to anymore and how the enjoyment of life is gone. Many referred to how difficult it is to socialise as more often than not, they were denied entry into privately owned social spaces and therefore, they felt there was no reason to make an effort to look good.

> *"The joy of life is gone you know. There's no social life. There's no way that you can go out. There's no point in looking well because you're not gonna get in anyway". (FG-A)*

They discussed being followed by security guards and how this serves as a disincentive to being socially engaged. One participant voiced her experiences and their impact:

> *"You go down town and you go to the shop and you're being followed around and you don't even want to go to town anymore because you're being followed and you're being watched..... I've only started going out into town since I'm 19 and I can't get in anywhere. I don't know why because I didn't do anything wrong". (FG-A)*

Participants believe this discrimination extends to the manner in which Travellers are treated by An Garda Síochána. They described garda vehicles attending weddings and funerals and how prejudice and frequent judgement by police is not only intimidating but also lowers self-confidence. They discussed the emotional impact of these negative experiences saying that they sometimes comfort eat to bury their feelings.

4.2.2.7 Absence of Racial Discrimination from non-Irish people

An interesting finding was how Travellers have more positive inter-personal experiences when abroad. It was noticeable how participants' mood and expression immediately brightened when they discussed being on a foreign holiday. Many shared experiences of how they were treated equally, didn't experience discrimination and that the feelings of shame and stigma they experience in Ireland aren't present when abroad.

> *"That feeling when you go out foreign and you are the same as anyone else it's like somebody got a load of bags of coal and took them off your shoulders. You don't think you are a Traveller". (FG-A)*

It was also noteworthy that some participants have found non-Irish employees in businesses in Ireland far more pleasant to deal with because, in their opinion, they don't have the prejudices which Irish people have towards Travellers.

4.2.3 Environmental factors

4.2.3.1 Access to Home Cooked / Convenience Food & Generational Changes in Food Consumption

A topic which reoccurred was the difference between Traveller generations in relation to food choice. The participants believed that the availability of cheap, affordable convenient foods and the option of 'take away' meals are affecting Traveller women's food choices today, particularly younger women. They agreed there has been a shift from the home-cooked meals they had as children to fast-food alternatives.

> *"When we were growing up, we had three meals a day....you'd always have a pot of porridge in the morning because it was cheap d'ya know. We'd come home from school and we'd have a pot of bacon and cabbage or maybe a stew". (FG-A)*

This greater availability of convenience food was regarded negatively by the older participants. They identified the convenience, speed and minimal effort as appealing to young Travellers whom they believe are no longer interested in the traditional food.

> *"The young ones say – That's yer kind of grub, that's not mine, there's nothing there to eat. Give me money, I'm going to the shop and I'll get my own roll". (FG-A)*

While much of this discussion focused on younger Travellers, some participants said that they also occasionally buy take-away food. However the older and middle aged participants believed that by comparison with younger generations they have a greater appreciation of food because they grew up in times where food was often scarce. They believed it was positive that the food they ate as children was always fresh and wasn't processed.

> *"..going back a long, long time ago, you would have bacon, cabbage, you'd go to the farmer's house cos your father could make old stuff or he'd fix something and you would you'd do a trade. You knew what you were getting, there weren't half the chemicals going through things". (FG-A)*

From health education the participants are aware that a lot of contemporary food is modified to make it grow faster and look more appealing. Some suggested that additives and chemicals are the reason why there is so much more sickness today.

The middle-aged and older participants have held onto the customs of cooking meals and extra food in the "big pot" in case someone visit but younger generations were described as hardly cooking at all and certainly not cooking extra. They described how young Traveller women either bring their family to their mother's home where traditional cooking still happens or to buy a takeaway. It was thought that some young Travellers view convenience food as cheaper than cooking. For example

> *"I know somebody who got married in the last year and said it's actually cheaper to get a takeout than cook". (FG-B)*

4.2.3.2 Food Cost, Food Waste and Sense of Control

Participants believed that it's more expensive to buy healthier food with many saying they couldn't afford it; for example

> *"It comes down to brass tacks doesn't it· You're going to buy whatever you can afford so you're probably going to get the cheaper food" (FG-C)*
> *"I can't afford the dear food and that's the truth· And the fruit and that is gone very dear· The fruit is more dearer than the sweets" (FG-C)*

It is important that they manage their money to ensure they have enough food for the week. While many would like to buy healthier options they believed it was out of their control due to financial limitations. Participants spoke of how Traveller men find it difficult to make extra money dealing in scrap or horses in the current environment.

The possibility of food wastage influenced participants' food purchasing; they don't want to risk buying food that may be thrown out so tend buy processed foods which they know will be eaten. The custom of cooking extra food daily leads to a regular dilemma if it hasn't been consumed by visitors. The majority of contributors said they would eat it, perhaps reheating it by frying it, as they wouldn't throw it out; some regarded throwing out food as a sin.

> *"……if no one shows up you eat it yourself"· (FG-A)*
> *"You'd often say that's a grand bit of dinner I'm not throwing that out I'm eating that· That's the thing I have - isn't that a sin? It's a mortal sin· To be throwing out food like this· There's children starving· I'm eating for the children then· I can't stand throwing it out"· (FG-C)*

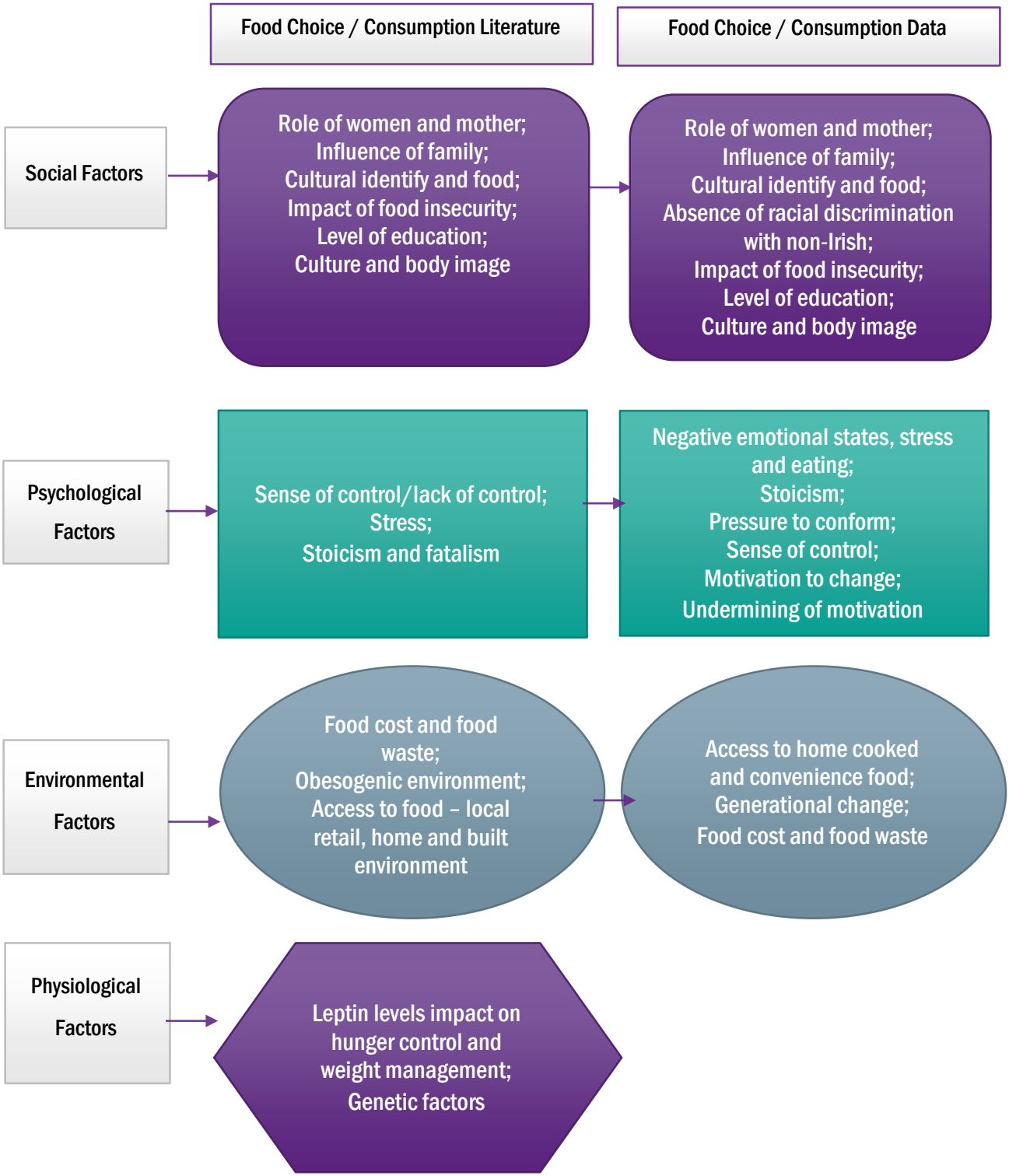
However they felt the younger generations don't share the same appreciation of food and would have no problem throwing out extra food with one participant saying:

> *"The younger generation they'd turn their nose up at it, they'd throw it out"· (FG-B)*

4.3 Summary of Findings on Food Choice and Food Consumption

These findings illustrate that a multiplicity of social, psychological cultural, historical and environmental factors overlapping in complex ways, influence participants behaviour in relation to food choice and consumption. It is evident that these findings correspond strongly with many of the factors identified in the literature review as illustrated in Figure 3.

Figure 3 Similarities between International Research on Food Choice / Consumption and Study Findings



4.4 Findings from the Physical Activity and Exercise Focus Groups

4.4.1 Nature of Engagement in Physical Activities and Exercise

Participants understood the difference between physical activity and exercise and they identified housework as the predominant physical activity for Traveller women. Traveller mothers were described as "*being on their feet all day*" (FG-A) when children are young; however this doesn't continue when children are older. They could also be active through cleaning and shopping.

Participants described engaging in limited amounts of exercise through walking; however it was described as a "stroll" with lots chat; for some it also involved stopping to smoke. Mothers with young children may do some walking e.g. to school but in general Traveller women were described as driving or being driven everywhere nowadays, even for short distances. Participants noted this is a very significant change from previous generations of Traveller women; for some it was a change from their own youth, when walking, including long distances, was the norm. It was mentioned that it was unacceptable in the past for a Traveller girl to walk alone; this was considered perhaps to be related to control of girls' sexuality or to an issue of safety. It was stated that the same applies today (FG-A).

Many participants had participated in exercise activities outside the home but for the vast majority it was only in the company of other Traveller women as part of an organised group activity. Some described being reluctant to go to gyms or swimming pools due to experiences of discrimination. Two participants however did use local sports facilities without concern. This led to an interesting discussion on those participants not having a typical Traveller woman's appearance i.e. style of hair, dress and jewellery.

4.4.2 Social and Environmental Barriers to Physical Activity and Exercise

Psycho-social stress was the pre-eminent barrier to participation in exercise outside the home. Discussions focused on high and chronic levels of psycho-social stress which Traveller women experience, the sources of such stress and how living with stress leaves them little opportunity to proactively engage in physical activity and / or exercise. Five sources of stress are now described.

4.4.2.1 Roles of a Traveller Woman

As previously discussed in the findings on food choice, participants again described how Traveller women are expected to *"drop everything for the family*" i.e. their extended family. They said that this expectation of availability, sometimes for extended periods of time (e.g. at funerals, weddings or christenings) is held by Traveller men and children; they described putting everyone else first and themselves last. They described experiencing a lot of worry – about the health of the men in their family and also their children's health. They discussed being very busy with children, due to high levels of sickness and attending lots of medical appointments. Participants who are grandmothers described looking after grandchildren frequently.

4.4.2.2 Experiences of Racial Discrimination and Social Exclusion

Some participants spoke of the stress they experience as a Traveller in Ireland. One participant described *"the act"* of trying not to stand out (i.e. trying to not be recognised as a Traveller), in order to be allowed enter a premises or to reduce the chance of being asked to leave. Others concurred with this description (FG-A).

Social exclusion was described by many, for example the participants often feel like they don't fit in or aren't welcome in public social settings. Participants in two focus groups described being *"barred"* from public premises, apparently due to the past behaviour of other Travellers. One participant recalled being told *"only you are allowed in"* and as a result if she has family or friends visiting she can't socialise in her regular public house with them. It was described that Travellers have to bring drink at home after a funeral as they can't gain entry to pubs – Traveller women may not want this drinking at home *"but they have no choice now"* (FG-A).

Participants described a life–long experience of racial discrimination beginning as children in school; as mothers they continue to see it happening to their children and worry about the impact that being in school has on their children's self-esteem. They mentioned how hurtful it is for children when they are excluded e.g. from party invitations issued at school. *"Sometimes you just pass it off but deep down inside it is hurting"*. (FG-A) Some participants spoke about their fear for their children's future as Travellers in Irish society.

A number of participants spoke of Garda surveillance, harassment and targeting of young Travellers and others concurred regarding the occurrence of such events for the community. Another notable source of psycho-social stress is the worry Traveller mothers experience when a daughter is planning to get married. Participants described *"carrying a load"* of worry for up to a year as they fear a venue will be cancelled if the booking is discovered to be for a Traveller wedding; they also worry about inviting or excluding people from the wedding and how the event itself will unfold (FG-A).

The participants raised the role of the media in contributing to the creation of negative images and discussion about Travellers and described the stress, by association, which they experience when a negative situation involving a Traveller is highly publicised. When probed about the impact of racial discrimination participants described the personal health consequences listed below:

- It lowers self-esteem
- It leads to feeling depressed / low
- It provokes comfort eating and smoking

4.4.2.3 Discomfort in the Company of Settled People

Participants discussed feeling uncomfortable among settled people, beyond short periods of time; they described avoiding or limiting time with them and not seeking opportunities to mix with the majority culture. Interestingly one participant likened Travellers experience to that of Black people:

> *"…. that's why we can't stop and talk to them for so long because that's in our head. It's there all the time kind of beating us as if we're Black. You're Black over there in that corner and stay over there kind of. Keep away from the rest of us". (FG-A)*

One participant had experienced social isolation while living among settled people at a distance from her extended family / other Travellers and identified it as a significant source of stress.

4.4.2.4 Experiences of Grief / Tragedy

Experiences of grief and tragedy were identified as significant stressors. Due to being part of a close-knit extended family a Traveller is likely to experience grief and tragedy far more frequently than a member of the settled community.

4.4.3 Cultural Factors influencing Physical Activity and Exercise

4.4.3.1 Socialisation of Traveller Girls and Women

Participants recognised that within Traveller culture girls and young women have traditionally been socialised into a role in which they must put others in the family before themselves, possibly to the extent where looking after oneself is conceptualised as being selfish. Girls and young women are also socialised to be responsible for young children in the extended family. The participants, who were largely in their 40's or older, identified that younger Traveller women nowadays seem to have a different attitude – perhaps due to the encouragement of their mothers i.e. the generation of many of the participants.

It was identified that cultural norms of early marriage and motherhood mean that Traveller women typically move from the role of responsible daughter into the roles of wife and mother without any period of freedom as young women who can choose to prioritise themselves; as a result they can lack experience in making time and choices for themselves. The matriarchal role of the grandmother in reinforcing cultural norms was discussed but they considered this reinforcement to be reduced somewhat nowadays by their own generation.

4.4.3.2 Sociability and Being in Pairs or Groups

Traveller women described strong practices of socialisation revolving around spending time talking together. This and the tradition of hospitality mean that they would never tell someone that they had something else to do – an intention to go for a walk, for example; instead they would stay talking.

Participants described how Travellers women and girls have a norm of being in pairs or groups; as already mentioned walking alone was not acceptable. Being by oneself is very rare and as a result, feels strange and uncomfortable. They discussed feeling that Travellers are blamed for being in groups but for them it's culturally normal. Some contributors identified that the practice of being in pairs or groups is reinforced by experiences of racism, as it provides a sense of safety. Some participants believed that some of these cultural factors don't facilitate participation in physical activity or exercise and that it is hard to break out of these norms.

4.4.3.3 Body Image Norms and Generational Change

Replicating a finding in the food choice data, participants described how carrying extra weight following childbirth was considered to be normal, was somewhat expected and regarded positively. Therefore the majority of the participants who were in their 40's or older, have been carrying additional body weight for two decades or more, despite health education and various efforts to lose weight.

Interestingly they discussed how body image norms of their and previous generations of Traveller women were no longer evident among the younger generations who were described as being very attentive to their looks and bodies. Some were known to pay for cosmetic surgery and even have bariatric bands applied to support weight loss; it was remarked that a small number of middle aged Traveller women have done this also.

4.4.3.4 Undermining and Disappearance of Traditional Traveller Social Occasions

Social traditions such as attending fairs and travelling to visit family elsewhere were found to be undermined. Rather than being sources of positive anticipation and enjoyment, of opportunities to earn a living, of chances to socialise with other Travellers and to meet potential spouses, for many they have become sources of stress (e.g. due to fear of racial discrimination and fighting) and they no longer participate in them. This resonates with the earlier finding of not being motivated to change food habits due to having very limited opportunities to socialise.

4.4.4 Individual / Personal Barriers to Physical Activity and Exercise

Linked to their demanding roles as women in the Traveller community and chronic stress / worry, participants said they didn't have much time or felt too tired to make an effort to exercise. Laziness and lack of motivation were also mentioned as barriers to exercise but to a lesser extent.

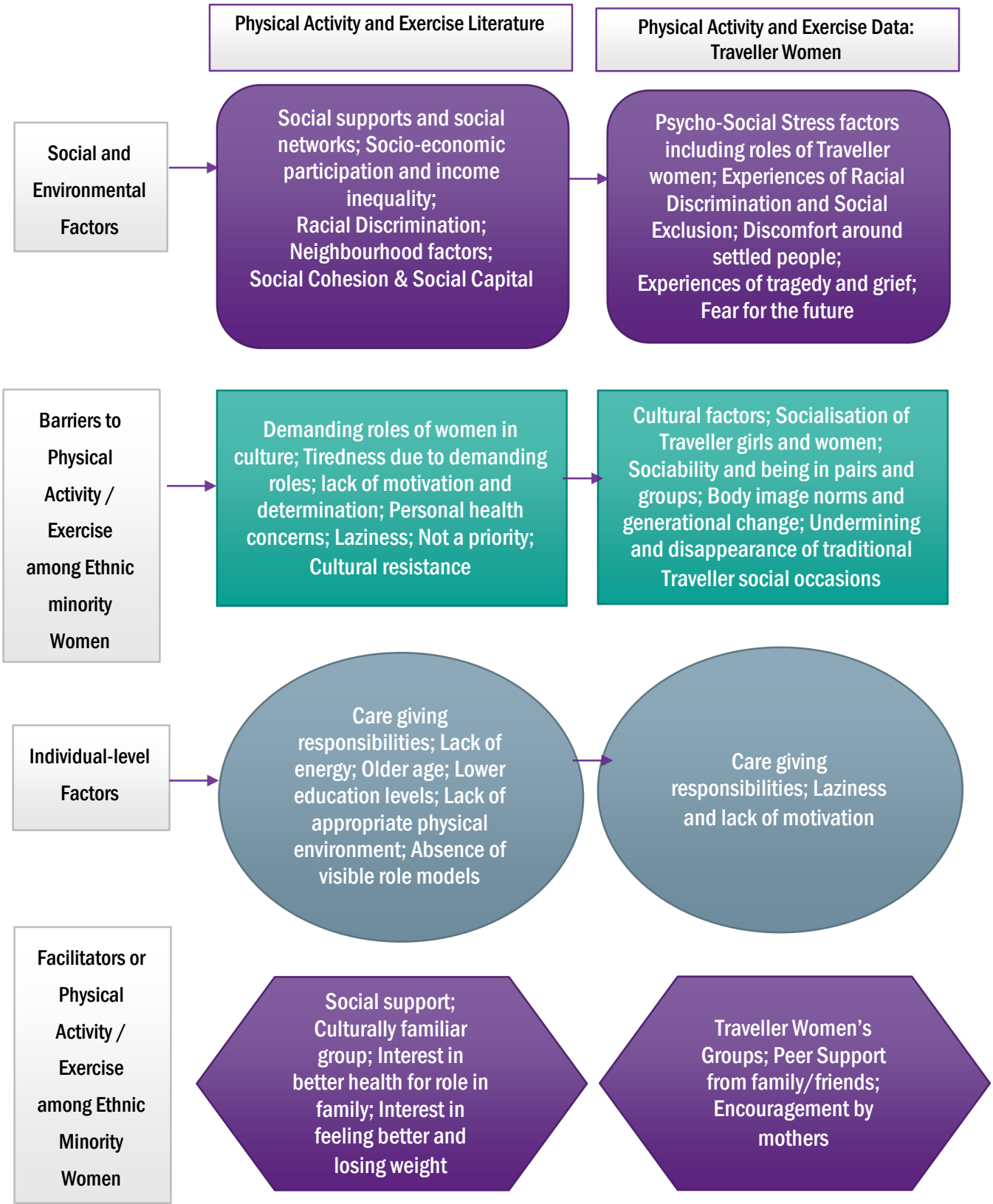
4.4.5 Facilitators of Physical Activity and Exercise

A number of existing and potential supports for engaging in exercise were identified. Traveller women's groups were the considered to be the best and most likely support. Participants suggested that the custom of being in pairs could be used to exercise together perhaps as mother and daughter, sisters or best friends. Mothers are considered to be strong sources of influence and their potential to positively support their daughters was raised. It was said that it would be good to have husbands support but it is not typical.

4.5 Conclusion of Findings on Physical Activity and Exercise

Participation in physical activity and exercise by Traveller women is influenced by a complex range of factors which bear a strong resemblance to the international literature as illustrated in Figure 4 below.

Figure 4 Similarities between International Research on Physical Activity / Exercise and Study Findings



5 Discussion

5.1 The Research Question

This discussion begins by considering the research question. The STHN members asked why, despite having received a lot of health education on healthy food and physical activity / exercise, they still find it very hard to change their behaviour and lose weight? There appears to be a degree of self-blame implicit in the question which begs a further question - why are these women blaming themselves? Smart *et al.* argued that *"traditional models of health promotion and health service provision designed to suit the requirements of the settled majority population often serve to reinforce the exclusion and poor health of Travelling communities"* (84)p.156. Hodgins *et al.* speculated that Traveller women may have *"internalised negative stereotypes"* regarding *their capacity to be 'good' mothers"* (3)p.1988. By asking this reflective question are participants dealing with negative messages from traditional models of health promotion which focussed on individual behaviour and paid little regard to wider social determinants? Are they processing internalised negative stereotypes in relation to the cause of excess weight and obesity?

Popular discourse on obesity is such that they may well be. " *'Fat is your fault''. Gatekeepers to health, attributions of responsibility and the portrayal of gender in the Irish media representation of obesity"*, is the title of a paper by De Brún *et al.* which analyses the newspaper media's construction of gender in discussions of obesity and associated attributions of blame (85). While many Traveller women may not be regular consumers of written media it is reasonable to suggest that this type of discourse which blames women is influential far beyond immediate newspaper readership, into radio listenership as well as political and popular discourse.

Professional discourse of course strongly influences popular discourse. Public Health has been critiqued for inappropriately placing blame for poor health onto individuals and families, particularly poor mothers, since the 'Personal Hygiene Era' in the early 1900's (86-88). In more recent decades

Health Promotion has been similarly critiqued for being overly influenced by a feature of neoliberal rationality i.e. individual responsibility, while ignoring the wider social determinants of health (89).

The research question could also be considered in another way; perhaps it reflects STHN members desire to reject, in full or in part, the discourse of blame and instead to interrogate a wider range of factors and 'the causes of the causes'? Whatever the starting point the research question has certainly uncovered a complex set of interactive causes and provided valuable insights into the life of a community of marginalised women.

5.2 Similarities between International Research and Study Findings

From Chapter 4 it is evident that Traveller women share many of the same determinants of food choice / food consumption and physical activity / exercise as women, including ethnic minority women, in other parts of the world. These similarities are important to note because they clearly indicate that many determinants are shared across the international literature. They're largely not exclusive to just one country, community or group of individuals; they are indicators of major health determinants such as social structure, social environment, early life and culture as depicted in the '*Socio-Economic Model of Health'* in the Acheson Report into Health Inequalities in England (90).

The similarities also indicate quite a sophisticated analysis by STHN members of their structural, psycho-social and environmental determinants of health; this mirrors the work of Ochieng (1), Van Cleemput *et al.*(51) and Hodgins *et al.* (3) in which ethnic minority participants presented a level of structural analysis of some broader determinants of health. This type of analysis may by indicative of increasing critical social consciousness in the community, or politicisation as identified by Hodgins et al and is contrast with other studies on marginalised populations in which, according to Blaxter, (2001) and Van Cleemput *at al.,* participants from lower social classes or with low levels of education are more likely to offer individual behavioural rather than structural explanations for poor health (3, 51).

5.3 Discussion of Dominant Themes

In this section themes which dominated the findings are discussed with reference to the literature reviewed and information on Travellers health determinants. The themes are listed below; where appropriate, food and exercise issues are discussed together.

- **Psycho-Social Stress** – sources of stress and its impact on food and exercise; the roles of Traveller women and mothers; experiences of grief and tragedy; pressure to conform.
- **Social factors** – experiences of discrimination, racism and social exclusion; discomfort among the settled community; social support
- **Cultural factors** - Travellers cultural identity, food customs and body image; history of food insecurity; sociability and being in pairs
- **Individual / Personal factors** – care giving responsibilities; level of education; lack of energy / tiredness; lack of motivation / laziness; undermining of motivation
- **Environmental Factors** – food cost and food waste; global food systems and the obesogenic environment; access
- **Physiological Factors** – links between weight and stress, impaired stress response, pregnancy and motherhood.

5.3.1 Psycho-Social Stress and its influence on Food Choice / Consumption, Physical Activity / Exercise and Weight Management

It is striking that the findings on food choices / consumption and those on physical activity / exercise overlap strongly in terms of the impact of ongoing high levels of stress which Traveller women experience, their roles as women and mothers in the Travelling community and as Travellers in Irish society. Participants' reported multiple sources of stress on a continuous basis in their daily lives and over their life-course. Their lives as Traveller women and mothers were described as stressful and hard, echoing the findings of Hodgins et al's study (3). Stress emanates from their demanding, care giving roles within their families and community and is linked with worry, having to be always available, as well as grief and tragedy due to high levels of sickness and early death, including suicide. Pressure to conform to community norms and fear for children's futures as Travellers, also play a role. Stress is also strongly associated with the marginalised position of Travellers in Irish society; this is discussed further in the next section.

As seen in the literature there is a body of evidence linking emotional state and stress with food consumption and weight gain because of its relationship with mood-related eating, as well as the physiological changes in the neuro-endocrine system arising from exposure to chronic stress. It is reasonable to consider chronic stress to be a factor contributing to weight gain among Traveller women and creating challenges for successful weight loss, particularly in middle age. It is therefore essential to identify measures which will contribute to a real reduction in stress as well as ones which will support Traveller women to develop healthy stress management mechanisms. Positive support for mental health is a key need for Traveller women in their very challenging life circumstances.

5.3.2 Social Factors – Experiences of Racial Discrimination / Social Exclusion and Sources of Social Support

Experiences of Racial Discrimination / Social Exclusion: In the data participants described experiencing social exclusion and racial discrimination in a wide range of contexts and also from the Garda Síochána, an important arm of the state. This corresponds strongly with findings of the AITHS (2). Social support, social participation and social exclusion are widely recognised as key factors influencing engagement in physical activity. The level of racism which Travellers in Ireland experience is exceptionally high when compared with that experienced by other minority ethnic groups for example in the USA (2). According to McNeill, Kreuter and Subramanian, racial discrimination is the 3rd most frequent social determinant of physical activity (75). Therefore racial discrimination and social exclusion must be considered to have a direct negative impact on participation in exercise outside the home / outside the Traveller community, as well as contributing to emotional eating.

Social cohesion and social capital were named among the top 5 social determinants of exercise by McNeill and colleagues (75). Travellers do not experience a socially cohesive society in Ireland and while the existence of many Traveller groups and networks around Ireland provide evidence of strong bonding social capital, the community appears to have low levels of the bridging and linking social capital which would create solidarity with others in Irish society and give them effective access to influential decision makers.

Racism is learned - it is not a given, as is evidenced in the finding that Travellers have more positive social experiences with non-Irish people in Ireland and while abroad. Findings of life-long experiences of racial discrimination by Travellers in this and other studies highlights the importance of Travellers being legally recognised as a distinct ethnic group by the Irish government, as without this they don't

benefit from the full legal protections awarded to such groups. Arguably lack of ethnic recognition contributes to a lack of respect for the community and its culture, leaving Travellers vulnerable to racial discrimination and social exclusion.

Unsurprisingly, participants reported feeling uncomfortable among settled people. Seeking to minimise / avoid contact with the majority community is an understandable coping / defence mechanism and is a manifestation of the second type of familism where family is prioritised because it provides a protective mechanism against negative social circumstances. Past generations of Traveller women had a lot of contact with the settled community through their buying / selling nomadic economic activities but current generations are experiencing diminished opportunities for social participation, education, training and work. This increasing marginalisation / lack of visibility of Traveller women could undermine their health even further and reinforce their almost exclusively family-focussed role, with its attendant stresses and personal limitations.

Social Supports: Similar to the findings of other studies on ethnic minority women, social support and cultural familiarity are central to Traveller women engaging in activities and exercise. Traveller women's groups were considered to be the best and most likely sources of support. The cultural practice of socialising in pairs of girls / women was described as a positive aspect of their culture but participants also regard it as a mechanism for coping with racial discrimination; they are aware too that it is often regarded negatively by settled people. Participants identified that the practice of being in groups or pairs could be utilised to support exercise outside the home. It was evident that participants looked only to themselves as Travellers for supports to make positive change, which may indicate a lack of trust in those outside the community to make a constructive contribution.

5.3.3 Cultural Factors

Familism: Based on the findings of this study the concept of familism as a cultural ideology in which the family needs come before any individual needs, appears to be applicable to the Travelling community with its traditional and collective culture. In practice it means that girls are socialised at a young age into a highly responsible care-giving role in the extended family. In this and other studies Traveller women describe very demanding, multiple care-giving roles in which family always comes first and oneself last or not at all. The central importance to the Traveller woman of caring for children, largely without her husband's involvement, mirrors the findings of Hodgins *et al's* study (3). It was considered that previous generations of Traveller mothers have been influential in maintaining this

role and while the generations largely involved in this study are sustaining this pressure on themselves they suggest that they are less likely to impose it on their daughters.

While it can be argued that women worldwide deal with similar family demands, cultural norms in most western societies have for some time incorporated an acceptance of a level of individualism. This facilitates girls / women to participate in education, paid work outside the home and an independent social life; family responsibilities fit in alongside other activities and / or people outside the family are paid to do some of this caring / domestic work. Familism appears to lead to "a hard life", a risk of depression, stress and lower levels of self-reported health for many Traveller women. These findings strongly resemble those on Latina and African American rural women in the USA. If Traveller women wish to achieve a level of 'women's liberation' similar to settled women in Irish society a significant cultural transformation will need to be facilitated by the community, possibly with the support of others outside the community.

Culture, Food Customs, Body Image and Food Insecurity: The accounts of Traveller traditions of hospitality and cooking extra food for visitors are interesting but importantly they indicate a pattern of over-eating among many women (and possibly others also). The custom of visiting family living at a distance has been replaced by visiting family nearby, due to limitations on Travellers scope to travel arising from boulder policies blocking traditional campsites and the threat of evictions. Travellers may eat 2 or even 3 main meals some days either as visitors or through eating left-over food. These two sources of excess calorie intake, along with high salt and butter usage and the frequency of frying as a cooking method (2), are very likely to contribute to weight gain and other health risks.

The reported lack of routine around meals, possibly arising from Traveller men's nomadic economic activities, means women can spend long hours in the kitchen cooking meals according to people's preferences with constant access to food leading to the likelihood of excess food consumption. This flexibility around meals may be important to the family's economic well-being but it may be also be amenable to change. For example families could consider having a smaller number of options available each day (one more traditional and one more contemporary) to reduce the amount of time a mother / wife / sister has to spend in the kitchen with access to food, as well as freeing her up for other activities.

The Food-Insecurity–Obesity Paradox: A number of participants in this study had personal experience of food insecurity and international research shows that for women and particularly mothers, this creates a risk of overweight / obesity (44). It appears there is also a community memory of food insecurity, reflecting the life-course perspective on food choice (25). This memory appears to have created in study participants a concern for child survival leading to a degree of over-feeding of infants and a positive regard for 'chubby' children. This collective memory may also contribute to acceptance of excess weight following childbirth among married women; while few Traveller women breastfeed nowadays it would have been the norm in the past and extra maternal weight may have been regarded as necessary to ensure infant survival and to support future healthy pregnancies. This cultural acceptance echoes other studies which found that some cultures don't regard extra weight negatively or worry about weight control (40, 48, 49). As participants did not identify food insecurity as a contemporary experience, it opens up the possibility of these cultural legacies being explored and alternatives being found, as cultures are dynamic and have the capacity to change.

Stoicism: Hodgins *et al's* study identified a sense of stoicism among Traveller women but also concluded that they had a sense of helplessness (3); in this study a sense of stoicism was most evident. It was clear that Traveller women cope with significant ongoing stresses and worries, they are very reluctant to ask for help and neglect their own health until something serious happens. In an almost contradictory manner, close female relationships within the community are a source of support and humour providing some counter-balance to daily hardships, whilst simultaneously being a source of pressure to conform to cultural norms.

5.3.4 Individual / Personal Factors

Level of Education and Control: According to Kearney *et al.* nutritional knowledge of itself is not strongly associated with dietary habits (91) and its long been known that health education / information alone are not sufficient to change behaviour. Many studies have highlighted the higher a woman's level of education the greater her control over food choice and food consumption, as opposed to control resting with children and / or her partner (37, 39, 50). Educational attainment also relates positively to the level of support a woman is likely to receive from her male partner when making food choices for the family (37). Travellers have much poorer educational attainment than the general population in contemporary Ireland; it is likely to be even lower among older generations. These participants had gained knowledge of healthy foods and exercise through health education sessions

but still reported not having control over the food they and their family consumed. They identified the preferences of husbands and children as key factors which overrode any ambition they had to change to a healthier diet, mirroring the findings of other research (37, 39, 52). The wishes / needs of older boys and men seem to be particularly influential and their desires were accommodated. Iin general, overcoming resistance was felt to be difficult and wasteful of food.

If Traveller women are to have higher levels of control over their and their family's diet now and in the future, investment in Traveller adult education – not simply nutrition education - as well as Traveller children's education, is essential. However recent years have seen exactly the opposite happen with cuts to budgets for community development projects which deliver much adult education in Ireland and the dismantling of the dedicated Traveller Visiting Teacher service, removing a key support for Traveller parents and Traveller children in education. This doesn't augur well for future improvements in Travellers educational attainment or their health status and needs to be urgently addressed.

Participation in Physical Activity / Exercise: In this study participants reported low levels of regular exercise which corresponds with the AITHS finding that most Traveller adults participate in physical activity fewer than 3 times a week and engage in high levels of sedentary activity, such as watching TV (2). Socialising rather than exercise was the main feature of walks / strolls and there is a high usage of cars to travel even short distances. Participants were aware that they're getting far less exercise than previous generations of Traveller women who were far more economically and physically active in rural areas. The habit of driving short distances may be open to modification as it is relatively recently established and small changes (for example walking children to school in urban areas or walking to nearby relatives) could make a valuable contribution to the incorporation of regular daily exercise for both women and children.

Traveller women participate in exercise activities organised by Traveller organisations but the majority don't avail of other public or private facilities due to fear of racial discrimination, hostility towards Travellers being in groups and discomfort among settled people. As already identified it is necessary that the legal status of Travellers is improved and the social environment is safer if Travellers are to participate fully in Irish society.

It is essential that anyone working with Traveller women on health promotion programmes - focused on exercise or otherwise – understands the challenging nature of Traveller women's lives and the level of stress, worry and tragedy that they experience and how they could impact on participation and the

achievement of goals. It is equally important that health promoters understand the role of stress in weight gain and the physiological challenges of weight loss. Older age and lower levels of education are known barriers to weight loss so it is advisable that activities for middle-aged and older Traveller women aim for improvement in metabolic profiles and mood elevation as recommended by Poirier and Després (72). It is important that evidence based goals are included in exercise activities and that unrealistic ones are avoided by those who run and / or fund them.

Lack of Energy / Tiredness / Laziness and Lack of Motivation: In this study and others lack of energy and tiredness arising from care giving duties were reported as obstacles to participation in physical activity / exercise outside the home (77). The findings of this research and Hodgins *et al's* study with Traveller women closely resemble studies with other ethnic minority women, in particular those with Black and Latina women. (17, 81). Obligation to family takes precedence, leading to fatigue and little time / energy for the woman's individual needs / aspirations.

Laziness was identified as a factor by some participants but was mentioned far less than tiredness and lack of energy. It's interesting that the term 'flojera' used by Latina women describes both a lack of energy / tiredness as well as laziness (81) apparently indicating a link between them. The overall context of social exclusion, lack of social opportunities, along with tiredness could be considered to contribute to laziness, undermining Traveller women's motivation to eat a healthy diet, to exercise and to 'look well'. Davis *et al*. have argued that unhealthy behaviours such as poor diet and low levels of physical activity are secondary to the impaired biological process which arises from chronic stress; this can be linked to Roses' 'causes of the causes' approach (54). From this perspective, the causes of chronic stress must first be tackled before more active behaviour is likely to be possible.

Motivational Supports: In this study short-term motivation for behaviour change in relation to food and exercise was associated with up-coming major social occasions but was considered unlikely to lead to sustained change. A more long-term source of motivation which could assist Traveller women to improve their diet and exercise habits could lie in their sense of obligation to their children / family and their sense of self-worth as mothers; caring for children / grandchildren is clearly a priority for Traveller women individually and collectively. While from a feminist perspective this may be questionable, for some members of a culture steeped in familism it may be appropriate and reflect Traveller women's current value system. For others a more personal sense of self-worth may motivate them and for some women it may be a combination of the two; this is a choice for Traveller women.

5.3.5 Environmental Factors

Food Cost & Food Waste: Similar to poor or marginalised women in other studies (23, 32, 40, 58), food cost and waste were important considerations; there was also a moral dimension as food waste was regarded by some as a sin. The cost of healthy eating is too expensive for many in Ireland and is even more challenging for those with large families. Traveller women are often on low incomes and are largely dependent on social welfare payments some of which have been reduced during the recent economic recession. Even prior to that period, the Traveller economy was squeezed by legislative changes related to keeping horses, selling at markets, scavenging from landfill sites and waste recycling. Many Traveller families have a history of relative economic uncertainty and even if money is available, habits of careful spending on food are well established, again reflecting the life-course perspective on food choice. Higher educational attainment and better, more secure incomes are key to reducing the impact of these factors on Traveller women, similar to the arguments of Ochieng in relation to Afro-Carribean people in the UK (1).

Obesogenic Environment: The nature of the contemporary Irish urban food environment and its impact on food choice and consumption was understood by participants. Convenience / processed food was reported to be eaten more by younger generations and less by those involved in the study who still largely prefer to eat traditional food from the 'big pot'. Nonetheless they regularly had to purchase and cook processed / convenience food for their family and sometimes, due to the effort involved in cooking multiple meals, they eat it too. However it is not only the food environment which impacts on Travellers food choice and exercise, it is also the wider social, political and economic environment. Arguably Travellers experience an obesogenic environment to a greater degree than most others in Irish society due to social exclusion and racism. As argued in the 2011 Lancet series on obesity, the global food system and local environments pose challenges to societies and communities in many parts of the world and require policy level measures to effect real improvements in the global obesity pandemic (55).

5.3.6 Physiological factors

While the participants didn't raise the issue of physiological processes in relation to weight gain and the challenges of weight loss, nonetheless these factors are important to this study. Traveller women experience many of the physiological factors associated with weight gain including chronic stress (48, 54), pregnancies (54) and a personal and / or community experience of food insecurity (32, 41, 44).

Therefore it's necessary that an understanding of these factors informs any discussion and any attempts to address the issue of excess weight in this community. In the short term it is essential that culturally appropriate methods for coping with stress are developed and evaluated and more importantly, for long term change, measures to reduce and eliminate chronic stress are implemented and evaluated also.

6 Conclusion and Recommendations

6.1 The Demanding and Constrained Lives of Traveller Women

While identifying and exploring factors underlying Traveller women's behaviour in relation to food choice and consumption and participation in physical activity and exercise, this study found evidence of serious social exclusion among the participants and other Traveller women whose lives they described. They experience racial discrimination on an ongoing basis while attempting to socialise, to exercise outside the home, to shop – this is a source of chronic stress impacting negatively on both their food and exercise patterns. Participants mentioned no roles for themselves outside of the extended family and community. Travellers' typically much lower levels of educational attainment severely limits their chances of finding paid work outside the home, were widespread racism already not such a profound barrier.

Traveller culture as it applies to women appears to reflect both aspects of the concept of familism. First, the internal aspect of familism subjugates the needs of the individual woman to those of the family and is likely to limit a Traveller woman's vision for her life. Second, the external aspect, in which family is prioritised as a response to social circumstances (i.e. hostility and racism in Irish society) also limits her, but arguably is a logical defence mechanism.

By comparison with previous generations of Traveller women who were more economically and physically active, earning money through selling in rural communities and travelling to fairs and markets regularly, the world of these women has been reduced to a very small size. They experience life as very hard and experience boredom and depression which are known contributors to weight gain. These participants are all involved in at least one voluntary group, the STHN, but their involvement in Traveller groups may only bring them out of the home once or twice a week.

During the early years of the family cycle the young Traveller mother is very likely to be at home with young children all day – she is unlikely to be returning to work after maternity leave. When her children are in school or young adults, her role is to be always available to them and to respond immediately to their needs, food related and otherwise. At all ages Traveller women socialise almost exclusively with

other Travellers, spending many hours visiting family / friends and during this process eating more food than is healthy, as it would be rude to refuse hospitality. When not visiting she is likely to be cooking for her family or hosting others; if extra food for visitors isn't eaten middle-aged and older Traveller women will consume it because to throw it out would be wasteful and sinful.

Middle-aged Traveller women seem to be in a position as guardians of tradition in a culture which is under significant threat. Some speak of wanting things to be different for their daughters and grand-daughters but simultaneously continue to place a strong critical gaze on each other, thus supporting continuity of traditional roles and practices rather than facilitating change. They are worried for their children's future due to the hostile social environment and the shocking suicide statistics in the community. Taking proactive measures to have a better diet and exercise more is not necessarily a high priority for these women. As one participant succinctly expressed it -

> *"Healthy eating would be a luxury now to be worrying about compared to the other stuff that be going on" (FG-C)*

It is essential that the lived experience, social context and culture of Traveller women are fully appreciated if their health status is to be improved.

6.2 Conclusion

To support behaviour change regarding diet Bowen and Hilliard argue that *"theoretically driven and culturally grounded research on dietary behaviour is increasingly important"* (27)p.1180. The research team hopes this study will make a positive contribution to the appreciation of the intricate web of factors influencing Traveller women's diet and physical activity. We hope this greater understanding prompts action on the many modifiable factors, particularly those within the public policy domain, which contribute to the many health inequities experienced by Travellers across so many health outcomes, not only excess weight.

All sectors of Irish society have the potential to play a positive role in improving Travellers determinants but politicians and public servants have a greater political and moral responsibility to do so. Travellers must continue to be agents of change both within their own community and in advocating for improved public policies and practices.

The research team agrees with the AITHS which concluded that

> *"Many positive aspects of Traveller culture and value systems should be better promoted ····· and this should be capitalised upon· Another key factor is how valued children and young people are in the community· ·····This needs to be disseminated to the general public and harnessed as a means of achieving next steps" (2010, p·157)·*

6.3 WAYS FORWARD – Recommendations

Davis *et al.* wrote about the under-appreciated modifiable factors contributing to obesity (54); with the appreciation gained through this research it is possible to make recommendations on ways forward in relation to many of the factors which are modifiable if the right circumstances, appropriate resources and will to change are present.

The 5 Key Action Areas of the Ottawa Charter for Health Promotion (WHO, 1986) have been employed to structure the recommendations, emphasising the need for multilevel interventions to address complex health issues such as those investigated in this study.

I. Build Healthy Public Policy

Recommendation 1: That the Irish government immediately officially recognises Travellers as a distinct ethnic group.

Rationale: This is necessary to provide improved legal protections and to begin a process of increasing respect for the community, to reduce and work towards elimination of experiences of racial discrimination and to encourage greater social cohesion and inclusion of Travellers in all aspects of Irish society.

Recommendation 2: That the Irish government ensures that existing equality laws are effective in practice, provide proper protection to the Traveller community and facilitate prosecution and meaningful sanctions when appropriate.

Recommendation 3: That the Department of Education develops a well-resourced strategic long-term plan to resource Traveller education at all levels.

Rationale: Educational attainment is central to a woman's food choices, control over family food consumption and securing partner support for a healthy diet, therefore improving Travellers education outcomes is a pre-requisite for significant progress in this area; nutrition education is insufficient. Obviously improved education attainment would be valuable in many aspects of Travellers lives.

Recommendation 4: That Government policies (a) provide those on social welfare incomes with an income sufficient to purchase a healthy diet and (b) that public policies do not have a disproportionately adverse effect on Travellers opportunities to earn a living.

Recommendation 5: That the Department of Health develops an ethnic identifier within the public health system with which Travellers can voluntarily co-operate.

Rationale: This would provide ongoing data on Traveller health service access, usage and health issues, with a view to ameliorating health inequities.

II. Create Supportive Environments

Recommendation 6: That anti-racism education be funded by Government and provided extensively through all levels of the education system, health services and public, private and community sector workplaces.

Recommendation 7: That the Government proactively uses its policies and powers to address the obesogenic environment for the health of all in Irish society.

Recommendation 8: That Public Health and Health Promotion practitioners and researchers reflect on aspects of their discourse which over-emphasise individual responsibility as a cause of overweight / obesity and become actively involved in publicly disseminating a more nuanced analysis which articulates the multiplicity of factors involved.

III. Strengthen Community Actions through Community Development

Recommendation 9: That the Government restores investment in Traveller community organisations working at local, regional, national and international levels.

Rationale: Traveller community groups and women's groups are key to the cultural, social, educational, economic and health development of the community, the securing of equal status for Travellers and the improvement of their position in society.

Recommendation 10: That Traveller organisations consider the findings of this and other studies in relation to cultural features which are not supportive of Traveller women's mental health or individualism, their control over food choices or participation in physical exercise.

Rationale: Participants identified Traveller organisations as important sources of support. If fundamental cultural change regarding the roles of Traveller women and girls is desirable these organisations are critical to the creation of safe opportunities to develop, implement and evaluate alternatives and model initiatives, as well as reducing the likelihood of cultural resistance.

Recommendation 11: That Traveller and health organisations consider this study's findings regarding cultural features which can support women's health and employ them in culturally appropriate initiatives to support healthier behaviour regarding food consumption and exercise.

Cultural features such as those listed below could incorporated into health initiatives and provide shared motivation to engage positively with changes in food consumption and exercise.

- *Traveller women's strong focus on their children's wellbeing*
- *Traveller women's central role and importance to the family*
- *The practices of being in pairs and groups*
- *Strong relationships between Traveller women*
- *The influence of mothers*
- *Being motivated by a social occasion,*

Recommendation 12: That Traveller organisations consider the findings of this study in relation to food customs, food preferences and health beliefs which are likely to promote excess weight and work towards the development of new / alternative customs and beliefs.

Recommendation 13: That the Government restores investment in community development organisations.

Rationale: Community development organisations network and build solidarity between marginalised groups in society. They can assist in the process of building bridging social capital for Travellers in Irish society and greater social cohesion.

IV. Develop Individual Skills

Recommendation 14: That Traveller women are supported to develop healthy mechanisms for coping with stress along with positive mental health strategies.

Rationale: The issue of stress is very strong within the findings. Interventions / new skills at the level of the individual are necessary in order that alternatives to emotional eating can be found and the burden of stress can be reduced as it is likely to be contributing to overweight and obesity along with other physical health problems. HSE Health Promotion and Improvement Departments could resource Traveller women to design, implement and evaluate culturally appropriate stress reduction strategies.

Recommendation 15: That Traveller women are supported to engage in personal development which supports their sense of self-worth and individuality, incorporating aspects of Travellers value system as appropriate.

Recommendation 16: That Traveller women are supported to engage in adult education, literacy and numeracy skills development. Health education classes employing a discourse of empowerment and not blame, have a contribution to make also.

Recommendation 17: That Traveller women are actively supported to engage in paid employment or self-employment outside the home and if desired, outside their community.

V. Reorient Health Services towards Primary Health Care

Recommendation 18: That the Dept. of Health resources Traveller Primary Health Care Teams to lead and/or support other Traveller organisations to take on board relevant recommendations of this study.

Recommendation 19: That a mental health dimension to the work of Traveller Primary Health Care Teams be developed and resourced.

Recommendation 20: That mainstream community health services engage proactively and in an informed manner with the Travelling community.

7 References

- 1. Ochieng B. Black families' perceptions of barriers to the practice of a healthy lifestyle: a qualitative study in the UK. Critical Public Health. 2013 2013/03/01;23(1):6-16.
- 2. AITHS. All Ireland Traveller Health Study: Our Geels, Summary of Findings. Dublin: University College Dublin2010.
- 3. Hodgins M, Millar M, Barry M. "...it's all the same no matter how much fruit or vegetables or fresh air we get": traveller women's perceptions of illness causation and health inequalities. Soc Sci Med. 2006 Apr;62(8):1978-90.
- 4. O'Connell J. Travellers in Ireland: an examination of discrimination and racism. In: Lentin R, McVeigh R, editors. Racism and Anti-Racism in Ireland. Belfast: Beyond the Pale Publications; 2002.
- 5. Barry J, Herity B, Solan J. The Traveller's Health Study Status Study: Vital Statistics of Travelleing People 1987. Dublin1989.
- 6. Slattery D, Brennan M, Canny C, Sweeney K, Ward M, O'Shea P, et al. Cardiovascular health in the Irish Traveller community. The British Journal of Diabetes & Vascular Disease. 2010 November 1, 2010;10(6):305-7.
- 7. Health Service Executive. INSIGHT '07 Survey. Dublin2008.
- 8. Krieger N, Smith K, Naishadham D, Hartman C, Barbeau E. Experiences of discrimination: validity and reliability of a self-report measure for population health research on racism and health. Soc Sci Med. 2005 Oct;61(7):1576-96.
- 9. Harrington J, Perry I, Lutomski J, Morgan K, McGee H, Shelley E, et al. SLÁN 2007: Survey of Lifestyles, Attitudes and Nutrition in Ireland. Dietary Habits of the Irish Population. Dublin: The Stationary Office2008.
- 10. Morgan K. SLÁN 2007: Survey of Lifestyle, Attitudes & Nutrition in Ireland. Main Report. Dublin: Department of Health and Children2008.
- 11. Central Statistics Office. Profile 7 Religion, Ethnicity and Irish Travellers. Dublin2012.
- 12. Marmot M. Historical perspective: the social determinants of disease – some blossoms. Epidemiologic perspectives & innovations : EP+I. 2005 06/02
- 05/04/received
- 06/02/accepted;2:4-.
- 13. Wadsworth M. Health inequalities in the life course perspective. Soc Sci Med. 1997 Mar;44(6):859-69.
- 14. Graham H. Building an inter-disciplinary science of health inequalities: the example of lifecourse research. Soc Sci Med. 2002 Dec;55(11):2005-16.
- 15. Graham H. Understanding Health Inequalities. 2 ed. Maidenhead: Open University Press; 2009.
- 16. Minkler M, Wallerstein N. Community Based Participatory Research: From Process to Outcomes. 2 ed. San Francisco: Jossey-Bass; 2008.
- 17. Wilcox S, Oberrecht L, Bopp M, Kammermann S, McElmurray C. A qualitative study of exercise in older African American and white women in rural South Carolina: perceptions, barriers, and motivations. J Women Aging. 2005;17(1-2):37-53.
- 18. Hazel N. Elicitation techniques with young people. University of Surrey: Dept of Sociology1995.
- 19. Schoenberg N, Ravdal H. Using vignettes in awareness and attitudinal research. Intl J Soc Res Methodol. 2000 2000/01/01;3(1):63-74.

- 20. Hughes R. Considering the Vignette Technique and its Application to a Study of Drug Injecting and HIV Risk and Safer Behaviour. Sociology of Health & Illness. 1998;20(3):381-400.
- 21. Silverman D. Doing Qualitative Research: A practical handbook. London: SAGE Publications; 2000.
- 22. Dressler H, Smith C. Food choice, eating behavior, and food liking differs between lean/normal and overweight/obese, low-income women. Appetite. 2013 Jun;65:145-52.
- 23. Barton M, Kearney J, Stewart-Knox B. Knowledge of food production methods informs attitudes toward food but not food choice in adults residing in socioeconomically deprived rural areas within the United Kingdom. J Nutr Educ Behav. 2011 Sep-Oct;43(5):374-8.
- 24. Dion X. Gypsies and Travellers: cultural influences on health. Comm Pract. 2008;81:31-4.
- 25. Delaney M, M. M. Food choice and health across the life course: A qualitative study examining food choice in older Irish adults. J of Food Productes Marketing. 2011;17:114-40.
- 26. Furst T, Connors M, Bisogni CA, Sobal J, Falk LW. Food choice: a conceptual model of the process. Appetite. 1996 Jun;26(3):247-65.
- 27. Devine C, Connors M, Bisogni C, Sobal J. Life-Course Influences on Fruit and Vegetable Trajectories: Qualitative Analysis of Food Choices. Journal of Nutrition Education. 1998 11//;30(6):361-70.
- 28. Bisogni CA, Jastran M, Shen L, Devine CM. A Biographical Study of Food Choice Capacity: Standards, Circumstances, and Food Management Skills. Journal of Nutrition Education and Behavior. 2005 11//;37(6):284-91.
- 29. Sobal J, Bisogni C, Devine M, Jastran M. A conceptual model of the food choice process over the life course. . In: Shepherd R, Raats M, editors. The Psychology of Food Choice. Oxfordshire: CAI Press; 2006.
- 30. McIntyre L, Glanville NT, Raine KD, Dayle JB, Anderson B, Battaglia N. Do low-income lone mothers compromise their nutrition to feed their children? Canadian Medical Association Journal. 2003;168(6):686-91.
- 31. Dammann K, Smith C. Factors affecting low-income women's food choices and the perceived impact of dietary intake and socioeconomic status on their health and weight. J Nutr Educ Behav. 2009 Jul-Aug;41(4):242-53.
- 32. Martin M, Lippert A. Feeding her children, but risking her health: The intersection of gender, household food insecurity and obesity. Social Science & Medicine. 2012 6//;74(11):1754-64.
- 33. De Vault M. Feeding the Family. Chicago: University of Chicago Press; 1991.
- 34. Rajkai Z. A conceptual typology of the term familism. Available from: http://www.ncfr.org/sites.default/files/downloads/news/147_zsombor_rajkai_ncfr-paper-presentation.pdf.
- 35. Gil A, Wagner E, Vega W. Acculturation, familism, and alcohol use among Latino adolescent males: Longitudinal relations. Journal of Community Psychology. 2000;28(4):443-58.
- 36. Austin J, Smith J, Gianini L, Campos-Melady M. Attitudinal familism predicts weight management adherence in Mexican-American women. J Behav Med. 2013 Jun;36(3):259-69.
- 37. Barker M, Lawrence W, Skinner T, Haslam C, Robinson S, Inskip H, et al. Constraints on food choices of women in the UK with lower educational attainment. Public Health Nutr. 2008 Dec;11(12):1229-37.
- 38. Groth M, Fagt S, Brondsted L. Social determinants of dietary habits in Denmark. Eur J Clin Nutr. 2001 Nov;55(11):959-66.
- 39. Robinson S, Crozier S, Borland S, Hammond J, Barker D, Inskip H. Impact of educational attainment on the quality of young women's diets. Eur J Clin Nutr. 2004 03/31/online;58(8):1174-80.
- 40. Lawrence W, Barker M. A review of factors affecting the food choices of disadvantaged women. Proc Nutr Soc. 2009 May;68(2):189-94.
- 41. Townsend M, Peerson J, Love B, Achterberg C, Murphy S. Food Insecurity Is Positively Related to Overweight in Women. The Journal of Nutrition. 2001 June 1, 2001;131(6):1738-45.

- 42. Adams E, Grummer-Strawn L, Chavez G. Food Insecurity Is Associated with Increased Risk of Obesity in California Women. The Journal of Nutrition. 2003 April 1, 2003;133(4):1070-4.
- 43. Martin K, Ferris A. Food insecurity and gender are risk factors for obesity. J Nutr Educ Behav. 2007 Jan-Feb;39(1):31-6.
- 44. Dinour L, Bergen D, Yeh M. The food insecurity-obesity paradox: a review of the literature and the role food stamps may play. J Am Diet Assoc. 2007 Nov;107(11):1952-61.
- 45. Shepherd R, Raats M. The psychology of food choice: Cabi; 2006.
- 46. James D. Factors influencing food choices, dietary intake, and nutrition-related attitudes among African Americans: application of a culturally sensitive model. Ethn Health. 2004 Nov;9(4):349-67.
- 47. Johnson C, Sharkey J, Dean W, Alex McIntosh W, Kubena K. It's who I am and what we eat. Mothers' food-related identities in family food choice. Appetite. 2011 8//;57(1):220-8.
- 48. Walcott-McQuigg J. The relationship between stress and weight-control behavior in African-American women. J Natl Med Assoc. 1995 Jun;87(6):427-32.
- 49. Lawrence J, Devlin E, Macaskill S, Kelly M, Chinouya M, Raats M, et al. Factors that affect the food choices made by girls and young women, from minority ethnic groups, living in the UK. J Hum Nutr Diet. 2007 Aug;20(4):311-9.
- 50. Harrington J, Fitzgerald A, Layte R, Lutomski J, Molcho M, Perry I. Sociodemographic, health and lifestyle predictors of poor diets. Public Health Nutr. 2011 Dec;14(12):2166-75.
- 51. Van Cleemput P, Parry G, Thomas K, Peters J, Cooper C. Health-related beliefs and experiences of Gypsies and Travellers: a qualitative study. J Epidemiol Community Health. 2007 Mar;61(3):205-10.
- 52. Lawrence W, Skinner C, Haslam C, Robinson S, Inskip H, Barker D, et al. Why women of lower educational attainment struggle to make healthier food choices: The importance of psychological and social factors. Psychology & Health. 2009 2009/11/01;24(9):1003-20.
- 53. Johnson P, Risica P, Gans K, Kirtania U, Kumanyika S. Association of perceived racial discrimination with eating behaviors and obesity among participants of the SisterTalk study. J Natl Black Nurses Assoc. 2012 Jul;23(1):34-40.
- 54. Davis E, Stange K, Horwitz R. Childbearing, stress and obesity disparities in women: a public health perspective. Matern Child Health J. 2012 Jan;16(1):109-18.
- 55. Swinburn B, Sacks G, Hall K, McPherson K, Finegood D, Moodie M, et al. The global obesity pandemic: shaped by global drivers and local environments. Lancet. 2011 Aug 27;378(9793):804-14.
- 56. Egger G, Swinburn B. An "ecological" approach to the obesity pandemic. BMJ : British Medical Journal. 1997;315(7106):477-80.
- 57. Friel S, Conlon C. Food Poverty and Policy. Study Conducted for Combat Poverty, Crosscare and the Society of St Vincent de Paul. Dublin2004.
- 58. Antin T, Hunt G. Food choice as a multidimensional experience. A qualitative study with young African American women. Appetite. 2012 6//;58(3):856-63.
- 59. Lawrence W, Barker M. A review of factors affecting the food choices of disadvantaged women. Proceedings of the Nutrition Society. 2009;68(02):189-94.
- 60. Cummins S, Macintyre S. "Food deserts"—evidence and assumption in health policy making. BMJ : British Medical Journal. 2002 04/11/accepted;325(7361):436-8.
- 61. Layte R, Harrington J, Sexton E, Perry I, Cullinan J, Lyons S. Irish exceptionalism? Local food environments and dietary quality. J Epidemiol Community Health. 2011 Oct;65(10):881-8.
- 62. Drewnowski A, Darmon N. The economics of obesity: dietary energy density and energy cost. The American Journal of Clinical Nutrition. 2005 July 1, 2005;82(1):265S-73S.
- 63. Morland K, Diez Roux A, Wing S. Supermarkets, other food stores, and obesity: the atherosclerosis risk in communities study. Am J Prev Med. 2006 Apr;30(4):333-9.

- 64. Kayman S, Bruvold W, Stern J. Maintenance and relapse after weight loss in women: behavioral aspects. The American Journal of Clinical Nutrition. 1990 November 1, 1990;52(5):800-7.
- 65. Wang M, Orci L, Ravazzola M, Unger R. Fat storage in adipocytes requires inactivation of leptin's paracrine activity: implications for treatment of human obesity. Proc Natl Acad Sci U S A. 2005 Dec 13;102(50):18011-6.
- 66. Considine R, Sinha M, Heiman M, Kriauciunas A, Stephens T, Nyce M, et al. Serum Immunoreactive-Leptin Concentrations in Normal-Weight and Obese Humans. New England Journal of Medicine. 1996;334(5):292-5.
- 67. Myers M, Cowley M, Munzberg H. Mechanisms of leptin action and leptin resistance. Annu Rev Physiol. 2008;70:537-56.
- 68. Kraegen E, Cooney G. Free fatty acids and skeletal muscle insulin resistance. Curr Opin Lipidol. 2008 Jun;19(3):235-41.
- 69. Oswal A, Yeo G. Leptin and the Control of Body Weight: A Review of Its Diverse Central Targets, Signaling Mechanisms, and Role in the Pathogenesis of Obesity. Obesity. 2010;18(2):221-9.
- 70. US Department of health and Human Services. Physical Activity and Health; A Report of rhe Surgeon General. Atlanta, Georgia: US Department of Health and Human Services, Centres for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion.1996.
- 71. Shaw K, Gennat H, O'Rourke P, Del Mar C. Exercise for overweight or obesity. Cochrane Database Syst Rev. 2006(4):CD003817.
- 72. Poirier P, Despres J. Exercise in weight management of obesity. Cardiol Clin. 2001 Aug;19(3):459-70.
- 73. Aguiar E, Morgan P, Collins C, Plotnikoff R, Callister R. Efficacy of interventions that include diet, aerobic and resistance training components for type 2 diabetes prevention: a systematic review with meta-analysis. International Journal of Behavioral Nutrition and Physical Activity. [journal article]. 2014;11(1):1-10.
- 74. Giles-Corti B, Donovan R. The relative influence of individual, social and physical environment determinants of physical activity. Soc Sci Med. 2002 Jun;54(12):1793-812.
- 75. McNeill L, Kreuter M, Subramanian S. Social Environment and Physical activity: A review of concepts and evidence. Social Science & Medicine. 2006 8//;63(4):1011-22.
- 76. Lindström M, Hanson B, Östergren P. Socioeconomic differences in leisure-time physical activity: the role of social participation and social capital in shaping health related behaviour. Social Science & Medicine. 2001 2//;52(3):441-51.
- 77. King A, Castro C, Wilcox S, Eyler A, Sallis J, Brownson R. Personal and environmental factors associated with physical inactivity among different racial-ethnic groups of U.S. middle-aged and older-aged women. Health Psychol. 2000 Jul;19(4):354-64.
- 78. Zunft H, Friebe D, Seppelt B, Widhalm K, Remaut de Winter A, Vaz de Almeida M, et al. Perceived benefits and barriers to physical activity in a nationally representative sample in the European Union. Public Health Nutr. 1999 Mar;2(1A):153-60.
- 79. Cerin E, Leslie E. How socio-economic status contributes to participation in leisure-time physical activity. Social Science & Medicine. 2008 6//;66(12):2596-609.
- 80. Eyler A, Baker E, Cromer L, King A, Brownson R, Donatelle R. Physical activity and minority women: a qualitative study. Health Educ Behav. 1998 Oct;25(5):640-52.
- 81. Juarbe T, Turok X, Perez-Stable E. Perceived benefits and barriers to physical activity among older Latina women. West J Nurs Res. 2002 Dec;24(8):868-86.
- 82. Eyler A, Wilcox S, Matson-Koffman D, Evenson K, Sanderson B, Thompson J, et al. Correlates of physical activity among women from diverse racial/ethnic groups. J Womens Health Gend Based Med. 2002 Apr;11(3):239-53.
- 83. Canuto K, Cargo M, Li M, D'Onise K, Esterman A, McDermott R. Pragmatic randomised trial of a 12-week exercise and nutrition program for Aboriginal and Torres Strait Islander women: clinical results immediate post and 3 months follow-up. BMC Public Health. [journal article]. 2012;12(1):1-11.

- 84. Smart H, Titterton M, Clark C. A literature review of the health of Gypsy/Traveller families in Scotland: the challenges for health promotion. Health Education. 2003;103(3):156-65.
- 85. De Brún A, McCarthy M, McKenzie K, McGloin A. "Fat is your fault". Gatekeepers to health, attributions of responsibility and the portrayal of gender in the Irish media representation of obesity. Appetite. 2013 3/1/;62:17-26.
- 86. Berridge V. Evaluating Health Promotion: Practice and Methods. Oxford: Oxfrod University Press; 2000.
- 87. Pelling M. Caring for Health: History and Diversity. . Buckingham: Poen University Press; 2001.
- 88. Porter D. Health, Civilisation and the State. Abingdon, Oxon: Routledge; 1999.
- 89. Ayo N. Understanding health promotion in a neoliberal climate and the making of health conscious citizens. Critical Public Health. 2012 2012/03/01;22(1):99-105.
- 90. Report. A. Report of the Independent Inquiry into Inequalities in Health. London: The Stationary Office1998.
- 91. Kearney M. Enduring love: a grounded formal theory of women's experience of domestic violence. Res Nurs Health. 2001 Aug;24(4):270-82.

8 APPENDICES

APPENDIX 1: Overview of Health Education received by Study Participants

The training / education at the STHN focuses on the wider social determinants of health thus including accommodation, personal, education and social environments. Traveller women receive training both at a local project level with the women's group they are involved with and at the STHN. The STHN links with the appropriate services either within the HSE or the voluntary sector to provide the training. The Health Promotion Department of the HSE has provided training on the healthy food choices/food pyramid, mental health training and stress management. The Healthy Minds Project (HSE) has also provided mental health training and also the SafeTalk training. National Traveller organisations such as Pavee Point and the National Traveller Women's Forum have provided training on gender analysis and domestic violence. Local NGOs and the STHN project workers have also carried out training with the STHN.

Many Traveller women have attended meetings, training, events etc since early adulthood, which is often the time they become involved with women's groups. There has been a shift in the training / education provided over the years; initially it focused on cooking/sewing/flower arranging, in more recent years it as become more about political and social analysis and the social determinants of health. Many of the women who participated in the research have been involved in Traveller rights issues for over twenty years. STHN reps who attend training/workshops feed-back the information to their organisations/women's groups and hopefully to the wider Traveller Community. The Traveller Primary Health Care workers are a key source of information within the community.

Over the last four years the women at the STHN has developed two specific resources which may be used by Traveller groups nationally. Firstly, the Rings of Hope, a graphic novel on domestic violence which tells the story of three generations of Traveller women, how their lives are affected by domestic violence and how the younger generation no longer tolerate violence. Secondly, a DVD of the Traveller Women's Monologues, these are monologues written and told by Traveller women of their experiences of accommodation, education, discrimination, domestic violence and also their hopes for the future. The Monologues originated from work on internalised oppression and racism which was facilitated by Thomas McCann, a psycho-therapist and Traveller activist.

The findings of the AITHS demonstrated an improvement in the health status of Traveller women but not Traveller men. The focus on health inputs within Traveller projects has clearly had a positive impact on Traveller women's health and well-being.

Below is a list of some of the training the women at the STHN have received, both at the STHN and local project level.

- Health Information – including breast and smear check, diabetes, cardiovascular health, beutler test,
- Healthy Food Choices – food pyramid
- First Aid
- Safe Talk
- Mental Health training – minding your mental health
- Menopause
- Findings of the AITHS
- Workshops looking at the recommendations of the AITHS
- Health Cooking at the Home (delivered at local project level)
- Gym and Swim – exercises (delivered at local project level)
- Walking Groups (delivered at local project level)
- Healthy eating for children (delivered at local project level)
- Parenting Course – Parents Plus
- Drug and alcohol Awareness and family support work
- Ethnicity Campaign
- Racism and discrimination (institutional and the individual) and its impact on Travellers
- Stress management
- Internalised oppression
- Monologues
- Domestic Violence
- Traveller Cultural Awareness Training
- Gender awareness

APPENDIX 2: Vignette

Margaret is a 34 year old Traveller woman who is married with four children. When she was in her teens and her twenties she wore size 12 clothes but nowadays she needs to buy size 18 to 20 to fit her. She is conscious that she has been steadily putting on weight over the years. She has gone to a good few health information sessions with the local Traveller group and has heard a lot about healthy food, eating fruit and vegetables and getting regular exercise but even though she understands these things are important she finds it hard to change what she eats, what the family eats and to try to get some exercise.

APPENDIX 3: Topic Guide Food Choices and Influences

What is Margaret likely to be eating and drinking

- during the day
- the evening
- the night?
- is there a difference at the weekends?
- Who does she eat with? Where?

Cooking

- Is she cooking / preparing all the family food?
- How is she cooking?
- Is it something she enjoys or is it simply a necessity?

Food purchasing

- What foods is she likely to buy regularly?
- What influences what she buys?
- Cost
- Availability
- Cultural factors
- Family preferences
- Advertising
- Mixing with settled people
- What's the biggest influence?

Where is she buying food?

- Why there?

What physical activity is Margaret regularly doing?

- Mon-Fri
- Sat / Sun
- How does she get to school / shops / visit family etc

What does eating food mean to Margaret?

- Getting rid of hunger?
- A necessity?
- Something enjoyable she likes doing?
- Something enjoyable she likes doing with family / friends?
- Snacks to boost energy and keep her going?
- A way of treating herself now & again?

Even though she knows the importance of healthy eating and would like to eat more healthily, she finds it hard to change what she eats herself

- Why is that?
- What is making it difficult to change her diet?
- Stress?
- Sense of control?
- Experiences of discrimination?
- Sense of worth / self-esteem
- Why bother?

Does she believe she could make changes and stick to them?

Does she believe dietary change would improve her or family's health?

Does she believe dietary change could improve the Travelling community's health?

Even though she knows the importance of healthy eating and would like the children to eat more healthily, she finds it hard to change what they eat

- Why is that?
- What is making it difficult to change the children's diet?

Changing her diet – If Margaret became very determined to change her own eating / drinking habits

- How could she go about it?
- What could help her to succeed?
- Where could she get reliable / regular support from?

- What would help her to stick with the change?
- What might stop her?
- Where might she meet resistance from?
- Cost issues / Availability?
- Struggle with her own will / determination?
- Children?
- Husband?
- Wider family?
- Other Travellers?
- Does being a Traveller have a role to play? E.g. what does an attractive Traveller woman look like?
- Could she get help to get over the resistance?
- What / who could help?

Is looking overweight regarded as a negative thing in the Traveller community?

- Among Traveller women?
- Among Traveller men?
- Among Traveller children?

APPENDIX 4: Topic Guide Physical Activity and Exercise

June 19th 2013

What kind of physical activity is Margaret likely to have in the typical day?

Is it likely she will take physical exercise on purpose to help manage her weight?

Barriers to Margaret taking action to lose weight?

Supports / Facilitators for Margaret taking action to lose weight?

What might motivate Margaret to take action to lose weight?

Probes

- Discrimination
- Mental health issues
- Hard life
- Fears for the future
- Fatalism re Travellers health

APPENDIX 5: Traveller Women's Food Choices Study Information Sheet

Information and Purpose: The Department of Epidemiology & Public Health in University College Cork (UCC) has been asked by the Southern Traveller Health Network (STHN) and the HSE South Dept of Health Promotion to research Traveller women's ideas of how they feel about food and what affects the food choices they make. We hope that this piece of research will give a better understanding of the issue. Two people from UCC, a student of Public Health, Aideen O' Leary and a college lecturer, Mary Cronin are running 2 days of group discussions to hear what Traveller women have to say about their food choices. This work is part of Aideen's Master's in Public Health course and will be part of her thesis, but the findings will also be given back to the STHN for it to take action if it wants to and may be published in the future with the permission of the STHN.

Your involvement: You are being asked to take part in 2 group discussions on Traveller women's food choices. Before the group discussion, you will have a chance to ask any questions you have about the research. If you want to go be involved, you will be asked to sign a Consent Form. Before the group starts, we will also ask you to tell us your name, age, the type of accommodation you live in and whether you have ever participated in health education courses.

Being involved in this study means taking part in 2 group discussions – the first is on June 5th and the second on June 19th; each last approximately 60-75 minutes. The discussion group will focus on a number of topics around your food choices - for example what food means to you, your family and the Traveller community; how food affects your physical and mental health; what influences the food you buy, cook and eat; what helps you to eat healthily and what makes it difficult to do. The group facilitator will work to ensure that everyone's perspective is heard – all involved can help this by listening when someone else is speaking.

If you find afterwards that you need to discuss something that came up in the focus groups, there will be a named person in your local area that you can contact for confidential support.

Leaving the Study: At any time you may tell the researcher that you would like to stop being involved in the study and can withdraw your consent for the use of your contribution to the research.

Benefits of participation: The benefit of being involved is that you will help to develop a greater understanding of why Traveller women are making certain choices around food. This hopefully can help to bring about change which will hopefully in the future improve Travellers health.

Confidentiality: The discussion groups will be audio-recorded; however, when the research is finished it will not be possible to identify who said what. When the research is written up, everyone will be anonymous or given a pseudonym (a false name).

Confidentiality will be discussed before the discussion groups take place. There will be an agreement between all involved that what is said stays between the group and the research team.

Thank You: Thank you very much for taking the time and trouble to be involved in this research.

Aideen O' Leary & Mary Cronin (UCC)

APPENDIX 6: Traveller Women's Food Choices Study Informed Consent Form

Purpose of the Study

The Department of Epidemiology and Public Health in University College Cork (UCC) has been asked by the Southern Traveller Health Network (STHN) and the HSE South Dept of Health Promotion to research Traveller women's ideas on how they feel about food and affects the food choices they make. We hope this piece of research will give a better understanding of the issue. Participants will be asked to part-take in two focus groups. Focus groups will be audio-recorded for research purposes.

Participants Understanding

- I agree to take-part in this research which I know will become part of Aideen O' Leary's Master's thesis for UCC and a report for the STHN.
- I understand that my participation is voluntary. I understand that I can pull out of the study at any time.
- I understand that all the information collected will be used only in this study.
- I understand that I will not be identified by name in the final product
- I am aware that all records will be kept confidential in the secure possession of the research team

I understand that the research findings will be provided to the Southern Traveller Health Network (STHN) and with the STHN's permission may be shared with other agencies and may be published in the future.

Participant's Full Name (BLOCK PRINT): _____

Participant's Signature: _____

Date Signed: _____

APPENDIX 7: Traveller Women's Food Choices Study Personal Information record Sheet

Name: _____

Age: _____

Accommodation Type:

_____

_____

Previous health education experiences:

_____

_____