A critical analysis of the media representations of food and eating in soap operas, televised in the United Kingdom

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Abstract

Objectives: To survey media representations of food and eating in soap operas shown on British television. To relate these findings to current guidelines for healthy food choices. To appraise the relationship between characters' apparent state of health and their food choices.

Rationale for research: The average British diet substantially deviates from the general recommendations for healthy eating. In addition, nutrition related chronic diseases feature highly as the leading causes of death in industrialized countries. At the same time, sedentary leisure pursuits such as watching television have increased dramatically so that by 2006, television ownership in private UK domestic homes rose to 25.8 million. Since viewing figures for soap operas are higher than other forms of programming, food representations in this genre warrant investigation.

Methods: A survey was taken of the top five soap operas with the highest viewing figures. 'Terrestrial' television only was studied to enable broader coverage and thus including those with and without cable facilities. The sample was taken from the BARB Top 30 Weekly Viewing Summary, resulting in the following programmes being surveyed: Coronation Street, EastEnders, Emmerdale, Hollyoaks and Home and Away. Verbal and visual references were noted, type of food, situation and scene length were recorded and characters and character descriptions logged. Simple descriptive statistics, namely percentages, were used to describe the findings.

Results: On average, approximately a third of all screen time related to food. Alcohol was the largest food group consumed in all programmes, with sweet and/or fatty foods the next most frequent food group consumed. Contrary to previous studies, food advertisements were not the dominant advertisement-type during the air-time of the soap operas. Of the food ads however, sweet, fatty and/or alcoholic content dominated in three out of the four commercial television programmes, namely Emmerdale, Hollyoaks and Home and Away.

Conclusions: When analyzing this study through a Cultivation theory perspective, the continual display of images of alcohol and sweet or fatty food consumption may result in small cumulative messages being absorbed by viewers. This form of passive learning may skew viewers' versions of reality, whereby viewers come to accept these images as a normal part of everyday nutrition. To confirm these findings, further research is needed whereby individual viewers of soap operas are studied in relation to their attitudes, beliefs and judgements regarding healthy eating issues.

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1 Introduction

1.1 Aims and objectives

Aims

 To investigate media representations of food and drinks in soap operas televised in Britain, and evaluate them in relation to healthy eating quidelines.

Objectives

- To survey media representations of food, eating and characters' food habits in soap operas shown on British television and analyze content.
- To relate findings to current UK and WHO guidelines for healthy food choices.
- To appraise relationship between characters' perceived state of health and their food choices.
 - To analyze advertisements in relation to food content.

Television is available to and watched by a vast amount of people. Its ubiquitous nature has seen an increase in television ownership in private domestic homes in the United Kingdom (UK) to 25.8 million in 2006 (BARB, 2006). Television has the capacity therefore to reach many, if not most members of society. The question that must be asked however is, does television imagery have the power to influence its viewers?

1.2 Eating habits of the British population

Good nutrition is a known feature in attaining and maintaining good health throughout life (WHO, 2003). Together with smoking status, alcohol and physical activity levels, the quality of nutrition can influence the outcome for a healthy or unhealthy existence.

Diet is recognized as a key contributor to many non-communicable diseases and their increase has become a serious public health concern in the UK (DOH, 2004a).

Non-communicable diseases feature highly in the leading causes of death in England and Wales. Table 1 shows the top 10 leading causes of death.

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		Rate per 100,000
Rank	Causes of death	population
Males		
1	Ischaemic heart diseases	146.2
2	Cerebrovascular diseases	55.1
3	Malignant neoplasms (trachea,	51.1
	bronchus, lung)	
4	Chronic low er respiratory diseases	38.9
5	Influenza and Pneumonia	35.3
6	Malignant neoplasm (prostate)	25.5
7	Malignant neoplasm (colon, rectum,	22.8
	anus)	
8	Malignant neoplasms (lymphoid,	17.2

	haematopoietic)	
9	Dementia and Alzheimer's disease	14.1
10	Aortic aneurysm	13.9
Females		
1	Ischaemic heart diseases	68.5
2	Cerebrov ascular diseases	51.8
3	Influenza and Pneumonia	29.8
4	Dementia and Alzheimer's disease	18.7
5	Chronic low er respiratory diseases	25.1
6	Malignant neoplasm (trachea,	28.9
	bronchus, lung)	
7	Malignant neoplasm (female breast)	28.2
8	Heart failure and heart disease	11.2
9	Malignant neoplasm (colon, rectum,	14.1
	anus)	
10	Diseases of the urinary system	9.9

Source: National Statistics Office (2006)

The leading cause of death is ischaemic heart disease for both men and women, which is strongly associated to nutrition (Mann *et al.*, 1997). Indeed several diseases from the top 10 causes of death are connected with nutrition: cerebrovascular disease, respiratory diseases, breast cancer, heart failure, and other cancers (Burke and de Francisco, 2005). Many chronic diseases share common risk factors: unhealthy eating habits, alcohol use, insufficient physical activity and smoking (Yach *et al.*, 2004). Obesity is an integral part of chronic diseases and is a rising problem (Choi *et al.*, 2005). Twenty four million adults in England are now classified as being overweight or obese and the groups most at risk of obesity and other non-communicable diseases are people of lower socioeconomic status (SES) (House of Commons Health Committee, 2004). Although in general most people have healthier lives, the health gap is widening between upper and lower SES groups. Some regions of the UK now have mortality rates last seen in the 1950s (DOH, 2004c).

Not only are the consequences of non-communicable disease a human tragedy, but financially they are a burden on society. Obesity related health problems are a drain on health services. It is estimated that diet related expenditure in the National Health Service is in the region of £4 billion per year (DOH, 2004a).

The food consumed in the daily diet therefore is of considerable importance in a public health context, yet many people have nutritionally poor eating habits. The

average British diet substantially deviates from general recommendations for healthy eating. The National Diet and Nutrition Survey (NDNS) (Food Standards Agency, 2002) clearly shows a shortfall in fruit and vegetable intake with the average person consuming between two and three portions per day. These figures become more alarming in that a portion of fruit and vegetables included composite dishes such as fruit pies; vegetable dishes such as cauliflower cheese or samosas. All fruit juice consumed was calculated as one portion and baked beans and other legumes were classed as one portion. Similarly, fruit only intake for all persons was less than two portions per day. These figures also included composite dishes. About a fifth, 21% of men and 18% of women consumed no fruit at all.

Those people in receipt of state benefits showed a further reduction in fruit and vegetable consumption than those not requiring benefit. For example, men ate approximately two portions of fruit and vegetables a day, while women ate less than two portions of fruit and vegetables a day. Indeed 35% of men and 30% of women receiving benefits ate no fruit whatsoever at the time of the survey.

Other dietary aspects, such as high levels of salt, sugar and animal derived products contribute towards a poor nutrition profile (Garrow *et al.*, 2001), while higher levels of omega-3 fish oils and whole grains provide health benefits (Hooper *et al.*, 2005 and WHO, 2003). The 2004-2005 family food report (DEFRA, 2006) on the UK population found that energy derived from fat and non-milk sugars was greater than levels recommended by the Department of Health. Salt intake had reduced since 2000 although levels were above the recommended maximum of 6g per day. Furthermore, the addition of table salt and food bought and consumed outside the home were not taken into account in these calculations.

The NDNS results show that less than half, 41% of all men and 47% of all women, ate oily fish during the period of the survey, while white bread was consumed by most, 93% of men and 89% of women in comparison to wholemeal bread, 33% of men and 39% of women (Food Standards Agency, 2002).

The above findings indicate that British eating habits are skewed towards an unhealthy eating pattern. Food choice underlines an increase in nutrition-related non-communicable diseases. This is an important public health issue, since not only is the end-result of death a tragedy, but quality of life during the course of illness is frequently debilitating whilst being avoidable.

Factors that influence food choice are wide and varied. For example, they may have social implications – friends, dining out, dieting; symbolic connotations – food used as power, cost, fashion; cultural associations – image, media, religious celebrations or nutritional links – health issues, food scares, health promotion (Beardsworth and Keil, 1997 and Murcott, 1998).

In her report on health and medicine, Karpf (1988) believes that television plays a significant role as a resource for the nation's health information. Although doctors are the primary source, due to its popularity, sometimes television becomes *the* major resource for health messages (Karpf, 1988).

With the increasing popularity of the soap opera genre and the volume of television unit sales rising each year, the soap opera is worthy of investigation into its possible effects, in regard to food and health.

1.3 Guidelines for healthy eating

Current UK and World Health Organization (WHO, 2003) guidelines state that for healthy eating, a balanced diet should be consumed based on starchy foods and incorporate at least five portions of fruit and vegetables a day, which equates to 400g. In addition, wholegrains in the form of cereals or wholemeal breads, several portions of fish per week including oily varieties, low fat dairy products and plenty of water should also be consumed. Reducing saturated and trans fats, is also recommended.

With the popularity of ready meals and snacks increasing, the potential for consuming higher levels of free sugars and salt is also on the rise. Guidelines for good health also suggest that the free sugars content of the diet be no greater than 10% and salt intake should be reduced to a maximum of 6g a day (WHO,

2003; Secretary of State for Health, 1999; WHO, 1985; DOH, 1991). Furthermore, Department of Health (DOH) recommendations (DOH, 2006) state that alcohol consumption be taken in moderation. DOH suggests that men do not drink more than 3-4 units of alcohol per day and women, no more than 2-3 units a day. A measure of spirits equals 1 unit, a glass of wine (175ml) or pint of lager registers 2 units, while a pint of bitter contains 3 units of alcohol.

The above recommendations are typical of the Mediterranean-style diet which has had extensive research into its efficacy on health. Studies have shown it substantially reduces total mortality in myocardial infarction and stroke (Lorgeril and Salen, 2006 and Trichopoulou *et al.*, 2003), certain cancers (de Lorgeril, *et al.*, 1998), prevalence of metabolic syndrome (Esposito, *et al.*, 2004) and other conditions.

The purpose of these food-related guidelines is to provide people with the best opportunity to achieve a healthy and long life that is free from, or with minimal chronic diseases (WHO, 1985). To achieve this, the guidelines or food messages must be available to and accessible by all. It is with this in mind that the present study has come about.

1.4 Soap operas in Britain

A soap opera is a serialized fictional drama, usually televised several times a week, and loosely based on real-life. They have been aired on radio and televised for many decades. The term 'soap opera' came about because the daytime dramas were mostly targeted towards 'housewives' and sponsors frequently marketed cleaning products accompanied by a jingle, hence the term soap opera. Sponsors are still connected with soap operas, but today they are more likely to be food or drinks orientated.

The public health significance of the soap opera lays in its audience and their SES. Although viewed by a wide cross-section of social groups, Hart (1991) claims the further viewers travel down the social gradient, the higher the audience figures (table 2).

Table 2: Percentage soap opera audience

Social status	EastEnders %	Coronation Street	Emmerdale %
AB	12	10	9
C1	22	19	18
C2	32	29	27
DE	34	42	46

Source: Hart (1991)

Although these figures are rather elderly in dating back to 1988, there is no evidence to establish a change in viewing patterns.

Soap opera ratings in the UK frequently surpass ratings for all other programmes. The BARB (Broadcasters' Audience Research Board) viewing summary for ITV-1 for week ending 23/07/2006 reported the top eleven programmes for that week were Coronation Street and Emmerdale. Coronation Street held positions one to five with ratings from 8.95 million to 7.79 million, while Emmerdale was placed at positions six to eleven with ratings from 7.10 million to 6.44 million. Similarly, BBC-1 occupied the top two ratings slots and positions four and five with EastEnders. Soap operas televised on channels 4 and 5 were less vigorous however they maintained their place in the top thirty listings (BARB, 2006).

Successes such as these highlight the concerns mentioned earlier regarding passive learning of unhealthy behaviours. It also emphasizes the potential significance of the stereotype in soap operas since this type of portrayal is relied upon.

1.4.1 Stereotyping

Despite the educational and informative side of many aspects of television, its sedentary nature makes it an ideal medium for relaxation. In this regard, soap operas are not required to be academically demanding and rely on characters that conform to stereotypes (Perse, 2001).

The stereotype is a generalization from real-life and provides aspects that are familiar to all. The problem with this type of depiction is that stereotypes are

neither representative nor constructed in a realistic manner. For example, Signorielli (1993) demonstrated that women characters that were married and working appeared on television less often than those in real-life. As a result, although soap operas give the impression they are about everyday life aimed at the 'average person', they are not in fact representative of the average person.

1.4.2 Fictional characters as role models

It is known that young adults get information from television (Women and Work Commission, 2006); for example female enrolment now outweighs male enrolment in UK forensic sciences courses. This has been attributed to the success of forensic science programmes such as Crime Scene Investigation which frequently produces the highest ratings for Channel 5 (BARB, 2006) and the BBC drama Silent Witness whose lead character is played by a female scientist (SEMTA, 2005).

It is suggested the soap opera functions in a similar vein. Stern *et al.*, (2005) note that the fictional characters often have attractive and enviable lifestyles and props are used to represent the essence of that way of life. Alcohol frequently appears as a device to symbolize a successful and extravagant lifestyle, although it may equally be used in the everyday setting of a bar, café or home (Stern *et al.*, 2005).

Stern *et al.* (2005) propose that some viewers become emotionally involved in characters' lives and see them as real. The more a viewer aspires and longs for the characteristics of the fictional lifestyle, the more likely they are to use those characters as role models (Stern *et al.*, 2005). This tends to occur more with people who view many hours of television a day.

1.5 Media effects and behaviour

This section reviews literature on the links between media and behaviour. A vast body of research exists, investigating issues such as media imagery and violence (Browne and Hamilton-Giachritis, 2005 and Felson, 1996); effect of advertisements on children (Aktas Arnas, 2006 and Folta *et al.*, 2006); role modelling and viewers (Perse, 2001). Research exists mostly from psychological, sociological and media

studies perspectives, with various explanatory theories such as cultivation and priming theories.

Television is an artificial environment of images and messages that has become an everyday part of life over the last 50 years or more. People growing up with television today are exposed to imagery unknown decades before. Gerbner *et al.*, (1994) describe television as a "centralized system of storytelling" that has become the basis for acquiring daily information. Its significance lies in its facility to expose a lot of viewers to a wide range of programming (Gerbner *et al.*, 1994).

It has been widely speculated that mass media effects are far-reaching and extensive (Perse, 2001). This is the intention of advertising. However McGuire (1986) hypothesized there are also unintentional effects that are less well-defined, such as aggression caused by watching violence on television; stereotyping and distorted views of reality. The latter may reveal itself with subtle changes in the types of food consumed. For example, a viewer watching repeated images of people eating hamburgers and chips may come to accept that this is a normal and healthy part of an everyday diet.

1.5.1 Effects of growing up with television

In her book on media effects and society, Elizabeth Perse (2001) stresses the importance of understanding the role that mass media plays in socializing people whether they are children or adults. Although she explains other avenues such as family and school have an important and more immediate affect on socialization, the media, particularly television is available to and watched by a vast number of people, making its effects potentially influential to most of society.

There is concern that television might promote unhealthy behaviour in some individuals (Alexander, 1985). This may be in the form of poor eating habits, aggression or health issues. The basis for concern is that television may be used as a passive learning tool. This rationale infers that messages and information are sent out and absorbed by people without them realizing it (Perse, 2001).

A healthy population requires an understanding of the elements contributing towards good health, for example, basic principles of fitness and nutrition, and consequences of smoking (Nestle, 2002). Whilst smoking is no longer part of the mainstream television agenda, food and alcohol are familiar parts of most programming and commercials; the content of which involves both nutritious and non-nutritious foods (Perse, 2001). In their research on the perceptions of nutrition, Signorielli and colleague (1997) identified a strong positive association between watching television and "unhealthy perceptions of nutrition" (Signorielli and Staples, 1997).

Over the past 20 years food and alcohol in particular have been criticised for portraying contradictory images in television and advertising, to guidelines for healthy food and alcohol consumption (Furnham *et al.*, 2002 and Wallack *et al.*, 1987). Frequently characters at odds with the given message accompany these images. For example, fast food restaurants and snack foods are often advertised by fit and healthy-looking characters implying health benefits to eating their products, when the food advertised is often highly refined, high in fat, salt and calories. It communicates the message that the advertised food is good to eat on a regular basis without contributing towards poor health (Nestle, 2002).

Film and television is often criticized for including characters that are not representative of society in general. For example, programmes frequently include actors that could be aligned with the modelling world, and often great importance is placed on attractiveness (Nariman, 1993). This is often the case in soap opera production.

1.5.2 Advertising effectiveness

Advertising executives appreciate the success of an advertisement is largely supported by the programme in which it is located. For example, an advertisement for a health-giving yoghurt drink would be expected to be more successful if it was placed in a health-related programme, rather than one about fast cars (Furnham *et al.*, 2002). This like-with-like involvement is the basis for cognitive priming theory, which states that an advertisement will be better remembered if it has a similarity with the content of the programme

(Sanbonmatsu and Fazio, 1991). Television is an important part of this concept, since imagery is remembered more easily than entirely verbal communication (Reed, 1988).

Conversely, cognitive interference theory challenges cognitive priming theory by proposing that when a programme and advertisement are located together with similar content, the two blend together weakening memory recall (Bryant and Zillman, 1994).

In contrast to the conflicting findings mentioned above, Norris *et al.* (2003) claim enhanced memory of an advertisement is the result of the willing choice and subsequent watching of a programme. The 'high involvement' in a programme enables viewers to be more open to advertising content.

Norris et al. (2003) explored the "cognitive processing of information" in their experiment on the effectiveness of advertisements within television programmes. They found the more viewers became absorbed by the programme, the better they retained information from the first commercial break. In addition, the more those viewers became involved and enjoyed the programme, the more likely they were to buy the advertised products.

Similarly, the positioning of the commercial breaks within the programme has been a focus of research in the past decades. Furnham *et al.*, (2002) established a link between the recall of an advertised product if the subsequent content of the programme was relevant to the commercial. In this case, beer was the product better recalled.

These connections relate to the present study since all but one of the programmes surveyed (BBC-1 EastEnders) have one main commercial break. In addition, it is known that some viewers become deeply involved with characters' lives in soap operas (Gerbner *et al.*, 1994 and Stern *et al.*, 2005).

1.5.3 Media and violence

The subject of media and violence may at first appear to have little to do with the impact of food images on television viewers. The two may be linked however in their explanations of their effects.

The extent to which television violence has on the action of individuals is on going (Bryant and Zillman, 1994). It is accepted by many that media violence does have an effect, which is both immediate and long lasting (Huesmann and Taylor, 2006 and Felson, 1996). This relationship is explained by cultivation theory which claims that repeated watching of violent imagery gradually dulls the senses into accepting the images as 'normal' and acceptable (Gerbner, *et al.*, 1994) (explained further in 1.5.4 Cultivation theory, p.22).

A 2005 Lancet review (Brown and Hamilton-Giachritsis, 2005) concluded that violent images do have an effect on thoughts and emotions in the short-term. Moreover, investigation into whether such imagery led to actual crime events revealed weak evidence in support of this hypothesis.

Although media and violence is a specific phenomenon, there are other aspects of everyday life that may be affected by regular streams of imagery. Although subtle and yielding different results, they may be equally significant. For example, does the regular imagery of food and alcohol have an effect on the individual and if so, can this influence eating and drinking patterns?

1.5.4 Cultivation theory

Whereas some look at the 'media effects' on the individual in their research (Perse, 2001 and Rosengren, 1994) Gerbner *et al.*, (1994) analyze the consequences of media on the individual through cultivation theory. Advocates of cultivation theory believe that television watching has effects that are small, pervasive and cumulative. Rather than focusing on the behavioural aspects as do media effects theorists, cultivation theorists concentrate on attitudes, beliefs and judgments of viewers and whether their version of 'reality' is skewed as a consequence of television watching.

Gerbner and colleagues (1994) state that people who watch a lot of television, are influenced to a higher degree by the representation of everyday life on television. The values broadcast may include gender roles, violence or other social constructions. Since many television programmes portray inaccuracies in terms of male/female ratios; levels of crime; quality of lifestyle and health choices, this is particularly important (Gerbner *et al.*, 1994).

The content of many television dramas would imply a much greater level of violence exists than most communities would experience. According to cultivation theorists, heavy users of television believe the world to be more violent than statistics would show (Perse, 2001). Such hypothesis could be expanded to other subject matter on television. For example, the level of alcohol consumption or unhealthy food choices of characters in programmes may be perceived by viewers as a 'normal' healthy way of life.

In his study on television and food choice, Dickinson (2005) looks at food messages and portrayals embedded in programming aimed at children and adolescents. He does this through a Cultivation perspective.

Since the nature of the soap opera genre is one that is neither challenging nor taxing to the viewer, and the viewing of such performed in a relaxed and casual manner, the cultivation approach is the most appropriate to study soap opera content.

1.6 Research gap in media effects and soap operas

A large body of research has been executed investigating the effects of food on children, specifically the effects of television. Most of this research however is based on advertisements although it largely draws from studies carried out in the United States (Dickinson, 2005 and Perse, 2001). Accordingly, groups such as the Food Standards Agency, Advertising Standards Authority (ASA) and Ofcom are active in the UK in protecting young viewers from harmful material.

Many research teams have been engaged in the study of the impact of mass media on health issues: as discussed previously, the effects of television on aggression (Huesmann and Taylor, 2006 and Felson, 1996) and the effects of television viewing per se on obesity (Viner and Cole, 2005) are well documented. Adding to this body of work is a leading study on the representations of breast feeding in the mass media. Henderson and colleagues (2000) found "the mass media do not promote a positive image of breast feeding, even though it is the method of infant feeding associated with the most health benefits" (Henderson et al., 2000). Although there are numerous studies on advertisement content (Folta et al., 2006), there is little research on the effects of food representations on the programmes in which the advertisements are placed and targeted towards adults. Moreover, there is less research on food representations in soap operas. Dickinson (2005) suggests, to fully understand the direct and indirect influences of food representations, the research-base must incorporate all food representations whether they are in the form of the advertisement, a health promotion or the programme in which they are embedded (Dickinson, 2005).

Since soap operas have the largest share of audience on television, and chronic diseases a significant problem in the UK population, further investigation into the outcome of viewing imagery of this nature could yield important results in understanding the eating habits of those watching television.

1.7 Theoretical framework

The Dickinson (2005) study was used as a standard for the current study on food and eating representations in soap operas.

To make sense of and to understand the issues surrounding the mass media, Dickinson (2005) draws upon Karpf's (1988) model of framing to interpret his findings. Dickinson (2005) recognized three frames in his study: a science approach – which linked nutrition and health; a consumer approach – which stressed the distinction between personal and commercial responsibility in relation to food safety, and an instructional approach – which was evident in cookery programmes. In analyzing food related commercials, Dickinson (2005) found these three frames in varying degrees across all food advertisements.

Although the present study deals with a single television genre, that is the soap opera, Dickinson's concept of framing provided a useful tool to examine programme content. Minor adaptations were made however, since some issues were inappropriate.

2 Methodology

2.1 Study design

A cross sectional study was used to gather information on food references in a selection of soap operas during the period of 24th July to 6th August 2006. The study period was chosen to avoid interruption of normal programme scheduling by special events such as sporting fixtures, since these events may have influenced typical script content.

2.2 Sampling and selection criteria

'Terrestrial' television was surveyed only, excluding cable and satellite stations to enable a broader coverage and thereby including those without cable facilities. Although it is appreciated that adolescents and children view adult programmes, primarily adult audiences were sought. Selection of programmes was sampled from the BARB Top-30 Weekly Viewing Summary, dated 2nd July 2006 (BARB, 2006). The top five most watched soap operas on commercial and non-commercial television stations were selected. BBC-2 was not included because it did not air television shows of the soap opera genre. An Australia production was selected. Although the storyline in this production does not include UK people, that the programme lay in the top five most watched soap operas and therefore watched by UK people, it was included in selection. Such parameters resulted in the following programmes being surveyed: EastEnders (BBC-1) Monday 20:00, Tuesday 19:30, Thursday 19:30 and Friday 20:00 hours; Coronation Street (ITV-1) Monday 19:30 and 20:30, Wednesday and Friday 19:30 hours; Emmerdale (ITV-1) Sunday to Friday 19:00; Hollyoaks (Channel 4) Monday to Friday 18:30 hours and Home and Away (Channel 5) Monday to Friday 18:00 hours.

2.3 Survey of television programmes and advertisements

Collection of soap opera data and advertisements contained within the programme was carried out using an existing framework for a similar study on the multiple meanings of food messages in children's television (Dickinson, 2005). Few

studies have been carried out investigating the effects of food representations on adult television viewers; therefore the Dickinson (2005) study was considered the most appropriate. It included timing of food content and the circumstances around its inclusion.

A pilot study was performed to test its suitability to the current study. It was learned that some categories were unnecessary and adjustments were made resulting in a simpler and more suitable format. See appendix I and II for final format.

The five programmes were recorded and scrutinized for food and alcohol content. All advertisements were examined during the course of the programmes. Where programme sponsorship was concerned, details were taken and recorded.

2.4 Data Analysis

After recording, data for programmes and advertisements were entered into Excel 2002 for analysis. Simple descriptive statistics were used, namely percentages, since the point of the study was to learn the food representations present if any, and how many.

2.4.1 Programme coding frame

In line with the abovementioned research (Dickinson, 2005), a three-part coding scheme was implemented to establish, examine and time all food related content of the programmes.

Part one was concerned with the actual references (table 3).

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Part 1

Verbal references

Visual references

'Verbal references' and 'v isual references' were coded yes/no.

Part two dealt with timing and situation (table 4).

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Part 2

Scene length

Food eaten

Food in background

Situation

'Scene length' was recorded in seconds, 'food eaten' and 'food in background' was translated into food groups: cereals and potatoes; dairy; fruit and vegetables; meat, fish and poultry and sweet and/or fatty food and alcohol. 'Situation' was translated to: kitchen/dining room; living room; pub/bar; café and street.

Part three was concerned with physical descriptions of characters eating and/or drinking (table 5).

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Part 3

Character eating food Physical characteristics

Descriptions of characters were noted in terms of their implied state of healthiness and whether or not they were overweight or obese. They were classified – healthyappearance or unhealthy-appearance; normal weight, overweight/obese.

2.4.2 Advertisement coding frame

Advertisements were coded food ad, other ad; advertiser; product; and scene length was timed in seconds.

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3 Results

The results present 1) overall frequencies with which different types of eating and/or drinking events occurred, 2) timing, food type and situation, and 3) characters eating and drinking these foods and their physical characteristics.

3.1 Food/alcohol related content of soap operas

In the programmes recorded, food and/or alcohol was used either as a prop in the background or eaten or drunk by the characters in many scenes.

3.1.1 Food/alcohol frequency

Verbal references to food were found to be few. Table 6 shows the findings.

Table 6: Average verbal food/drink references per episode.

Programme	Ave verbal references
Coronation Street	3.6
East Enders	3.1
Emmerdale	3.9
Hollyoaks	3.9
Home and Away	1.9

Home and Away televised the highest amount of screen time with background food (21%); Hollyoaks had the most background alcohol screen time (10%); Home and Away was highest for characters eating, while Emmerdale had the highest level of alcohol drinking (15%) than the other programmes in the study (table 7).

Table 7: Food references for eating and drinking.

Television programme	Visual ref to food In b/gnd	Visual ref to alcohol in b/gn d	Character eating/ drinking (soft drink)	Character drinking alcohol	Tot al
	%	%	%	%	%
Coronation St	7.4	4.5	4.8	13.1	29.8
East Enders	10.3	4.1	6.5	12.3	33.2
Emmerdale	1.6	1.6	7.4	14.5	25.1
Hollyoaks	13.8	10.0	6.4	8.2	38.4
Home & Aw ay	21.3	1.3	8.6	5.4	36.6
Ave food ref					32.6

The food and drink consumed by characters was examined and allocated to food groups: cereals and potatoes; dairy; fruit and vegetables; meat, fish and poultry; sweet and/or fatty food and alcohol.

Coronation Street

Coronation Street is the longest running soap opera in Britain. It is situated in a fictional working class industrialized town based on Salford, Manchester. It has a sizeable cast loosely representative of most communities – young, middle aged and older residents. However, it does not appear to be representative of ethnic minorities. Coronation Street has a grocery store at one end and a pub, the Rovers Return, at the other end. It has a wide ranging audience.

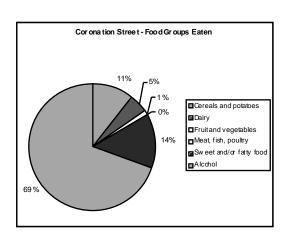
After the two-week study period, it was found that Coronation Street contained 34:45 minutes of footage where people ate or drank. This gave an average of 3:52 minutes of eating per episode.

Of the food eaten by Coronation Street characters, alcohol was the most frequently consumed food group (69%). Sweet and/or fatty food was the second most commonly eaten food group (14%) (figure 1). Most scenes relating to food or eating were based in the home (26 scenes) compared to the pub (20 scenes).

Figure 1: Food groups consumed by

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Of the screen time dedicated to background food sweet and/or fatty foods were most prevalent (figure 2).

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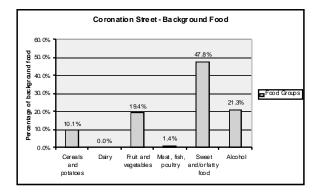
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On average, combined background alcohol and drinking alcohol scenes made up 17.6% of each episode.

EastEnders

EastEnders is set in a fictional east end part of London, based around a Victorian square. It has a sizeable cast, most of whom are working class. There is a strong sense of family values, and storylines are frequently based on gritty social realism. A street market, and pub, the 'Queen Vic' features as focus points. Coronation Street is EastEnders main contender. At the height of its popularity, it attracted 30.15 million viewers – the highest audience figures in UK history. It has a mixed audience.

The total scene time spent where people ate in EastEnders was 37:15 minutes, averaging 4:39 minutes eating scenes per episode.

The food groups consumed by EastEnders characters were predominantly alcohol (56%) and sweet and/or fatty foods (23%), with some fruit and vegetables (7%) (figure 3). Most of these were consumed in the home situation – thirty-three scenes, although the pub/bar showed eating and drinking in twenty-five scenes throughout the two week period.

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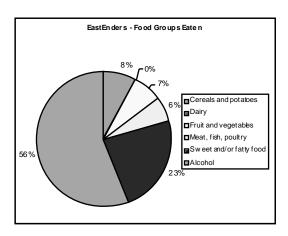
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Of the food displayed in background scenes, fruit and vegetables had the highest coverage (figure 4).

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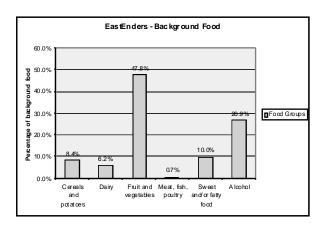
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Figure 4: Food groups in background scenes



On average, combined background alcohol and drinking alcohol scenes totalled 16.4% per episode.

Emmerdale

Emmerdale is a long running production set in a fictional rural village. It centres on a pub, the Woolpack, and grocery shop/café. The local vicar and church is also a prominent feature of the programme. It has a diverse audience.

Emmerdale contained 51:15 minutes of eating/drinking scenes, which gave an average of 4:40 minutes per episode.

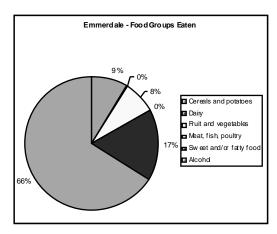
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Most of the scenes in Emmerdale where characters consumed food and/or alcohol were located outside the home. Thirty-nine out of seventy-six food related scenes were situated in the pub. As such, alcohol accounted for 66% of food groups consumed by characters (figure 5).

Figure 5: Food groups consumed by characters in Emmerdale



Sweet and/or fatty foods were the most prevalent food group in background scenes (figure 6).

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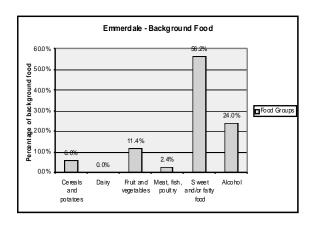
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On average, all alcohol related content in Emmerdale totalled 16.1% of each episode.

Hollyoaks

Hollyoaks is a fictional part of Chester. Its characters are largely middle class and storylines tackle topical problems. Target audience is 16-30 year olds. Hollyoaks is unlike other UK soap operas in that it utilizes a wider range of locations and uses incidental modern music.

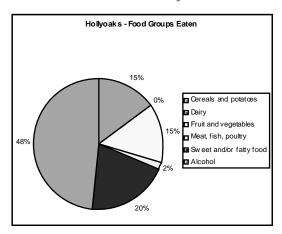
The total scene time spent where people ate in Hollyoaks was 34:20 minutes, which averaged 3:26 minutes of eating/drinking scenes per episode.

Most of the scenes that involved eating or drinking in Hollyoaks were staged in either a bar, pub or bistro. This equated to forty-seven scenes compared to thirty-eight scenes showing eating or drinking in the home. Thus, of the food/drink consumed by characters, 48% was alcohol.

Although a substantial amount of the food eaten came from the sweet/fatty food category, cereals and fruit/vegetables were also present in reasonable amounts. Hollyoaks characters consumed more cereals and potatoes than other programmes (figure 7).

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Alcohol was the food group most prevalent, although cereals, fruit and vegetables and sweet and/or fatty foods were also represented (figure 8).

Figure 8: Food groups in background scenes of Holly oaks.

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On average, 18.2% of each episode of Hollyoaks included alcohol related content.

Home and Away

Home and Away is set in the fictional costal town of Summer Bay, New South Wales, Australia. It focuses on four or five families, along with various single characters. The central location of Home and Away is the café, although the beach is prominent. It has a young, adult audience.

Home and Away presented 18:45 minutes of eating and drinking scenes throughout the study period, averaging 1:53 minutes per episode.

This programme showed characters consumed a broader range of food groups than the other programmes, with 31% of food consumed being fruit and vegetables (the highest of all programmes studied) and the least amount of alcohol at 38% (figure 9). Home and Away also presented more eating and drinking scenes located in the domestic environment – the kitchen/dining room or sitting room than other programmes. This type of setting was recorded on fifty-two occasions over the study period.

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Of the background food displayed in Home and Away, fruit and vegetables were most prevalent. Representations of background alcohol were less in this programme than the others (figure 10).

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A w a y On average, combined background alcohol and drinking alcohol scenes in Home and Away came to 6.7% of each episode.

3.2 Characters' eating/drinking patterns

Pub, bar and bistro related scenes were numerous, with alcohol on display in all these scenes. Many of the cast were seen in these locations across all programmes. A few were more frequent visitors.

3.2.1 Coronation Street eating/drinking habits

A minority of characters were recorded consuming sweet and/or fatty food or alcohol, or the implication of having recently done so, on a regular basis. Table 8 describes the physical characteristics of the characters concerned.

Table 8: Physical characteristics of Coronation Street characters in relation to food/drink consumption.

% of episodes character associated with sweet/fatty/ alcoholic content	Charact er	Physical charact eristics
77.7	Janice	Healthy-appearance; normal weight
55.5	Leanne	Healt hy-appearance; normal weight
44.4	Charlie	Healthy-appearance; normal weight
33.3	Jason	Healt hy-appearance; normal weight

3.2.2 EastEnders eating/drinking habits

The pub, bar or café featured in every episode over the two week study period. Several characters were a regular part of the pub/café landscape (table 9).

Table 9: Physical characteristics of EastEnders characters in relation to food/drink consumption.

% of episodes character associated with sweet/fatty/ alcoholic content	Charact er	Physical charact eristics
75.0	Minty	Healt hy-appearance; over weight
75.0	Gary	Unhealt hy-appearance; over weight
50.0	Kevin	Unhealt hy-appearance; n ormal w eight

3.2.3 Emmerdale eating/drinking habits

A young female character was recorded with the highest prevalence of 'unhealthy' eating/drinking habits. This was largely due to consumption of fried food and fizzy drinks. She appeared to be young, fit and healthy (table 10).

Table 10: Physical characteristics of Emmerdale characters in

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% of episodes character associated with sweet/fatty/ alcoholic content	Charact er	Physical charact eristics
54.0	Jasmin	Healt hy appearance; normal weight
54.0	Simon	Unhealthy appearance; over weight
54.0	Ivan	Healt hy appearance; normal weight
45.0	Paddy	Unhealt hy appearance; over weight

3.2.4 Hollyoaks eating/drinking habits

Hollyoaks had scenes of eating and drinking in every episode. The three characters that appeared in the most episodes associated with sweet and/or fatty foods, or alcohol consumption was due to alcohol. In addition to the most frequent appearances, these characters spent more time associated with alcohol since they worked in a restaurant/bistro. In this regard, all three characters were associated with alcohol in 100% of the episodes. The three characters were fit and healthy-looking (table 11).

Table 11: Physical characteristics of Hollyoaks characters in relation to food/drink consumption.

% of episodes character associated with sweet/fatty/ alcoholic content	Charact er	Physical characteristics
60.0	Tony	Healt hy appearance; n ormal w eight
50.0	Dom	Healt hy appearance; normal weight

50.0	Sam	Healt hy appearance; n ormal w eight

3.2.5 Home and Away eating/drinking habits

Home and Away characters appeared in less episodes associated to sweet, fatty foods or alcoholic content than other programmes. The character 'Kym' had the highest screen saturation with more episodes consuming alcohol than other characters, although this was countered by frequent scenes where he consumed fresh fruits, accompanied with an implication of previous exercise (table 12).

Table 12: Physical characteristics of Home and Aw ay characters in

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% of episodes character associated with sweet/fatty/ alcoholic content	Charact er	Physical charact eristics
50.0	K ym	Healt hy appearance; normal weight
40.0	Leah	Healt hy appearance; n ormal w eight
30.0	Dan	Healt hy appearance; normal weight
30.0	Rachel	Healt hy appearance; normal weight

3.3 Food/alcohol related content of advertisements

A common feature of the commercial television stations was the sponsorship of programmes by companies producing consumer goods. Home and Away was sponsored by Weetabix, in particular Weetabix minis, Hollyoaks - Wrigley's Extra gum, Emmerdale - Air Wick and Coronation Street - Cadbury chocolate, specifically dairy milk.

Although a usual part of the Coronation Street format for many years, sponsorship by Cadbury was present only in the final two days. This was due to a Salmonella scare that was ongoing and visual backing by Cadbury was absent. When the difficulties were resolved, visual sponsorship was resumed, hence the inclusion in only two rather than all nine episodes.

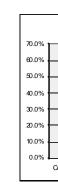
3.3.1 Food/alcohol frequency

On average the commercial television stations televised four minutes of advertising time in the middle of each programme.

The amount of food related content varied substantially between the programmes. Coronation Street dedicated 25.5% of the break to food and drink;

Emmerdale 11.6%; Hollyoaks 28.3% and Home and Away 32.5%. These food advertisements were further analyzed for percentage time spent on sweet, fatty and alcoholic content. Emmerdale and Hollyoaks had the highest saturation with 64.5% and 61.8% respectively (figure 11).

Figure 11: Percentage of food advertisements and sweet/fatty/alcoholic content.



However due to the nature of the sponsorship system, sponsors received extra time which was in effect advertising time. These sponsorships were 'tagged' onto the beginning and end of programmes and commercial breaks. This provided an additional four 'advertisements' of varying lengths between thirty and forty seconds per episode.

4 Discussion

The objectives of this project were to survey food and drink representations in soap operas televised in Britain, and to then analyze and evaluate their content in relation to healthy eating guidelines and the relationship between characters on screen consumption and their apparent state of health.

4.1 Media representations of food and eating

Food and eating have been shown to appear regularly in soap operas. On average a third of all scenes included food and/or drinks – either in the background, or being consumed by characters. Alcohol was a frequent feature in many scenes. Although average screen-time concerning alcohol was 15% per episode, this figure included the more abstemious Home and Away, whose alcohol scenes involved only 7% per episode, compared to the others which involved between 16% and 18% alcohol scenes per episode.

Hollyoaks high alcohol content at 18% was an unexpected result. This programme has a substantially young cast. Given current concerns about binge drinking in the young, these representations are poor role models for young adults.

It is not known whether these figures are comparable to other soap operas, since there is no other research with which to compare data.

4.2 How does food and drink consumption in soap operas relate to current guidelines?

As discussed in section one, current UK recommendations propose that adults follow the Balance of Good Health (DOH, 2004b). This national food guide displays food groups and portions for daily intake. It is suggested that a healthy diet should consist of at least 5 portions of fruit and vegetables; at least 5 portions of starchy carbohydrates such as bread, potatoes, cereals; 2-3 portions of dairy; 0-3 portions fatty/sugary foods and 2-3 portions of protein such as meat, fish, poultry, nuts and

eggs per day. This translates approximately to the daily diet consisting of at least 55% carbohydrate, 15% protein and maximum 30% fat each day.

The food content of the reviewed programmes did not resemble balance at all. Instead it implied that characters mainly survived on a diet of alcohol, sweet and fatty food. Although there were differences between the individual programme titles, on average the picture looked somewhat bleak. On the whole when characters drank a non-alcoholic drink, it was in the form of a sweet fizzy drink. Given the current concerns about free sugars and health (Mann, 2004 and Popkin 2003), imagery such as this implies an endorsement of poor eating habits. Similarly where food was eaten, it was frequently fried or containing high amounts of fat – in contrast to recommendations.

There were some references to fruits and vegetables; however these were predominantly background props – particularly bowls of fruit. Such scenes are noteworthy because NDNS data show the average person consumes little fruit, yet many scenes displayed bowls of fruit in the domestic setting, which was in contrast to what was actually being eaten in many of the programmes.

Few scenes contained presentation or consumption of meat, fish or poultry. The reason for this is unknown. The lack of meat, fish or poultry may have been mediated by production problems – the constraints of filming may have rendered the preparation and correct storage of meat unfeasible. Since these are high risk products in terms of foodborne disease, their exclusion might have been due to necessity.

The unexpected result of this survey was the screen time dedicated to alcohol-related activities. With the exception of Home and Away whose background alcohol and consumption of alcohol scenes was well under 10%, the other programmes' combined alcohol references were more than 15%.

When alcohol, sweet food and fatty food coverage per episode is combined with the frequency of episodes per week, a strong case can be had for analysis through cultivation theory. The continual display of images of alcohol and sweet or fatty food consumption may result in viewers' skewed versions of reality, whereby viewers come to accept these images as a normal part of everyday nutrition, as explained by Gerbner's (1994) hypothesis. As Perse (2001) suggests, such messages are small and cumulative – viewers may be inadvertently using information on screen as a passive learning tool.

This could be a potentially serious public health issue for some groups. As discussed in section one, there is a widening health gap between upper and lower SES groups. In addition, lower SES groups watch more soap operas than upper SES groups. When the two are combined, lower SES groups may be at a huge disadvantage.

4.3 Relationship between characters' eating habits and their implied state of health

Some, but not all characters displayed a mismatch between healthy physical appearance and unhealthy habits. Coronation Street used several characters in the 20-30 age brackets who, as actors, were fit, healthy people of normal weight with healthy complexions. Yet storylines frequently saw these individuals consuming fatty foods and drinking alcohol, particularly in the pub. The regularity of these visits would have them consuming well over the recommendations for healthy drinking of 3-4 units of alcohol per day for men and no more than 2-3 units a day for women (DOH, 2006). In a climate where government and allied sources are struggling to contain alcohol to a healthy limit, images such as these give out the wrong messages, and celebrate lifestyles that contribute towards chronic diseases.

Similarly, other programmes portrayed characters that were exemplars of health. Hollyoaks regularly showed a young male character who was healthy, energetic and successful, yet 60% of the scenes in which he appeared had him consuming alcohol. Home and Away demonstrated a similar situation with a young male whose on screen occupation was a gym instructor. In contrast to his physical characteristics, 50% of his scenes saw him consuming beer and wine.

This report does not set out to advocate abstinence from alcohol. On balance, the consumption of alcohol for many is a normal condition and in moderation can contribute to good health (WHO, 2003). It is important however that excessive alcohol consumption should not be aligned with a successful and enviable lifestyle. Equally, television characters that are fit and healthy-looking who drink a lot of alcohol and eat sweet/fatty foods send out mixed messages as to the consequences of an unhealthy diet. This may be problematic for those individuals who become emotionally attached to the character and involved in their lives, as Stern *et al.* (2005) suggests. If these characters become role models to viewers who watch many hours of television a day, incorrect health messages are being attached to the role model who is thus giving 'bad advice'.

4.4 Advertising

Unlike other studies (Dickinson, 2005; Tirodkar and Jain, 2003), food advertisements in this survey did not dominate the commercial break content. This may be due to pressure from the government's white paper, *Choosing Health: Making healthy choices easier* (DOH, 2004c), on the Advertising Association to take a more socially responsible point of view in the marketing of processed food and alcohol. It is unlikely however, since the foods advertised were consistently high in sugars and fats. This was the case particularly with Emmerdale and Hollyoaks.

In this study, a case can be had for each of the various theories previously mentioned on advertising effectiveness when relating them to food. This creates inconsistency and therefore makes it difficult to analyze the content with any degree of certainty. On the one hand advertisements in programmes such as Coronation Street and Emmerdale had little connection with the programme's storyline. According to cognitive interference theory this is preferable for memory retention, since if it were similar, the content of each would merge together, thus interfering with memory retention (Bryant and Zillman, 1994).

On the other hand, advertisements in programmes such as Hollyoaks and Home and Away had numerous connections with the content of the programmes. For

example, breakfast foods were often advertised while programme scenes involved eating breakfast. There were similar connections between fizzy drinks and snacks being advertised with consumption of same in these programmes. This links in with cognitive priming theory which argues that memory recall of advertisements is greater if they are embedded in a programme with similar content (Sanbonmatsu and Fazio, 1991).

A more helpful and likely explanation of the effectiveness of advertising in the soap operas studied is explained by Norris *et al.* (2003) however. Better memory retention of advertisements is more likely when viewers are the willing participants of programme selection and watching. Accordingly, many viewers of soap operas become highly involved in the programme, thereby predisposing them to better memory recall of advertisements – albeit in this case sweet and fatty foods. However the author can not state this with certainty, since viewers of these soap operas were not interviewed – it is merely speculation.

4.5 Comparison's between British and Australian made productions

If 'unhealthy' eating were to be defined as consuming high amounts of sweet and/or fatty foods and alcohol, then Coronation Street and Emmerdale displayed the most 'unhealthy' eating patterns in the programmes surveyed with 83% of the food eaten coming from this food group. Home and Away showed the most 'wholesome' eating habits, with 61% sweet and/or fatty foods and alcohol. Although this widely deviated from the suggested guidelines for healthy eating – no more than 10% free sugars and 30% fat in the daily diet (DOH, 2004b) – the difference lay in the themes in which this programme presented its eating scenes. In most scenes where sweet/fatty/alcoholic content was observed, the scenes were imbued with a celebratory sense, for example: birthday party, dinner party, treat for children. The other programmes largely implied sweet/fatty food and alcohol as a part of their characters' diets. There was no sense of characters understanding of good eating health. Instead, fatty foods such as fried breakfasts and chips were frequently praised.

Similarly, Home and Away televised nearly twice as many background scenes displaying food than any other programme. Furthermore, the content was frequently bowls of fruit, and sometimes vegetables. It is not known whether this was simply a device on behalf of the production team to 'fill-in' space in the background, or whether these were intentional latent messages implying health and vigour.

Overall, Home and Away consistently televised the impression of characters with healthy lifestyles – they ate fruits and vegetables and exercised regularly.

4.6 Study limitations

This study analyzed television content only and not the audience watching the specific programmes surveyed and their eating habits. A deeper understanding of the effects of food representations in soap operas would be gained if such research were to be undertaken and is strongly recommended.

If such research were to be carried out however, it does not infer a causal link between watching television and the subsequent perceptions and behaviours of viewers. Instead, it implies the prospect there may be a link although there may also be confounding factors. For example, a viewer who is a heavy drinker may prefer to watch programmes with frequent drinking scenes, rather than the drinking scenes causing the viewer to drink heavily.

In addition, for convenience purposes this study used a sample of a time frame, that is, two weeks in a specific month of the year. It did not cover celebration periods that might have affected the food content such as Christmas or other public holidays, where food habits may change. Further studies would need to be carried out at different times and these would need to be done randomly.

5 Conclusion

It is clear that food and alcohol occupies an important part of soap opera content, and that food is frequently of a high density nature. In addition, soap opera characters drink above the recommended levels for healthy alcohol consumption.

Various theories can explain the effectiveness of advertising and the potential for viewers to develop a skewed version of reality. However, given the involvement of food and alcohol in programming, should television, specifically soap operas, be held as the agents of public health promotion? The soap opera is, after all, a form of light entertainment whereby the viewer is neither challenged mentally nor physically. It is unrealistic to expect the creative process of television production to remain creative under such censorship, nor would it be welcome.

Television not only provides imagery that may be at odds with public health initiatives, it also embraces current trends, particularly those related to food. While these images may not be as frequent at present as the more 'unhealthy' representations of food, they are indeed a part of many television settings. It is possible that television writers are simply reflecting the current mood, rather than causing current trends.

However, given the popularity of high ratings programmes such as the soap opera, the growing rates of nutrition related chronic diseases and the ambiguity concerning media effects, further investigation is called for to assess the relationship between the actual viewer and their food and alcohol consumption, of soap operas and food and alcohol representations contained therein.

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