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HAVE YOUNG PEOPLES' WEIGHT LOSS DESIRES CHANGED SIGNIFICANTLY OVER THE PAST 10 YEARS?

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INTRODUCTION

Obesity is a growing health problem worldwide (Veerman et al., 2007). It has been described by many as an epidemic and the most challenging public health problem of the 21st Century (WHO, 2006). The need to bring obesity into the public focus and provide effective preventative measures is considered urgent (Ebbeling *et al.*, 2002; Dietz, 2004). The Government set a target to 'halt the year-on-year rise in obesity among children under the age of 11 by 2010' (DoH, 2004b).

Three public health papers identify the school environment as a key setting and it is also widely accepted that young people have an active role to play in the management and prevention of obesity as a whole (Swinburn & Egger, 2002; Lobstein *et al.*, 2004). The National Institute for Health and Clinical Excellence (NICE) has also set about promoting the whole school approach to health and, in particular, obesity prevention (NICE, 2006). This approach, born from the ideas of 'Health Promoting Schools' (Denman, 1999), aims to ensure the school environment and consistent school policies help young people maintain weight, eat healthily and be physically active.

AIMS AND HYPOTHESES

AIMS

1. To investigate the prevalence of weight loss desires between the years 1997 and 2006 amongst a large representative sample of young people from across England and Wales.
2. To discover if any identified trend is appropriate and if it demonstrates a positive or detrimental change in young people's weight related attitudes.
3. To discuss the impact the results may have upon present and future weight-related public health strategy alongside recommendations for the future.

Hypothesis 1

Between the years of 1997-2006, there will be an increase in weight loss desires amongst female and male subjects in both Year 8 (aged 12-13 years) and Year 10 (aged 14-15 years) adolescents.

Hypothesis 2

The hypothesised increase in weight loss desires will be due to an appropriate change in weight-loss attitudes.

METHODS

Data was collected over 10 years between 1997 and 2006 by the Schools Health Education Unit (SHEU, 2007). Participants are young people and, for this study, in school-years 8 (12-13 years) and 10 (14-15 years). Between 1997 and 2006, 300 000 students participated, providing data from 150-300 schools annually in the UK.

STUDENT SURVEY

Schools were asked to provide information on the nature of catchment area and school postcode. Participants were asked to indicate their ethnicity, gender, age in years and months and their height and weight in either imperial or metric units. This data was used to calculate a Body Mass Index (BMI) as kilograms per metre squared (kgm^{-2}) for each participant

The questionnaire asked “Which statement describes you best?”, offering the options “I would like to put on weight”, “I would like to lose weight”, and “I am happy with my weight as it is now”.

DATA ANALYSIS

Ten databases containing questionnaire responses for all participants were provided. Systematic errors were identified and removed leaving 243206 valid responses.

BMI was calculated and classified into underweight, healthy, overweight and obese categories (Cole *et al.*, 2000; Cole *et al.*, 2007). A new variable, appropriateness, was consequently programmed from weight-classification (wt_class) and weight-related desire (typwght). This was achieved using the groupings defined in Table 1.

Table 1. Grouping of appropriate and inappropriate weight-related concerns

Appropriate concern

Underweight participants responding ‘I would like to put on weight’

Healthy-weight participants responding ‘I am happy with my weight as it is’

Overweight and obese participants responding ‘I would like to lose weight’

Insufficient Concern

Healthy-weight participants responding ‘I would like to put on weight’

Overweight and obese participants responding ‘I would like to put on weight’

Overweight and obese participants responding ‘I am happy with my weight as it is’

Excessive Concern

Underweight participants responding ‘I would like to lose weight’

Underweight participants responding ‘I am happy with my weight as it is’

Health-weight participants responding ‘I would like to lose weight’

Adapted from Swift *et al.* 2007

Trends for weight-loss desire, weight-classification and appropriate and inappropriate concerns were produced by year, gender and ethnicity.

RESULTS

Respondents were excluded from analysis if they provided incomplete (n=135750) or implausible data (n=274). Analysis was therefore conducted on a complete dataset of 107182 responses. Participants included in the analysis were predominantly of White UK or European origin.

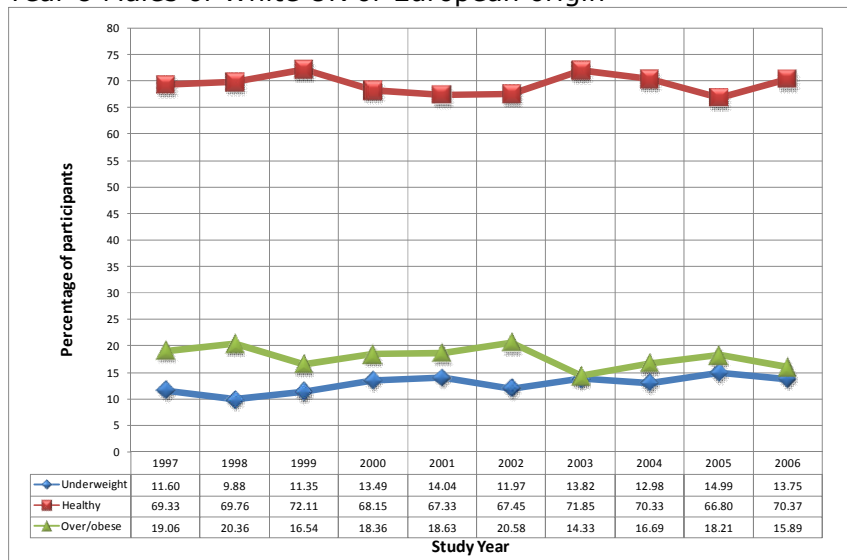
Weight loss desires are significantly higher in females than in males throughout the 10 year period. Weight loss desires are more prevalent in Year 8 males than those in Year 10. Weight loss desire in the White UK or European Year 8 group appear, despite a major decrease in 2001, to be following an upward trend. Following a fall between 1997 and 2001, no ethnic group displayed a significant ongoing trend despite some increases in prevalence.

In females, the prevalence of weight loss desires is significantly higher for the Year 10 group. The most recent years suggest a decrease in weight loss desire amongst those other than White UK or European origin but this trend is not matched by those of White UK or European origin. White UK or European Year 10 Females show a gradual decline in the prevalence of weight loss desires over the past 10 years. Just over half the males surveyed in both year 8 and year 10 demonstrated appropriate weight-related desires for their weight classification throughout the 10

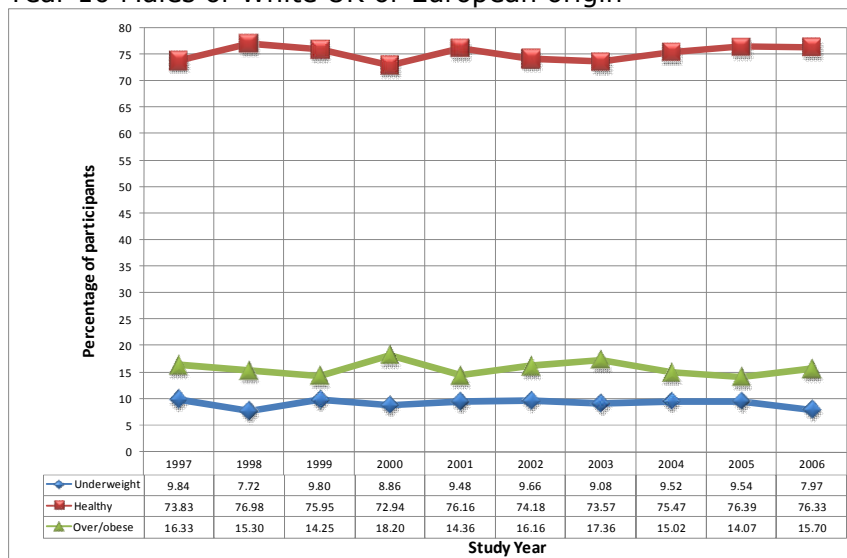
years. Those people with excessive concerns about their weight were however the second most prevalent group. Participants with an insufficient concern showed a decreasing trend and in more recent years levels appear between 3-5% lower than in earlier samples. In females, whilst insufficient concern and appropriate concern are significantly lower than in males, excessive concern accounts for just over half the sample population. Year 10 females have shown significant reductions in the level of excessive concern and increases in appropriate concern over 10 years. For Year 8 females, the converse is true and in more recent years, no significant difference in the appropriateness of weight-related desire between female year groups.

Graphs 1(a-d): Weight Classifications

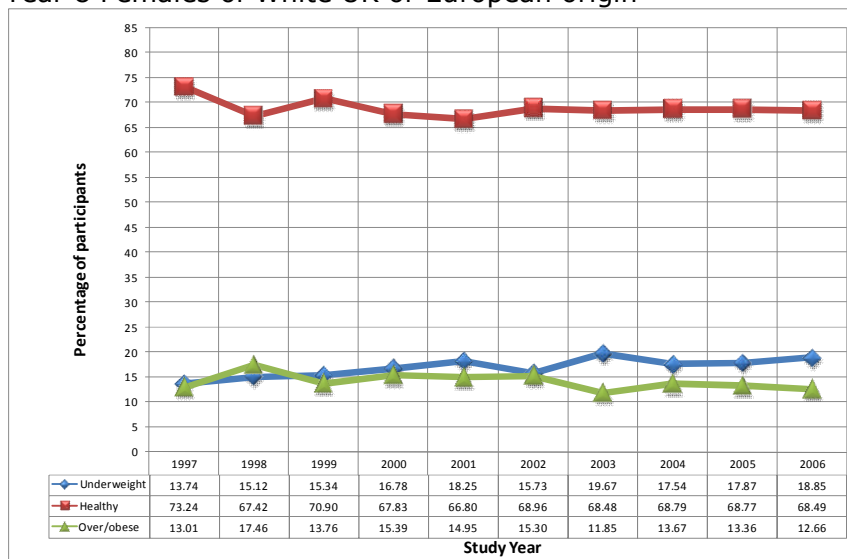
Graph 1a) Year 8 Males of White UK or European origin



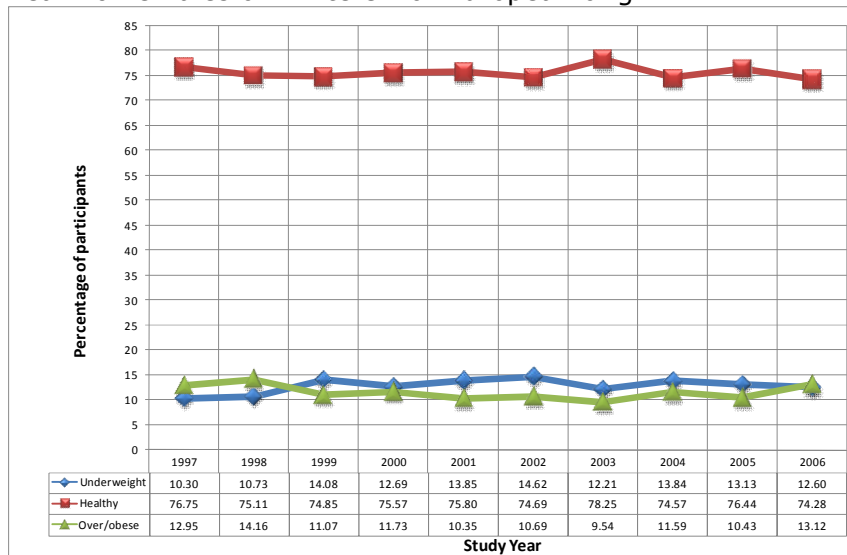
Graph 1b) Year 10 Males of White UK or European origin



Graph 1c) Year 8 Females of White UK or European origin

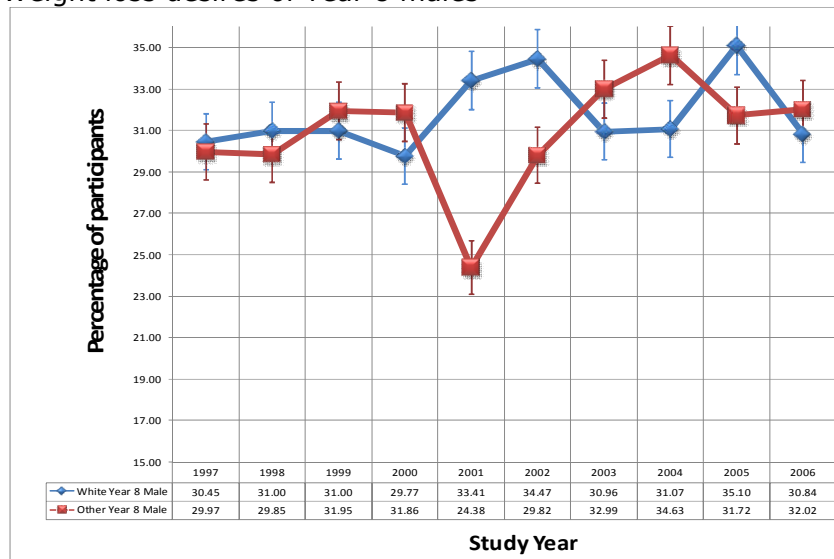


Graph 1d) Year 10 Females of White UK or European origin

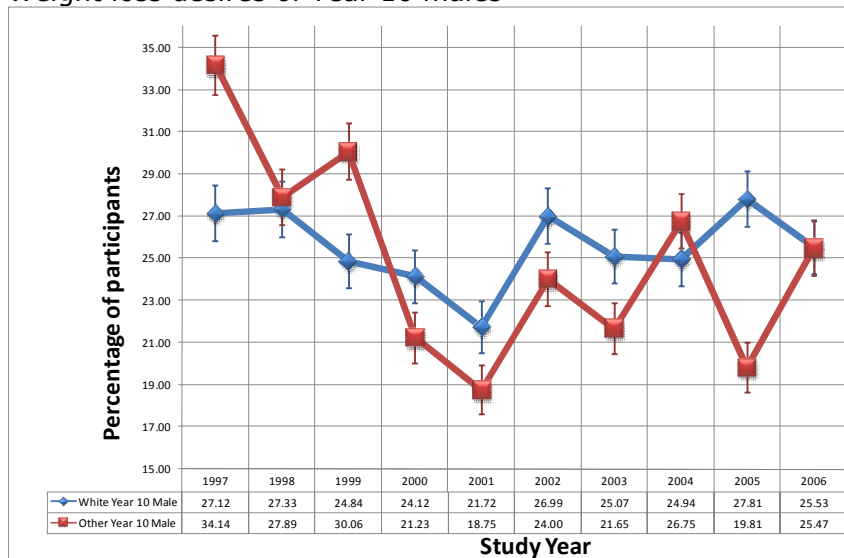


Graphs 2 (a-d): Weight Loss Desires

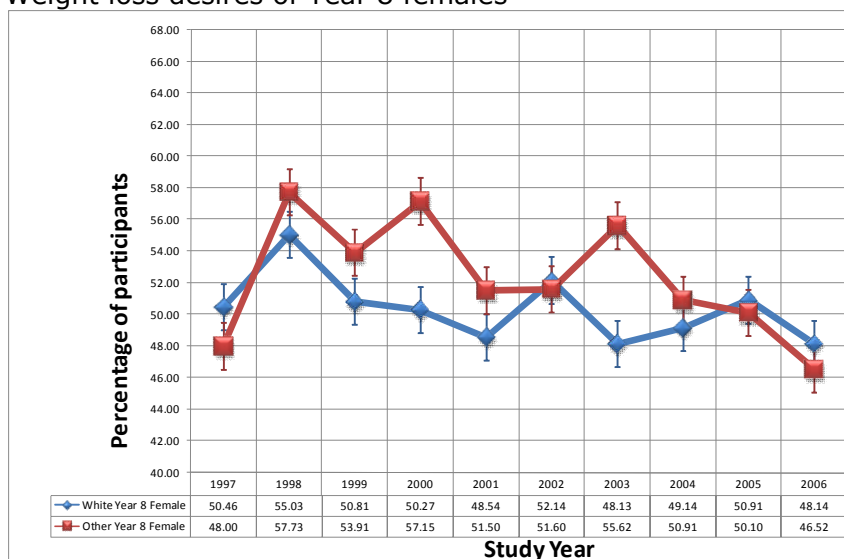
Graph 2a) Weight loss desires of Year 8 males



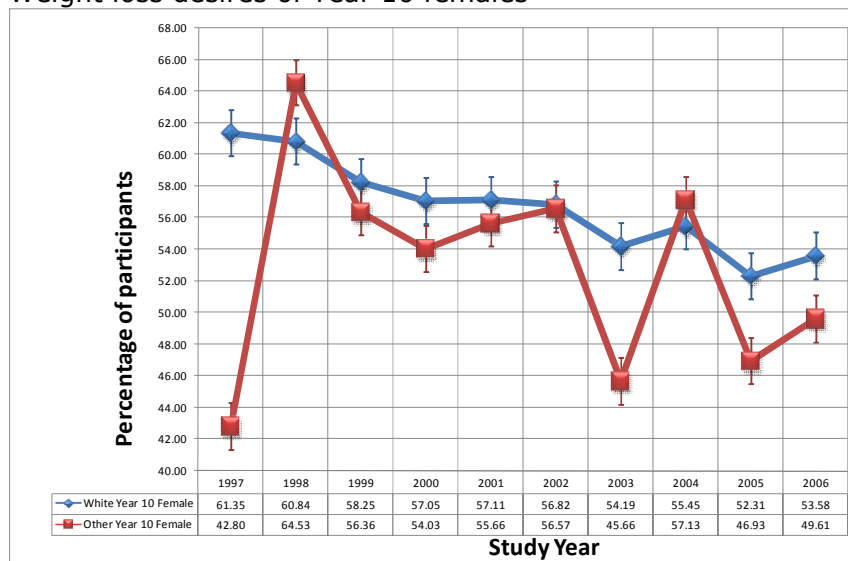
Graph 2b) Weight loss desires of Year 10 males



Graph 2c) Weight loss desires of Year 8 females

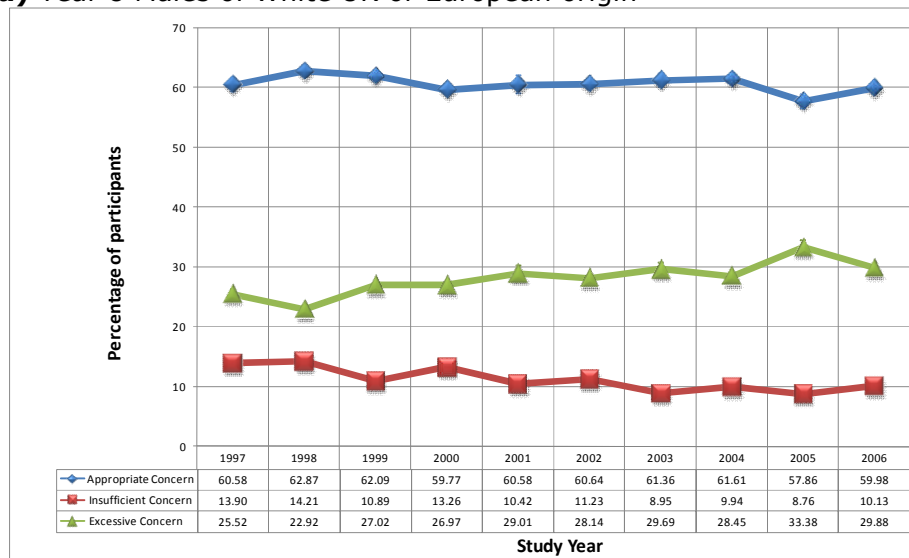


Graph 2d) Weight loss desires of Year 10 females

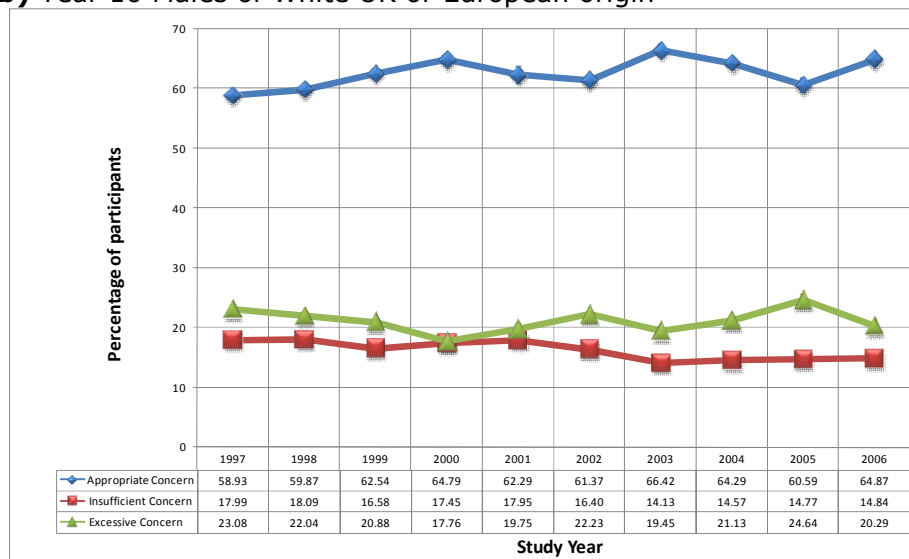


Graphs 3(a-d): Appropriateness of weight related desires

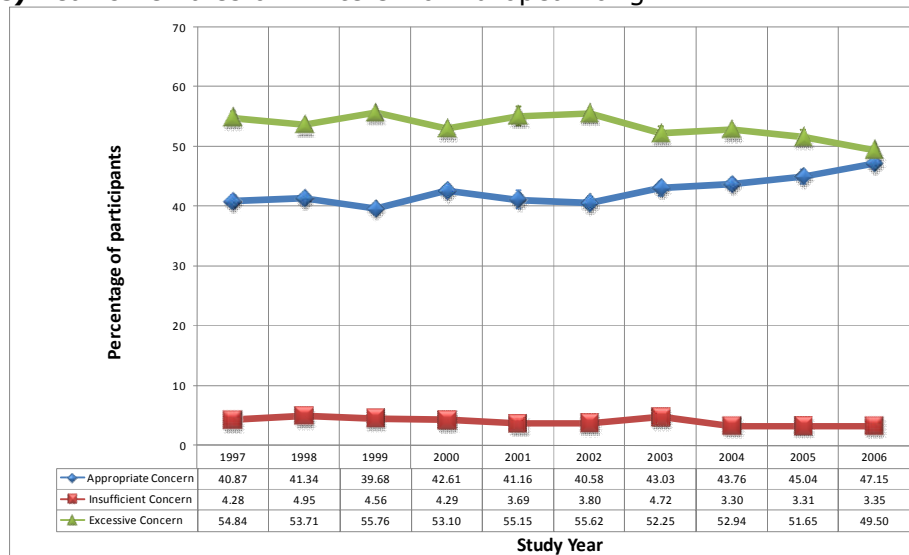
Graph 3a) Year 8 Males of White UK or European origin



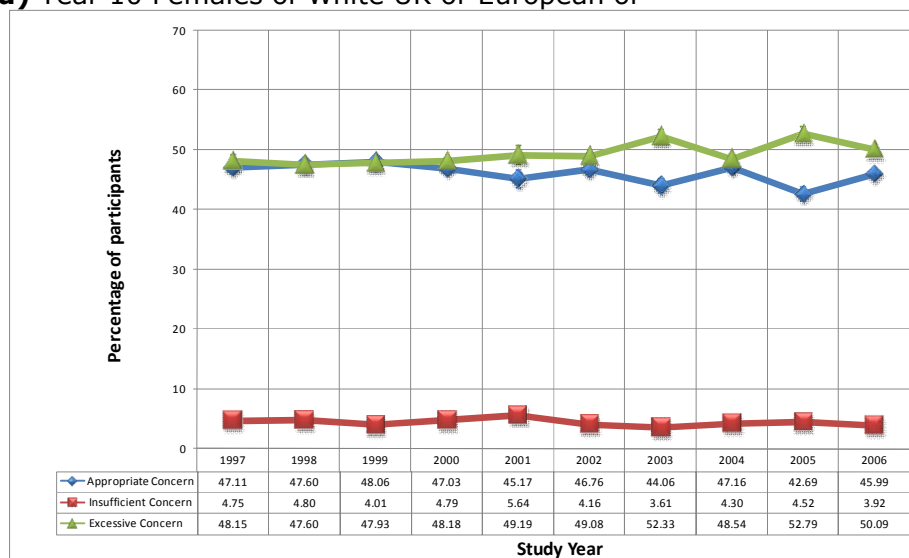
Graph 3b) Year 10 Males of White UK or European origin



Graph 3c) Year 8 Females of White UK or European origin



Graph 3d) Year 10 Females of White UK or European or



Hypothesis one predicted an increasing trend in the number of participants within all groups who wanted to lose weight. While this was shown to be true for Year 8 males, all other groups showed no significant change. Hypothesis two relied upon the verification of hypothesis one: however, the study has shown increases in excessive concern for both Year 8 genders; a decrease in excessive concern and an increase in appropriate concerns for Year 10 females; and no significant change in the appropriateness of Year 10 males weight-related concerns over a 10 year period.

DISCUSSION

This study concurs with previous statements about the impact of gender upon the desire to lose weight (Kostanski *et al.*, 2004; McCabe & Ricciardelli, 2005). Females have had a greater desire to lose weight than males consistently over the last decade. This study adds to past research by demonstrating that Year 8 males have a greater desire to lose weight than Year 10 males and, as such, suggests the male desire for a larger broader figure may develop within this period.

As in other studies (Kostanski *et al.*, 2004; McCabe & Ricciardelli, 2005; Swift *et al.*, 2007), older female participants were more likely to want to lose weight than their younger counterparts, suggesting social or physiological changes within this period alter the weight-related desires of young females. Further to this, the results demonstrate that although this difference still exists, due to reductions in older females wanting to lose weight, it is less pronounced than 5 to 10 years ago.

In accordance with other studies (Schur *et al.*, 2000; Ricciardelli & McCabe, 2001; Brener *et al.*, 2004; Swift *et al.*, 2007), males were found to be more likely to be insufficiently concerned about being overweight than females, whilst females were more likely to be excessively concerned. This study has provided further evidence that these differences occur due to gender and age, and that they have been present for the past 10 years. Despite this, the difference between age groups in females has decreased over the past 10 years.

This narrowing of the gap between the different age groups may suggest that the same characteristics that were thought to have made older females more susceptible to societal messages in the past (Kostanski *et al.*, 2004) have led to a reversal of view. The modern day over-focus on obesity may in fact inadvertently be returning the perceived 'ideal' body weight or 'norm' to a more healthy body weight. These results suggest that, unlike previously thought (Swift *et al.*, 2007), year 8 pupils should be the main focus of obesity interventions.

This study confirms, by showing, in some sectors of the population, an increasing prevalence of excessive concern, that impersonal (mass communication) health promotion interventions in the UK must consider their impacts on the entire population. It is suggested that within the underweight group, those wanting to lose weight do not need this desire reinforced (Wardle *et al.*, 2006) and those yet to consider losing weight are not prompted to do so.

As discussed by Swift and colleagues (Swift *et al.*, 2007), impersonal health promotion interventions for obesity prevention may achieve this by educating the population so they are able to identify what a healthy weight is. If interventions with the aim to educate people about a healthy weight are to be successful, organisations fighting both conditions will need to pool their knowledge of the different behavioural and clinical techniques they use to provide a new, integrated approach.

Whilst considering and tackling the needs of those with concerns about their weight, it is important that those with insufficient concerns about being overweight and obese

are not forgotten, even though this is a small group. It is likely that this group is at the greatest risk from associated co-morbidities and adulthood obesity. Therefore, It is essential to target these people-because they will greatly influence adult obesity rates and increase the economic and healthcare burden in the future. Interventions should be highly targeted and young people identified on an individual basis.

CONCLUSION

Inappropriate concern about bodyweight, is consistently found in the UK population of young people. This study demonstrates an overweight population that, in the majority, appears willing but unable to change. It also shows the needs of health promotion interventions to consider the diverse population they serve in order to ensure the health of some is not sacrificed in order to benefit others.

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