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Family Health Culture and Young Adult Health Behaviors' and Wellbeing

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Abstract

The aim of this study was to explore the relationship between family health culture and the health behaviour of young people, using a cross-sectional survey of 379 children and young adults aged between 14-25 years. Results show that SES, mother's education, family health culture, internal health locus of control, and self compassion are inter-related in a predictive relationship with healthy behaviour and wellbeing. The study concludes that a focus on empowering families is important to promote health in young people.

Keywords: Family; Health; Culture; Behaviour' wellbeing

Introduction

Obesity is a global crisis, which some describe as an epidemic [1,2], and it is caused by lifestyle behaviour or habits where in energy intake exceeds energy expenditure [3]. This imbalanced dietary lifestyle can be influenced by a variety of factors, including socio-economic status, family, peers, media advertising and sedentary behaviour [4]. Obesity contributes too many different health problems and is a major risk factor for cancer, cardiovascular disease and diabetes [2].

Late childhood through adolescence presents unique influences on the individual's health behaviours which can develop to become life-long habits [5-7]. Health habits established early in life are resistant to change, making this a key period for preventive intervention [8]. Creating positive health and wellbeing behaviours in this period is thus of paramount importance in order to promote better health-related long-term outcomes [9].

The family can be deemed as one of the primary influences on health behaviours of children, with previous research finding family history of obesity as the major predictor of obesity [10]. Researchers have suggested that the primary function of the family is to ensure that its members are strong and healthy through influencing health-related behaviour patterns to inherently prevent and treat disease and health issues. Our modern society contains a diverse range of family forms; however the vast majority of young people grow up in some form of family. Arguably it is not so much the structure of the family as the culture and habitual practices which impacts upon the family approach to health and wellbeing [11].

Healthy families provide an environment where children can feel emotionally secure and physically safe, allowing them to maintain their physical and emotional health independently of the family dynamic [12]. In contrast, families that display overt family conflict, deficient child nurturing and unsupportive, neglectful relationships have been consistently found to have damaging outcomes for mental and physical health [12]. A study of 13,494 adults found a strong relationship between breadth of exposure to abuse/household dysfunction in childhood and risk for certain adult diseases such as ischemic heart disease, cancer and liver disease [12].

Self-compassion entails having kindness and understanding towards oneself and a balanced awareness of one's life experiences as part of the larger human experience [13]. Having self-compassion has been found to be strongly associated with well-being among adolescents and adults, with one's family being identified as a predictor for individual differences in self-compassion [14,15] suggested that self-compassion was posited to facilitate effective health behaviour regulation, including setting goals; giving attention to and evaluating ongoing behaviour and emotional regulation [16] in a meta-analysis found that self-compassion significantly correlated with the practice of positive health behaviours and concluded that self-compassion interventions could be extremely valuable for clinical and at-risk populations i.e. diabetes, cardiovascular heart disease and hypertension.

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Culture can be defined as the ideas, customs, and social behaviour of a particular people or society and when applied to the family health context it reflects the combination of attitudes, customs and models of healthy or unhealthy behaviour exhibited. Many of the negative influences on adolescent health behaviours have been linked to family practices and suggest that family health culture could be a useful focus for both research and intervention. This is becoming even more important in a context where the average age of children leaving home has risen to around 25-27 years of age [17]. Different family health cultures have, therefore, become an area of interest for researchers [11]. The family health culture is the identifiable patterns of health behaviour that relate to the health beliefs and attitudes they hold [18]. The health culture informs the health experience of the family members and their use of the health services. Family health culture is thus arguably the most influential in terms of promoting healthy behaviour or establishing poor health habits [19]. Gruber and Haldeman (2009) believe that family units share similar health behaviour characteristics, such as physical activity levels, eating habits and body weight and exert influence through social modelling processes [4]. Factors contributing to this include parental level of education, attitude to authority and social class [18].

Eating meals together as a family has been shown to promote healthy behaviours in young adults [20] with breakfast consumption being shown to increase nutrient intake. It has also been identified that as they progress through adolescence, children increasingly skip breakfast and increasingly opt to eat at a different time than their family [5,21]. Patrick, Hennessy, McSpadden and Oh (2013) argue that it is essential to develop research on adolescent perception of their parent's attitudes and behaviours and how these are associated with the adolescent health behaviours. Ewan, McLinden, Biro, DeJonckheere and Vaughn (2016) agree and found that young people identified obesity as one of the most important health concerns.

Based on Rotter's (1966) concept of locus of control; Wallston, Wallston and DeVellis(1978), developed and applied a model specific to health. Health locus of control concerns the beliefs of individuals about the agents acting on their health. It is concerned with whether an individual believes that they are responsible for their own health status (internal locus of control), whether their state of health is due to chance (chance locus of control) or whether their health is controlled by what has been termed 'powerful others', for instance doctors (external locus of control) [22]. Tabak et.al., (2009) state that health locus of control recognizes the importance of health being a responsibility of the individual. It is believed that behaviours and habits formed in childhood and adolescence remain through to adulthood [4].

The current study examines the family environment and its relation to healthy behaviour in 14-25 year-olds children and young adults. In this instance, family health culture encompasses the family environment and attitudes towards healthy behaviours (as perceived by young adults) and the healthy behaviours of the young people participating in the study. In relation to attempting to explain the impact of family on individual health behaviour development, is also suggested that this might be mediated by health locus of control and self compassion.

From the literature reviewed above the model shown in Figure 1 is proposed. It is argued that positive health behaviours and wellbeing will be related. Family health culture is proposed as a predictor of both healthy behaviours and wellbeing. It is further argued that health locus of control and self compassion will be related to family health culture and may potentially have a direct impact on healthy behaviours and wellbeing as well as indirectly impacting through their relationship with family health culture. Again based on previous research it is suggested that Socio-Economic Status (SES) and mother's level of education will be related both to healthy behaviours and wellbeing and also to the interrelated variables of family health culture, health locus of control, and self compassion.

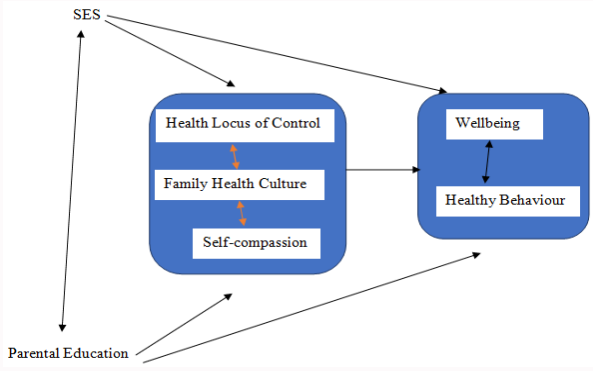

Figure 1: Model of relationships with healthy behaviour and wellbeing based on the literature.

Methods

Ethics

The research was approved by the research ethics committee within Ulster University. Each participant was provided with an information sheet and gave informed consent before participating in the study.

Design

Across-sectional survey design using a self-report questionnaire for data collection was used in a sample of 14-25 year old children and young people.

Participants

Participants were 379 children and young adults ranging in age from 14-25 years. Of these 261 were female and 118 were male. There were 123 aged between 14-17, 141 aged 18-21, and 115 aged 22-25 years.

Measures

Demographic information on age, sex, parental education and Socio-Economic Status (SES), number of siblings, birth order, as well as participant's height and weight in order to calculate Body Mass Index (BMI) were collected at the start of the survey, followed by the measures described below.

The Reported Health Behaviour Checklist [23]. This scale provides a list of 16 health behaviours e.g. eating fruit and vegetables regularly, taking regular exercise, getting enough sleep, etc. And is scored on a 5-point Likert scale, 1 corresponding to 'strongly agree' through to 5'strongly disagree'. In this study it achieved a Cronbach Alpha of 0.73.

A Measure of Family Health Culture This comprised of a 9-item measure, with respondents being asked to rate on a 5-point Likert scale how often they felt their family had provided encouragement on the different items, ranging from 'never' (1) to always (5). All 9 items described a healthy behaviour, so the range of possible scores

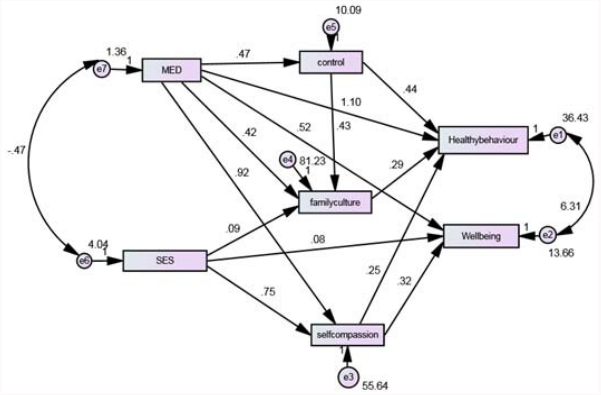

Figure 2: Path Model of Predictors of healthy behaviour and wellbeing from SEM analysis.

were 9 (unhealthy/low levels of encouragement) to 45 (high levels of encouragement). Cronbach's alpha was 0.91.

The Warwick Edinburgh Mental Wellbeing Scale [24]: This scale was developed in order to monitor the mental wellbeing of the general population. The short-form, which was used in the current study, is a seven-item scale and was validated by Haver, Akerjordet, Caputi, Furunes and Magee (2005). This version has been found to be one-dimensional, largely free of bias and the level of reliability has been reported as (α=0.85) [25]. The Cronbach Alpha in the current study was 0.86.

Health Locus of Control was measured by the Multidimensional Health Locus of Control (form A) [26]: An 18-item measure of general health locus of control, scored on a 6-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (6). Subscales measure internality (α=0.85), powerful others externality (α=0.81) and chance externality (α=0.79).

Short-form Self-Compassion Scale [27]: This scale was developed to measure how one acts towards themselves in times of difficulty. Self-compassion scores were calculated through reverse scoring negative subscale items of self-judgment, isolation, and over-identification. Scores were then calculated through the mean of the subscale item response. Responses are measured using a 5-point Likert scale (0=Almost Always to 4=Almost Never). The SCS-SF has demonstrated satisfactory reliability among Dutch and English samples (α=0.86) [27].

Procedure

Participants were accessed both online and in person. The 14-17 year old group were attending University open day, and they were given the questionnaire to complete after they had read an information sheet and completed a consent form. The older groups were students attending a university and were provided by e-mail with a link to an online questionnaire.

Results

The first stage in analysis was to explore the correlations between healthy and unhealthy behaviours as well as the study variables using Pearson Correlation Coefficients. Healthy behaviours consisted of a combination of healthy eating, getting an adequate amount of sleep and taking regular exercise. Table 1 shows that the variables correlating significantly with healthy behaviours were wellbeing (r= 0.422, p<0.001), family health culture (r= 0.435, p<0.001), self-compassion (r= 0.335, p<0.001), chance locus of control (r= -0.157, p<0.01), powerful others health locus of control (r= -0.165, p<0.01), and internal locus of control (r= 0.325, p<0.001). This means that those exhibiting healthier behaviours scored higher on wellbeing; family health culture; self-compassion; and internal locus of control

Table 1: Bivariate correlations between variables.

	1	2	3	4	5	6	7
Wellbeing	1						
Healthy behaviour	0.422**	1					
Unhealthy behaviour	0.04	0.09	1				
Self compassion	0.568**	0.335**	0.179**	1			
Chance HLOC	-0.151**	-0.157**	0.153**	-0.069	1		
Internal HLOC	0.114*	0.325**	0.066	0.165**	-0.184**	1	
Powerful others HLOC	-0.103*	-0.165**	0.065	-0.052	0.410**	-0.349**	1
Family Health Culture	0.092	0.435**	0.197**	0.06	0.05	0.172**	0.067

*=p<0.05, **=p<0.01

Table 2: Predictors of healthy behaviour from HMRA.

	B	SE B	β	p-value
Step One: R^2 = 0.15, f (7,371)=10.853, p<0.001				
Age	0.208	0.503	0.022	0.679
Sex	2.620	0.837	0.161	0.002
Number of siblings	0.225	0.279	0.041	0.420
Birth order	-0.284	0.133	-0.106	0.033
Father's Education	1.216	0.301	0.198	0.001
Mother's Education	1.696	0.315	0.262	0.001
SES	0.419	0.221	0.098	0.058
Step Two: ΔR^2=0.13, f (2,369)=40.552, p<0.001				
Age	0.990	0.466	0.104	0.034
Sex	1.559	0.780	0.096	0.046
Number of siblings	0.133	0.256	0.024	0.604
Birth order	-0.147	0.122	-0.055	0.228
Father's Education	0.847	0.278	0.138	0.003
Mother's Education	1.575	0.288	0.244	0.001
SES	0.328	0.201	0.077	0.103
Family health culture	0.258	0.040	0.383	0.001
Step Three: ΔR^2=0.10 f (4,365)=11.639, p<0.001				
Age	0.838	0.471	0.088	0.076
Sex	0.516	0.769	0.032	0.503
Number of siblings	0.131	0.244	0.024	0.592
Birth order	-0.114	0.116	-0.043	0.326
Father's Education	0.592	0.269	0.096	0.028
Mother's Education	1.230	0.280	0.190	0.001
SES	0.077	0.198	0.018	0.698
Family health culture	0.295	0.039	0.380	0.001
Chance HLOC	-0.109	0.078	-0.065	0.161
Internal HLOC	0.284	0.108	0.124	0.009
Powerful others HLOC	-0.315	0.138	-0.112	0.023
Self compassion	0.187	0.049	0.217	0.001
Total R^2=0.38				

and scored lower on chance and powerful others locus of control.

There were also a range of significant correlations between other variables which were not of direct relevance to the study aims. It is just important to note that none of the inter correlations were high enough to cause multi co linearity.

The next stage in analysis was to more directly test the aims of the study using Hierarchical Multiple Regression Analysis (HMRA). HMRA was used to explore the predictive relations with healthy behaviour. The analysis involved three steps. On step one age, sex, number of siblings, birth order, father's education, mother's education, and SES were entered as predictor variables and accounted for 15% of the variance. Sex (β= 0.16, p=0.002), father's education (β= 0.20, p<0.001), and mother's education (β= 0.26, p<0.001), exhibited significant partial correlations with health behaviours. On step 2 family health culture was added and increased variance explained by 13%. On this step age (β= 0.10, p<0.05), sex (β= 0.10, p<0.05), father's education (β= 0.14, p<0.01), mother's education (β= 0.24, p<0.001), and family health culture (β= 0.38, p<0.001), exhibited significant partial correlations with health behaviours. On the next step the dimensions of health locus of control and self compassion were added and accounted for an additional 10% of variance. On this step father's education (β= 0.10, p<0.05), mother's education (β= 0.19, p<0.001), family health culture (β= 0.38, p<0.001), internal health locus of control (β= 0.12, p<0.01), powerful others health locus of control (β= -0.11, p<0.05), and self compassion (β= 0.22, p<0.001), exhibited significant partial correlations with health behaviours. See Table 2.

The final stage in analysis was to use Structural Equation Modelling with AMOS 25 to test the model proposed in Figure 1.

The model shown in Figure 2 is the best fit for the data and approximates sufficiently to Figure 1 to argue that the proposed model is supported. The fit statistics were χ^2 (6) = 10.477, p=0.106, the ratio of chi-square to degrees of freedom is 1.746 which is below the recommended cut off score of 5. It is recommended that the Comparative Fit Index (CFI), and Incremental Fit Index (IFI), are greater than 0.95. For this model they were CFI = 0.98 and IFI = 0.98. The Root Mean Square Error of Approximation (RMSEA) should be less than 0.08 and in this case, it was 0.04. Finally, p of Close Fit (PCLOSE) should be significant and in this case, it was 0.52, p<0.001.

Discussion

The aim of this study was to explore the relationship between family health culture and the health behaviour of young adults. Healthy behaviours measured consisted of a combination of healthy eating, getting an adequate amount of sleep and taking regular exercise. In addition, it was proposed that health locus of control and self compassion would play a role in the process as would mother's education and SES. This was proposed in the model shown in Figure 1. In general, both the bivariate correlations and the partial correlations from HMRA supported the proposed model. The path model from SEM analysis provided more robust support for the proposed model. The path model suggests that family health culture is strongly related to both healthy behaviours and wellbeing. Healthy behaviours and wellbeing are interrelated. Family health culture in turn is related to and may be a product of SES and mother's education in that more affluent SES and having a more educated mother correlate with a healthier family culture. Having a more internal locus of control also related to healthier family culture and is itself related to mother's education. In other words, having a more educated mother seems to be related to both an internal sense of control over health and a more positive family health culture. Self compassion was also related to both healthy behaviours and wellbeing and seems to be somehow related to a more affluent SES and a more educated mother.

These finding do reflect some previous research indicating that the family is a primary contributor to health and wellbeing [28], but goes some way beyond that to identifying some potential mechanisms whereby that may be the case. It suggests that the core demographics of more affluent SES and more educated mother, which are undoubtedly linked, provide the context within which a culture of healthy behaviours may grow. This health-focused family culture is related to a more internal sense of control over health and may reflect a tendency to take responsibility for one's health [4,7].

The role of self compassion in the process reflects previous findings that as a construct it has been associated with the practice of positive health behaviours [16]. Its role may be seen as facilitating more realistic regulation of health behaviours (e.g. achievable dieting goals), and more effective regulation of health-related emotions [15]. Body positive movements and the promotion of body confidence and self-acceptances just one of the societal movements of this generation. Body positivity aims to promote the equality of all bodies [29] using self-compassion. Developed from the "fat acceptance" movement, which aims to liberate and destigmatise fat bodies [29], body positivity encourages individuals to decide what is good and healthy for them.

Healthy families provide an environment where children can feel emotionally secure and physically safe, allowing them to maintain their physical and emotional health independently of the family dynamic [12]. Some have suggested that the primary function of the family is to ensure that its members are strong and healthy through influencing health-related behaviour patterns to inherently prevent and treat disease and health issues [28]. Behaviours and habits formed in childhood and adolescence remain throughout adulthood [4].

The current study was cross sectional and as such the direction of causality can only be a matter of speculation. However, it does give some direction for future longitudinal study. On the other hand, most of the constructs measured in this study have received support in previous research as to their role in health and health behaviours. There are two main ways in which the current study is an advance on the past, a) the proposed construct of family health culture, and b) the fact that it brings together a number of constructs that have not previously been linked in an attempt to understand what might predict healthy behaviour.

Conclusions

There are many approaches to interventions in improving health behaviour though many have sought to do this through reducing unhealthy behaviours. Programmes have focused on health shifting external locus of control towards a more internal perspective [30] and influencing cognitive-perceptual factors *via* health promotion [31]. This study concludes that an important focus must be on the culture of health attitudes and behaviours within the family as located within a social and economic context. Eradicating poverty and ensuring access to a good education for all, particularly girls and young women must be a political priority. Tailoring messages and support services to the social and emotional needs of families must follow. Probably one of the most damaging things to self compassion is the blame culture which exists where the burden of guilt for unhealthy lifestyles is placed on individuals and families. Instead an approach to enabling

and empowering families and individuals to take responsibility and control over their health choices is advocated by these findings.

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