Submission of Evidence for Youth Select Committee
Inquiry into Body Image, 2017

Written evidence submitted by Dr Emma Rich, Associate Professor, University of Bath and Research Partners

I welcome this opportunity to submit evidence to the youth select committee inquiry into Body Image. Please find evidence below based on over 15 years of research on young people, learning and body image with colleagues internationally (research partners are cited below).

Biography and Expertise

Dr Emma Rich is an Associate Professor/Reader in the Department for Health at the University of Bath.

I am an Associate Professor/Reader with an international expertise in socio-cultural studies of the body, health and education. I have published extensively in this area and my research has had a major influence on the intellectual agenda of critical perspectives of health, weight and physical activity, and more recently, digital health and education. I have pioneered new theoretical frameworks (e.g. body pedagogies) which are used internationally in understanding the relationships between health knowledge and health practices across different social contexts. I bring specific expertise in 'public pedagogy'; studying public sites and spaces through which people learn about health and their bodies and the impact this has on their identities and health practices.

I have spent a number of years researching the relationship between a moral crisis around obesity and school policy and practices around health education (ESRC The impact of new health imperatives on schools). Working with young women with eating disorders, I have undertaken research examining the relationship between the cultures, policies and practices of schools and the development of eating disorders and I am an expert advisor to the charity Anorexia and Bulimia Care Charity.

My current research is focused on the relationship between learning, technologies and health including recent developments in digital health, including exergaming, mobile and wearable health, social media and the medicalization of cyberspace. This includes a research project funded by the Wellcome Trust '***The Digital health generation: The impact of 'healthy lifestyle technologies on young people's learning, identities and health practices'.*** This work is grounded critical digital health studies and I have written on issues such as self-tracking cultures, mobile health apps, social media and the body and the impact of digital surveillance on young people. I am co-author of the book 'The Medicalization of Cyberspace' which was a world first in 2008 and examines how the infrastructure and culture of medicine is being transformed by digital technology, the Internet and mobile devices. I have been invited to publish papers for special issues of journals on digital technologies/health and I am also editing special issues of journals such as 'Pedagogies of Health: The Role of Technology' (Social Sciences) and 'Digital Cultures' (Leisure Studies)

All of this work has involved the novel application of sociocultural and pedagogical theories to examine how people learn about health and the impact this has on their bodies, identities and health. I am member of various technology/health advisory boards and organisations (Associated Fellow Royal Society of Medicine, Creative Futures Institute, Anorexia and Bulimia Care) and have extensive experience of public engagement activities (art exhibitions, citizen science projects etc). I am a named research investigator on projects totalling over £1 million.

I have written for a range of different publishing outlets, having published over 120 academics articles for conferences, books, encyclopaedias, academic journals and newspapers. My major publications (books) are ***The Medicalization of Cybserpace*** (2008, Routledge) ***Education, Disordered eating and Obesity Discourse: Fat Fabrications*** (2008, Routledege) *and* ***Debating Obesity: Critical Perspectives*** (2011, Palgrave). I have been awarded research funding from a range of sources including the Economic and Social Research Council (ESRC), Arts and Humanities Research Council (AHRC) Wellcome Trust, the Society for Educational Studies, the International Olympic Committee, the International Olympic Academy and the Australian Research Council (ARC). I am a member of various academic associations and working groups including the British Educational Research Association, International Critical Obesity Network, International

Olympic Academy Association, founder of the International Gender Sport and Society Forum and an invited associate fellow of the Royal Society of Medicine. I have engaged extensively with the public, policy-makers, charities and education organisations to shape and inform new directions and I have been invited to give evidence on this research at Westminster public policy exchange events on body image

Research Projects Informing the Report

2017- The Digital Health Generation The impact of 'healthy lifestyle' technologies on young people's identities and health practices.
Funded by the Wellcome Trust. With Professor Deborah Lupton (University of Canberra) and Professor Andy Miah (University of Salford) and Dr Sarah Lewis (University of Bath).

2017 – Promoting body confidence in schools: Engaging young people and co- creating critical interventions
Funded by University of Bath, Public Engagement Unit Seed Award. With Bath and North East Somerset (BANES) council and Leyland Carter, The Motivation Project - *an organisation providing dance infused workshops to schools and community groups*

2007: The Impact of New Health Imperatives on Schools
Economic and Social Research Council (ESRC) Funding Award RES-000-23-2003 with Professor John Evans (Loughborough University) RA: Dr Lara De Pian

2007: The Impact of New Health Imperatives on Schools Australian Research Council (ARC) Funding Award,
With Professor Jan Wright, Dr Valerie Harwood (University of Wollongong) Professor John Evans (Loughborough University) Professor Lisette Burrows (University of Otago) Discovery linkage grant extending the ESRC project above into an International collaborative project.

2002-2006 Education and eating disorders: Schools, anti-obesity health imperatives and their impact on young people.
Funded by Loughborough University.
With Professor John Evans, Dr Rachel Sandford, Dr Rachel Allwood (Loughborough University), Professor Brian Davies (Cardiff University). Project Report 'Dying to be thin: anti-obesity health imperatives and their impact on young people

Summary of key evidence submitted for body image inquiry

The influence of contemporary focus on obesity and weight loss

- the contemporary focus on obesity appears to be driving what might be described

as 'new health imperatives' prescribing the choices young people should make around lifestyle (in particular physical activity and food). These imperatives share a number of distinctive features which separate them from other health promotion strategies seen in previous years. health imperatives around 'eating well', exercising regularly, and monitoring our bodies, carry powerful moral overtones and as such are very difficult to resist or contest and can have a damaging impact on young people's embodied identities and body image.

- Young people (and their guardians) are implicitly held personally responsible and accountable for the prevention of certain associated conditions, such as obesity, by knowing and avoiding relevant 'risk' factors – the 'risky' behaviours associated with physical activity, diet and weight. These imperatives are strongly associated with body size and appearance, such that the thin or slender body is taken to represent not only a state of 'good health' but also control, virtue and goodness.

- Overwhelmingly, students understandings of health reflect the messages found in new health imperatives; reducing complex matters of health to 'weight issues' which require young people to engage in a constant process of self-monitoring.

- many young people experience psychological and social distress caused by fears associated with fatness which are being exacerbated by this contemporary focus on tackling childhood obesity

- Fat shaming is often justified on the grounds of obesity as a health risk: Healthism equates obesity with a moral failing

- Research studies with colleagues reveals that the process of weighing, regulating and measuring children can be very damaging. Some of the many young women who have experienced severe body disaffection and/or eating disorders recalled negative experiences of being weighed in schools. These experiences had profound impact pressing them toward developing negative relationships with their bodies, and was often a humiliating and stigmatised encounter for those involved.

The impact of schools, health policy and peer culture

- Our research revealed the significant role that schools can play in the development of body disaffection amongst young people. Schools enact health imperatives through a range of regulative and surveillant practices which can have a damaging impact on young people; e.g., fitness testing, lunch box inspections, annual weighing, moral commentary about children's weight, finger print screen technology to monitor food selections.

- Far from improving health, for many, health imperatives generated a concern with their body which generated varying degrees of psychological and social stress, with young people reporting:
  - A preoccupation with their bodies and weight and body dissatisfaction
  - Experiences of being bullied/stigmatised in school in relation to their (by teachers and students)
  - Engaging with extensive forms of surveillance of their own and other's bodies
  - undertaking unhealthy and obsessive practices of weight management (skipping meals at lunchtime)

Enhancing Body Confidence and implications for education policy

- There is a need for resources to help teachers feel confident in delivering material related to body image, eating disorders and body disaffection in schools (need for more resources and training).

- To enhance body confidence in schools, long term strategies and whole school approaches are needed. One off/short term programmes may have immediate impact on body image, but there is little evidence of sustained long lasting effect on body image.

- Critical understanding of media/social media does not necessarily translate to change in desire to develop body ideals. It is therefore crucial that media literacy programmes fully address the complexity of the relationships between culturally induced images of the body and eating practices and those between young people and other elements of their lives (and associated affects).

- Alongside media literacy programmes in schools, there is a clear need to develop critical approaches to digital health/social media which is having a significant impact on young people's learning about their bodies and health.

- We need to empower young people to understand and act on their own health concerns.

- Health education needs to explore the complexities of health and weight with young people: Body weight is not simply a matter of individual control that can be altered through behaviour change and the relationship between weight and ill-health is far more complicated than is suggested in obesity discourse.

- In our body confidence workshops, whilst young people were confident talking about obesity/health behaviours, there was a need to develop 'safe spaces' to talk about the body/disaffection.

- Critical workshops on body image need to engage young people in the process and attend to culturally relevant needs: e.g for some social media might a pressing concern.

Digital (health) technologies and the impact on young people's learning, identities and health practices

- Digital technologies are providing new resources through which to undertake self-monitoring and surveillance (self tracking devices such as wearable sensors, mobile phone apps which enable the collection and sharing on data).

- Whilst digital health includes a range of technologies, the recent trend towards mobile health technologies has had an impact on healthcare in significant ways, including the emergence of new data practices and pressing individuals towards self- surveillance. These raise significant ethical questions about young people's use of these technologies and how young people are being targeted by a range of commercial companies (e.g. wearable physical activity trackers targeted at 4 year olds).

- This includes the global wearable and mobile health industry providing the means through which people's bodies and health practices are being measured and monitored. There has been a rapid growth in what can be described as technologies that seek to improve healthy lifestyle behaviours, such as physical activity, body weight management, sleep and food consumption and which track other bodily aspects such as menstruation, fertility, sexual activity and pregnancy. Mobile and wearable devices offer a range of tools for individuals to measure, monitor and regulate their health, and provide new ways of representing the body through quantified data.

- The blurring or public and private spaces and the sharing of health information that might lead to the transformations of bodies and identities

- Young people are learning to recognize themselves and/or others as good, healthy, active, desirable bodies in the pursuit of 'health' within these environments.
- Through their engagement with digital technologies children learn through these apps the moral obligations of self-transformation and individual responsibility for example towards the management of one's own weight and health.

- A further risk is that within digital landscapes there is the potential for nurturing disaffected relationships with the body. One such recent example of this is a mobile app that required users to carry out plastic surgical interventions to an avatar.

- There are over 160,000 health apps available in the app marketplace alone – whilst medical devices are regulated, many of these commercial lifestyle apps remain largely unregulated. There are concerns about how young people select and use technologies/apps and how they make sense of the data that is being produced about their bodies and identities.

- There is an urgent need to develop resources and critical skills to enable young people to safely navigate these digital environments. Critical health literacy needs to include a focus on digital health technologies.

Detailed Evidence from Research Studies

The contemporary focus on obesity and weight loss: The impact of new health imperatives associated with obesity on body image

Evidence taken from Key Studies:
2007: The Impact of New Health Imperatives on Schools
Economic and Social Research Council (ESRC) Funding **Award** RES-000-23-2003 with Professor John Evans (Loughborough University) RA: Dr Lara De Pian

2007: The Impact of New Health Imperatives on Schools Australian Research Council (ARC) Funding Award,
With Professor Jan Wright, Dr Valerie Harwood (University of Wollongong) Professor John Evans (Loughborough University) Professor Lisette Burrows (University of Otago) Discovery linkage grant extending the ESRC project above into an International collaborative project.

In recent years, obesity has been deemed to be a problem of 'epidemic' proportions. Children in particularly have been targeted as a group 'at risk' in relation to obesity and associated diseases. As a result, governments around the world are investing a great deal of money in a range of new school-based health policies, initiatives and practices that focus on getting young people to exercise more, change their diets and lose weight. Millions of pounds are being invested by Governments to support these initiatives in an effort to address the 'obesity crisis'. Currently, public discourse around 'health' focuses on the assumed relationship between childhood inactivity, young people's diets, and a putative rise in levels of obesity. As such, children are increasingly being identified as a population 'at risk' in relation to obesity and associated diseases. Such concerns are driving what we describe as 'new health imperatives' which prescribe the 'lifestyle' choices young people *should* make, particularly in relation to physical activity and diet.

Many of the claims made around the prevalence and extent of the obesity problem are promoted through the media, and a number of government policy documents as 'certain' and truthful 'fact'. However, over the last decade, a growing body of research has questioned the scientific base from which these claims are made revealing a number of uncertainties, contradictions and unknowns. Obesity initiatives and associated policies are often driven by an assumed connection between escalating rates of obesity and particular 'lifestyle' practices, including a decline in physical activity, 'poor' diet, and excess engagement with sedentary activities associated with technology (e.g., mobile phone usage, television watching, computing). However, it is now acknowledged across a range of research fields and disciplines that the relationships between weight, diet, physical activity and health is far more complex and uncertain than is currently being suggested. Despite these uncertainties, schools, families and organisations in the UK and elsewhere are being pressed to respond to the notion of a 'childhood obesity crisis', with 'certainty' and in quite distinct ways. Yet, 'health' and 'weight' are infinitely more complex than is suggested in the body-as-machine explanations which are to be found in many of the public messages associated with an obesity epidemic.

The focus on obesity appear to be driving what might be described as 'new health imperatives' prescribing the choices young people should make around lifestyle (in particular physical activity and food). These imperatives share a number of distinctive features which separate them from other health promotion strategies seen in previous years. health imperatives around 'eating well', exercising regularly, and monitoring our bodies, carry powerful moral overtones and as such are very difficult to resist or contest. Young people (and their guardians) are implicitly held personally responsible and accountable for the prevention of certain associated conditions, such as obesity, by

knowing and avoiding relevant 'risk' factors – the 'risky' behaviours associated with physical activity, diet and weight. In addition, these imperatives are strongly associated with body size and appearance, such that the thin or slender body is taken to represent not only a state of 'good health' but also control, virtue and goodness. These new imperatives are a powerful force driving major policy initiatives on health and education in a number of countries.

At the same time as we have seen an increase in initiatives which are geared towards weight loss, dietary changes and increases in physical activity, there is increasing evidence that eating disorders, extreme dieting, over-exercising and body image problems amongst young people are rapidly on the increase. Evidence from our studies have made clear the impact of health imperatives on young people, including body disaffection and disordered relationships with food.

Public representations of obesity do not simply inform people of neutral medical 'facts' but create meanings which influence cultural understandings of health, the body and eating . It informs wider cultural beliefs around how we view 'fatness'. The pressure to obtain the 'right' body size, or to eat 'good' foods, was not simply about achieving a healthy status but was clearly connected to morality. Within these contexts, which are now so heavily oriented towards anti-obesity, the overweight come to be seen as lazy, self-indulgent and lacking control and care for themselves. Feeling fat carried with it 'stigma' which could evoke strong feelings of guilt and shame, as one of our participants commented:

"If I see someone having something healthier than me I immediately feel guilty as I feel I am eating so much fat and it disgusts me."

School based policy and practices: The impact of new health imperatives on schools and body image

Evidence taken from our ESRC funding report

The role that schools should play in curtailing the obesity crisis is now a significant and timely matter. The drive to tackle a so called 'obesity epidemic' has resulted in extensive government funding to support a number of health policies and school based initiatives (e.g., annual weight checks, fingerprint screening in school canteens, removal of vending machines) to monitor and regulate young people's weight, physical activity patterns and diets. This research explored how such health imperatives and their associated strategies are being adopted, adapted and re-contextualised in schools, and their impact on young people's identities, health, well being and rights.

Previous research on body image, obesity and eating disorders has tended to focus on individuals at the extreme ends of body size. Expanding on prior work, we have focused on the majority who are neither necessarily extremely thin nor fat (or obese) and explore these themes across broader and diverse populations. Our research study has sought to explore the impact that these new health messages and initiatives within schooling cultures has had upon young people, particularly in terms of the development of disordered relationships with food, the body and physical activity. The study formed part of a wider international collaborative research project with partner institutions in New Zealand and Australia.

The study was grounded in case study methodology: In the UK study this has been achieved through analyses of 90 in depth interviews and questionnaire responses from 1176 young people across a diverse range of backgrounds aged between 9-16 years old. 19 Interviews with teachers were also conducted across the 8 schools. In addition to this, at each school, copies of health and PE programmes, school policies, textbooks, websites and other relevant resources were collected.

This research involved an international collaboration between the UK, Australia and New Zealand

The collaborative study has produced one the largest data sets internationally on young people's learning about health in terms of registering the resources young people draw upon to make sense of official health policy and practice in schools:

Figure 1 - Breakdown of data sets

country	questionnaire	Interviews with students	Interviews with school staff
UK	1176	90	19
Australia	330	66	24
New Zealand	795	30	12
TOTALS	2301	186	55

Our research has revealed that overwhelmingly, student's understandings of health reflect the messages found in new health imperatives; reducing complex matters of health to 'weight issues'

In our ESRC study, 72.5% of survey respondents suggested that a person's weight or size is linked to their 'health'. Students reported that being healthy was important to them because of reasons connected with appearance (60%), much more so than health related reasons such as protection from disease (30.3%) and life (e.g. longevity 25.9%). When asked in the survey 'what does it means to be healthy?' 44.5% made reference to the imperative of exercise, 24.9% made reference to diet and 30.3% of being a particular body size or shape.

41.3% of students felt they would be healthier if they exercised more, and 67.2% if they changed their diet. Rather less (30.3%) made reference to broader concepts of health such as 'well being' (30.3%), positive self perception (3.7%) or social reasons (0.2%). These understandings appeared to shape young people's limited perception of fatness and obesity which was seen either as a disease category or associated with negative characteristics such as lack of care, irresponsibility and laziness.

The research has highlighted the different ways in which health policy is recontexualised in schools. Although operationalized in markedly different ways, schools tended to enact health imperatives through a range of regulative and surveillant practices which monitor young people's bodies and health behaviours e.g., lunch box inspections, annual weighing, moral commentary about children's weight. The pervasiveness of the surveillance which accompanies new health imperatives is such that the majority of young people in our research were preoccupied with their bodies and weight. Many had been bullied about their weight in schools, wanted to lose weight or engaged with extensive forms of surveillance of their own or others' bodies. Participants reported worrying a great deal about what their future lives would be like if they gained weight. Far from improving health, for many, health imperatives generated a concern with their body which generated varying degrees of psychological and social stress.

Results suggest that children predominantly understand the complex issue of 'health' as a simplistic issue of weight management. The majority of students were cognisant of the widely held presumption that achieving health is primarily a matter of eating well, exercising frequently and losing weight. Rather less articulated understandings of health with reference to well being or broader and more complex understandings of the body. Social, emotional and other constituents of health were rarely alluded to, and familiar health issues such as smoking, drinking, sexual behaviour, often took secondary

importance to matters of weight. Many children suggested that evaluating health was simply a matter of 'looking' at a person, assessing their size, shape (and/or assessing their eating and exercise behaviours), and making judgements about their perceived weight. This way of thinking (as evident in new health imperatives) appeared to grant young people moral licence to comment, often negatively, on the body size, shape and weights of others (including their peers).

Our ESRC study highlighted the significant role of interrelationships between key social sites (especially the family and peer group) in young people's engagement with and negotiations around the new health imperatives featuring in schools. Our data suggest that students have to negotiate their identities often through contradictory cultural representations of 'health' and with reference to multiple identifications (e.g. social media images, role models from music, sport, TV, family, peers, etc). Young people report that they traverse a variety of terrains and experience multiple meanings (connected to health and the body) simultaneously, not all of which are afforded equal levels of interest or influence. The health messages they receive from schools thus have to be set alongside a range of other influences and messages emanating form popular culture, family, friends, church or internet and elsewhere, that may have more immediate, pressing relevance to their lives. Young people have vastly different experiences of new health imperatives in schools, depending on their social class and ethnic backgrounds and experience of particular forms of schooling, family and community. These configurations of health have particular effects for how individuals understand and act toward their own and others' bodies. Rather than a matter of individual effort and motivation, the opportunity to understand and enact the health behaviours expected of young people are thus shaped by a complex web of relationships *between* formal schooling and other social sties, such as the media, family and peers. However, this social context is rarely given due attention in health policy, particularly those focused on anti-obesity initiatives.

Whilst the extent to which girls and young women experience body dissatisfaction has been well documented in wider literature, it was an unexpected outcome of the research to find that boys demonstrated high levels of dissatisfaction with the appearance of their bodies.

The importance, authority and credibility now given by children/pupils and parents to the health messages transmitted through public/popular pedagogies (e.g., of the media - TV, film, etc.,) was a key finding in our ESRC and ARC research. Such pedagogies not only present many new challenges to researchers and teachers as to how they are to better conceptualise and address 'formal education', but also as to how and where Governments should direct attention and resource with respect to health issues.

Although operationalised in markedly different ways, schools enact new health imperatives through a range of regulative and surveillant practices which monitor young people's bodies and health behaviours . These practices included:

- Lunch box inspections
- Weighing (38% of students in the research had been weighed at school)
- Fruit snacks
- Monitoring packed lunch boxes
- Banning of fizzy drinks/snacks/vending machines
- Fingerprint scanning to monitor canteen purchases
- Moral commentary on students health / bodies / practices

Far from being an act of individual effort, young people's opportunities to 'be healthy' and make sense of weight, health and body image, are heavily influence by the socio-cultural resources they have access to across multiple sites of learning.

The health messages young people receive from schools are set alongside a range of

other influences and messages emanating from the internet, popular culture, family, friends and elsewhere. Many young people thus bring an already formed view of 'acceptable/healthy bodies' to schools, some of which collide with the schools 'official' views.

When asked to report then source of their ideas around 'health', parental influences (mum 61.7%, dad 42.4%) were found to be more important than school (teachers 30.7%). 44% of our cohort had learnt specifically about obesity from their mums reiterating the cultural assumptions about a Mother's role in the regulation of children's health

Family play a significant role in that some children were evidently more able to appropriate and accept health imperatives and undertake particular health practices. For example, students in independent schools described 'thin bodies' as evidence not only of good health but of good citizenship, as someone who cares for their body in line with middle class values. Many referred to the ample sport and leisure opportunities available to them in both their family and school life, which offered cultural enrichment.

Preliminary studies by the research team (Evans, Rich, Davies and Allwood, 2008; Rich and Evans, 2009) alluded to the potentially deleterious effects of these policies on the lives of girls and young women, and its capacity to presage disordered eating.

Body Burdens: Health imperatives, Body Image and Body Surveillance

The young people in our study reported engaging in extensive levels of surveillance, regulation and monitoring of their own and their peers bodies to reach the expectations of new health imperative. These included:

- Self-monitoring – e.g. regularly weighing themselves
- Self-evaluation – e.g. often negative moral evaluation of their bodies 'I'm too fat' 'I'm lazy'
- Self-Regulation – e.g. dieting, skipping meals, losing weight
- Evaluation of other children's bodies - e.g. commenting on others' weight

Peer Learning

Peer group relations serve as crucial pedagogic sites, threatening or offering potential independence from or alternatives or resistance to office learning. Over a third (32.8%) of survey respondents identified friends as an important sources for learning about health, mediating official health pedagogy in ways not always conducive to wellbeing and thus impacting on body image. Analyses of interview data suggest peer culture played a significant role in the formation of embodied identities particularly in terms of the moral commentary young people expressed about other's bodies.

New health imperatives are heavily inflected with class, ethnic and cultural differentiations.

Despite the emphasis in contemporary society on individual choice, little seems to have changed in terms of the narrow expectations placed on girls' bodies and health behaviours. Girls in the study reported excessive monitoring and regulation of their bodies and diets in an effort to achieve some form of distinction and differentiation through their bodies. In this sense, limiting expectations about the 'female body' were being reformed and legitimated through the coming together of new health imperatives, peer culture and consumer / media imagery.

Data revealed how young people's relationships with their bodies is strongly nurtured by relationships and orientations prevailing within and between the pedagogies of the family,

school and popular culture (media). These relationships are significant in the process of identity formation and in how these young people learned to think of their physicality and the values given to it. Alarmingly, over a quarter (26.1%) of the young people in our research felt that they needed to lose weight because they 'felt fat'. 77.6% of our respondents reported that they have never tried to put weight on, the majority of students were instead focused on losing weight (90.4%). This was influenced by others' evaluations of their bodies. Students reported **a range of individuals made comments about their weight or size**, including; Friends (39%), Mum (33%), Dad (25.6%), Other family (22%) People who don't like me (20.6%), People I don't like (14.9%), doctors (7.6%), sports coaches (6.7%), Teachers (3.4%) and carers (2.1%)

Interview analysis revealed that concerns associated with obesity and weight gain, are not confined to 'health' or 'medical' worries connected to how they image possibilities for their life. 'Health fears' associated with weight gain were significant in the formation of young people's sense of who they were and their future life plans. For example, one teacher described how she purposefully tried to instil a sense of fear:

> 'this is a lifetime and if you get it wrong for the rest of your life and if you choose to, then you've got nobody to blame but yourself when you cut your life short. I'm not the most PC person in the world. (food technology teacher)'

Students reported worrying a great deal about what their future lives would be like if they were to gain weight. This generated varying degrees of psychological and social stress, which far from improving health had a negative effect on young people's well being.

- Anger
- Anxiety
- Guilt
- Pity
- Shame
- Disgust
- Fear
- Horror
- Abjection
- Repulsion

The pervasiveness of the surveillance which accompanies new health imperatives is such that the majority of young people in our research were preoccupied with their body size, shape and weight in some way.

A high percentage of our respondents reported that they thought about their bodies sometimes (51.5%) or all of the time (34.8%). Only a small proportion of the respondents (12.2%) stated that they never thought about their bodies. Many of those who think about the way they look and wanted to change something, reported wanting to change to become thinner (56.3%) or change particular body parts (49.2%). Preliminary analysis of the data revealed that over half of the young people in our research had experienced some degree of body dissatisfaction with regards their weight. 15.8% were never happy about their current weight/size and 39.6% only sometimes happy with their current weight/size. 43.1% reported that they were happy with their weight/size all the time. Obesity discourse had, it seemed, granted moral licence for people to monitor, regulate and comment on others' bodies, with over a third of our sample (38.6% of the young people) having experience of being called names about their weight/size. Rather alarmingly, for 8.2% of the sample, this was something they experienced 'all the time' revealing the extent of social stigma attached to weight, whist others (11.5%) who had

been ‘picked on because of their weight/size’ reported experiencing some kind of ***physical*** abuse. Analyses of the UK questionnaire responses of 1167 students, revealed three distinctive orientations towards the embodied self (see also Research by Dr Laura De Pian, 2008). A small, but nonetheless worrying number of children registered what we describe as having ***Troubled Bodies****,* who reported that they were never happy with their weight or size (15.8% of the cohort) and never felt good about their bodies. Most ‘troubled bodies’ were likely to be 13-14 year olds. The findings challenged the view that body dissatisfaction remains a problem mostly for young girls, with just under a third of the respondents in this category located in an Independent Boys school. The second orientation towards the body, could be described as ***emboldened bodies***, constituted by those (around 43.9% of the cohort) who responded that they always are happy with their weight or size, and always felt good about their bodies. In contrast to our findings concerning ‘Troubled bodies’, gender, class and type of schooling together appear to be significant in determining how children and young people feel toward their embodied self. This category were likely to be aged 13, with parents or guardians in ‘middle class’ occupations and were of ‘normal weight’ BMI (Body Mass Index). These ‘bodies’ are more able to achieve a consonance between experienced corporeality and prevailing cultural (and sub cultural) norms, thus do not display the levels of body dissatisfaction identified by those with troubled bodies. The final category, ***Insouciant Bodies;*** these young people (around 40.3% of the cohort) appeared neither completely satisfied with their bodies nor preoccupied with them. They suggest that while it may be possible to conceptualise health imperatives associated with obesity discourse as all pervasive, we clearly can not claim or assume that it is monolithic. Consequently, we may consider the above category of youth as dissatisfied but ‘disengaged’ bodies.

Popular Pedagogies and Media resources

Survey respondents identified media sites as significant resources for learning about health (e.g. TV, 37.5% and Internet 20.5%) and specifically obesity (friends 35.2%, newspapers 38%, Internet 28.4% and films 12.25%). These findings endorse the view that **media texts are becoming increasingly significant in the construction of pedagogies of health and obesity**, specifying orientations towards the body in terms of its maintenance, development, enrichment and repair (see Rich, et al, 2009a). Over a third of the study sample reported wanting to lose weight because of media influences. This was a particularly difficult process for girls where there was pressure to be neither too fat nor too thin creating what we describe as ‘body burdens’ (see Rich et al, 2009b and Rich, et al, in press b).

Links with extreme body disaffection/Eating Disorders

2002-2006 Education and eating disorders: Schools, anti-obesity health imperatives and their impact on young people.
Funded by Loughborough University.
With Professor John Evans, Dr Rachel Sandford, Dr Rachel Allwood (Loughborough University), Professor Brian Davies (Cardiff University). Project Report ‘Dying to be thin: anti-obesity health imperatives and their impact on young people

A large body of research has emerged over the last decade providing evidence concerning the number of young people experiencing problematic relationships with their bodies, food and physical activity. Our concerns over these issues arise in major part through recognition that serious ‘weight loss’ is as great, if not greater, a health risk than ‘weight gain’. More serious clinically defined eating disorders such as anorexia nervosa and bulimia are also on the increase. Although such disorders are relatively rare in comparison to other affective disorders there is some agreement that ‘the sub threshold components’, negative body image, fear of fat, feeling powerless and insecure, are now so prevalent enough among girls and women in the UK and

elsewhere, to be considered normative and an epidemic.

Over a period of four years our research study investigated the lives of some forty girls and young women all of whom have suffered from differing forms of clinically defined eating disorders, such as anorexia nervosa, bulimia or versions of disordered eating (e.g orthorexia), and/or depression, over-exercising, and other conditions of ill-health.

The research was the first study to to document the impact that various schooling experiences had upon the development of eating disorders, over-exercising, body dissatisfaction and disordered eating patterns amongst young people. To do so, two research studies were conducted at a leading clinic in the UK for the treatment of eating disorders, involving the collection of detailed qualitative data with young women who were residents at the centre. A number of various data collection methods were deployed/carried out with these young women in order to explore their lived experiences of schooling, and the impact this had upon their relationships with food, their body and physical activity.

Our studies by this research team (Evans, Rich, Davies and Allwood, 2008; Rich and Evans, 2009) alluded to the potentially deleterious effects of these policies on the lives of girls and young women, and its capacity to presage disordered eating, as reflected in the words of one of our participants:

> *"At my school … all the girls have like a tiny, tiny little bread roll when there's like a big variety of stuff and they just go and get one tiny little bread roll … it's like that big (indicating with her hand) … little bread roll and that's it … or nothing…."*

A preoccupation with regulating ones weight and diet is no longer a matter for the vulnerable few (for example, those with clinical eating disorders), it is affecting all children and raising serious issues of social justice.

The evidence surrounding the prevalence of 'body disaffection' and 'weightism' in various social contexts, raises questions as to whether current initiatives, deriving their rationale from health imperatives around obesity, help young people achieve a better quality of life or hinder them in such a quest.

There is ample evidence in what these young people say to confirm that they are deeply affected by the way in which the media, and increasingly the curriculum of formal education transmits messages around body shape, size and weight. All of the young girls in our research reported that a narrow definition of 'health' associated with eating the 'right foods, 'exercising' and achieving the 'right size' that had emerged from, or at least been reinforced and endorsed, in the formal and informal cultures of schools they attended. Teachers comments which were often delivered with the best intentions, of had a particularly strong effect on these girls understandings of their body and body image

Teachers comments, heavily influenced by the pressures now associated with drives towards tackling the obesity epidemic, emerge as structures of meaning defining what body size, shape, predisposition and demeanour is and ought to be and how, if not meeting these ideals, it should be treated, repaired and restored. These types of comments come to determine what sort of body sizes, and shapes come to be forbidden or legitimated within schooling contexts.

> *She (teacher) picked out this girl who was literally like this thick (pointing to a pole in the room) and she said 'now this looks like a girl who is the right weight'. That really upset me because I just thought I have to get (my weight) down quick, so yeah that probably had a big effect on me*

The responsibilities placed on the individual to accept that correct diet and involvement in physical activity therefore become *moral* as well as physical obligations.

Our data revealed that the process of weighing, regulating and measuring children can be very damaging. Some of the young women interviewed recalled negative experiences of being weighed in schools. These experiences had profound impact pressing them toward developing negative relationships with their bodies, and was often a humiliating and stigmatised encounter for those involved.

Many of the girls found that in the pursuit of following 'healthy' guidelines, they had become obsessive or extreme in their dietary or physical activity practices. None of the girls reported that they had been warned of the dangers of weight loss within schooling, yet had been taught about 'good' and 'bad' food in relation to achieving an ideal weight for health.

The tendency towards skipping meals, over-exercising, or utilising exercise for the purposes of weight loss rather than the pleasure of movement, was often unnoticed in schools, and at worse legitimised by emerging health cultures. This tendency to slip towards 'unhealthy' relationships with physical activity and the body, is made worse by the variance in the guidelines on healthy eating and exercise. This is not only a problem for young people, but for the teachers/coaches who are expected to implement anti-obesity policy and initiatives.

To summarise, the evidence from our research reveals that:

- schools can and do play a part, albeit unwittingly, in the development of extreme body disaffection and eating disorders

- the intensification of school work, particularly pressures relating to academic achievement and constant assessment when combined with an emphasis on the quest for corporeal perfection (a slender ideal) can seriously damage some children's health.

- damage may be done to young people's wellbeing, health and body image when information on food and diet is recycled uncritically and unthinkingly in schools.

- if taught uncritically Health Education uncritically can damage children's relationships with food and those who provide it.

- eating disorders are not irrational actions but, for some children, a radical means of regaining control over key aspects of their lives.

Whilst only relatively few young people are impelled to take dramatic action in terms of self- harm, extreme dieting or self-starvation, they vividly reveal features of contemporary school culture, that have been nurtured through recent education and health policy, to which all are subject and which generate increasing levels of less dramatic body disaffection and dissatisfaction.

Addressing Body Image and Body Confidence in Schools

Funded by the Public Engagement Unit at The University of Bath
Workshops in local schools in conjunction with

- *The Motivation Project'*, an organisation providing dance infused workshops to schools and community groups
- *Bath and North East Somerset (BANES) Council*
- Findings from an evaluation of workshops with 24 Girls aged 12-13 years in an all girls school in BANES area

Various school-based programmes are being developed to prevent eating disturbances and body image problems among young people, such as those described above. However, there is little research addressing the effectiveness of these programmes and their associated policies and practices. My ongoing research is exploring the relationship between the cultures, policies and practices of schools and young people's embodied identities/body confidence. Funded by the University of Bath, the project public engagement project drew on this research to run workshops in a local girls school to enhance body confidence. In each of the workshops, we gathered the participants views on current school practices and policies on health/body confidence. They then undertook a series of activities designed to help them critically reflect on their experience and to be develop critical skills to understand health and the body beyond appearance, size/shape and weight.

24 girls (year 8, aged 12-13) took part in workshops Participants took part in workshops facilitated by Leyla Carter of *The Motivation Project* and informed by my research. This involved a series of activities reflecting on body confidence within a range of relevant contexts (e.g. social media) and engaging with dance as a medium to explore issues of the body and enhance body image. This involved some critical engagement with social media associated imagery and body image.

A total of 4 focus groups took place over the two days of engagement activities. 2 x initial focus group to firstly discuss the participants' views on current school practices and frameworks related to body confidence. I then presented findings from 15 years of research, designed to help girls develop critical skills to understand health and the body using variables other than appearance/weight.

2 x follow up focus groups provided an opportunity for young people to discuss their experiences of the dance workshop. Addressing the need for critical interventions to engage young people, this workshop also involved young people as co-participants to inform the design of future school based policies and practices designed to enhance body confidence (thus bringing young people's voices centrally into debates).

- Both the school staff and girls participating in the project have reported that the found the workshops to be highly engaging, enjoyable and beneficial.
- The girls reported that they felt more confident as a result of the workshop
- The girls reported that they had developed a range of skills to engage more critically with health message, media imagery and health pedagogies.
- The girls had an opportunity to participate in a dance workshop with a dance company
- The workshops helped young people/schools find other ways to imagine health so that bodies are not simply read as 'other' and 'marginalised'
- Young people reported they left the workshops with a better/more critical understanding of the influence of social context of their health. This widens the focus from being about the individual to the 'socio-cultural' thus addressing the

tendency towards individualising and moralising the body and weight which leads to the blame culture that impacts on young people's embodied identities.

- Behaviour change models presuppose people have the ability/means to make healthy choices. The workshop introduced them to a framework that moves beyond transmission and behaviour change models
- Young people reported they were more aware of the complexities of the 'science' behind many of the claims about health (e.g. obesity) that are populated in the media.
- The workshops explored some the relationship between weight and ill-health as being far more complicated than is suggested in obesity discourse (e.g. Body weight is not simply a matter of individual control that can be altered through behaviour change; Significantly, any uncertainties of research are lost amongst the truth claims inherent in interventions and practices that are brought to bear on children)
- The participants were very interested in health at every size and felt this ought to be part of the school curriculum: Health at every size explores how 'health can be achieved by overweight people without dieting and weight loss' (Jonas, 2002) for whom 'self esteem' not 'fat' may be a primary concern
- The workshops empowered young people to understand and act on their own health concerns – e.g. Some girls reported that they would share what they had learned with parents.
- The overwhelming need expressed by the girls for safe spaces to discuss sensitive issues. There is a clear need for provision of this kind.
- Young people carry the burden of moving across different social contexts and navigating multiple health messages: the workshops provided an opportunity to discuss this and identify the need for support in schools to help young people navigate these spaces.
- Alongside media literacy programmes in schools, there is a clear need to develop critical approaches to digital health/social media. The young people found our exploratory workshop on this both interesting and relevant.
- For many of these girls, 'confidence' is strongly connected to healthism - individualised and understood as successfully managing self/body/health, mitigating risks and being in control: As participants commented *"She's healthy, she's not afraid to show her body. She's 15, she's confident" "She's her proper weight and she's confident in her life, quite resilient"*

What works well?

- The *range* of activities. Young people reported that they enjoyed being able to participate in a variety of activities from social media, dance activities through to discussing salient issues to them in small groups.
- The young people reported that they found the opportunity to talk particularly beneficial and would like similar activities embedded into the curriculum/school practices
- Understanding what is important to students in terms of identifying their health needs, concerns, questions (intersections of class, gender, ethnicity, religion)
- Ensuring that young people are able to articulate their own needs/health concerns first – What issues did they face? How was this influenced by class/gender etc? This enabled me to better relate and engage and adapt the workshop activities.
- There is a need to help young people to develop critical perspectives of social, cultural and political frameworks that shape health norms / policy

Digital Technologies and Body Image

Evidence taken from the following ongoing research study

2017- The Digital Health Generation The impact of 'healthy lifestyle' technologies on young people's identities and health practices.

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With Professor Deborah Lupton (University of Canberra) Professor Andy Miah (University of
Salford) and Dr Sarah Lewis (University of Bath).

Funded by the Wellcome Trust

Globally, populations are being encouraged to engage with wearable and mobile digital health technologies to acquire information/data about their bodies using processes of quantification/self-tracking and use this data to learn about their bodies, health and subsequently manage their health practices. Of particular prominence are technologies promoting healthy lifestyles, which are now a feature of preventive medicine/healthcare. Digital health technologies are revolutionising healthcare, profoundly changing Government policies and the ways that health knowledge is being created, accessed and used around the world. This includes the global wearable and mobile health industry providing the means through which people's bodies and health practices are being measured and monitored. There has been a rapid growth in what can be described as technologies that seek to improve healthy lifestyle behaviours, such as physical activity, body weight management, sleep and food consumption and which track other bodily aspects such as menstruation, fertility, sexual activity and pregnancy. Mobile and wearable devices offer a range of tools for individuals to measure, monitor and regulate their health, and provide new ways of representing the body through quantified data. A number of authors point to the overarching shift towards the personalization and individualisation of healthcare through the self-tracking functionality of digital health technologies.

These technologies raise a series of key questions and concerns in relation to young people and body image given that current generations of young people have been described as 'the app generation' (Gardner and Davis, 2013) due to the pervasiveness of digital media in their everyday life. The use of tablet computers and iPods are common in preadolescent children. The average age of ownership of a smartphone is around 11 years (GSMA and NTT Docomo, 2013; uSwitch, 2013) and many young people begin to use social media platforms around this age. Furthermore, this is a critical life period with increasing levels of independence when critical decisions around education, leisure, employment and health may be taken (Foresight, 2007).

Our current research is examining what and how people learn about their bodies and health through self-tracking and quantification and the impact this is having on their embodied identity (body image) and health practices. Specifically, the research will address major and pressing gaps in digital health knowledge, by providing unique insights into young people's (aged 13-18) experiences of digital health technologies focused on 'healthy lifestyles'. This project brings together perspectives from the fields of critical digital health, pedagogy and ethics and utilising innovative qualitative methods of data collection to examine the impact of digital health technologies on young people's health, bodies and identities and identify related inequalities and opportunities.

We are further analysing how young people are using digital technologies to find counter spaces to resist or evade particular health imperatives/messages: for example, by using particular hashtag groupings or communities (such as fat activism) on media such as Twitter, Instagram and Tumblr. Our research will generate unique insights into how access to and engagement with digital health technologies by young people is shaped by socio- cultural context (geographical, familial, spatial, religious, socoeconomic, cultural) and background (age, gender, digital experience) and identify related disparities. We will

therefore explore the experiences of young people across what Livingstone and Helsper (2007) describe as ‘a continuum of digital inclusion’.

These technologies include:

1) Mobile phone and tablet computer applications: There are over 160,000 health apps available in the app marketplace, yet it is unclear how experiences of these technologies affect wider knowledge about or engagement with personal health, nor how these might be used by a range of agents/organisations to regulate others' behaviours. Many of these apps track, monitor and regulate various aspects of a user’s lifestyle, such as physical activity, sleep, diet, exercise behaviour, body weight, alcohol and cigarette as well as body functions such as menstruation. Such apps are the largest and among the most downloaded group of health apps (Fox and Duggan, 2013; Research2Guidance, 2014) . Google announced 2014 as the year of health and fitness apps (Boxall, 2014) recording this as their fastest growing app category.

2) Wearable technologies: There is a growing range of wearable technologies available to monitor health behaviour. These include smartwatches, wristbands or patches worn on the body fitted with motion and biosensors, geolocation sensors and algorithms to track everyday activities. This wearable device market is set to grow to 485 million annual device shipments globally by 2018 (ABIResearch, 2013).

3) Social media: Platforms on which young people are discussing and learning about health issues and lifestyles e.g. Facebook, Twitter, Instagram, Tumblr, YouTube.

4) Websites: Websites remain an important information source for health behaviours. Contemporary websites often not only provide information but offer interactive features such as discussion forums, self-diagnosis tools and support groups.

There are number of key aspects of the digital technologies and body image we would like to highlight for the consideration of the committee:

The risks of social media/sharing data:

From a health perspective, there is a pressing need to identify better and potentially safer use of digital health for young people and thus a greater understanding is required of what takes place within these environments. A specific feature of digital health and the data it generates is their capacity to be shared with others, for example within social media networks, potentially leading to ‘lateral surveillance’ (Andrejevic, 2005) of each other’s bodies. As such, private and public spaces are increasingly merging and the commercialisation of personal data raise ethical concerns about young people’s privacy and the use of the data that are collected from digital health technologies. For example, the app Calorie counter and diet tracker by MyFitnessPal has a social feature to ‘connect with friends and easily track and motivate each other’ (App Descriptor). The presence of these data companies in young people’s private spaces and commercialisation of personal data raise ethical concerns about young people’s privacy and the use of the data that are collected from these devices.

Self-presentation online presents a common point of interest for researchers of social networking sites. The public sharing of information and images about one’s body and health, raises questions about potential vulnerabilities to online bullying which is a significant risk to children using the Internet in Europe (Livingstone and Haddon, 2009). This is an issue of concern, given the extent to which our other research reveals that young people’s and children’s relationships with their bodies is often troubled. On the other hand, young people may gain considerable support and emotional stability by being able to communicate with other young people who challenge norms: e.g. fat

activism and LBGTI support groups.

Young people as subjects of health surveillance:

Many health and fitness apps therefore feature a variety of functions, such as self-tracking, goals, diet and physical activity advice, social media connections and reward systems. Users learn how to look after themselves via the disciplining regularity of the device‘s presence and regular notifications to maintain their good behaviour; a trend that has been depicted in the popular press as ‘nag technology’. Devices such as wristbands and apps build a profile of the user’s lifestyle including calories consumed, activities undertaken, and number of steps walked during the day. with their accompanying processes of surveillance and evaluation, these technologies imply certain expectations of control, which are to be *learned* but also publicly displayed for evaluation by others. In this way, in the era of mobile health, these encounters with our bodies, weight and health have become more public facing, social experiences. This can lead to increasing levels of peer surveillance.

Young people are being exposed to forms of suveillance of their bodies by the user of these digital health technologies by actors or organisations who have some responsibility towards them (families, health professionals, teachers). Not only do commercial companies exploit these data for commercial gain, educational institutions and workplaces are beginning to ‘push’ people into engaging in self-tracking and using data for their own purposes (Lupton, 2014b). Young people may be particularly vulnerable to these practices where the agency and space to resist tracking and/or seek out other sources for health information may be diminished. Looking to the future, it is apparent that many of these trends are finding their way more formally into official health sites, organisations and the pedagogic practices of institutions. Over the past few years there has been an increase in the use of GPs referring patients to digital health technologies such as health or medical apps. Similarly, in the context of schooling, there is growing support for the use of ‘digital devices and software that allow students to collect, track, manipulate and share health-related data’ (Gard, 2014: 838) particularly within Health and Physical Education (HPE) (Williamson, 2015). This represents a broader trend in which schools are integrating data tracking and analytic technologies to monitor and measure student behaviours, reflecting the emergence of ‘smart schools’ (Williamson, 2014) or ‘sentient schools’ (Lupton, 2015).

Through tracking, measuring and monitoring of our bodies, complex behaviours and health practices are often reduced to data such as body mass index (BMI), calorie consumption or levels of physical activity. Such apps allow users to track their exercise behaviour, body weight, and food consumption. Data can be shared through social media and can often lead to body anxieties.

The influence of these practices for those interested in the surveillance of children’s bodies is a pressing matter for a number of reasons. As we enter this new era of health care, young people will be the first generation of digital health users. Whilst the encroachment of digital surveillance into an increasing number of everyday contexts is now well recognised, the growing use of commercialised health apps by increasingly younger people may represent the biomedicalisation of children’s bodies and it is worth highlighting some of the potential areas of concern for future consideration

- The burden of decision-making and adherence placed on children and the anxieties that might be associated with these processes through the individualisation of risk.
- Extended boundaries and forms of surveillance through the operation of health systems on children’s bodies through digital technologies
- The masking of surveillance through processes of ‘gamification’ (Whitson,

2012)

- The blurring or public and private spaces and the sharing of health information that might lead to the transformations of bodies and identities
- young people are learning to recognize themselves and/or others as good, healthy, active, desirable bodies in the pursuit of 'health' within these environments.
- Through their engagement with digital technologies children learn through these apps the moral obligations of self-transformation and individual responsibility for example towards the management of one's own weight and health.
- A further risk is that within mHealth landscapes there is the potential for nurturing disaffected relationships with the body. One such example of this is a mobile app that required users to carry out plastic surgical interventions to an avatar.

The marketing of social media/health technologies at an increasing younger age group

There is also a need to understand the role of commercial companies and families in 'pushing' digital health technologies onto young people and at an increasingly younger age; for example the first fitness band designed for children aged as young as 4-7 was launched in 2014. Our research will document the influence of particular social relationships and expectations within these different contexts, exploring how young people experience forms of digitization and self-tracking when prescribed or pushed by others. We will examine the different forms of valance this produces and document the accompanying modes of data production. There is a growing need to not only understand what takes place within these contexts but to carefully consider the risks and impacts of the digital practices whereby increasingly younger children collect, monitor and even share information about their bodies.

Children and young people's exposure to digital health technologies might not be of their choosing as they becoming increasingly embedded in the policies and practices of more formal institutions, government policies and health promotion strategies.

References used in the report

ABIResearch. (2013). Wearable computing devices, like Apple's iWatch, will exceed 485 million annual shipments ABIResearch. Available from: https://www.abiresearch.com/press/wearable-computing-devices-like-apples-iwatch-

Andrejevic, M. (2005) The work of watching one another: Lateral surveillance, risk, and governance. Surveillance 479–497

Boxall, A. (2014) 2014 is the year of health and fitness apps, says google. Available from http://www.digitaltrends.com/mobile/google-play-store-2014-most-downloaded-apps/ [accessed 11 December 2015]

Foresight (2007) Tackling Obesities: Future Choice Projects, Available from http://www.foresight.gov.uk/Obesity/[Accessed October 2015].

Fox, S. and Duggan, M. (2013) Tracking for Health. Available from http://www.pewinternet.org/2013/01/28/tracking-[accessed July 2015].

Gard, M. (2014) eHPE: a history of the future. Sport, Education and Society, 19(6): 827-845.

Gardner, H., & Davis, K. (2013). The app generation: How today's youth navigate identity, intimacy, and imagination world. New Haven: Yale University Press.

Lupton, D. (2013a) Quantifying the body: monitoring and measuring health in the age of mHealth technologies. Critical Health, 23(4): 393-403

Lupton, D. (2013b) Understanding the Human Machine [Commentary]. IEEE Technology and Society Magazine,

Lupton, D. (2014a) Beyond techno-utopia: critical approaches to digital health technologies. Societies, 4: 706-711. doi:10.3390/soc4040706

Lupton, D. (2014b, August 27). Self-tracking modes: Reflexive self-monitoring and data practices. Paper presented 'Imminent Citizenships: Personhood and Identity Politics in the Informatic Age' workshop, ANU, Canberra.

Lupton, D. (2015b) Data assemblages, sentient schools and digitised health and physical education (response to Gard). Sport, Education and Society, 20 (1) 122-132

Livingstone, S. and Haddon, L. (eds) (2009) Kids online: Opportunities and risks for children. Bristol: The Policy

Livingstone, S., and Helsper, E. (2007) Gradations in digital inclusion: children, young people and the digital divide. and Society. 9(4): 671-696

Research2Guidance (2014) mHealth App developer economics 2014: The state of the art of mHealth app publishing.

Williamson, B. (2015). Algorithmic skin: health-tracking technologies, personal analytics and the biopedagogies and physical education. Sport, Education and Society, 20(1), 133-151.

Associated reports and publications by the author and research partners

FUNDING REPORT

Rich, E., & Evans, J. (2009). The impact of the new health imperatives in schools: Full research report ESRC End of Award Report (RES-000-22-2003).

BOOKS

Evans, J., Rich, E., Davies, B., and Allwood, R. (2008) Education, Disordered eating and Obesity Discourse: Fat Fabrications. Oxon and New York: Routledge.

Miah, A., and Rich, E. (2008) The Medicalization of Cyberspace. Oxon and New York: Routledge.
(website: http://medicalizationofcyberspace.wordpress.com/)

EDITED BOOKS

Rich, E., Monaghan, L. and Aphramor, L. (Eds) (2010) Debating Obesity: Critical Perspectives. Palgrave

Macmillan. ACADEMIC

JOURNAL ARTICLES

Silk, M., Millington, B., Rich, E., and Bush, A. (2016) (Re)thinking digital leisure. *Leisure*

Studies. DOI: 10.1080/02614367.2016.1240223

Rich, E., and Miah, A., (2017) Mobile, wearable and ingestible health technologies: Towards a critical research agenda. *Health Sociology Review.* 26(1): 84-97

Rich, E., De Pian, L., and Francombe-Webb, J. (2015) Physical cultures of stigmatisation: health policy and social class. *Sociological Research Online*, 20(2): 10. DOI: 10.5153/sro.3613

Miah, A., and Rich, E. (2015) Digital health: Medicine, Methods and Mobile Devices. Editorial for *Salute e Soceità, the Italian Journal of Sociology of Health*.

Rich, E., and Miah, A. (2014) Understanding digital health as public pedagogy: A critical framework. *Societies*, 4: 296-315.

Mansfield, L., and Rich, E. (2013) Public health pedagogy, border crossings and physical activity at every size. *Critical Public Health*, 23(2): 356-370

Evans, J., Davies, B., Rich, E., De Pian, L. (2013) Understanding policy: why health education is important and why it does not appear to work. *British Educational Research Journal*, 39(2): 320-337

Rich, E., and Evans, J. (2013) Changing times, future bodies? The significance of health in young women's imagined futures. *Pedagogy, Culture and Society*, 21(1): 5-22

Wright, J., Burrows, L., and Rich, E. (2012) Health imperatives in primary schools across three countries: intersections of class, culture and subjectivity. *Discourse: Studies in the Cultural Politics of Education,* 33(5): 673-691

Rich, E. (2012) Beyond school boundaries: new health imperatives, families and schools. *Discourse: Studies in the Cultural Politics of Education*, 33(5): 635-654

Evans, J and Rich, E (2011) Body polices and body pedagogies: every child matters in totally pedagogised schools. *Journal of Education Policy*, 26(3): 361-379

Evans, J., Rich, E., De-Pian, L., and Davies, B. (2011) Health imperatives, policy and the corporeal device: schools, subjectivity and children's health. *Policy Futures in Education*,
9(3) 328-340

Rich, E (2011) Exploring the relationship between pedagogy and physical cultural studies: the case of new health imperatives in schools. *Sociology of Sport Journal*, 28(1): 64-84

Rich, E (2011) 'I see her being obesed!': Public pedagogy, reality media and the obesity crisis. '*Health': An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine*, 15(1): 3-21

Rich, E. (2010) Obesity assemblages and surveillance in schools. *International Journal of Qualitative Studies in Education*, 23(7): 803-821

Rich, E., and Perhamus, L.M (2010) Health Surveillance, the body and schooling. *International Journal of Qualitative Studies in Education*, 23(7): 759-764

Rich, E (2010) Body Pedagogies, education and health. *Sport, Education and Society*, 15(2):
147-150

Evans, J., Rich, E., and Davies, B. (2009) The body made flesh: embodied learning and the corporeal device. *British Journal of Sociology of Education*, 30(4): 391-406

Rich, E., and Miah, A. (2009) prosthetic surveillance: the medical governance of healthy bodies in cyberspace, *Surveillance and Society*, 20, Feb 2009. (online)

Rich, E. and Evans, J. (2009) Now I am NO-body, see me for who I am: The paradox of performativity. *Gender and Education*, 21(1): 1-16

Evans, J., Rich, E., and Davies (2008) Health education or weight management in schools?
Physical Education Matters (official journal of the AfPE), 3(1): 28-33

Evans, J., Rich, E., Davies, B and Allwood, R. (2008) The class and cultural functions of obesity discourse: our latter day child saving movement. *International Studies in Sociology of Education*, 18(2): 117-132

Evans, J., Rich, E., Allwood, R., and Davies, B. (2008) Body pedagogies, p/policy, health and gender. *British Educational Research Journal*, 34(3): 387-402

Rich, E., and Evans, J. (2007) Re-reading voice: Young women, anorexia and performative education. *Junctures: The Journal for thematic dialogue*, 9: 39 54

Rich, E. (2006) Anorexic (dis)connection. *Sociology of Health and Illness*, 28(3): 284-305

Rich, E and Evans, J. (2005) 'Fat ethics' – the obesity discourse and body politics. *Social Theory and Health*, 3(4): 341-358

Evans, J., Rich, E., Allwood, R., and Davies, B. (2005) Fat fabrications. *The British Journal of Teaching Physical Education*, 36(4) Winter 2005: 18-21

Rich, E., and Evans, J. (2005) making sense of eating disorders in schools. *Discourse: Studies in the Cultural Politics of Education*, 26 (2): 247-262

Evans, J., Rich, E., Davies, B and Allwood, R. (2005) The embodiment of learning: what the sociology of education doesn't say about 'risk' in going to school. *International Studies in the Sociology of Education*, 15(2): 129-149

Evans, J., Rich, E., and Davies, B., (2004) The emperor's new clothes: fat, thin and overweight. the social fabrication of risk and ill-health. *Journal of Teaching in Physical Education*, 23(4): 372-391

Evans, J., Rich, E., and Holroyd, R. (2004) disordered eating and disordered schooling: what schools do to middle class girls. *British Journal of Sociology of Education*. 25(2): 123-142

Evans, J, Evans, B, Rich, E. (2003) 'the only problem is they will like their chips': education and the discursive production of ill-health'. *Pedagogy, Culture and Society*, 11(2): 215-241

Evans, J., Evans, B., & Rich, E. (2002). Eating disorders and comprehensive ideals. *Forum for Promoting 3-19 Comprehensive Education*, 44(2): 59-65.

EDITED WORKS / BOOK CHAPTERS

Rich, E. (in press) Healthism, girl's embodiment and contemporary health and physical education: from weight management to digital practices of optimisation. In L.Mansfield, J.Caudwell, B.Wheaton and R.Watson (Eds) *The palgrave handbook of feminisms in sport, leisure and physical education.*

Rich, E. (2017) Childhood, surveillance and mHealth technologies. In E.Taylor and T.Rooney (Eds) *Surveillance Futures: Social and ethical implications of new technologies for children and young people.* Ashgate. 132-146

Rich, E. (2016) Troubling obesity discourse through public pedagogy. In E.Cameron and C.Russell (Eds) *The fat pedagogy reader: Challenging weight based oppression in education*. Counterpoints series. Peter Lang Publishers.

Rich, E. and Evans, J. (2015) Where's the pleasure? Exploring the meanings and experiences of pleasure in school based food pedagogies. In E. Swann and R.Flowers (Eds) *Food Pedagogies*. London: Ashgate.

De Pian, L., Evans., J & Rich., E. (2014) Mediating bio-bower: education, organisational culture, class and subjectivity. In K.Fitzpatrick and R.Tinning (Eds) *Health Education: Critical Perspectives* London: Routledge. 129-141

Rich, E., and Evans, J. (2013) physical culture, pedagogies of health and the gendered body. In D.Andrews and B.Carrington (eds) *A Companion to Sport*. Blackwell (Blackwell companions in cultural studies) 179-195

Rich, E (2012) It's not for the school to tell us Charlie.. After all, to us you are healthy big. In F.Dowling, A.Flintoff and H.Fitzgerald (Eds) *Stories of Difference in Physical Education, Youth Sport and Health*. Routledge: Oxon and New York. 119-123

Rich, E., Evans, J., and De-Pian, L. (2010) Obesity, body pedagogies and young women's engagement with exercise. In E.Kennedy and P.Marjula (Eds) *Women and Exercise: The Body, Health and Consumerism*. Oxon and New York: Routledge. 138-158

Rich, E., Evans, J., and De-Pian, L. (2011) Children's' bodies, surveillance and the obesity crisis. In E.Rich, L.F.Monaghan and L.Aphramor (Eds) *Debating Obesity: Critical Perspectives*. Palgrave. 139-163

Evans, J., Rich, E., and Davies, B. (2011) Critical health pedagogies: Whose body is it anyway? In K.Armour,(Ed) *Sport Pedagogy: An introduction for teaching and coaching*. Pearson Education Ltd, 65-76.

Evans, J., Davies, B., and Rich, E. (2011) Berstein, body pedagogies and the corporeal device. In G.Ivinson, B.Davies and J.Fitz (Eds). *Knowledge and Identity: Concepts and Applications in Berstein's Sociology*. London, Routledge. 176-190

Miah, A., and Rich, E. (2010) The bioethics of cybermedicalization. In P.K. Nayar (Ed) *The New Media and Cybercultures Anthology*. Wiley-Blackwell: 209-220

Rich, E., and Miah, A (2010) The body, health and illness. In D.Albertazzi and P. Cobley (Eds). *The Media: An Introduction 3rd Edition*. Pearson. 485-504

Evans, J. Rich, E., and Davies, B (2010) Schooling the body in a performative culture. In M.Apple, S. Ball and L. Armando Gandin (Eds). *The Routledge International Handbook of the Sociology of Education.* Oxon and New York: Routledge, 200-212.

Rich, E., and Evans, J (2009) performative health in schools: welfare policy, neoliberlism and social regulation? In J. Wright and V.Harwood (Eds) *Biopolitics and the Obesity Epidemic*: *Governing Bodies.* Oxon and New York: Routledege. 157-171

Rich, E., and Evans, J. (2007) Learning to be healthy, dying to be thin: Construction, representations and production of 'healthy children' in schools. In S.Riley, M.Burns, H.Frith, S.Wiggins and P.Markula (Eds) *Critical Bodies: Representations, practice and identities of weight and body management*. Basingstoke: Palgrave Macmillan. 60-76

Evans, J, Rich, E, Allwood, R. & Davies, B (2007) Being 'able' in a performative culture, in I.Wellard (Ed), *Re-thinking Gender and Youth Sport* , Routledge, London: Routledge. 51-67

Rich, E., Harjunen, H., and Evans, J. (2006) Normal gone bad' – Health Discourses, Schools and the Female Body. In P.Twohig and V.Kalitzkus (Eds) *Bordering Biomedicine Interdisciplinary Perspectives on Health, Illness and Disease.* Rodopi

Rich, E., Holroyd, R., Evans, J. (2004) hungry to be noticed: young women, anorexia and schooling, in J.Evans, B.Davies and J.Wright (Eds). *Body Knowledge and Control*. London and New York: Routledge. 173-190