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Halting the rise of Obesity: making every clinical contact count

Policy Briefing

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Abstract

Obesity is a major 21st century health challenge, contributing to chronic illnesses and presents a serious threat to world health. Obesity is associated with more deaths than underweight/malnutrition, imposing a serious financial burden on struggling health services. Northern Ireland has 63% prevalence of adult overweight/obesity and reduction is a priority in the HSC Commissioning Plan Direction 2016/17. Global, national and local guidelines aim to halt its rise by 2025; yet no country is on track to achieve these. Current obesity reduction strategies are failing; with professionals challenged to promote best practice. Disengaged patients and clinicians are potential barriers to implementing effective strategies. This paper presents an innovative body of research which is aimed at activating patients and engaging clinicians in obesity management. Our approach breaks new ground and contributes to the development and implementation of Northern Ireland's 'Fitter Future for All' framework and future policies to reduce obesity and associated health care costs. This work is timely with the chief nurses of the 5 countries including the republic of Ireland calling for professional action on obesity reduction as a priority.

Introduction:

Obesity as defined by a BMI over 30kg/m² is a global health challenge and is associated with more deaths than underweight or malnutrition and imposes a financial burden on struggling health services (World Health Organisation (WHO) 2014, Harvard 2015, NCH 2016). In excess of 36 million yearly global deaths (65% of all deaths) are caused by illnesses such as cardiovascular and pulmonary diseases, diabetes, and cancer, with obesity a major contributing factor (WHO 2013). Indeed, it has been recognised worldwide that unhealthy diets and lack of exercise have displaced tobacco as the foremost cause of preventable death (World Obesity Federation (WOF) 2014, Global BMI Mortality Collaboration 2016). Thus, the obesity pandemic simultaneously

compromises individual health and societal welfare programmes (Organization for Economic Cooperation and Development (OECD) 2014, WOF 2014, NCH 2016). Current strategies to reduce obesity are failing to have a significant impact (RCP 2013, Academy of Medical Royal colleges (AMRC) 2014, Kaplan et al., 2018) consequently obesity management is under scrutiny to promote best practice. The paucity of research in this area has resulted in a state of uncertainty regarding best practices leading to calls from influential groups (RCP 2013, AMRC 2014, WHO 2014, WOF 2014, Kaplan et al., 2018) to undertake research with clinicians to enhance obesity management. A Cochran systematic review recognised there is a scarcity of research to support the implementation of effective tactics in practice increasing the challenges in helping patients with overweight or obesity achieve weight loss (Flodgren et al., 2010). They conclude that obesity management is inconsistent in practice, and advise that innovative research based strategies need to be implemented to improve the prevention and treatment of obesity. This conclusion was also evident to the RCP (2013) working party when collecting evidence for 'Action on Obesity: Comprehensive Care for All' as they cite clinical practice with established obesity is '*extremely patchy*'. Likewise, in 'Measuring Up' the 'Medical Professions Prescription for The Nations Obesity Crisis report (AMRC 2014) it is identified "*current strategies to reduce obesity are failing to have a significant impact*" (pg11). In a recent study Kaplan et al., (2018) concluded there remains '*inconsistent understanding of the impact of obesity and need for both self-directed and medical management*'(pg 61).

Obesity in Northern Ireland (NI)

Obesity is now pandemic, prevalent across all age groups and all social classes, identifying it as a significant public global health threat. The 2016-17 NI Health survey determined 63% of adults were overweight or obese with an economic cost of £370 million to the NI economy (Perry et al. 2012). The presence of obesity increases the risk of coronary heart disease which is the leading single cause of death in NI. Furthermore, there are in excess of 85,000 citizens in NI with diabetes with ongoing yearly increases > 3,000 projected. Type 2 diabetes is linked with obesity and accounts for 90% of diabetes cases in NI. Alongside the health and economic cost to the individual of living with these obesity related conditions the health and social care system has a finite budget and is under increasing pressure to deliver an effective service. Thus highlighting the urgency to improve obesity management strategies. The NI obesity prevention framework, '*A Fitter Future for All 2012-2022*' (AFFFA 2012), The National Service Frameworks for Cardiovascular Health & Wellbeing (2014-17) and Diabetes (2010) acknowledges obesity related morbidity mortality and have set targets for obesity reduction. These strategies aim to empower individuals to make healthy choices, reduce the risk of obesity related diseases and improve health ultimately 'Making Life Better' which is the NI Executive's ten-year public health strategic framework. Yet despite global, UK and local obesity reduction strategies no single nation has turned around the obesity epidemic (WHO 2013, DOHSSPS 2015).

Clinical Practice –what is known?

Strategies which will make every clinical contact count with obesity management need to be implemented (RCP 2013, AMRC 2014, WHO 2014), however there is a scarcity of research evidence illuminating what these strategies might be. There is an emerging evidence base indicating patients' lack of motivation impacts negatively on clinician motivation decreasing the likelihood of clinicians discussing and managing weight (Grave et al., 2013, Kloek et al., 2014, McAloon et al., 2015, Kaplan et al., 2018). Additionally, the focus of obesity management consultations has been reported as taking a technical practice style with less emotional rapport with patients with obesity than for normal weight patients (Bertakis et al., 2005, Gudzone et al., 2013). It is reasonable to suggest that demotivated clinicians adopting technical styles present barriers to effective obesity management. The acquisition of appropriate attitudes and clinical skills are crucial for effective obesity management, yet education and training is insufficient (Pollack et al., 2011, RCP 2013, AMRC 2014).

Health care professionals are recommended to make every clinical contact count with obesity management through routinely speaking to patients with overweight and or obesity about diet and exercise habits at each appointment and offering help (RCP 2013, AMRC 2014, NICE 2014, NICE 2016). Historically such healthcare advice was not routinely offered (Michie 2007, Clune et al., 2010). The first step towards obesity reduction is engagement between clinicians and patients enabling weight management conversations to occur as research has established clinician engagement with weight management increases motivation to lose weight and weight loss behaviour (Rose et al., 2013, Jackson et al., 2014, AMRC 2014). Engagement can be demonstrated

through appropriate discussions and referral practices. Moreover, Kaplan and colleagues (2018) argue clinicians need to be encouraged to plan for follow up visits focusing on the obesity diagnosis and supporting patients to keep appointments. Indeed, robust evidence (Logue et al., 2014) has demonstrated that referral to routine NHS weight management services achieved moderate weight losses, they evidenced that 54% of participants achieved at least 5kgs weight loss at 12 months. Therefore, referral to weight management programmes has proven efficacy.

Obesity represents an immense global challenge and impacts on longevity, health, productivity, and quality of life. Illnesses and complications arising from obesity are a source of vast human and financial loss. Clinicians face a very significant challenge as they work with patients with obesity and often report fatigue and demotivation as they reflect on previous failures or patients' attrition from weight loss programmes. The potential for this clinical demotivation to impact on obesity management was the impetus for my doctoral research which investigated the motivation, and clinical decision-making of nurses, doctors, and dietitians working with patients with obesity and chronic illness.

Doctoral Study:

In the context of calls for action to improve obesity management my doctoral study aimed to establish and compare the obesity attitudes of qualified and student nurses, doctors and dietitians across varied clinical settings and to explore the influence of these attitudes on practice.

Data collection methods: 3 innovative data collection tools were operationalized within a virtual research environment which was specifically designed to evaluate hard to reach or implicit attitudes and the influence on clinical decision making. To establish such an environment, a collaborative relationship was instituted with Project Implicit (www.implicit.harvard.edu) a not for profit research laboratory with expertise created by researchers in the USA from Harvard University, University of Washington and University of Virginia. **Tool one** was 8 Factorial Survey Design (FSD) vignettes presenting virtual patients with obesity and chronic illness, **tool two** was a brief questionnaire consisting of validated explicit weight related questions and demographics and **tool three** was the validated weight Implicit Association Test (IAT). Although vignettes are not the same as actual practice their use to replicate the reality of practice is validated with studies illustrating that vignettes are a valid measure of what clinicians do during clinical practice (Peabody et al., 2004, Veloski et al., 2005, Shah et al., 2007, Rousseau et al., 2015). Data collection took place in the WHSCT, BHSCT, Ulster University and Queens University. Approvals were obtained from a national ethics committee, two universities ethics filter committees and the health and social care trusts (HSCT) governance processes. On-line participation was voluntary and anonymous with no identifiable data collected with participation indicating consent.

Results

Participant Demographics: The demographic breakdown of the participants (n=427) indicated the majority had a nursing background (48%), were predominately female (79%) were qualified clinicians (59%) and with 49% of the sample having more than 10 years' experience. There was a diversity of clinical practice specialities represented citing more than 17 clinical variations. The mean calculated BMI for all respondents was 25 kg/m² (SD=5.27). The distribution of actual BMI classification was 3% underweight, 58% normal weight, 26% pre-obese and 13% obese (class I-III). Pre-obesity and obesity were more prevalent in men. Normal weight was more common in the 18-48-year age group. Pre-obesity levels rose after this age with pre-obesity equal with normal weight in 59-68 year olds. Normal weight was most common in all professional groups. Pre-obesity occurred in all groups. The combined classifications of pre-obesity and obesity were highest in nursing. Seventy-nine percent of the sample were able to correctly classified their own BMI, with inaccuracies occurring between the boundaries of normal weight versus pre-obesity and pre-obesity versus obesity. Of the inaccurate classifications 43% were underestimated.

Participant Obesity Attitudes: Self-reports of affinity with people with obesity indicated 214(54%) held a moderate – strong affinity. Females reported more affinity. Higher affinity was related to increasing levels of personal BMI in general and females with high BMI's reported the highest levels of affinity. Both qualified and student nurses expressed higher levels of affinity than other professional groups. Participant age and level of clinical experience did not influence affinity scores.

A perceived societal preference for thin people was present with 284 (72%) participants indicating most people would prefer thin people. Participant BMI influenced perception of societal preferences. Eighty-six percent of the obese group perceived a preference for thinness. Preference perception was not influenced by participant gender, age, professional group or experience.

A strong implicit anti-fat attitude was prevalent in the sample. Three hundred and five participants (91%) indicated moderate to strong “anti-fat” attitudes. This bias existed irrespective of discipline, level of experience or clinical environment. No personal characteristic, including being obese, influenced implicit “anti-fat” bias. This is a similar prevalence to that found in general population samples.

Three key clinician behaviours relevant to obesity management were identified from the current obesity literature. These were selected as the study outcomes relevant to clinical practice and were: motivation to treat, likelihood to discuss weight and time spent with the patient as opposed other patients. It was recognised that both the characteristics of the participant (clinician) and the virtual patient potentially could influence these outcomes consequently both sets of characteristics were examined for statistical significance.

Participant characteristics influencing practice:

Age influenced reported motivation to treat with those between 39-58 years of age most motivated but this declined with increasing age. Dietitians and medical staff were more motivated than nurses. Novice clinicians within the first 5 years of practice were less likely to discuss weight; however, the likelihood increased with experience and was at its peak for those with 10-15 years' experience. Differences were noted between professional groups when spending time with patients, with dietetic staff spending more time with patients than other groups. Additionally, participant level of experience significantly influence how much time was spent with patients with obesity, those in the first 10 years of practice spent less time but with increased experience more time was spent with the patient.

Patient characteristics influencing practice:

Clinicians are motivated to work with patients with a rising BMI, but if the patient is unconcerned or does not attend scheduled appointments that motivation is reduced. With a rising patient BMI clinicians were more likely to discuss weight management. They were also more likely to engage with weight management when there are large amounts of weight lost or gained. Clinicians were less likely to discuss weight management with patients irrespective of the BMI or weight change, if the patient was unconcerned about their weight. An increasing BMI meant more time was spent with the patient; however, less time was spent with those patients with modest weight loss or weight stability. Despite the influence of other variables if the patient is unconcerned about their weight less time was spent with them.

Clinical Significance

1. The finding that the presence of anti-fat attitudes does not preclude the ability of clinicians to express affinity with people with obesity is a previously under reported relationship and is hopeful for improving practice.
2. Lack of patient motivation altered clinician behaviour and lead to reduced motivation, decreased likelihood of discussing weight and spending less time with the patient. Hence tangible patient engagement with weight management appears central to engaged clinicians. However patient ambivalence may be a self defence mechanism in response to perceived stigmatisation, therefore clinicians' awareness of this potential needs to increase and rather than disengaging, clinicians need to help patients understand influences on their motivation to change.
3. The screening of all patients for overweight/obesity and the instigation of appropriate interventions including discussing weight management and referrals are strongly recommended. Yet this is often absent in practice. Within my study clinicians only reported intervening when large amounts of weight were gained or lost. Weight management strategies need to be implemented with all patients with

- overweight, early intervention may prevent patients progressing to the obese category and decrease the associated morbidity related health care needs and costs.
4. Clinician non-engagement contributes to patient perceptions of being judged which the literature cites as a reason patients do not initiate discussions on weight management with clinicians. However, there is substantial evidence that such discussions with clinician's increases patients' desire and attempts to lose weight. It is clear that patients are unlikely to initiate such discussions therefore clinicians need to proactively take the lead to commence these discussions.
 5. 21% of my participants incorrectly classified their own BMI, with 43% of that 21% underestimating their weight. If clinicians cannot correctly interpret weight boundaries it is unlikely they will implement timely clinical interventions and follow up for weight management. Hence this finding highlights this is an area of practice that needs developed through suitable training.
 6. Nurses reported the highest levels of affinity, they also had the highest combined level of overweight/obesity which may increase affinity. However, we should be concerned about the prevalence of pre-obesity/obesity in a professional healthcare population as this may interfere with role modelling of healthy behaviour. Consequently, intervention strategies should support and motivate clinicians to engage with obesity management, including their own.
 7. Accordingly, the two clinical practice conclusions drawn from consideration of my findings aligned with available literature is we need to both activate patients and engage clinicians to improve obesity management strategies.

Contributions Made to the Field: My study addressed the current deficit in obesity management research through both documenting the attitudes of a multi-professional sample of clinicians to obesity and uncovering the influences of these attitudes on clinical practice. Hence my data both extended prior knowledge regarding clinician attitudes and generated new knowledge regarding their influence on clinical behaviour. These data are crucial to support the first steps towards obesity reduction which is engagement between clinicians and patients enabling conversations regarding weight management to occur.

Post-Doctoral Activity: The doctoral study has led to the development of a body of research to improve obesity management.

1. Activating patients: To engage the public in debating obesity management and enhance future research protocols we actively recruited people with obesity as personal and public involvement (PPI) members of our multidisciplinary research team. Additionally, Economic and Social Research Council (ESRC) and HSC Research and Development (R&D) funding was secured to develop and present a novel interactive theatre event in the MAC Belfast in 2016 as part of the Festival of Social Science. Participating in the festival presented the opportunity for societal engagement to debate obesity research with the public with the potential to impact on both societal wellbeing and the economy.

Research has shown that the discussion of weight management is unlikely to happen during many clinical encounters between nurses, doctors, dietitians and patients but yet such discussions increase the likelihood of successful weight loss. The aim of our experiential theatre event was to promote public engagement with the need to discuss obesity and explore barriers to such discussions from the perspective of the public and clinician. The researchers and PPI members collaborated with the AFTAThought Consultancy Company UK to produce a piece of performance art through applying drama techniques which optimised public awareness of the need to discuss obesity and clinicians' skills in doing so. Audience participation was facilitated to explore the potential impact and possible resolution of identified barriers. The event was attended by a mixture of the public and health care professionals some of whom were themselves experiencing overweight/obesity.

Evaluation by attendees highlighted this unique event had a twofold impact. Firstly, it provided an opportunity for the general public and clinicians to reflect upon their individual situation and discuss barriers to reducing this serious threat to their personal health. Secondly such events which increase the self-awareness of all parties have the potential to enhance the likelihood of clinician's and patient's having enabling conversations regarding weight management. More opportunities for societal debate were called for. Thus this innovative event

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contributed to dissemination of available research to inform best clinical practice, engage PPI members in the processes and built research capacity through the implementation of a novel dissemination method.

2. Engaging Clinicians: A large multidisciplinary, multi organisational research team including PPI members has been established. A multicentre RCT is planned to develop/test an intervention to improve clinician engagement with obesity management. To assist in development of this RCT in 2017 a HSC R&D enabling grant was successfully secured to collect preliminary data. This will support a National Institute Health Research (NIHR) grant application in 2018. The body of work will seek to increase the public and clinician awareness of the need to discuss obesity and develop/test an intervention to improve clinician engagement with obesity management.

Conclusions

The paucity of research in this area has resulted in a state of uncertainty regarding best practices with obesity management which impinges upon '*making every contact count*'. It is timely and consistent with the calls for action from influential groups to undertake a body of research which will support patients and clinicians to engage effectively with obesity management. Thus my doctoral study and our obesity programme of work is generating empirical evidence contributing to the implementation of 'Transforming Your Care' agendas and future policies to reduce obesity and associated health care costs.

Research team

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Post-Doctoral Study:

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