PhD Project Proposal - A prospective mixed method study of person-centred care in a community weight management programme

1.Background to the study

Obesity has become one of the biggest health concerns in the UK. Obesity has multiple origins, is strongly associated with deprivation, and gives rise to both personal and medical consequences through a diverse range of medical and psychosocial comorbidities. There is strong evidence that most of the medical and psychosocial comorbidity of obesity is substantially improved by weight loss. In view of the complex nature of obesity, the development of the evidence base and implementation of treatment for obesity has posed a considerable challenge in societies and health systems. Traditional approaches to obesity treatment have usually been limited by the "one size fits all" nature of individual interventions and a limited menu of these interventions. Currently, there is evidence to support the use of a variety of interventions, including some diets (1), physical activity (2) and surgery (3). The pharmacotherapy of obesity is currently problematic because of safety concerns that have led to the withdrawal of several drugs (4).

Inequalities of access, variation of initial responses to treatment and/or weight relapse are frequent challenges in weight management programs, with outcomes tending to be good in motivated individuals with access to support. Factors associated with sustained weight loss include motivation, treatments of long duration, physical activity, self-monitoring and social support. Conversely, factors associated with poorer outcomes include low socioeconomic status, hunger, dietary restraint and eating disorders (5). Health inequalities appear to be strongly associated with obesity and act as barriers to limit access to help. Although there has been widespread interest in application of the stages of change model to weight management, a recent systematic review found very limited, low quality evidence of the superiority of this over standard dietary and exercise approaches (6). Anecdotally, patients attending weight management clinics have often commented on the good and the bad, but there has been no systematic attempt to determine whether person-centredness might be an important ingredient of successful weight loss programs.

The extent of obesity-related multi-morbidity is often not fully recognised (7). People attending for assessment of serious and complex obesity and/or bariatric surgery carry large burdens of comorbidity. When the extent of this multi-morbidity is recognized, medical care usually fragments into multiple specialty-based approaches, and while the aetiological role of obesity is often acknowledged, there is a systematic failure to tackle this central underlying problem. Examples include diabetes, cardiovascular disease, depression, infertility, sleep apnoea and musculoskeletal problems.

As a result of the above considerations it is widely recognized that a multidisciplinary approach to obesity is appropriate, and this is reflected in current NICE guidance (8). Plymouth weight management clinic (WMC) was commissioned in 2006 and now sees 500-600 new patients per year. The service is community-based in the deprived area of Devonport which has high levels of obesity-related health problems. The service is about to be expanded to provide care for South Hams and East Cornwall. The clinic provides community-based assessment and treatment for people with BMI>40, or >35 with obesity-related comorbidity. The programme works on an opt-in basis, and offers a 2 year programme of treatment using a combination of one-to-one and group interventions. The components of the intervention have been built up and are based upon the principles of behaviour change, incorporating bariatric surgery when that is agreed appropriate.

While the Plymouth WMC was not explicitly designed to be person-centred, many person-centred features have nevertheless been intentionally incorporated, so that the clinic offers a multicomponent intervention that is responsive to the needs of individuals and the community. Person-centred consultations, incorporating motivational interviewing methods (9) are combined with a range of group educational activities. However, as highlighted by Foster (9) the real-world generalisability of "person-centredness" in weight loss programmes is largely unknown. Important questions about the Plymouth WMC population and intervention remain. These include the exact nature of the inequalities facing this patient group, the barriers they face in being referred, factors associated with retention and completion of the programme, lack of integration and coordination between the clinicians they have contact with, clinic and individual factors associated with favourable and less favourable outcomes, the individual efficacy of each component of the intervention and how it is delivered. The mechanisms, including consultation style, through which interventions promote behavioural change and whether additional person-centred

interventions could further optimise patient outcomes and what person-centred outcomes should be measured, are also of particular interest.

This PhD project will explore these fundamental questions using a mixed method design to describe the experience of people attending the WMC, investigate the uptake and person-centredness of the various interventions used by patients, their perceived worth and contribution to outcomes, and probe the mechanisms through which these interventions contribute to the process of behavioural change - from a person-centred perspective. The overall goal of the research is to define person-centredness and its potential value in treatment, in the context of weight management, and to extract principles that could be generalized.

2. Problem or issue to be investigated

While obesity has been embraced as a serious public health and personal medical concern, leading to policy documents to steer NHS provision (10), the optimum structures and underpinning philosophies for optimal treatment of established obesity are far less well described. We propose a theoretical model that postulates person-centredness understood within a person's immediate socio-cultural-geographical constraints and enablers, and normative experiences, to be the pivotal requirement to optimise individual outcomes and response rates of weight loss interventions:

- **Seeking help:** Obesity as a heath concern is often neglected because of a lack of person-centredness. Taking the decision to seek professional help to lose weight depends on personal perception that weight has become a problem, motivation to address the perceived problem, shared decision-making with a health professional, and assumes that appropriate interventions are available. Alternatively, sometimes the issue of weight is raised initially by a health professional. Increasing the person-centredness of approaches to identifying and referring people who would benefit from weight loss would reduce barriers and selection bias associated with health inequalities and variations in care, which currently restrict and delay access to services
- **Starting to change:** Greater person-centredness of interventions, methods of delivery, consultation styles and motivational methods that patients see as both directly relevant to their individual needs and can realistically engage with, are more likely to lead to better engagement, retention and behavioural change
- **Retention and relapse prevention:** High levels of engagement and retention lead to sustained progress from both the health service and person-centred perspective
- **Optimum outcomes:** The person-centred, as opposed to disease-centred approach to treating obesity is likely to optimize outcomes from all interventions. This would optimize cost-efficiency and may be a generalisable principle for the design of weight management services.

3. Hypothesis, aims and objectives

Hypothesis:

A person-centred approach to weight management can reduce barriers of access to care, by acknowledging, identifying and systematically addressing the multiple origins of obesity and tailoring individualized care from a flexible menu of evidence-based interventions. Optimally person-centred models of care would maximise engagement and retention in, and outcomes from weight management interventions in a sustainable way, and therefore are more likely to provide a more effective long term approach to obesity-related ill health.

Aims:

1) To contribute a rich narrative understanding of how personal, familial, socio-cultural and environmental factors contribute to obesity and perceptions towards the WMC and care.

2) To identify principles of person-centred care in weight management based on WMC practice that can be generalised.

Objectives:

1) Provide a review of the national literature on person-centred care in weight management to contextualise WMC practice.

2) Provide a rapid ethnographic analysis of the local WMC to explore person-centred practice.

3) Describe the social, cultural and clinical frameworks for individuals with obesity and explore how these factors relate to perceptions of health and identity or facilitate access to help with weight control and investigate how these barriers could be overcome.

4) Undertake qualitative semi-structured interviews focusing on the experience of WMC care and employ these findings to contextualise outcomes by typology response type.

5) To develop a set of testable, generalizable and practical principles for person-centred weight management that will be partly informed by working with a PPI group and practitioners. *(241 words)*

4. Proposed methodology

This sequential mixed methods study will use a range of qualitative and quantitative methods to meet the objectives specified above. The qualitative and quantitative methods will be equally weighted. A patient and public involvement group will be set up at an early stage in the PhD and consulted throughout to provide advice for various aspects of the research project.

Study 1: (Objective 1 and 2) Contextualisation of the WMC through a literature review and rapid ethnographic assessment.

Literature review:

A structured narrative review of the social and health science literature will be conducted to identify the drivers of obesity and interventions to reduce weight in obese populations. This will identify the theoretical and research context of the work proposed for the PhD, examining which factors related to person-centred care are the strongest predictors of outcome in relation to weight reduction strategies.

Rapid Ethnographic Assessment of Practice:

A rapid ethnographic assessment of practice (RAP) (11) at the WMC (12 weeks) will be carried out to build a description of components of treatment, with particular regard to person-centred care. Approximately 5-8 observations of treatment sessions and approximately 3-5 discussions with key staff members will be carried out. The methods used will be tailored to include the wishes of patients and staff, the constraints of local conditions and ethical considerations. The results from the rapid ethnographic assessment of practice and process will help provide an understanding of how person-centred care in weight management is implemented in WMC.

Study 2: (Objective 3) Narratives of Obesity.

Narrative Interviews and Experiences of Care Interviews:

A sample of 20 individuals will be recruited from newly referred patients attending the WMC to participate in narrative interviews. The sample will be purposively selected to represent the socio-demographic spread of the area served by the WMC, to ensure representation from across the life span, social class, gender and ethnic group. Interviews will use a narrative structure to explore the person in their social context and their journey to the point of referral to the WMC. These interviews will explore formative life events, attitudes to self, health and illness and how explanatory models (EMs) are formed, shaped and challenged by family, immediate social context and other normative beliefs around self-image, weight and weight management. The interviews will also explore experiences of healthcare fragmentation and the potential of person-centred care to reduce this (what key components are necessary). Narrative interviews have been selected to reflect the importance of understanding the person in the context of their life and their socio-cultural setting, which is central to a person-centred approach to integrated care (cf. House of Care Model, 12). This approach will help explore pathways to obesity and identify why and how potential WMC strategies succeed or fail to achieve weight management goals. The results from the depth analysis will be used to develop a typology of patient response types that will be tracked in relation to the effects of the WMC intervention.

Study 3: (Objective 4) Response Typologies and Experiences of WMC Care.

An exploratory study of the WMC will be conducted following up a random sample (n. 60) of newly referred people entering the clinic between months 16-18 of this PhD. Those selected will be subject to a semi-structured interview at baseline to match to response type developed from the narrative interviews developed from study 2. Baseline structured data will be collected and compared at follow-up (3 months) and end point 1 (6 months or drop out prior to 6 months). The quantitative outcome measures will include routinely collected measures of weight and BMI, whether the individual met their own weight-loss goal or not, as well as validated patient reported outcome measures including generic (e.g. SF36) and disease specific (e.g. IW QoL) measures of quality of life, and mood (e.g. BDI or PHQ-9), as well as psychological process measures (e.g. self-efficacy, motivation and expectation of weight change) associated with weight loss. The literature review, constraints of local practice and considerations of research burden for the participants will help determine the specific outcome measures used. We will also explore the experiences of care in a sample of these individuals (n. 20) by carrying out semi-structured qualitative interviews at 3 and 6 month follow-ups.

Analysis

Study 1:

A structured narrative literature review of obesity, weight management approaches and person-centred care (and related terms) will be carried out. The literature review will shape the researcher's understanding of national practice of weight management and person-centred care, but also increase their knowledge and understanding of academic factors of interest in the idealised and theoretical practice of the WMC.

The RAP approach (11) will use a variety of data collection techniques responsive to the setting and will be an iterative reflexive process of learning in the field. It is envisaged that data will be collected using field notes, recordings of discussions and observations of treatment. Analysis will be guided by an ethnographic approach paying particular attention to interactions and processes. The RAP will help provide a description of local practice both idealised and realised (i.e. what is in the guidelines, protocol or that practitioners aim to do, in contrast with how the practice occurs and is perceived). This national context of the weight management practice and description of local practice will help to guide the choice of outcome measures and topic guides for the semi-structured process interviews in the evaluation phase.

Study 2:

A narrative analysis (13) will be carried out on interviews with a sample of patients referred to the WMC. After verbatim transcription of the interviews, the validity of the transcriptions will be checked with participants. Coding of the field texts will include analysing the narrative for storylines, events, places where events and actions took place and interweaving storylines with a particular emphasis on perceptions of obesity, health and help-seeking. The aim of the analysis is twofold. Firstly, it will describe the social, cultural and clinical frameworks for individuals with obesity and explore how these factors relate to perceptions of health and identity or facilitate access to help with weight control and investigate how these barriers could be overcome. Secondly, it will be used to form typologies of patient experience and potential response to treatment.

Study 3:

The quantitative part of the evaluation of WMC is likely to comprise 3 analyses. [1] Depending on data quality, logistic regression models may be built using whether each client met their own weight-loss target or not. Failing that the weight trajectories of the types within the typology (see below) will be compared by appropriate statistical means taking into account inter-individual and other clustering. [2] Mediation analyses (14) will be used to explore the effect of psychological processes on outcome. [3] The formation of typologies of response from the narrative interviews will be assessed by cluster analysis. A thematic approach (15) will guide the analysis of the data from the semi-structured interviews (n.20) on the experiences of care and will be used to contextualise the outcome data by response type by integrating qualitative and quantitative findings.

Dissemination:

It is anticipated that three publications will result from the PhD. The first will present and discuss the literature review and RAP of WMC practice. The second will describe the narratives of obesity and the third will focus on the typologies of response to treatment within the WMC.

In order to address objective 5, an integration workshop with patients / PPI group and staff will be used to explore how sustainable implementation of the results may occur with particular emphasis on how typologies may or may not be used to guide stratification of treatment as well as other learning around access to treatment and person-centred care. It will also provide an opportunity to discuss and disseminate the findings with WMC practitioners.

Timeline:

Year 1

0-6 months: Structured review of the literature on weight management and person-centred care;

0-4 months: Application for IRAS ethical approval.

4-7 months: Rapid ethnographic assessment of WMC.

8-15 months: Paper 1: "The national context of local weight management care".

Year 2

10-15 months: Recruitment and narrative interviews

14-16 months: Analysis of narrative interviews and development of typologies

16-24 months: Paper 2: "Narratives of obesity"

17-24 months: Exploratory study of WMC.

Year 3

23-28 months: Analysis of evaluation

27-33 months: Paper 3: "Use of typologies within WMC"

29-30 months: Integration workshops with patients/PPI and professionals regarding sustainability for WMC

30-36 months: Write up

5. <u>Relevance/significance</u>

Benefits for patients:

- Patients will have the opportunity to play a fundamental role in developing and testing the evidence base for person-centred interventions in weight management, with the aim of service improvement.
- Patients will be invited to an integration workshop in order to shape the implementation of recommendations for future ways of working and further research.

Benefits for PenCLAHRC and Plymouth University:

- This a new collaborative research project addressing a strategically important subject to the NHS, strengthening the HSR team in Plymouth, its capability and supervisory experience, and complementing the existing PenCLAHRC research portfolio. The research is also intended to pave the way for external grant applications.

Benefits for the NHS and commissioners:

- The NHS will benefit in obtaining a rigorous academic evaluation of a major clinical service from the person-centred perspective, and generalizable principles to inform future service design.

Benefits for the Plymouth WMC:

- The host clinical service will benefit because the project will describe the inequalities and barriers that prevent or delay people with serious obesity from seeking help and accessing professional support for weight loss. This information will help ensure that those in most need are not disadvantaged.
- The project will describe the self-reported comorbidity of the patient group and extent of multiple agency treatment which could be improved by a person-centred approach to weight management. This information can be used in service improvement.

- The project will evaluate the person-centred experience of the various components of the WMC, and test a theoretical model of how interventions can be optimized to meet person-centred needs to achieve retention in the program. This information is important to evaluate the performance of different components of the intervention.

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