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Current Weight Management Approaches Used by Primary Care Providers in Six Multidisciplinary Healthcare Settings in Ontario

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Abstract

Background: Obesity management in primary care has been suboptimal due to lack of access to allied health professionals, time, and resources.

Purpose: To understand the weight management approaches used by primary care providers working in team-based settings and how they assess the most suitable approach for a patient.

Methods: A total of 20 primary care providers (13 nurse practitioners and 7 family physicians) working in 6 multidisciplinary clinics in Ontario were interviewed. All interviews were recorded, transcribed verbatim, and coded using NVivo qualitative software. Conventional content analysis was used to inductively elucidate codes, which were then clustered into categories.

Results: A referral to on-site programming was the most frequent weight management approach used. The pharmacological approach was underutilized due to adverse side effects and cost to patients. Primary care providers assessed the most suitable weight management approach based on patients': preference, level of motivation, income status and access to resources, body mass index and comorbidities, and previous weight loss attempts. Primary care providers perceived that referring to health professionals and educational resources were the approaches preferred by patients.

Conclusions: The team-based nature of these clinics allowed for referrals to various on-site professionals and/or programs. Some barriers to pursuing weight management avenues with patients were patient dependent.

Keywords

Multiprofessional practice, obesity, Canadian health services, primary care, qualitative approaches

Background and Purpose

According to national estimates, nearly two thirds of Canadian adults have obesity or are overweight (Statistics Canada, 2015). The negative consequences of obesity are well known and include a higher risk of developing many chronic diseases such as type 2 diabetes, hypertension, and heart disease (Bray, Kim & Wilding, 2017). Today's patients often present with concurrent chronic diseases, also known as multi-morbidity (Koné Pefoyo et al., 2015). This has significant implications on healthcare expenditures, for example costs related to obesity in Canada range between \$4.6 and \$7.1 billion annually (Senate Canada, 2016). Primary health care settings are an ideal place to prevent and manage obesity (Campbell-Scherer & Sharma, 2016). Existing guidelines on the management and prevention of obesity underline the importance for Primary Care Providers (PCPs) (i.e., nurse practitioners and family physicians) to screen for obesity and provide appropriate management actions (Brauer et al., 2015).

Weight management strategies include addressing diet and exercise, pharmacotherapy and surgery (Brauer et al., 2015). Many studies, however, showed that weight management strategies are rarely discussed with patients due to lack of time, knowledge, and compensation (Forman-Hoffman, Little & Wahls, 2006; Petrella, Lattanzio & Overend, 2007; Brown et al., 2007; Wynn et al., 2010; Dolor et al., 2010). Lack of accessibility to allied health professionals and lack of patient referrals to additional nutrition counseling were demonstrated to be important barriers in providing weight counseling (Claridge et al., 2014; Ferrante et al., 2009). Nevertheless, the move towards multidisciplinary primary care settings (e.g., nurse practitioner-led clinics and

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family health teams) was fuelled by the goal of providing patients with comprehensive care while emphasizing health promotion and chronic disease management (Government of Canada, 2007).

Furthermore, studies revealed an underuse of anti-obesity drugs due to public safety concerns (Rueda-Clausen, Padwal & Sharma, 2013; Chan et al., 2013) and adverse health effects (Padwal & Majumdar, 2007; Hainer & Hainerová, 2012). Recent breakthroughs in understanding the underlying mechanisms of elevated body fat permitted new developments in anti-obesity drugs (Wharton, 2016). Thus, there are currently two pharmacotherapies (liraglutide and orlistat) that have been approved and are available in Canada (Wharton, 2016).

Due to the shift towards multidisciplinary primary care settings and novel advances in the pharmacological approach, it is unclear which weight management approaches are used by PCPs working in team-based settings. Consequently, this study will address this knowledge gap by investigating the weight management approaches used by PCPs as well as how they assess which weight management approach is most suitable for a patient. This study also examined PCPs' perceptions regarding weight management approaches preferred by patients.

Methods and procedures

Participants and recruitment

Eligible participants included nurse practitioners and family physicians working in a Family Health Team (FHT), Nurse Practitioner-Led Clinic (NPLC) or Community Health Centre (CHC) for at least six months and providing care to predominantly adult

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populations. All these multidisciplinary primary care settings had an important aspect in common: each team was comprised of a variety of health care professionals (i.e., social workers, dietitians, nurses, kinesiologists, pharmacists). Purposive sampling was used to recruit **PCPs** working in various types of multidisciplinary clinics to maximize diversity. We first contacted the clinical directors of primary care settings located in proximity to the research institute. With the clinical director's permission, flyers notifying primary care providers of our study were posted in meeting rooms. NPs and FPs were also contacted face-to-face and via email. PCPs who showed interest were emailed with further details regarding the study.

Data Collection

Out of the 25 PCPs who were notified about the study, a total of 20 participants (13 nurse practitioners and seven family physicians) agreed to participate. The five PCPs who refused to participate were unable to allocate time for the interview due to competing demands. One individual interview was conducted with each participant and took place at the participant's work or by telephone based on geographic area. Participating PCPs completed a short background questionnaire on demographic characteristics and an individual semi-structured interview. Interviews were conducted by SA and ranged from 30 to 50 minutes (average length: 42 minutes).

The participants were not provided with the interview protocol prior to the scheduled interview. Informed written consent was obtained prior to the interview and each participant received a 50-Canadian dollar coffee shop gift card as a token of appreciation. All interviews were recorded with the participant's permission. Field notes and the interviewer's reflections were written by hand. The interview protocol was

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composed of open-ended questions and had the following objectives: 1) to identify current weight management approaches suggested by PCPs, 2) to identify how PCPs assessed which weight management approach is most suitable for a patient, and 3) to identify PCPs' perception of patients' preferred weight management avenue.

The interview guide was pilot tested with 4 PCPs. Data from the pilot test was not used in this study because the questions were refined based on the participants' feedback. For instance, probes were added subsequent to the pilot study in order to collect in-depth data. Data collection ceased when data saturation was reached (i.e., no new information was being collected).

Data analysis

All interviews were transcribed verbatim and coded using NVivo software (QSR International Pty Ltd. Version 11). The transcripts ranged from 4 to 6 pages in length, including the questions. The conventional content analysis approach was used to avoid using preconceived categories (Kondracki & Wellman, 2002). Transcripts were first read in their entirety and memos of salient information were made (Tesch, 1990). The data was then read word for word and descriptive codes were elucidated (Miles & Huberman, 1994). Subsequently, these codes were grouped into clusters and were arranged under categories (Coffey & Atkinson, 1996; Patton, 2002). Two coders (SA and MJ) coded the data independently and met to review codes. The research team met (SA, MJ, IB and IG) and discussed the codes, which allowed for reflexivity and minimized biases (Johnson, 1997). Direct quotes were also extracted from the data to illustrate the themes and findings. Lincoln and Guba's (1985) criteria for establishing trustworthiness were used, including optional member checks and investigator triangulation.

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Participants who were interested in a member check were asked to indicate this preference on the consent form. Seven participants indicated that they were interested in a member check. These participants were contacted at the end of data analysis. Four PCPs were still interested in reviewing the data analysis at the time of follow up. No changes were made following the member checks.

Results

Demographics

Participant characteristics and demographics are provided in table 1. Three NPs and three FPs were recruited from FHTs and CHCs, whereas seven NPs and one FP were recruited from the NPLC.

Weight management approaches used by PCPs

Table 2 lists the various weight management approaches used by PCPs and the number of PCPs who mentioned each approach.

Theme 1: Referral to a dietitian or on-site programming

The most frequent approach stated by participants was referring their patient to on-site programming (i.e., classes offered by various health professionals and that touch on nutrition, physical activity, as well as mental health and/or behavioural change). An on-site dietitian was available at each multidisciplinary primary care settings involved in this study. As such, another frequent approach was referring to a dietitian for one-on-one nutrition counselling. Referral to on-site programming and/or a dietitian seemed to be highly valued.

“It’s mostly referring to the programs we have here. We have the Healthy U class so I refer to that or if they have done that. These programs go through

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diet, exercise and behaviour change. If there are not interested in a group session, I refer directly to the dietitian” NP, FHT – Participant 12

“Well initially I refer to the dietitian; if I have weight concerns at all, I usually directly refer to the dietitian to get her feedback.” NP, NPLC – Participant 4

Theme 2: Referral to outpatient weight loss programs

The second most frequent approach was referring their patients to existing weight loss programs and medical weight loss programs offered in hospitals or in specialized clinics. Referring to weight loss programs was common and often described as a priority. This option was reserved for patients with higher BMI and more advanced medical conditions.

“We do have the medical management weight program at the hospital nearby, so I have referred there.” NP, CHC – Participant 13

“If they live close to the hospital then I would ask them to look into that and book an appointment or sign up for their workshop.” FP, FHT – Participant 19

Theme 3: Referral to Weight Watchers

Referring to self-help groups such as Weight Watchers demonstrated a divided opinion, which underlined that this program was not always perceived as a suitable weight management approach. Participants also expressed that this option is usually suggested when the person shows motivation. It was also perceived as an approach that works for a subset of patients.

“I don’t really refer to Weight Watchers and that sort of thing because I wouldn’t want to go against anything that the dietitian recommends.” NP,

NPLC – Participant 2

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“Weight Watchers works for some but not others.” NP, CHC – Participant 13

“If they’re on Weight Watchers, great, but I don’t necessarily encourage that.”

FP, FHT – Participant 19

Theme 4: Providing educational resources

Educating patients and referring them to educational weight management resources was also commonly used. That is, PCPs would provide basic education and refer to additional resources, either by giving handouts or referring to web materials. PCPs found this to be important because the education needed to occur when the diagnosis was made and when patients are motivated.

“I find fear is a great motivator. Once they’ve got a new diagnosis for, say, diabetes and the thoughts of insulin, they turn to resources and you’re seeing great results with these patients.” MD, NPLC – Participant 9

“I usually educate and I tell them about caloric intake, reading labels, the Dietitians of Canada website so they can access certain points of healthy eating.” NP, NPLC – Participant 6

“Of course, there are pamphlets or handouts, whatever I can give them or referring them to websites.” FP, CHC – Participant 20

Theme 5: Bariatric surgery

Referral to bariatric surgery was mentioned less often and was stated as less popular and typically referred to as a last resort, in cases of morbid obesity, or upon request by the patient. Some participants mentioned that even if bariatric surgery is warranted based on clinical guidelines, they do not suggest it due to patients’ lack of

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resources, patients' strenuous workup leading to the surgery, and lack of accessibility to the patient.

“Typically I will also refer to bariatric surgery if they tried several other methods so if they say that they've been trying to do this all their life and that they yo-yoed. It requires commitment and sometimes patients are not ready for the workup leading to the surgery.” NP, NPLC – Participant 2

“It's very difficult for patients to come to surgery, if they are pre-retirement age, it's hard for them to take all that time off work and sometimes they can't afford it with the type of coverage they have. For some it's also difficult or not feasible to travel to the nearest bariatric hospital.” FP, FHT – Participant 9

“People that have lifelong issues with obesity and that come in telling me they tried everything and want a referral for bariatric clinic.”

NP, FHT – Participant 16

Theme 6: Anti-obesity drugs

Finally, prescribing medication portrays itself as a very rare undertaking and applied at a low priority. Codes that emerged from the data for suboptimal prescription of weight-loss medications were: perceived negative side effects and lack of efficacy, cost, and lack of knowledge on current weight-loss inducing drugs.

“I almost never use medications because I don't think they work very well and they're expensive and there are side effects.” FP, FHT – Participant 9

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“Medication, I don’t really use it as much because of some side effects that patients experience.” NP, NPLC – Participant 4

Assessing the most suitable weight management approach

Once we reached a clearer understanding of the weight management approaches used by PCPs working in multidisciplinary clinics, we wanted to understand how they assessed the most suitable approach for a patient. The findings are presented in decreasing order in terms of which theme takes precedence when giving recommendations.

Theme 1: Patients’ motivation to change

Assessing their patients’ motivation to change was the most common way in assessing a suitable weight management approach. Participating PCPs assessed motivation by directly asking the patient if they are motivated or by asking patients how motivated they were on a scale of 1 (not motivated) to 10 (very motivated). It seemed that if the patient did not exhibit any signs of motivation, the topic of weight management would be pushed aside and brought back in future medical visits.

“I get to know the patient and get a sense of what they already try, how motivated they are to change their lifestyle components.” NP, NPLC –

Participant 8

“It really depends on the person - what they need what they’re capable of - and where they’re at in the stages of change.” FP, FHT – Participant 9

Theme 2: Providing options and letting the patient choose

Participants mentioned that they provided their patients with multiple weight management options before deciding on an approach. Additionally, participants stated that they let their patients decide and/or provide input on their preferred weight

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management approach. Several healthcare providers underlined that they made a collaborative decision with their patients as to the weight management approach to adopt. The participants who used this approach mentioned that even if a specific weight management approach is the most suitable for a patient based on their Body Mass Index (BMI) and/or co-morbidities, patient preference takes precedence.

“I will give them their range of options and ask if they are interested by any of them. I don’t usually pick for my patient, I usually present the option available for the patient.” NP, NPLC – Participant 5

“There has to be buy in and a collaborative approach to the issue.” FP, FHT
– Participant 9

Theme 3: Patients’ BMI and co-morbidities

Other participants reported using BMI and co-morbidities to assess the suitable weight management approach. In terms of identifying if the patient is eligible for bariatric surgery, BMI and co-morbidities were always used.

“That depends on their BMI, on how much at risk they are, what their other comorbidities are.” NP, NPLC – Participant 2

“For the surgical program, I reserve because there are specific criteria (BMI over 35 with co-morbidities or BMI over 40 with no co-morbidities) so patients that fall into that criteria and they’ve been overweight for a long time and they tried several other methods such as weight watchers or something else, those are the ones I will bring up the topic of surgical weight loss.” FP, CHC –
Participant 20

Theme 4: Patients' income status and access to resources

Patients' personal circumstances such as income and access to resources were other deciding factors when determining which weight management approach is most suitable. Although only a few PCPs reported assessing these aspects, they seemed to have a substantial impact on the weight management approach proposed by these PCPs.

“It depends how accessible certain resources are for the patient.

Transportation is a major issue for many of the patients. If they live close to the CHC then I would refer them to the dietitian here. Some of them don't have access to the Internet. If they're tech savvy then I would refer them to the services that are online or I would print it up for them.” FP, CHC –

Participant 20

“With some of the more challenging or individuals with limited funds, I will make an effort to refer to the dietitian and she has self help groups (healthy eating, healthy weight management groups).” NP, FHT – Participant 1

Theme 5: Patients' previous weight loss attempts

Although this theme seemed to be a factor considered by most PCPs, only two PCPs elaborated on how examining previous weight loss attempts can shape the approach(es) provided to the patient.

“If they haven't tried any previous weight loss methods, I start with the basic, just discussing portions and referring to the dietitian and giving them some handouts. If I am dealing with a patient who has come time and again

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because of their weight, has a longstanding history of obesity or being overweight, I will discuss the other approach such as the referral to the program at the hospital.” NP, NPLC – Participant 5

Perception of patients’ preferred weight management approach

One participant, who had less than 5 years of work experience, stated that they did not feel that they have enough experience to know patients’ preferred weight management approach. As such, the analysis for this area of questioning is based on data provided by 19 participants.

Theme 1: Multidisciplinary approach that focused on lifestyle behaviours

The multidisciplinary approach was perceived as the most preferred approach by patients as perceived by PCPs. This theme included the approaches, which required the patient to engage in a collaborative weight management process. Therefore, referring to the registered dietitian, providing an exercise regime and referring to an existing weight loss program/course were the approaches included in this theme. PCPs mentioned that patients appreciate the input from various health professionals and the personalized approach to care.

“They will say absolutely book me with a dietitian. They tend to like one-on-one sessions because they can deal with their specific questions and then they will take that information most of the time and implement it in their own time.” NP, CHC – Participant 13

In contrast, participants reported that they perceived group activities as another approach preferred by many patients, as they are able to go through the weight loss journey with others in a similar situation. A few PCPs mentioned that some patients also prefer receiving an exercise regime and being encouraged to simply exercise more.

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“For the average person, they like more people being involved and supporting them. They like the support group, they like knowing that other people are also going through this and that it is possible to be successful.”

FP, FHT – Participant 11

Overall, the multidisciplinary approach seemed to be perceived by PCPs as the most preferred approach by patients. PCPs mentioned that they tend to see weight loss success with the multidisciplinary approach.

Theme 2: Patient independent approach

The second most mentioned theme was the patient independent approach. This approach generally allowed the patient to independently manage their weight loss after being provided with basic information. Therefore, the provision of educational health information resources, the suggestions of healthy lifestyle changes and patients demonstrating the desire for independence in their weight loss journey were the approaches included in this second theme.

“They [patients] want to receive information but it’s mostly ‘I want to keep doing thing in my way’. I respect their wishes but I still provide the information and allow for patients to make their own decisions based on what they feel is right for them.” NP, NPLC – Participant 4

Providing educational resources seemed to be popular by the majority of PCPs. Overall, this second theme seemed to be a starting point for many patients.

Theme 3: Medical approach

This least frequent theme included bariatric surgery and medication. The pharmacological and bariatric surgery approaches seemed to be discussed with

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patients who have morbid obesity or those with complex conditions. These approaches seemed to demonstrate an increasing acceptance by patients.

“Definitely medical management. Some people are willing to try the medications; however, because of the side effects, sometimes they don’t stay on them.” NP, NPLC – Participant 3

“I have one patient who’s taking medication and she has been taking it for a year and she has lost 15 pounds. She wants to continue taking it.” NP, NPLC
– Participant 2

“For a long time bariatric wasn’t accepted but now that we are seeing good results patients are taking more confidence in it.” NP, NPLC – Participant 5

Overall, PCPs reserved bariatric surgery for patients with severe chronic conditions and weight-loss medications were under-utilized and were mostly prescribed when requested by patients.

Discussion

This study aimed to better understand which weight management approaches are used by PCPs working in multidisciplinary primary care settings. We also assessed how PCPs determined which weight management approach was most suitable for a patient as well as their perception regarding the patients’ preferred weight management option. Various weight management approaches were reported with the most common being dietetic referrals, referral to on-site programming that addressed diet, exercise and overall mental health, referral to weight loss programs (e.g. Weight Watchers), providing basic information on nutrition and exercise, and referral to online resources. On-site programming and dietetic referrals were possible because they are accessible

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and cost-free in these multidisciplinary settings. Given the complexity of obesity management, a multidisciplinary approach where various professions exchange information and provide specialized care to patients is imperative (Asselin et al., 2016). A team-based approach was identified as beneficial for obesity management in primary care (Hansson et al., 2011; Torti et al., 2017) as it mitigates many barriers highlighted in previous studies (Forman-Hoffman et al., 2006; Petrella et al., 2007; Wynn et al., 2010; Dolor et al., 2010). In fact, patients prefer a multidisciplinary approach for weight management (Torti et al., 2017). Although referrals to on-site programming and allied health professionals seemed to be common practice, the pharmacological approach was underutilized. Some PCPs mentioned that patients stop using anti-obesity drugs due to side effects while other PCPs believed that the pharmacological approach worked very well for some patients. This mixed finding is in line with research examining patients' perception on the use of anti-obesity drugs, including orlistat (Psarou, Aikaterini & Brown, 2010). While liraglutide has been shown to be effective for weight loss, a critical review highlighted adverse events such as gastrointestinal side effects (Mehta, Marso & Neeland, 2017). Another barrier for recommending anti-obesity drugs as an approach was cost to patients, which was also linked to suboptimal adherence. As for bariatric surgery, it was mostly used when patients specifically asked for the surgical referral or if the patient had severe co-morbidities and reported many failed weight loss attempts. PCPs mentioned that the pharmacological and surgical approaches were not appropriate with the absence of behavioural intervention and lifestyle changes, aligning with current recommendations (Brauer et al., 2015).

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Assessing the most suitable weight management approach seemed to be mostly patient driven. Many participants geared the care they provided based on what the patient wanted or was capable of rather than the appropriate approach recommended based on BMI and co-morbidities. This is similar to what was found in another study evaluating PCPs' view of treating obesity (Epstein & Ogden, 2005). Willingness to change, patients' income status and accessibility to resources were all factors that seemed to greatly affect the weight management approaches suggested by PCPs. In this study, we found that assessing patients' social determinants of health and level of motivation were important in proposing suitable weight management approaches. It was mentioned as well that patients' lack of motivation was an important barrier in addressing obesity and chronic diseases, replicating findings from other studies (Matthews, Peden & Rowles, 2009; Hansson et al., 2011). This may be linked to the normalization of excess weight and patient lack of knowledge regarding the potential side effects of overweight and obesity (Johnson et al., 2008; Burke, Heiland & Nadler, 2010; Kirk et al., 2012). While some studies found that some PCPs use scare tactics to motivate their patients, this can have a negative impact on adherence (Matthews et al., 2009) or may be perceived by some patients as essential to change (Ward, Gray & Paranjape, 2009).

Not only do PCPs often utilize on-site programming as a weight management avenue, it is also perceived by PCPs to be the patients' preferred option. They reported that it might be attributed to the various insights patients receive from different health care professionals as well as the support provided and reassurance that others are also in a similar situation. This was also found in another study that examined the

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perceptions of patients (Torti et al., 2017) and reinforces the need for a multidisciplinary approach when addressing obesity (Janke et al., 2016; Fitzpatrick et al., 2016). However, more than half of PCPs perceived that their patients want to manage their weight on their own after having received basic information. This finding contradicts some studies suggesting that patients expect their PCPs to address weight and the need for accountability (Metzgar et al., 2015; Kelly & Barker, 2016; Torti et al., 2017).

This study has some limitations. Firstly, the study sample consists of 20 participants working in various types of multidisciplinary primary care settings across Ontario. Our findings cannot be generalized to other types of primary care settings (such as lone physician offices) but may be transferred to other similar team-based settings. We believe that this study can inform the conceptualization of a survey that can be administered to a larger number of primary care providers, which will allow for more generalizable results. Secondly, the conventional content analysis approach has some challenges given its focus on identifying inductive themes that emerged from the data (Hsieh & Shannon, 2005). As such, established categories in the literature may not have been elucidated in this study. As suggested by Lincoln & Guba (1985), we addressed these limitations by conducting one member check with interested participants and holding regular meetings where the researchers discussed the emerging categories, which also allowed for reflexivity.

Conclusion

The recent shift towards multidisciplinary primary care settings was fuelled by the need to provide comprehensive care to patients and to emphasize chronic disease

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management and prevention. Obesity has recently been identified as a chronic disease and is important to address in primary care. Although previous studies demonstrated that weight management approaches were underutilized in primary care, most of these studies were conducted in non-team based settings. Our study highlights that PCPs working in multidisciplinary settings use many approaches to weight management (e.g., referral to allied health professionals and programming) and that most of these services are available on site. Some weight management avenues such as anti-obesity drugs and bariatric surgery were reserved for patients with more severe obesity and medical conditions. These options were also perceived as not accessible to certain patients due to cost. Patient-dependent barriers need to be addressed as it impedes with the PCP's ability to intervene. Individuals interested in optimizing weight management practices in primary care should acknowledge the important role that patients play in determining potential weight management avenues. Future studies could examine patients' perception regarding the team-based approach and how they believe it affects their health and weight management.

Authors' Contributions

S.A. and M.J. developed the study design, collected the data, carried out the data analysis, and drafted the original manuscript. I.B. and I.G. contributed to the conceptualization and design of the study. All authors contributed to the literature review, read, and approved the final manuscript.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Ethics Approval and Consent to Participate

Participants in this study provided informed consent to the interview and audio recording. The University of Ottawa's Research Ethics Board approved all the study procedures (file number: 06-16-07). All data are locked in a secure manner at the University of Ottawa and can be reviewed for audit with permission from the University of Ottawa's Ethics Board.

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