

# Interaction between primary health care professionals and people who are overweight or obese: A critical review

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## KEY WORDS

Obesity, men, primary health care professionals, interaction

## ABSTRACT

### Objective

To identify through a review of the literature how primary health care professionals interact with people who are overweight or obese.

### Setting

Primary health care practices.

### Primary Argument

Interactions between primary health care professionals and overweight or obese patients are influenced by complex factors that impact on effective management of overweight and obesity.

### Conclusions

The practice skills and knowledge of primary health care professionals, lack of resources, and inconsistent overweight and obesity management guidelines impact on the interaction with patients. The emotive and personal nature of overweight and obesity, and the attitudes and beliefs of primary health care professionals also impact on the interaction. Education of primary health care professionals must address attitudes and beliefs about overweight and obesity. Education in the diagnosis of overweight and obesity and the acquisition of effective weight loss counselling skills is essential to improving interactions and the overall management of overweight and obesity.

## INTRODUCTION

The epidemic nature of overweight and obesity has been extensively reported and acknowledged. The rising prevalence of overweight and obesity and the consequent increased incidence of associated chronic disease (World Health Organization (WHO) 2006) are creating significant demands on health care resources. Primary Health Care Professionals (PHCP) play a key role in recognition, diagnosis and management of overweight and obesity. However, the success of primary health care strategies to address the epidemic of overweight and obesity is limited.

Some of this limited success can be attributed to the interaction between PHCP and people who are overweight or obese (Scott et al 2004). The nature and quality of the interaction between patients and PHCP is a key determinant of the successful management of overweight and obesity (Kelly-Irving et al 2009). Consequently, a critical review was undertaken to examine the interaction between PHCP and overweight or obese patients, and the subsequent effect on management strategies.

### Literature search strategy

Key terms were identified and defined prior to commencing the literature search. Overweight is defined as a Body Mass Index (BMI) between 25 kg/m<sup>2</sup> and 30 kg/m<sup>2</sup>, whereas obesity is defined as a BMI greater 30 kg/m<sup>2</sup> (WHO 2005, 2006). Likewise, 'primary health care professionals' are defined as first contact health care professionals (specifically doctors and nurses) who work individually or collaboratively to deliver primary care (Australian Primary Health Care Research Institute 2009). 'Interaction' is defined as a communication where there is a two-way sending and receiving of verbal and non-verbal information.

Medline, PubMed, Scopus, CINAHL, PsychINFO and Social Work abstracts were searched using the terms outlined in table 1. Where applicable MeSH terms were used in preference to these key terms (refer table 1). The literature search was limited to research papers and systematic reviews published in English between January 1990 and August 2011. A review of 181 citations yielded from the combined search identified five papers that specifically examined the interaction between PHCP and overweight or obese patients. An additional eleven papers examined communication and counselling skills of PHCP, however did not specifically address the interaction and were therefore excluded from the critical review. A hand search of the reference lists of these papers did not reveal additional studies or papers.

**Table 1: Search terms and associated MeSH terms**

Search terms	MeSH terms	Number of citations
Obesity, obese, overweight, morbidly obese, morbid obesity	No additional terms applicable	1,436,657
Primary health care professional, nurse, doctor, medical practitioner.	Physician	3,071,270
Patient, person, client	Patient	26,892,877
Interaction, communication, patient education	Physician-patient relations	11,840,352
Overweight + obesity + physician + patient + physician-patient interaction	No additional terms applicable	181

### Findings of literature review

Five studies examined the interactions between primary health care professionals and overweight or obese patients. A summary of the findings of these studies is presented in table 2.

Table 2: summary of reviewed studies

Author(s)	Aim(s)	Participants	Key methods	Key findings
Michie 2007	Understand the practices of primary health care professionals when communicating with overweight and obese patients	<ul style="list-style-type: none"> <li>40 General Practitioners (GP)</li> <li>47 Practice Nurses (PN)</li> </ul>	Postal Questionnaire of GP and PN in two inner London Primary Care Trusts	<ul style="list-style-type: none"> <li>52% of GP and 28% PN were concerned about raising the issue of overweight</li> <li>The predominant concerns were fear of distressing, angering or alienating the patient, or damaging the therapeutic relationship with the patient</li> <li>9% of GP and PN discussed weight loss solutions and health promotion with overweight patients</li> <li>GP and PN were more likely to raise the issue of weight with overweight patients if there was a diagnosed medical problem</li> <li>PN were more likely to discuss weight and health than GP</li> <li>GP and PN identified the need for more training, skills, knowledge and resources to address and manage the issue of overweight</li> </ul>
Bertakis and Azari 2005	Investigate the influence of patient obesity on primary care physician practice style	<ul style="list-style-type: none"> <li>509 patients (205 were obese)</li> <li>105 Primary Health Care physicians</li> </ul>	<ul style="list-style-type: none"> <li>Videotapes of doctor-patient interactions analysed using Davis Observation Code (DOC)</li> <li>BMI calculated</li> <li>Patient interviewed pre-visit and questionnaires conducted for self-reported health status, sociodemographic information, depression evaluation, and general satisfaction with previous health care</li> <li>Post-visit: patient satisfaction interview</li> </ul>	<ul style="list-style-type: none"> <li>Mean BMI 29.78 kg/m<sup>2</sup>, 205 obese patients</li> <li>Obese patients more likely to be female (p = 0.0101)</li> <li>Physicians failed to diagnose 63% of obesity</li> <li>Physicians two times more likely to diagnose obesity in female patients than in male patients</li> <li>No significant difference in consultation time between obese and non-obese patients</li> <li>Physicians spent more time on technical tasks and less time on communication with obese patients</li> <li>Obese patients received physical activity education more often than nutrition education</li> <li>Obese patient post-visit satisfaction significantly lower than non-obese patients</li> </ul>
Scott et al 2004	Compare strategies used by physicians when communicating with patients who are obese with the aim of identifying strategies that are more effective (Sub-study)	Doctors and patients in 18 family practices	<ul style="list-style-type: none"> <li>Descriptive field notes of outpatient visits collected</li> <li>Field notes analysed independently by two family physicians, a medical anthropologist, a nurse, a conversation analyst and two epidemiologists</li> <li>Observation of 633 doctor-patient interactions some of the patients were obese</li> <li>Chart review recording height, weight, visit type and preventative care activities</li> </ul>	<ul style="list-style-type: none"> <li>68% of adults and 35% of children overweight or obese</li> <li>Excess weight discussed in 17% of encounters with overweight or obese patients (11% with adults)</li> <li>Participation by the physician and the patient was necessary to make weight loss part of the agenda for the encounter</li> <li>Weight loss counselling went well if: <ul style="list-style-type: none"> <li>the patient raised the issue</li> <li>the agenda to discuss weight loss had been set at a previous visit</li> </ul> </li> <li>Weight loss counselling only initiated by the Physician when weight diagnosed as a problem</li> <li>Need for weight loss counselling frequently not diagnosed by the Physician</li> <li>Weight loss counselling done most frequently in health care maintenance visits with patients with BMI &gt; 35 kg/m<sup>2</sup></li> </ul>

Table 2: summary of reviewed studies, continued...

Author(s)	Aim(s)	Participants	Key methods	Key findings
Huang et al 2004	<ul style="list-style-type: none"> <li>Determine physicians' barriers to weight loss counselling</li> <li>Determine patients' recall of physicians' weight loss recommendations</li> <li>Determine the influence of physicians' counselling on patients' understanding, motivation, and behaviour regarding weight loss</li> </ul>	<ul style="list-style-type: none"> <li>24 Faculty and internal medicine residents</li> <li>210 patients, BMI <math>\geq 25</math> kg/m<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>Four focus groups of Faculty and internal medicine residents</li> <li>Chart review</li> <li>Exit interviews with patients regarding the relationship between weight and health, the effect of a 10% weight loss, the physician's weight loss recommendations, the patient's motivation for weight loss, previous and current weight loss activities</li> </ul>	<p>Physicians</p> <ul style="list-style-type: none"> <li>Diagnosis of obesity in 14.4% of obese patients</li> <li>Pessimism about the patient's desire and ability to lose weight</li> <li>Pessimism about effectiveness of weight loss counselling</li> <li>Insufficient time due to high patient volume</li> <li>Lack of comprehensive obesity management resources</li> <li>Underuse of dieticians or lack of experience working with dieticians</li> <li>Lack of skills in providing brief weight loss counselling</li> <li>Insufficient knowledge of best clinical practices</li> </ul> <p>Obese Patients</p> <ul style="list-style-type: none"> <li>Mean BMI 39 kg/m<sup>2</sup></li> <li>61% believed their weight affected their health</li> <li>89% reported need to lose weight (88% wanted to)</li> <li>79% recalled physician counselling to lose weight</li> <li>28% recalled being given specific recommendations               <ul style="list-style-type: none"> <li>- 17% recalled dietary modification counselling</li> <li>- 5% recalled physical activity counselling</li> <li>- 5% recalled dietary and physical activity counselling</li> </ul> </li> <li>BMI <math>\geq 35</math> kg/m<sup>2</sup> and type 2 diabetes more likely to be given specific weight loss advice</li> <li>More motivated to lose weight if they received weight loss counselling</li> <li>63% referred to dietician</li> <li>Patients with type 2 diabetes, dyslipidaemia or both were more likely to be referred to a dietician</li> <li>Patients who received weight loss counselling were more likely to have a better understanding of obesity-associated health problems and the benefits of weight loss</li> </ul>
Himmel et al 1994	<p>Explore whether family physicians recognise the problem of overweight in patients and if the problem was addressed in communication between patient and physician</p>	<ul style="list-style-type: none"> <li>Physician in a sole physician family practice in Germany</li> <li>Patients attending the practice over a three month period</li> </ul>	<ul style="list-style-type: none"> <li>BMI determined for all patients</li> <li>Questionnaire sent to all patients with BMI <math>\geq 25</math> kg/m<sup>2</sup></li> <li>Semi-structured interview with physician about need for treatment, attitudes, knowledge and treatment methods for overweight and obesity</li> </ul>	<ul style="list-style-type: none"> <li>49% patients recalled physician discussing their excess weight with them</li> <li>Information/communication regarding overweight between physician and patient ranked as 'good' in 29% of cases and 'average' in 53%</li> <li>Physician rated 36% of overweight patients as overweight</li> <li>Physician rated 74% of obese patients as obese</li> <li>Physician considered is weight loss advice futile because of the personal characteristics of the patients</li> <li>Physician regarded type 2 diabetes, hypertension and/or 8 to 10 kg overweight as indicative of need to treat overweight patients</li> </ul>

## DISCUSSION

Several factors impact on the interaction of people who are overweight or obese with PHCP. These include the diagnosis of overweight and obesity, and the initiation and nature of weight loss counselling. Likewise, the attitudes and beliefs, and education of PHCP about overweight and obesity also impact on the interaction.

Three papers identified that PHCP underdiagnose overweight and obesity in their patients (Bertakis and Azari 2005; Scott et al 2004; Huang et al 2004; Himmel et al 1994). Huang et al (2004) found that obesity was diagnosed in 14.4% of obese patients, whilst Himmel et al (1994) identified that one-third of overweight patients were not diagnosed. In contrast, Bertakis and Azari (2005), and Himmel et al (1994) found improved rates of obesity diagnosis; 37% and 74% of obese patients respectively. Interestingly, female patients who were obese were two times more likely to be diagnosed as such compared to male patients (Bertakis and Azari 2005).

This underdiagnosis of overweight and obesity is consistent with the findings of other authors (Brown et al 2006; Epstein and Ogden, 2005). Bramlage et al (2004) reported 70% to 80% of overweight patients and 30% to 40% of patients with grade 3 obesity were undiagnosed by PHCP. Consequently, overweight and obesity may not be adequately addressed by PHCP in a significant number of patients.

The relatively low rate of overweight and obesity diagnosis corresponds with low rates of weight loss counselling. Michie (2007), Scott et al (2004) and Huang et al (2004) found that weight loss counselling did not occur in more than 70% of encounters with overweight and obese patients. However, weight loss counselling was more likely to occur if the patient presented with obesity related comorbidity (Tham and Young 2008; Michie 2007; Huang et al 2004; Himmel et al 1994) or had a BMI greater than 35 kg/m<sup>2</sup> (Scott et al 2004). Yet the benefits of weight loss counselling are clear (Pollak et al 2007; Loureiro and Nayga 2006; Rodondi et al 2006; Galuska et al 1999). Overweight and obese patients receiving weight loss counselling were more motivated and more likely to lose weight, and demonstrated a better understanding of obesity comorbidity and the benefits of weight loss (Huang et al 2004).

The underdiagnosis of overweight and obesity and the underuse of weight loss counselling may relate to perceived difficulties about communication and the lack of confidence in patient compliance and physician counselling skills (Greiner et al 2008; Alexander et al 2007; Ruelaz et al 2007). Michie (2007) found that physicians were concerned that a diagnosis of overweight or obesity may distress or anger their patients, which may in turn affect the therapeutic relationship.

PHCP are often uncertain about raising the issue of overweight or obesity, and rather focus on technical tasks such as blood pressure measurement (Bertakis and Azari, 2005). Linking the diagnosis of overweight and obesity with an associated comorbidity can be an effective means of raising the issue (Alexander et al 2007). However, comorbidities associated with overweight and obesity typically develop over a number of years. Early recognition and management of overweight and obesity results in a decreased risk of comorbidity, improved course of disease of existing comorbidities and reduced health care costs (Bramlage et al 2009).

Therefore, PHCP need to be proactive in addressing the issue of overweight and obesity in their patients. Whilst, weight loss counselling is most effective if the patient raises the issue (Scott et al 2004), overweight and obese patients may be reluctant to do so (Alexander et al 2007). Consequently, developing a collaborative therapeutic relationship that leads overweight and obese patients to an understanding of the potential comorbidities and the need to take action is essential. This involves determining the patients' readiness to accept this information, their willingness to make change, seeking their permission to discuss the issue of overweight and obesity, and encouraging the patient to set the agenda (Scott et al 2004).

Addressing the attitudes and beliefs of PHCP is equally important to the development of effective interactions. Michie (2007), Huang et al (2004) and Himmel et al (1994) found that physicians were pessimistic about the capacity and motivation of their overweight and obese patients to lose weight, and consequently the effectiveness of their weight loss counselling. Given the prevalence of overweight and obesity and the limited long-term success of overweight and obesity management strategies, such attitudes and beliefs are not without basis. Nevertheless, these attitudes and beliefs negatively impact on the interaction and are obvious barriers to effective management of overweight and obesity.

Similarly, the education of PHCP with respect to overweight and obesity diagnosis and management, may also impact on the interaction. Michie (2007) and Huang et al (2004) identified the need for additional resources and education to address and manage overweight and obesity, especially with respect to weight loss counselling and implementation of best practice standards. The lack of quality overweight and obesity clinical guidelines and doubt in their effectiveness of weight loss counselling, were identified by physicians as significant barriers to effective management of overweight and obesity (Huang et al 2004).

There are a number of limitations to the five studies. The duration and quality of the doctor-patient relationship has not been specifically explored in any of these studies. Moreover, only Bertakis and Azari (2005) and Scott et al (2004) directly observed the interaction. The remaining three studies made inferences about the interaction based on questionnaires, focus groups and chart reviews. It seems obvious that if the research focus is on understanding the interaction between two parties (e.g. PHCP and patients) then it is best to either view the interaction directly or at least gain the perspective of both parties.

The impact of the quality of communication techniques of PHCP was also not adequately examined. Bertakis and Azari (2005) and Himmel et al (1994) found relatively high rates of patient recall of weight loss counselling. However there is no evidence about the quality and effectiveness of the communication techniques. Equally, none of the studies sought to determine if participants had received any form of weight loss counselling before the observed clinical encounter. Similarly, the qualitative experience of the patient has not been researched, and should be considered in future studies. Knowledge of previous incidences of weight loss counselling and the patients' past response may well assist in determining appropriate approaches to counselling in current and future interactions.

## CONCLUSION

Several factors inhibit effective management of overweight and obesity by PHCP, and impact on their interaction with patients. Key factors include PHCP practice skills and knowledge, lack of resources, and inconsistent overweight and obesity management guidelines. The emotive and personal nature of overweight and obesity, and the attitudes and beliefs of PHCP also impact on the interaction.

PHCP are the gatekeepers for the recognition, diagnosis and subsequent management of overweight and obesity (Sharma et al 2004). Consequently, education of PHCP needs to address their attitudes and beliefs about overweight and obesity. Equally, education in the diagnosis of overweight and obesity and the acquisition of effective weight loss counselling skills is also important in improving PHCP-patient interactions.

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