District nurses' self-reported clinical activities, beliefs about and attitudes towards obesity management

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ABSTRACT

Aim: To describe district nurses’ self-reported clinical activities, beliefs about and attitudes towards obesity management; and to examine associations between the variables.

Background: Obesity is increasing worldwide and primary care could play a central role in the management.

Methods: Questionnaire data were collected from 247 nurses in 33 centres.

Results: The most common activities performed weekly were; advice about physical activity (40.1%) and general lifestyle advice (34.8%). However, nearly one third seldom/never performed these activities. Approximately half seldom/never performed BMI assessment and even fewer waist circumference (78.1%). Values for the factors Importance of obesity and Personal effectiveness were skewed towards a positive view and Negative view close to neutral. Multivariate analysis revealed that nurses with specialized tasks, longer working experience and higher perceived personal effectiveness performed more clinical activities.

Conclusion: Managers need to make efforts to engage all personnel in obesity management; and strategies to increase self-efficacy are called for.

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1. Introduction

Obesity is increasing worldwide and is a global public health problem incurring high costs and burden for the individual, society as well as health care (WHO, 2006). Health-care personnel are crucial in the management of obesity, and primary care plays a special role in delivering first-line health care by seeing many patients and having regular long-standing contact (Laws & Counterweight Project Team, 2004; Michie, 2007). Despite this, research has shown that health-care personnel have negative attitudes towards patients with obesity (Poon & Tarrant, 2009). However, a recent review found improved attitudes over time (Budd, Mariotti, Graff, & Falkenstein, 2011).

Furthermore, it has been found that obesity is under-recognized and under-treated in studies reviewing patient records for obesity screening, obesity diagnoses and treatment (Bleich, Pickett-Blakely, & Cooper, 2011; Laws & Counterweight Project Team, 2004). The relation between district nurses’ (DNs’) attitudes towards and beliefs about obesity management and obesity-related clinical activities has received less attention in the research.

The prevalence of obesity in the WHO European Region has been estimated at around 20% among males and 23% among females, based on country estimates for 2006 (WHO, 2012) and around 34% among US adults (Ogden & Carroll, 2010). Sustained modest weight loss is associated with improved health, for example; reduced blood pressure, lower diabetes risk, lower mortality risk from cancer, and lower osteoarthritis-related disability (Logue et al., 2010). Guidelines recommend that weight management programmes include physical activity, dietary change and behavioural components. The patient's motivation to make long-term changes should be assessed, and interventions should be adapted to the patient's situation (Logue et al., 2010). DNs meet many patients and could thus play a key role in obesity management through screening, counselling and supporting patients to lose weight (Counterweight Project Team, 2008).

A UK study (Brown, Stride, Psarou, Brewins, & Thompson, 2007) revealed that practice nurses reported substantial obesity-related clinical activity, while other nurses and health visitors reported less activity. Giving general lifestyle advice about obesity was done by more than half of the nurses within a typical week, while other obesity-related activities were most common for practice nurses. BMI assessment and waist circumference were measured weekly by 32% and 3.3% respectively. Use of both measures is strongly recommended...
(Hauner et al., 2008). Two other UK studies (Laws & Counterweight Project Team, 2004; Michie, 2007) revealed that nurse practitioners in primary care were more active in obesity management than were general practitioners (GPs). Yet both studies concluded that obesity is under-treated. In the study by Michie (2007), both GPs and nurses were more likely to raise the issue of weight if the patient had an identified medical problem. To raise the issue there is a need of knowledge. A study by Hankey, Eley, Leslie, Hunter, and Lean (2004) revealed that practice nurses in UK who had read guidelines were more up-to-date in obesity management and had more positive attitudes. However the need for improved knowledge of nutrition was evident among both practice nurses and GPs, which also has been found in a study from Korea (Park et al., 2011). A study of counselling healthy eating in primary care found lack of clarity and consistency (Phillips et al., 2012).

Research has shown that obese patients are more likely to perceive weight as a health-risk when health-care personnel have said they were their professional responsibility, but they are uncertain as to their own 2004). Regarding overcoming obesity management barriers, Logue et al. report that they view patients (Sargent, Forrest, & Parker, 2012). Most health-care personnel also nurses in primary care to treat risk factors related to obesity found that provision of counselling was more effective than screening alone (Sargent, Forrest, & Parker, 2012). Most health-care personnel also report that they view patients’ weight problems and management as their professional responsibility, but they are uncertain as to their own effectiveness in delivering advice (Brown et al., 2007; Hankey et al., 2004). Regarding overcoming obesity management barriers, Logue et al. (2010) (p 476) concluded that “For obesity to be given the priority it deserves in clinical services, negative attitudes towards this condition and its causes must be checked”. Associations between health professionals’ attitudes towards and beliefs about obesity management, and their obesity-related clinical activities are not fully understood and need to be further explored. Obesity-related clinical activities are in the present study defined as activities performed by DNs in primary health care to assess for obesity and overweight; and to counsel and support persons with obesity or overweight to lose weight (e.g. BMI assessment, waist circumference, advice about physical activity and weight reducing diets, and use of approaches such as motivational interviewing). Research during the past 10 years has been performed on physicians in this regard (e.g. Al-Ghawi & Uauy, 2009; Ferrante, Piascik, Ohman-Strickland, & Crabtree, 2009; Smith et al., 2011), but less is known about DNs’ obesity-related clinical activities, and attitudes and beliefs in relation to obesity management in adult patients. A review (Budd et al., 2011) found 15 studies and of these only six focused nurses. Some research has been done in the UK (Brown & Thompson, 2007; Brown et al., 2007; Laws & Counterweight Project Team, 2004; Michie, 2007), but mostly on practice nurses in primary care. Furthermore, intervention studies of obesity management performed by DNs have been performed and is an important part (for a review see Sargent et al., 2012) but there is also a need to study and deepen the knowledge about what is done by DNs in clinical practice, i.e. daily work in primary care and possible influencing factors. Given this as well as the importance of counteracting the obesity epidemic and of developing practice in obesity management, it is important to gain greater insights into DNs’ obesity-related clinical activities, attitudes and beliefs in different countries. Therefore the aim of this study was to describe Swedish DNs’ self-reported clinical activities and beliefs about and attitudes towards obesity management. Furthermore, the aim was to examine associations between the study variables and sociodemographic data.

2. Methods

2.1. Design, study setting and sample

A cross-sectional, correlational design was employed. A convenience sample of all DNs working in 33 primary care centres in central Sweden were asked to participate \((n = 316)\); response rate 78% \((n = 247)\). The centres served together about 276,000 inhabitants. DNs in Sweden have further education beyond the registered nurse level (75 credits); they have responsibility for younger as well as older residents in their district, and health promotion is an important part of their work.

2.2. Data collection

Questionnaire data were collected and questionnaires together with a cover letter were distributed at the DNs’ workplaces and then sent back to the researchers. Two reminders were sent out. Approval for the study was obtained from the directors of operations. All participants received written information about the study aim, procedures, voluntary participation and their right to withdraw at anytime. Completion and return of the questionnaires were judged as indicating the participants’ tacit informed consent. According to Swedish law 2003:460, 2003:460 (2008), no approval by an ethics committee was required, as the study concerned the participants’ clinical activities, attitudes and beliefs related to obesity management, i.e. the aim was not to explore the participants’ own health.

2.2.1. Measures

A questionnaire developed by Brown et al. (2007) was used to measure DNs’ obesity-related clinical activities, beliefs and attitudes with respect to obesity management. The part on obesity-related clinical activities consists of 10 items (3 items were added in the present study; Table 2 in the results section). Responses in the present study were collected using a four-graded scale (never in the current post, once/at some occasions in the current post, once a month, once or several times during a typical week), as compared to two-grade in the study by Brown et al. (ever done in current post, do in a typical week). The overall level of obesity-related clinical activities was measured using a formative index summing the positive responses to ‘once or several times during a typical week’ (scale range 0–10).

The part on attitudes and beliefs consists of 23 items and five factors. Responses are measured on a 5-point Likert scale (strongly disagree; disagree; neither agree nor disagree; agree; strongly agree). For each factor, mean scores are calculated after some of the items have been reversed. In the study by Brown et al. (2007), the Cronbach’s Alpha \([\alpha]\) values for the factors were: Personal effectiveness 0.71; Importance of obesity 0.55; External causes 0.56; Negative views 0.69 and Organizational support 0.78. Sociodemographic data on, e.g., age, sex, working hours, working experience, specialized tasks were collected. Cronbach’s \(\alpha\)-values for the factors in the present study are presented in the results section.

2.3. Data analysis

Statistical analyses were conducted using IBM SPSS Statistics 20. Spearman’s correlation coefficient \([r_s]\) was used to study bivariate correlations and a logistic regression model to study multivariate associations. Furthermore, a generalized linear model, using a generalized estimating equation (GEE), was applied to control for potential unknown correlations among DNs within a single centre. The level for statistical significance was set at \(p < .05\).

3. Results

3.1. Sample characteristics

Most DNs were female (96.8%) and worked full-time (63.6%). The mean age was 51.3 (SD 8.0) years. DNs had an average of 14.2 (SD 9.0) years work experience within primary care and 28.7 (SD 9.6) years total work experience. Some DNs \((n = 64)\) had specialized tasks (responsibilities for patients with diabetes and/or hypertension, and/ or health coordinator).
The most common self-reported clinical activities performed by District nurses more than once or several times during an ordinary week for patients with overweight and obesity were: BMI assessment (40.1%), give general lifestyle advice for obesity (34.8%), perform waist circumference measurement (42.5%), offer an ongoing structured support programme (64.0%), use motivational interviewing (27.9%), give general lifestyle advice for obesity (34.8%), perform BMI measurement (27.5%), use motivational interviewing (27.1%), and provide information brochures (30.8%).

Regarding obesity management, a majority disagreed/strongly disagreed that ‘a patient’s weight is not really my business’ (60.7%) and rated obesity as an important area for developing services (91.5%). Eight percent (8.1%) of the participants thought they were effective in helping patients lose weight, while 25.9% disagreed/strongly disagreed with the statement. About one fifth (22.6%) were aware of a specific clinical protocol for managing obesity in their practice situation, and about one third (34.8%) were aware of an identified lead clinician in relation to managing obesity in their practice situation. Ten percent (10.1%) thought their practice includes a well-developed programme of support for obese patients.

### 3.2. Obesity-related clinical activities

The most common self-reported clinical activities performed by DNIs once or several times during an ordinary week for patients with overweight and obesity were: give advice about physical activity (40.1%), give general lifestyle advice for obesity (34.8%), perform BMI assessment (27.5%), use motivational interviewing (27.1%), and provide information brochures (21.1%). The clinical activities that never had been performed in the current post by one fifth or more of the DNIs were: BMI assessment (20.2%), motivational interviewing (27.9%), provide information brochures (30.8%), give detailed advice about weight reducing diets (42.1), perform waist circumference measurement (42.5%), offer an ongoing structured support programme for obese individuals (64.0%), use motivational interviewing (87.4%) and perform treatment for patients with overweight and obesity in a group (92.3%). When the index was summarized, the results revealed that 89 participants reported performing 2 or more of the clinical activities on a weekly basis. Forty-nine participants (19.8%) reported performing on a weekly basis: 1) BMI or waist circumference assessment, 2) give general lifestyle advice about obesity or detailed advice about weight reducing diets and 3) give detailed advice about physical activity (Table 1).

### 3.3. Beliefs about and attitudes towards obesity management

Regarding the consequences of obesity, the results showed that more than half (73.3%) of the participants disagreed/strongly disagreed with the statement ‘the importance of obesity as a risk to health is now being overstated’. Responses to items about attitudes towards obese patients revealed that nearly one third (28.3%) of the participants disagreed/strongly disagreed with the notion that obesity is rooted in the patient’s personality type, while one fifth of the participants agreed (17.8%) or strongly agreed (2%) with the same statement. Furthermore, 40.9% disagreed/strongly disagreed with the notion that a person’s weight problem is due to a lack of personal control, while 15.4% agreed/strongly agreed. Regarding patients’ motivation, the attitudes varied; about one fifth (22.3%) thought obese patients were quite motivated about lifestyle change, and about one fifth (19%) thought the opposite. A majority (73.3%) disagreed/strongly disagreed with the notion that obese patients are lazier than other patients. Mean scores for the factors are presented in Table 2.

Regarding obesity management a majority disagreed/strongly disagreed that ‘a patient’s weight is not really my business’ (60.7%) and rated obesity as an important area for developing services (91.5%). Eight percent (8.1%) of the participants thought they were effective in helping patients lose weight, while 25.9% disagreed/strongly disagreed with the statement. About one fifth (22.6%) were aware of a specific clinical protocol for managing obesity in their practice situation, and about one third (34.8%) were aware of an identified lead clinician in relation to managing obesity in their practice situation. Ten percent (10.1%) thought their practice includes a well-developed programme of support for obese patients.

### 3.4. Associations between the study variables

Bivariate correlation analysis revealed modest to weak statistically significant positive associations between obesity-related clinical activities: and Personal effectiveness ($r = 0.39, p < .001$); Importance of obesity ($r = 0.13, p = .047$); working experience total ($r = 0.18, p = .007$); working experience in primary care ($r = 0.22, p = .001$). Furthermore, a weak negative association between obesity-related clinical activities and Negative views ($r = -0.13, p = .046$), Table 2. Participants that had specialized tasks (responsibilities for patients with diabetes and/or hypertension, and/or health coordinator) performed statistically significantly more clinical activities than participants without these tasks (Mann–Whitney U-test mean 4.1 SD 2.3 vs. mean 0.9 SD 1.4, $p < .001$) and perceived higher personal effectiveness (Mann–Whitney U-test mean 3.8 SD 0.6 vs. mean 3.3 SD 0.7 $p < .001$). A multivariate logistic regression model (Table 3) with the dependent variable performing three or more clinical activities

### Table 1

District nurses’ obesity-related clinical activities n (%), $n = 247$.

<table>
<thead>
<tr>
<th>Clinical activity – overweight and obesity</th>
<th>Never in the current post</th>
<th>Once or at some occasions in the current post</th>
<th>Once a month</th>
<th>Once or several times during a typical week</th>
<th>Missing value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detailed advice about physical activity</td>
<td>18 (7.3)</td>
<td>55 (22.3)</td>
<td>75 (30.4)</td>
<td>99 (40.1)</td>
<td>-</td>
</tr>
<tr>
<td>Give general lifestyle advice about obesity</td>
<td>8 (3.2)</td>
<td>69 (27.9)</td>
<td>84 (34.0)</td>
<td>86 (34.8)</td>
<td>-</td>
</tr>
<tr>
<td>BMI assessment</td>
<td>50 (20.2)</td>
<td>73 (29.6)</td>
<td>55 (22.3)</td>
<td>68 (27.5)</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Uses motivational interviewinga</td>
<td>69 (27.9)</td>
<td>52 (21.1)</td>
<td>54 (21.9)</td>
<td>67 (27.1)</td>
<td>5 (2.0)</td>
</tr>
<tr>
<td>Provide information resources</td>
<td>76 (30.8)</td>
<td>68 (27.5)</td>
<td>48 (19.4)</td>
<td>52 (21.1)</td>
<td>3 (1.2)</td>
</tr>
<tr>
<td>Detailed advice about weight reducing diets</td>
<td>104 (42.1)</td>
<td>64 (25.9)</td>
<td>41 (16.6)</td>
<td>36 (14.6)</td>
<td>2 (0.8)</td>
</tr>
<tr>
<td>Waist circumference measurement</td>
<td>105 (42.5)</td>
<td>88 (35.6)</td>
<td>25 (10.1)</td>
<td>27 (10.9)</td>
<td>2 (0.8)</td>
</tr>
<tr>
<td>Offer ongoing structured support programme for obese individuals</td>
<td>158 (64.0)</td>
<td>55 (22.3)</td>
<td>24 (9.7)</td>
<td>4 (1.6)</td>
<td>6 (2.4)</td>
</tr>
<tr>
<td>Uses behavioral therapya</td>
<td>216 (87.4)</td>
<td>10 (4.0)</td>
<td>5 (2.0)</td>
<td>2 (0.8)</td>
<td>14 (5.7)</td>
</tr>
<tr>
<td>Perform treatment for patients with overweight and obesity in groupa</td>
<td>228 (92.3)</td>
<td>5 (2.0)</td>
<td>-</td>
<td>-</td>
<td>14 (5.7)</td>
</tr>
</tbody>
</table>

a Items were added in the present study compared to the study by Brown et al.

### Table 2

Bivariate correlations between obesity-related clinical activity (CA), the factors in the attitude and belief scale and sociodemographic variables ($n = 221–247$), Spearman's rho.

<table>
<thead>
<tr>
<th>Factors</th>
<th>CA</th>
<th>PE</th>
<th>IO</th>
<th>EC</th>
<th>NW</th>
<th>OS</th>
<th>Mean (SD)</th>
<th>Cronbach's α values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal effectiveness (PE)</td>
<td>0.39***</td>
<td></td>
<td></td>
<td></td>
<td>3.4 (0.7)</td>
<td></td>
<td>0.68</td>
<td></td>
</tr>
<tr>
<td>Importance of Obesity (IO)</td>
<td>0.13</td>
<td>0.23***</td>
<td></td>
<td></td>
<td>4.1 (0.5)</td>
<td></td>
<td>0.40</td>
<td></td>
</tr>
<tr>
<td>External causes (EC)</td>
<td>-0.09</td>
<td>-0.04</td>
<td>-0.22**</td>
<td></td>
<td>2.9 (0.5)</td>
<td></td>
<td>0.43</td>
<td></td>
</tr>
<tr>
<td>Negative views (NW)</td>
<td>-0.13*</td>
<td>-0.17**</td>
<td>-0.18**</td>
<td>0.12</td>
<td>2.7 (0.6)</td>
<td>0.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational support (OS)</td>
<td>-0.05</td>
<td>0.00</td>
<td>-0.10</td>
<td>0.08</td>
<td>2.8 (0.9)</td>
<td>0.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working experience total</td>
<td>0.18**</td>
<td>0.13</td>
<td>-0.02</td>
<td>-0.03</td>
<td>0.04</td>
<td>-0.02</td>
<td>28.7 (9.6)</td>
<td></td>
</tr>
<tr>
<td>Working experience primary care</td>
<td>0.22**</td>
<td>0.08</td>
<td>-0.06</td>
<td>-0.05</td>
<td>-0.00</td>
<td>0.02</td>
<td>14.2 (3.0)</td>
<td></td>
</tr>
</tbody>
</table>

*** $p < .001$, ** $p < .01$, * $p < .05$ (two-tailed).
weekly (yes or no) was then performed. The independent variables were being or not being a district nurse with special tasks, working experiences in primary care, Personal effectiveness, Negative views and Importance of obesity. The model was statistically significant (p < .001) and the model summary Nagelkerke R Square was 0.598. Variables that made statistically significant contributions were being a district nurse with special tasks (p < .001), Personal effectiveness (p = .003) and working experiences in primary care (p = .005). The GEE model revealed that the same variables remained statistically significant i.e. being a district nurse with specialized tasks (p < .001), Personal effectiveness (p = .002) and working experiences in primary care (p = .021).

4. Discussion

A majority of the participants reported obesity management as part of their role and rated obesity as an important area for developing services, a smaller proportion were aware of a specific protocol for obesity management at their practice and few thought that their practice had a well-developed programme of support for obese patients (cf. Brown et al., 2007). The two most common obesity-related clinical activities performed by one third or more during an ordinary week were giving advice about physical activity (40.1%) and general lifestyle advice for obesity (34.8%), while nearly one third reported that they seldom or never performed these activities. Approximately half reported seldom or never performing BMI assessment and even fewer reported measuring waist circumference (78.1%). Other studies of nurses and physicians have revealed that about one third (Al-Ghawi & Uauy, 2009; Brown et al., 2007) to half of physicians perform BMI regularly (Smith et al., 2011) and that few measure waist circumference regularly (Huber et al., 2011; Smith et al., 2011). Furthermore, many GPs and nurse practitioners poorly understood the strength of waist circumference as an obesity measure (Hankey et al., 2004). Assessment and documentation of BMI and/or waist circumference are necessary to quantify the prevalence of obesity and to evaluate progress in management; use of both measures is strongly recommended (Hauner et al., 2008). Research (Hauner et al., 2008) has also shown that many abdominally obese patients have a BMI below 30. A qualitative study (Dunkley, Stone, Patel, Davies, & Khunti, 2009) of attitudes towards waist circumference measurement revealed that some practitioners felt uncomfortable while, in contrast, the patients raised few barriers to the measurement.

The DNs in the present study were more likely to give detailed advice about physical activity than about diet, which is similar to findings from other studies on advice from physicians (Huber et al., 2011; Smith et al., 2011) and patients reports on advice from health personnel (Ko et al., 2008). Combined lifestyle advice, e.g. advice about both physical activity and diet was in a recent review found to be rather low (van Dillen, van Binsbergen, Koelen, & Hiddink, 2012). The apparent lack of obesity-related clinical activities in some areas among some DNs is a concern. For example, when the answers never in the current position and once/at some occasions in the current position were summed, this response pertained to about 30–31% of the nurses regarding giving detailed advice about physical activity and general lifestyle advice about obesity; to about 58% regarding providing information resources; and to about 68% regarding giving detailed advice about weight reducing diets. These results are not in line with the strategy for Europe on nutrition, overweight and obesity related health issues (European Commission, 2010). A study from Bahrain (Al-Ghawi & Uauy, 2009) revealed that GPs, according to self-reports, mostly performed these activities. However, a study from the US (Simkin-Silverman et al., 2005) of GPs and their patients showed that 65% of the patients had received education about the benefits of weight loss according to self-reports. Considerably fewer patients reported receiving advice on how to lose weight (37%) and how to increase physical activities (28%). Thus, advice about how to lose weight is not that common either in the present study or others. In addition, studies (Hankey et al., 2004; Park et al., 2011) have found deficient obesity-related nutritional knowledge.

In the present study, about one quarter of the participating DNs used motivational interviewing on a weekly basis as an approach when counselling patients with overweight or obesity. A meta-analysis of randomized controlled trials on weight-loss management and the use of motivational interviewing showed the clear benefits (Armstrong et al., 2011); yet, research among GPs have shown low use of motivational interviewing (Pollak et al., 2011).

Most DNs in the present study believed that obesity is a risk to health, which is similar to findings from other studies of nurses (Brown et al., 2007) and physicians (Al-Ghawi & Uauy, 2009). Only about 8% felt they were effective in helping patients lose weight [corresponding figures in Brown et al. (2007) were higher: 22%]. A study of GPs also revealed higher figures (36%) for effectiveness (Al-Ghawi & Uauy, 2009). Most DNs felt obesity was an important area for developing service and did not agree with the statement that a patient’s weight is not really my business. Findings from a Swedish qualitative study (Hansson, Rasmussen, & Ahlström, 2011) revealed that GPs and DNS thought obesity should be prioritized, yet contradictory beliefs were identified, according to which obesity was not a disease and thus not their responsibility. A trusting relationship is crucial in nursing care, and such a relationship might be at risk among DNs with negative views on obesity and low scores on ratings of the Importance of obesity and Personal effectiveness. However, mean values for the Importance of obesity and Personal effectiveness in the present study were skewed towards a positive view and for Negative view close to neutral, which is quite similar to Brown et al.’s (2007) results.

In the present study, longer work experience in primary care and total work experience were related to DNs performing more obesity-related clinical activities on a weekly basis, cf. studies of physicians (Al-Ghawi & Uauy, 2009; Smith et al., 2011). Higher levels of perceived effectiveness were also associated with DNs performing more obesity-related clinical activities (cf. Stark, Graham-Kiefer, Devine, Dollahite, & Olson, 2011). There were weak but significant associations between more Negative views on obesity and fewer clinical activities, as well as between higher scores in the Importance of obesity factor and more clinical activities. DNs with specialized tasks performed more weekly activities compared to the others. This was also in line with our expectations since in guidelines for treatment of these diseases there are sections on obesity management. Furthermore, several studies (Ko et al., 2008; Michie, 2007; Simkin-Silverman et al., 2005; Smith et al., 2011) have also revealed that health-care personnel perform more activities for obese individuals with co-morbidities. Brown et al. (2007) found that practice nurses, who have a prevention and disease management role, performed more obesity-related clinical activities than other nurses in primary care.
Surprisingly, there was no statistically significant association between organizational support and clinical activities. Studies have revealed the importance of structural conditions in obesity management (Melin, Karlström, Berglund, Zamfir, & Rössner, 2005) and nurses’ working life (eg. Engström, Skyt, & Nilsson, 2011). However, this might be due to the items measuring organizational support; for example being aware of an identified lead clinician in relation to managing obesity in my practice situation is not the same as perceiving one has support from managers, physicians, colleagues and is receiving feedback on one’s work. A well-developed programme might also be that there is a team working with obesity management in the practice, meaning that not all personnel are involved in the more intensive work. The multivariate analysis revealed that, in addition to being a DN with specialized tasks, the variables Personal effectiveness and working experiences within primary care also made statistically significant contributions to the model; cf. Brown et al. (2007) and Smith et al. (2011) regarding working experiences.

The cross-sectional design is a limitation, and conclusions as to the direction of causality cannot be drawn. Cronbach’s Alpha values for two of the factors were low, which has to been taken into consideration when interpreting the results. Cronbach’s Alpha values for these two factors were also low in the study by Brown et al. (2007) and may require further development in the future. Limitations that may affect generalizability are the non-random sampling. On the other hand, 33 different centres were involved and the response rate was quite high (78%). Another strength was that a GEE was used to control for potential unknown correlations among DNs within a single centre. Social desirability bias cannot be ruled out when topics such as obesity are investigated. Research (Laws & Counterweight Project Team, 2004) has also shown that nurses tend to self-report higher levels of intervention than are actually the case.

5. Conclusions

According to the results, there is considerable room for improvement regarding obesity management in primary care. Multivariable analysis showed that being a district nurse with specialized tasks, longer working time in primary care and higher perceived personal effectiveness were significantly associated with performing three or more obesity-related clinical activities on a weekly basis. Managers need to make efforts to engage all personnel in tackling the obesity epidemic, and strategies to increase self-efficacy are called for. If primary care is to assume responsibility for the obesity epidemic further education of DNs is needed. Brief training interventions of counselling might be helpful to strengthen self-efficacy as might nurse-led projects like the counterweight programme for obesity (Counterweight Project Team, 2008). Attitudes and beliefs need to be assessed, brought up and discussed in the work groups. Managers and primary care personnel need to jointly discuss measures to initiate and improve prevention and management of obesity, including organizational factors that might facilitate such improvements. In the present study, perceived effectiveness was associated with performance of more obesity-related clinical activities, thus support, feedback and supervision could be one way to increase self-efficacy. Future research also needs to focus on this i.e. how can perceived effectiveness related to obesity management in clinical practice be improved as well as structural conditions for obesity management.

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References


