

## Predictors of perceiving smoking cessation counselling as a midwife's role: a survey of Dutch midwives

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**Background:** Smoking during pregnancy can have many serious consequences. As the usual providers of pregnancy care in the Netherlands, midwives could serve as effective counsellors to pregnant women about cigarette smoking. The aim of the present study was to identify relevant factors that hamper or promote the provision of effective smoking cessation advice and counselling. **Methods:** Questionnaires were mailed to midwives; 237 (64.4%) were returned. Questions were asked about advantages and disadvantages of giving smoking cessation advice, perceived health benefits for mother and child, smoking behaviour and normative beliefs of colleagues, self-efficacy and role definition of midwives with regard to giving smoking cessation advice. **Results:** Midwives who have a more positive role definition regarding giving smoking cessation advice are more convinced of the advantages of giving advice, the advantages of quitting for their clients and perceive more support from their colleagues with regard to giving advice. **Conclusion:** In general, midwives were motivated to provide their clients with smoking cessation advice. They were less comfortable with guiding women through the cessation process. Therefore, effective materials and training should be developed to facilitate and stimulate midwives in their role as effective counsellors.

**Keywords:** attitudes, education, midwives, smoking cessation

Pregnant women are considered a special target group for smoking cessation because smoking cessation during pregnancy significantly reduces the risks of growth retardation, foetal death, Sudden Infant Death Syndrome, and other problems.<sup>1-5</sup> Women can be more readily motivated to quit smoking because of the harmful effects for their baby<sup>6</sup> and women are in regular contact with a health care professional. Health care professionals are a potential source of health information, and their attitudes and counselling practices can have an important impact on the health habits of their clients.<sup>7</sup>

In the Netherlands, several sources and channels can be used to reach pregnant women, such as mass media approaches and more interpersonal approaches. Although mass media approaches may have a more agenda-setting function, interpersonal contacts may present a better strategy for realizing behavioural change. Consequently, those who provide pregnancy care can be potential sources of anti-smoking information. In the Netherlands, pregnancy care is provided through midwives, general practitioners and gynaecologists. Uncomplicated pregnancies are usually guided by midwives who work independently in private practices, organized into regional networks.<sup>8</sup>

Although midwives may be potential sources of smoking cessation education, a precondition is that they consider providing smoking cessation to be part of their job. In the Netherlands no information about this was available. Moreover, only a few international studies have addressed this issue. An English study by McGreal<sup>9</sup> revealed that midwives were anxious to encourage pregnant women to give up smoking, but arguably lacked certain skills in this area and thus felt ill equipped for the task. Although little has been written about attitudes regarding providing smoking cessation advice by midwives, more general studies about attitudes of health professionals have listed several reasons for failing to raise the issue of smoking. Lack of time, insufficient knowledge, personal attitudes and fear of endangering the relationship with the client have all been frequently cited.<sup>10</sup>

Studies conducted among nurses indicate that nurses perceive health education to be an important part of their role but that there are various factors that either facilitate or constrain this role. Nurses feel, for instance, that it is essential that their health education role is valued by other health care professionals.<sup>11</sup> With regard to providing smoking health risk education few actually provide this care due to perceived ineffectiveness of health risk education, belief that smoking is not a health risk, and lack of knowledge base to provide care.<sup>12</sup>

Several behavioural science models suggest that behaviour is determined by three types of cognitions or ideas that people hold about a particular behaviour: attitudes, perceived social influences and self-efficacy expectations, although the description of these cognitions differ from model to model.<sup>13-17</sup> The present study uses the Attitude-Social influences-Efficacy model, or ASE model.<sup>18-20</sup> Attitude is conceptualized as the result of weighing the perceived advantages and disadvantages of a specific behaviour. Perceived social influences is conceptualised as the result of social norms,<sup>21</sup> modelling<sup>14</sup> and social support encountered in favour of the behaviour or pressure against the behaviour.<sup>22</sup> Self-efficacy, a concept derived from Bandura's Social Learning Theory,<sup>14,23</sup> measures an individual's perceived capacity to perform a particular behaviour. The ASE model has been used to explain various health behaviours,

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nutrition,<sup>24</sup> exercise,<sup>25</sup> alcohol consumption,<sup>26</sup> child safety<sup>27</sup> and smoking.<sup>18,19,28</sup> To assess the degree to which midwives see themselves as appropriate intermediaries to give smoking cessation advice to pregnant women and their partners, a survey was conducted with a sample of members of the Dutch Organization of Midwives.

It was hypothesized that midwives who have a positive role definition of giving smoking cessation advice to their clients would be more convinced of the advantages of providing smoking cessation advice, including the perceived health benefits for pregnant women, experience more social support from their colleagues to provide smoking cessation advice, and have higher levels of self efficacy for this task than midwives with a less positive role definition.

## Methods

### Design

In January 1995, 368 questionnaires were mailed to all members of the Dutch Organization of Midwives in the Middle and Southern part of the Netherlands (provinces: Gelderland, Utrecht, Zeeland, Noord-Brabant and Limburg). Enclosed with the questionnaire was a cover letter explaining the purpose of the study and the co-operation of the Dutch Organization of Midwives and a post-paid pre-addressed envelope. Midwives who returned the questionnaire were offered the opportunity to win a gift certificate of 100 Dutch guilders.

### Measures

**Outcome expectations.** Attitude toward providing smoking cessation advice was assessed with eight advantages ('When I provide smoking cessation advice to my clients...there is less chance of young children becoming ill, they are better able to weigh the pros and cons of quitting, they will they appreciate me more, I am a better midwife, I fulfil an important preventive task, I show interest in the health of my client, there is less chance that the woman will start smoking again postpartum') answered on a 7-point scale, with 6 indicating total agreement and 0 total disagreement ( $\alpha = 0.75$ ) and nine disadvantages ('When I provide smoking cessation advice to my clients this takes a lot of time, I am hindered by the presence of others, I notice that I am not trained to provide preventive tasks, I lack specific knowledge of the subject, I create evasive reactions, I intrude the privacy of my clients, I patronize my clients, I have to break my usual routine, it is difficult when there is no immediate reason') answered on a 7-point scale, with 6 indicating total agreement and 0 total disagreement ( $\alpha = 0.71$ ).

**Perceived health benefits.** Perceived health benefits of quitting for the pregnant client was assessed with eight advantages ('When my client quits smoking she will improve her health, she will improve her physical condition, she will improve the health of the foetus, she will reduce her risk of heart disease, cancer and lung problems, she shows a feeling of responsibility for her pregnancy, she sets a positive example for other pregnant women') answered on a 7-point scale, with 6 indicating total agreement and 0 total disagreement ( $\alpha = 0.80$ ) and three disadvantages ('When my client quits smoking she will gain more weight than usual, she will be less able to relax, she will eat less healthfully (eat more sweets)') answered on a 7-point scale, with 6 indicating total agreement and 0 total disagreement ( $\alpha = 0.65$ ).

**Social norms.** Social norms about giving smoking cessation advice were assessed using three items representing different groups of important colleagues ('My colleague midwives/general practitioners/gynaecologists think that providing smoking cessation advice is part of my job) answered on a 5-point scale with -2 indicating total disagreement and 2 total agreement ( $\alpha = 0.72$ ). Additionally midwives were

asked to indicate how many of their colleague midwives/general practitioners/gynaecologists smoke, using a 5-point scale, with 1 indicating none and 5 all.

**Self-efficacy.** Self-efficacy for giving smoking cessation advice was assessed by 15 items ('Are you able to give smoking cessation advice when you are running out of time, you have little time per client, you feel rushed, you feel sick, you are not convinced of the negative consequences of smoking during pregnancy, your client is not interested, your client shows resistance, your client is accompanied by her partner, children, mother or acquaintance, your colleagues do not talk about smoking cessation, your client has little time available, you do not have sufficient background information, you are not specifically trained to provide smoking cessation information') answered on a 7-point scale, with -3 indicating total disagreement and 3 total agreement ( $\alpha = 0.72$ ).

**Role definition.** Role definition of midwives with regard to giving smoking cessation advice was assessed using two items ('Do you think advising pregnant women to quit is part of your job?' and 'Do you think helping pregnant women to quit is part of your job?') answered on a 6-point scale, with 1 indicating total disagreement and 6 total agreement.

**Behaviour.** Behaviour was assessed by asking the midwife how much time she actually spent, per client, giving smoking cessation advice during the first consultation (in minutes).

**Background variables.** Three sets of variables were sociodemographic (sex (female, male) and age (in years), midwife and practice characteristics (years working as a midwife, type of practice (solo, duo, group or health centre), having a practice assistant (yes/no), location of midwife practice (Utrecht, Gelderland, Zeeland, Noord-Brabant, Limburg) duration in minutes of a first consult and follow-up consultations) and smoking status (smoker, ex-smoker, never smoked) and about how many of your clients smoke at intake (in percentages).

### Analysis

Chi-square for categorical variables and *t*-tests for continuous variables were used for sociodemographic, midwife and practice characteristics and smoking items to check for any between group differences. Cronbach's  $\alpha$ s were computed to evaluate the internal consistency of the outcome expectations, perceived health benefits, social norms and self-efficacy items. Analysis of variance was performed to study differences between the two groups with regard to total scores on the scales (positive outcome expectations, negative outcome expectations, positive perceived health benefits, negative perceived health benefits, social support and self-efficacy) and also on individual items per scale.

To determine whether outcome expectations, perceived health benefits, social norms and self-efficacy were predictive for role definition with regard to giving smoking cessation advice, we used logistic regression analysis with role definition as dependent variable and the following covariates as independent variables: positive and negative outcome expectations, positive and negative perceived health benefits, social norms and self efficacy. The independent variables were entered first as one block and were then removed one by one, using a backward elimination procedure.

For the analysis, midwives were divided into two subgroups using a median split of their combined scores on the two role definition items. All analyses were performed using the SPSS-x statistical analysis program.<sup>29</sup>

## Results

### Recruitment and participant characteristics

A total of 237 (64.4%) midwives returned their questionnaire. Respondents could be characterized as non-smokers, having

worked as a midwife more than 10 years, and working in duo or group practices without a practice assistant. An average first consultation lasts about 30 minutes and follow-up consultations last approximately 10 minutes each. Midwives estimate that about 30% of their clients still smoke at intake. They reported spending on average 3.5 minutes discussing smoking with their client during intake. There were no differences between groups on any of these items.

### Outcome expectations

There are no differences between the two groups on the total score of disadvantages of providing smoking cessation advice (table 1). On individual items a difference was found only for believing that providing smoking cessation advice intrudes the privacy of clients. Midwives with a less positive role definition with regard to providing smoking cessation advice were more convinced that this intrudes on their clients' privacy ( $F(1,231) = 4.00; p < 0.05$ ).

With regard to advantages of providing smoking cessation advice, a difference was found between the two groups on the total score. Midwives with a more positive role definition were more convinced of the advantages (table 1). In-depth analysis showed that midwives with a more positive role definition regarding providing smoking cessation advice were more convinced that providing smoking cessation advice reduces the risk of young children becoming ill ( $F(1,231) = 9.09; p < 0.01$ ), helps women to quit smoking ( $F(1,231) = 8.97; p < 0.01$ ), helps women to weigh the pros and cons ( $F(1,231) = 9.33; p < 0.01$ ), makes them a better midwife ( $F(1,231) = 6.54; p < 0.05$ ), helps them fulfil a preventive task ( $F(1,231) = 13.4; p < 0.001$ ), they show interest in their client's health ( $F(1,231) = 5.88; p < 0.05$ ) and they help women to not start smoking again postpartum ( $F(1,231) = 4.04; p < 0.05$ ) compared to midwives with a less positive role definition.

### Perceived health benefits

No differences were found between the two groups with regard to the total score of negative perceived health benefits of quitting for the pregnant woman (table 1). Additionally, no differences were found on individual items.

A difference was found between the two groups on the total score of positive perceived health benefits. Women with a more positive role definition were more convinced of the advantages of quitting for pregnant women (table 1). Additionally, women with a more positive role definition were more convinced that when pregnant women quit smoking they improve their health ( $F(1,231) = 6.79; p < 0.01$ ), they improve the health of the foetus ( $F(1,231) = 12.1; p < 0.01$ ), they decrease their risk of heart disease ( $F(1,231) = 11.6; p < 0.01$ ) and lung problems ( $F(1,231) = 9.54; p < 0.01$ ) and they set a positive example for other pregnant women ( $F(1,231) = 8.15; p < 0.01$ ).

### Social support

Midwives with a more positive role definition were more convinced that their colleagues are more positive about them providing this task (table 1). On individual items a difference was found for believing that general practitioners ( $F(1,228) = 6.37; p < 0.05$ ) and gynaecologists ( $F(1,229) = 4.29; p < 0.05$ ) consider providing smoking cessation advice to be part of the midwife's job.

### Self-efficacy

There were no differences between the two groups with regard to total score on self-efficacy items (table 1). On individual items only a difference was found for being able to provide smoking cessation advice when you are running out of time ( $F(1,231) = 6.12; p < 0.05$ ) or you have little time per client ( $F(1,231) = 4.25; p < 0.05$ ). Midwives with a more positive role definition are more convinced that they are able to provide smoking cessation advice in the situations described on this scale.

### Correlations among scales

Significant correlations between factors are presented in table 2. Logistic regression indicated that midwives who were more convinced of the advantages of giving smoking cessation advice ( $OR = 1.07, 95\%CI: 1.014-1.127$ ) and midwives who were more convinced of the advantages of quitting for pregnant women ( $OR = 1.08, 95\%CI: 1.011-1.158$ ) were more likely to have a positive role definition with regard to providing smoking cessation advice.

### Discussion

The present study investigated a set of psychosocial motives that were thought to determine whether a midwife has a positive or negative role definition with regard to giving smoking cessation advice to their clients. The framework used in the study was the ASEmodel, which states that behaviour is determined by attitude, social influences and self-efficacy.

There were no differences between midwives who expressed a more positive role definition and those who were less positive with regard to any of the background characteristics. Respondents with a more positive role definition were more convinced of the advantages of providing smoking cessation advice, the advantages of quitting smoking for their clients and perceived more support from their colleagues to provide smoking cessation advice. An important finding of this study is that both groups had very low scores on the individual self-efficacy items.

The data from our self-administered questionnaire of smoking behaviour indicated a relatively small percentage of smoking midwives in this survey; between 20.9% and 25.2%. This means that the smoking rate among midwives is lower than among the general population of Dutch adult females (33.8%).

Table 1 Means (SD) of and significant differences in outcome expectations, perceived health benefits, social norms and self-efficacy by group ( $n = 233$ )

Sum scores	Positive role definition ( $n = 129$ )	Negative role definition ( $n = 104$ )	
Negative outcome expectations	-15.3 (7.31)	-15.6 (7.22)	ns
Positive outcome expectations	34.4 (5.50)	31.2 (6.13)	$F(1,231) = 17.3; p < 0.001$
Negative perceived health benefits	-10.5 (3.17)	-9.88 (3.14)	ns
Positive perceived health benefits	41.6 (4.28)	39.4 (4.69)	$F(1,231) = 14.2; p < 0.001$
Social norms	3.32 (2.00)	2.64 (1.94)	$F(1,228) = 6.80; p < 0.05$
Self-efficacy	9.51 (12.2)	7.17 (11.5)	ns

**Table 2** Pearson correlation between outcome expectations, perceived health benefits, social norms, self-efficacy, role definition and behaviour ( $n = 228$ )

	Positive outcome expectations	Negative outcome expectations	Positive perceived health benefits	Negative perceived health benefits	Social norms	Self-efficacy	Role definition
Negative perceived health benefits	0.41**		-0.16*				
Social norms	0.28*	0.15*		0.14*			
Self-efficacy		0.26**				0.23**	
Role definition	0.35**		0.31**			0.17*	
Behaviour	0.13*					0.18**	0.19**

\* significant correlation  $p < 0.05$ \*\* significant correlation  $p < 0.01$ 

Research into smoking habits among nurses and general practitioners has shown that these health professionals tend to smoke more than the general population. However, a study conducted in the UK<sup>30</sup> found that only 9.5% of midwives smoked, indicating that the relatively low smoking rates in our study group might be correct or attributed to response bias.

The results of the present study suggest that to foster a more positive attitude of midwives towards providing smoking cessation education to pregnant women who smoke, they need to receive information about the advantages such as helping more women quit smoking, women can be enabled to weigh up the pros and cons of non-smoking, and more women can be helped to avoid relapse after delivery. Furthermore, it may be helpful for midwives to receive information about the positive health benefits of smoking cessation during pregnancy for mother and child. Additionally, publicizing the midwives, general practitioners and gynaecologists that view smoking cessation as normal and good practice may increase positive role definition. Finally, training including enactment, persuasion, and role modelling are recommended to further increase learning counselling skills in midwives as well as increasing their confidence with regard to their counselling roles (i.e. high self-efficacy feelings).

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