Network participation for unpromoted female dentists in relation to psychosocial support

Karin Hjalmers, Björn Söderfeldt, Björn Axtelius and Mats Kronström

Department of Oral Public Health, Faculty of Odontology, Malmö University, Malmö, Sweden; School of Dentistry, Dalhousie University, Halifax, Nova Scotia, Canada

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Studies have shown that female unpromoted general practice (GP) dentists have a taxing work situation with many problems related to their psychosocial work environment. This study aims to describe: 1) the participation of this group in organized network activity (support groups) in a region (Scania) in Sweden, 2) the sense of support compared with another organization and with a nationwide sample of GP dentists, and 3) the covariation of network participation with support. All unpromoted female dentists within the Public Dental Health Service (PDHS) in Scania received a questionnaire and 94% responded. Those participating in network activity $\geq$4 times a year constituted 12% of respondents. Cooperation between colleagues was lower than in the nationwide sample. Support from the PDHS was experienced as weak. It was not possible to explain why female unpromoted GP dentists participated $\geq$4 times a year, while those who felt lonely in their work were to a higher degree participants in a network. Almost 9 out of 10 reported being strengthened by the network both as a person and in a professional role. The female dentist was three times more likely to participate in a network if she had a male head of clinic. The main findings are a paucity of inter-colleague contact and a lack of association between support and network participation. The many affirmative comments indicated that network participation might be a good coping strategy for unpromoted female GP dentists. □ *Coping strategies; public health dentistry; social network; work conditions; work environment*

Karin Hjalmers, Department of Oral Public Health, Faculty of Odontology, Malmö University, SE-205 06 Malmö, Sweden. Tel. +46 40 665 70 00, fax. +46 40 92 53 59, e-mail. karin.hjalmers@od.mah.se

Psychological well-being is currently decreasing in Sweden while sickness absence is increasing. This concerns mainly middle-aged and elderly women, especially those employed by municipalities, county councils, or regions. According to a new Swedish report, the situation is worse in Sweden than in any of the other countries investigated in the European Union (1). In Sweden, the number of sick-listed women has been >50% higher than for men in the past 15 years. Of these women, 74% were employed in the public sector, which was the highest rate of all of countries in the report (1).

Causative factors behind this immense ill-health problem can be that working life places stronger and greater demands on individuals, with a faster working pace and higher demands on profitability and flexibility. Restructuring could also be a factor (2). According to another new report on working life in Sweden (3), there are indications that the work itself has become more stressful and that control over the work rate has diminished, greatest among those with the least freedom of action. The proportion of people with unfavorable combinations is clearly increasing, especially among women (3). It is therefore important to expand our knowledge of the factors contributing to this situation and to study ways of changing a problematic situation, especially in the case of vulnerable groups.

An example of a taxing work situation is that of female unpromoted general practice (GP) dentists employed in the Public Dental Health Service (PDHS) in Sweden. These dentists have a difficult work situation with many problems related to their psychosocial work environment (4, 5). About half of all the dentists are employed in the PDHS, where 68% are women with an average age between 40 and 44 years (6). More than one-fourth are unpromoted female dentists.

Work as an unpromoted dentist is a lonely job. 'Enclosure' means that dentists are tied to their chairs, lacking realistic alternatives in their work. The work organization could also be characterized as authoritarian, with the dentist obliged to obey and to adapt to the organization's demands, which implies close surveillance and detailed control of their work (4). There are few opportunities for the unpromoted female dentist to meet colleagues at her place of work. Another factor contributing to job stress is a high work load impairing her social network during leisure time (7).

Lacking control over one's job situation combined with high demands often means high job strain and need for support. Support is regarded as an important moderating factor in the connections between high demands/low control and stress, known as the demand-control model (8, 9). Networks may function as 'preventive rehabilitation groups' in generating support, and might therefore give participants better social capital and health (10).

Partly in an effort to mitigate stress, a network was initiated in December 1997 by one of us (K.H.) for unpromoted female dentists in the northwestern part of

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the region of Scania, Sweden. There have also been other networking activities in the region. A study of all female publicly employed unpromoted GP dentists in Scania was carried out in 2000 to investigate and evaluate network activity in a stress context.

The aim of this study was to investigate whether participation by unpromoted female dentists in organized network activity covaries with the sense of support at work. More specifically, the aims were: 1) to describe participation in organized network activity, 2) to compare sense of support with that in another organization and also with that in a nationwide sample of general practice dentists, and 3) to study the covariation of network participation with support.

Materials and methods

Study base

The study deals with the PDHS in Scania, Sweden. All unpromoted female dentists within PDHS general practice in the region, a total of 183, received a mailed questionnaire. Of these, 172 (94%) responded. The data were collected during July and August 2000. Comparisons have been made in some issues with a nationwide study of the Social Insurance Organization's (SIO) personnel in Sweden (11) and in others with the Kronström nationwide study of GP dentists in Sweden (6), where we selected the unpromoted female GP dentists in the PDHS for study.

If the dentist participated in a network $\geq$4 times per year, she was classified within the category 'active network participant', in contrast to the others. A dentist who had participated in the network for unpromoted female dentists in the northwestern part of the region of Scania since its start in December 1997 was classified within the category 'original network participant'.

Questionnaire

The questionnaire comprised 76 questions and statements. One part enquired about support and network participation and there was ample space for personal comments.

The section of the questionnaire concerning support and network participation was introduced as: 'In the job, you can get support in different ways and from different persons and this can be important for connections between work environment and health. Here are some questions and statements.'

The first question was: 'I am a member in a local female network ("support group") for dentists' ('yes' or 'no'), with a corollary question about the number of meetings. The next two questions were 'Do you feel that the network has strengthened you as a person?' and 'Do you feel that the network has strengthened you in your professional role?'

The 5-grade responses were dichotomized into 'agree' and 'do not agree'. Another question concerned whether or not the respondent would like to be a member of a local female network. There was also a question about need for a personal mentor.

A series of questions aimed at measuring support in private life from colleagues and from management. A well-established (11, 12) question about private life support is 'Do you feel a strong affinity to . . . your community? . . . to your residential area?' Concerning support from colleagues, it was asked: 'Do you ever feel lonely in your work?' This question was identical with one in the SIO study (11), as well as another question: 'Do you get enough support from your colleagues when you have tricky problems to solve?'

One question in this context specific for dentists was taken from the Kronström study (6): 'How often do you discuss different treatments with colleagues?'

A question on support from management was introduced as follows: 'I feel that the categories mentioned below work actively to improve my work situation'. The question was in four parts, namely the management of the PDHS, the union organization, the head of the clinic and the team leader. The 5-grade responses were dichotomized into 'agree' and 'do not agree'.

Besides the study variables, there were questions about control variables, namely age, work experience, marital status, and gender of clinic head. Age was asked for in 5-year categories to avoid identification, while work experience was set in years.

Statistical methods

All data were processed in the statistics program SPSS, with statistical significance set to $P \leq 0.05$. For multivariate analysis, logistic regression analysis was used where model fit was assessed from model χ^2 and the number of correctly classified cases. Model χ^2 indicates whether the model is significantly better than one with only a constant, i.e. similar to the F-test in ordinary regression. Analysis of the quantitative data was completed with evaluation of the qualitative information from the respondents' commentaries.

Results

Of all the respondents, 27% were participants in networks for female dentists. The group 'active network participants' constituted 12%, while 7% were 'original network participants'. Of all the network participants, 61% stated that the network had strengthened them as individuals. Furthermore, 55% agreed that the network had strengthened them in their professional role. Of the active network participants, the percentages for 'strengthening as a person' and 'in the professional role' were 86% in both cases. Of the original network participants, the figures were 100% and 91%. The differences between participant categories were statistically significant ($P \leq 0.01$).

Of those who were not participants in a network for

Table 1. Percentage distributions of responses to the question: 'How often do you discuss different therapies with any colleague?' for female unpromoted GP dentists in Scania ($n = 170$) and for female unpromoted GP dentists in Sweden ($n = 446$)

	Dentists in Scania (%)	Dentists in Sweden (%)
Many times a day	4	4
Several times a day	8	15
Several times a week	37	42
At most once a week	19	18
Several times a month	21	13
At most once a month	12	8

$\chi^2 = 13.1$, 5 d.f., $P \leq 0.02$.

Table 2. A logistic regression analysis for female unpromoted GP dentists in Scania with network participation $\geq$4 times a year or not as dependent variable ($n = 160$)

Independent variable	B	OR	*P*
Work experience (years)	−0.0041	1.00	0.8773
Single (ref. cat.)	–	–	–
Married/living with a partner	−0.9614	0.38	0.2268
Social network (0–5)	0.1360	1.15	0.5183
Support from PDHS management (1–4)	−0.0392	0.96	0.9092
Support from head of clinic (1–5)	−0.1180	0.89	0.6164
No support from colleagues (ref. cat.)	–	–	–
Support for colleagues	−0.0867	0.92	0.8732
Head of clinic (ref. cat. male)	–	–	–
Head of clinic (female)	−1.2325	0.29	0.0375

Model $\chi^2 = 7.16$, 7 d.f., $P \leq 0.4128$. Correctly classified cases 86.9%.

unpromoted female GP dentists, 69% wanted to become so. Fewer than 1 in 10 (9%) were supported by a mentor, and 26% felt that they were in need of support of this kind.

Concerning support in private life, 91% had a feeling of affinity to the community in which they lived. Nine percent did not experience such a feeling, but nobody answered 'not at all' to this question. Ninety-one percent had a feeling of affinity to the residential area, 8% had no such feeling, and 2% answered 'not at all' to this question.

One or two questions concerned support from colleagues. In answer to the question whether or not they felt lonely at work, 16% of the dentists in our study did so 'often' or 'very often'. In the SIO, the corresponding number was 20% ($P \leq 0.05$).

Similar responses were obtained from dentists and SIO personnel to the question whether or not they received enough support from colleagues when they had tricky problems to solve. Sixty-seven percent of both dentists and SIO personnel answered that they often or very often received support from their colleagues. In regard to support from colleagues, there was no difference between being and not being an active network participant. However, among the active network participants, 33% felt lonely in their job situation, while among not active network participants, 14% felt lonely in the job situation ($P \leq 0.05$).

Unpromoted female GP dentists in Scania discussed treatments less often with colleagues than did unpromoted female GP dentists in Sweden as a whole (6) (see Table 1). Of the dentists in Scania, 88% did not have daily contact with colleagues about treatments compared to 81% of dentists in Sweden.

Another type of support could come from the organization. The heads of clinics were perceived as actively improving the dentist's work situation by 26% of respondents, the union organization by 8%, the team leaders by 4%, and the management of the PDHS by 1%.

The most frequent opinions about networks concerned the importance of the positive and supporting meeting with female colleagues with whom there was much in common and with whom they could work for a better work situation. Active participation in networks was set as a dependent variable in a multivariate logistic regression model (Table 2).

The model as a whole was not significant and the support variables showed no association with network participation. The only variable that did show a significant covariation was the gender of the head of the clinic; clinics with a male head had a 3-fold probability of participating actively in networks. The share of correctly classified cases was high, but represented a modest improvement (0.01%) in relation to the frequency of network participation.

Discussion

The aims of this study were to register participation in organized network activity, to describe the sense of support compared to another organization and to a nationwide sample of GP dentists, and to study the covariation of network participation with support.

One of the the main results was that it was not possible to explain the participation in networks (support groups) for female unpromoted general practice dentists. With the design of the study, having only cross-sectional data, neither the causality between network participation and well-being nor the causal paths with support can be explained. We could not find positive cross-sectional associations between support and network participation. On the other hand, the female dentists who felt lonely in their work were to a higher degree participants in networks. Network participation can function as a coping strategy, since almost 9 out of 10 of the 'active network participants' reported being strengthened both as individuals and in their professional role. Among the 'original network participants' the scores were even higher. There were also many positive comments on network participation. Attitudes to network participation among those who were not participants were also positive, since the overwhelming majority wanted to become participants in a network for female unpromoted dentists.

Compared to the personnel in the SIO, fewer dentists felt lonely at work. One explanation could be that dentists work almost entirely along with a dental nurse. Still, few

dentists discussed their treatments with colleagues, even less so in Scania than in the nationwide sample (6). Almost 9 out of 10 of the female dentists in Scania did not have daily contact with colleagues about treatments.

The organizational support experienced was weak, which may well have contributed to the high levels of stress-related symptoms found in this group (5), in accordance with the demand-control-support model (8). The best support, though low, came from the heads of clinics. One-fourth of the respondents were of the opinion that the heads of clinics actively worked towards improving their work situation. In this context, the result should be considered that the female dentist was three times more likely to participate in a network if she had a male head of clinic. This could be explained in several ways. Perhaps the male heads of clinics are less afraid of making mistakes by taking 'dangerous decisions', like giving female dentists some freedom in a network out of their control? Perhaps female clinic heads distrust their own gender? Another possibility could be that it is more difficult for a man to deny requests from women out of fear of being regarded as sexist.

There are certain weaknesses in the present study. The questionnaire for the SIO study (11) was sent out in 1993 and for the Kronström study (6) in 1995. In the interim, the work climate may have changed for the worse for everybody, according to new reports (1, 3). This might partially explain the fact that the dentists in our study stated that they did not discuss treatments as often as the dentists in the Kronström study (6). It is also noteworthy that the median age for the dentists in our study, 46–50 years, was higher than for the unpromoted female GP dentists in the nationwide study (6).

Our results are also based on self-reported data. Some questions offered a comparison possibility with other studies (with striking similarities in some cases). There is no possibility of validating the present data, lacking any 'gold standard'. Most occupational health research, however, is based on similar questions. The precision and the reliability of self-reported data are also shown to be surprisingly high in many cases (13).

A further source of possible bias may be the personal engagement by one of the present authors in establishing networks. This may well have given the high response frequency, but the personal ties between the author and the respondents encompassed only about 10% of respondents. There were positive comments from considerably more of the respondents.

Like health care and teaching, dentistry is a human service organization. The special emotional exertions in such work make those working in this area especially vulnerable to occupational health problems, which is developed in the theories of human service organizations (11, 14). For dentists, just as for teachers, there are many contact areas, e.g. professional organizations, union meetings, conferences, and courses. The establishment of interspaces, with familiar relations, can mitigate the negative factors through improved social support (15). In the light of the present results concerning contact with colleagues, it seems as if dentists in particular are exposed to hazards in this respect. Contact with colleagues is an essential component of human service work.

There are coping strategies such as searching for mentors and learning from other people's experiences; examples of simple organizational resources, which for the individual can mean considerably better possibilities for handling one's workload. According to Antonovsky, a coping strategy could be defined as 'an overall plan of action for overcoming stressors'. Social ties could be a generalized resistance resource (16). Lazarus believed that 'the crucial concept that allows us to understand the diverse patterns of reaction to threat is coping' (17). Furthermore, in human services the encounter with the patient is the central component of work (14), requiring as it does social competence from the professional. Participation in networks can be good training in this respect.

A model network for colleagues could be characterized as a meeting place for gaining social support, breathing space and opportunities to develop social competence. Such a network can act as an intellectual fellowship founded on solidarity, where the participant gains in confidence and strength. Within a network one can find, or be, a mentor, and in many ways learn from the experiences of other people, reminiscent of a Balint group (18). In a good network one is not alone but a member of a group supporting and acting for the best of the group. For female unpromoted dentists, all these components of network participation may be ways of improving a problematic working situation.

It is well known that middle-aged women are especially vulnerable to job stress (19). Fifty-year-old Swedish women today feel much worse at work and suffer more from job stress than women did 10 years ago (Assoc. Prof. Aila Collins, Department of Clinical Neuroscience, Karolinska Institute, pers. comm. 2004, (20)). There are two main results of this study, namely the lack of association between support and network participation and the paucity of inter-colleague contact. Enhancing contact should be a main task in dentistry, even if there is no cross-sectional relation to support. Network activities should be pursued for the purpose of promoting contacts. However, there could be intervening variables that give a more nuanced picture of work conditions for dentists. One indication that this might be so can be found in the very affirmative comments.

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