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The prevalence of sick leave: Reasons and associated predictors – A survey among employed pregnant women

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ABSTRACT

Objective: We aimed to investigate the prevalence of sick leave and self-reported reasons given for sick leave during pregnancy. Furthermore, we aimed to estimate the frequency of long-term sick leave during pregnancy in relation to pre-baseline maternal characteristics and to identify predictors of long-term sick leave.
Method: Data from 508 employed pregnant women seeking antenatal care was collected by questionnaires from August 2015 to March 2016. The questionnaires, which were filled in at 20 and 32 weeks of gestation, provided information on maternal characteristics, the number of days spent on sick leave and the associated reasons. Descriptive statistics and logistic regression analysis were applied.
Results: The prevalence of sick leave was 56% of employed pregnant women in the first 32 weeks of gestation and more than one in four reported long-term sick leave (> 20 days, continuous or intermittent). Low back pain was the reason most frequently stated. Fewer than one in ten stated that their sick leave was due to work-related conditions. Positive predictors of long-term sick leave were multiparity, pre-pregnancy low back pain and mental disease, while an advanced degree education was a negative predictor.
Conclusions: The prevalence of sick leave was 56% in the first 32 weeks of gestation and more than one in four women reported long-term sick leave. The majority of reasons for sick leave were pregnancy-related and low back pain was the most frequently given reason.

Introduction

Sick leave among pregnant women is a frequently discussed issue in the Scandinavian countries. Two out of three pregnant women spent an average of 47–73 days on sick leave during their pregnancies [1–4] and the number has increased over recent decades [5–7]. This leads to a significant socio-economic burden as more than 80% of the Danish women form part of the workforce [8]. Hence, it is in the public interest to reduce pregnancy-related sick leave [2,9]. The question is whether sick leave is preventable or can at least be reduced during pregnancy.

Sick leave also affects pregnant women on a personal level because work is perceived as an important part of life: being unable to fulfill a work obligation can cause feelings of guilt, shame and frustration. Women may worry about their employers' reactions to their diminished work capacity, about being a burden to their colleagues and about the risk of being socially isolated [10].

Predictors of sick leave during pregnancy have been identified by recent studies as: younger maternal age, multiparity, maternal overweight and obesity, as well as a lower level of education and pregnancy achieved by assisted reproductive technology [3,11,12]. Work-related factors such as work postures, shift work, increasing working hours and occupational strain are also associated with sick leave during pregnancy [13,14]. Only limited research exists regarding the reasons for sick leave; however, low back pain has been shown to be a significant contributor to sick leave during pregnancy [3,14–16].

In order to support and guide pregnant women concerning work conditions, it is necessary to obtain more detailed knowledge about the extent of and the reasons for sick leave. Sick leave data from the Danish national registry of sickness benefits [11,17] appear to be incomplete and the validity of this registry concerning pregnant women has been questioned [18]. Furthermore, the national register does not provide detailed information about reasons for sick leave during pregnancy [17] and there are only a few studies clarifying the reasons for sick leave in pregnancy [3,17]. This leaves a need for studies using self-reported data

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to describe the extent of, and detailed reasons for, sick leave during pregnancy.

Hence, we aimed to investigate the prevalence of sick leave and self-reported reasons given for sick leave during pregnancy. Furthermore, we aimed to estimate the frequency of long-term sick leave during pregnancy in relation to pre-baseline maternal characteristics and to identify predictors for long-term sick leave.

Methods

Study design and setting

This is a secondary analysis of data obtained from a cohort study conducted with a primary focus of low back pain in a population of pregnant women seeking antenatal care at Zealand University Hospital, Denmark during the period from August 2015 to March 2016. The hospital is one of four in Region Zealand providing obstetric services and it serves as primary birth facility with 2700 deliveries annually and covers the central part of Zealand. As part of the standard antenatal care in Denmark, all women are offered an ultrasound scan at 20 weeks of gestation to screen for fetal malformations. In connection with this scan women were approached and participants received two links by email to self-administered electronic questionnaires, the first link after the ultrasound scan at 20 weeks of gestation and the second at 32 weeks of gestation, to be completed at a convenient time within five days.

Participants We invited all pregnant women aged 18 years or more, who were able to read and understand Danish to participate in the study. Written informed consent was obtained from all participants and the study was approved by the Danish Data Protection Agency, Region Zealand (REG-151-2016).

In the original survey a total of 654 eligible pregnant women were approached of whom 566 (87%) completed the first questionnaire and 513 (78%) completed the second questionnaire. Women who were employed, answered the first questionnaire and who reported data on sick leave in at least one of the two questionnaires were included in the present study. One woman who had not reported data on sick leave in either of the questionnaires was excluded. Thus, in the present study we included data from the 508 employed pregnant women, who had completed the first questionnaire. Women who were lost to follow up at 32 weeks of gestation were more likely to report frequent pre-pregnancy low back pain. We lacked knowledge of the eligible but non-participants at 20 weeks of gestation. (See Fig. 1, flowchart).

Variables

The main outcome was sick leave measured by five items, similar items were previously used among pregnant women [15]. Initially, any sick leave was indicated with a Yes/No answer; it was then specified in four domains whether the sick leave was pregnancy-related, not pregnancy-related, related to the working environment or related to other reasons, using Yes/No answers; multiple answers were allowed. The specific reasons were stated in an open answer within each of the four domains. Finally, the total number of days spent on sick leave was stated for the first 20 weeks of gestation and for the period from the first questionnaire up to 32 weeks of gestation. The specific reasons for sick leave were then categorized as shown in Table 2. Long-term sick leave (either continuous or intermittent) was defined as days above the median number of days of sick leave in the study population, which was 20 days. Subsequently the days were categorized into no sick leave/short-term sick leave (0–20 days) and long-term sick leave (> 20 days). The extent of the days spent on sick leave were further categorized into time spans of 0 days and 7 days (1–7, 8–14, 15–21, 22–28, 29–35, 36–42, 43–49, 50–57 and 57 days or more). Maternity leave in Denmark is based on a collective agreement, which allows women to start maternity leave between 32 and 36 completed weeks of gestation; this means that measuring sick leave after 32 weeks would not be relevant for the entire population. Other variables provided in the first questionnaire were maternal characteristics (age, pre-pregnancy weight and height), level of education (Compulsory = 9 years mandatory schooling, Skilled worker = 9 years of mandatory schooling and 3 as a trainee, 1–4 years higher education ≥12 years and an advanced degree > 15 years), obstetric history (parity and mode of conception), medical history (chronic physical and mental disorders chosen from a predefined list; hypertension, diabetes, lung, heart, metabolic or kidney disease, epilepsy, arthritis, mental disorder or other disease, including pre-pregnancy low back pain) and pre-pregnancy exercise. Dichotomous (Yes/No) questions were used.

Pre-pregnancy low back pain defined according to international guidelines [19] was illustrated on a drawing of a woman; respondents were required to indicate with a Yes/No response whether or not they had experienced the condition. The frequency was categorized into frequent (daily, weekly) or rarely (monthly, occasionally, seldom) or no pain.

The working hours were divided into full time (≥35 h pr. week), part time (< 35 h pr. week) and whether the woman worked shifts (evening and/or night). Dichotomous (Yes/No) questions were used.

Before commencing our study, a pilot study was performed, including 15 test persons who were interviewed shortly after completion of the questionnaire. The relevant comments were used in a revision of the questionnaires in order to ensure comprehensibility of the questions and to strengthen the likelihood of complete responses in the survey.

Danish legislation on sick leave during pregnancy According to Danish legislation pregnant women may be given sick leave if deemed necessary by the general practitioner. Women get either full payment or sickness benefits from the first day from the employer, which is subsequently refunded, by the social security system. The employer is obligated to adjust work tasks if these are considered incompatible with pregnancy and may require documentation of disease from the first day of absence."

Statistics

The Pearson Chi-square and Fisher's Exact tests were applied to detect differences between and within the categorical variables. The *t*-test was used to compare means for continuous variables. Univariate and multivariate logistic regression analyses were performed to identify predictors of long-term sick leave and presented as crude and adjusted odds radios (OR) with 95% confidence intervals (CI). To address the missing data issue of the number of days spent on sick leave we performed a complete case analysis (n = 453) and an analysis including data on at least one of the two measurement points (n = 508). These results were similar and led to identical conclusions and we therefore chose only to show the results of the analysis including data on at least one of the two measurement points. A two-sided p-value < 0.05 was considered statistically significant. The statistical analyses were performed in SPSS 22.0 (IBM).

Results

Maternal characteristics are presented in Table 1.

The overall prevalence of sick leave in the entire period up to 32 weeks of gestation was 56% (Table 2). The prevalence of sick leave was 35%