

Experiences of counselling on physical activity during pregnancy Gestational diabetes mellitus - screening and pregnancy outcomes

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Akademisk avhandling

som med vederbörligt tillstånd av Rektor vid Umeå universitet
för avläggande av medicine doktorexamen framläggs till
offentligt försvar i Betula, Norrlands universitetssjukhus,
fredagen den 27 maj 2016, kl 09.00.

Fakultetsopponent: Margareta Larsson, docent, Institutionen
för kvinnors och barns hälsa, Uppsala universitet



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Umeå 2016

Organization
Umeå University
Department of Clinical Sciences
Obstetrics and Gynecology

Document type
Doctoral thesis

Date of publication
29 April, 2016

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Title Experiences of counselling on physical activity during pregnancy
Gestational diabetes mellitus - screening and pregnancy outcomes.

Abstract

Background Overweight and obesity are global health problems with several adverse health effects that threaten public health and are conditions that are associated with adverse pregnancy outcomes, including gestational diabetes mellitus (GDM). Globally, physical inactivity is the fourth leading risk factor for mortality. The recommendations for physical activity (i.e., ≥ 150 minutes/week) issued by the Swedish National Board of Health and Welfare is in line with the recommendations issued by the WHO. Physical activity during pregnancy is generally safe and beneficial for both the pregnant woman and her fetus and can maintain or improve fitness and may further improve pregnancy outcomes. Midwives working in antenatal care (ANC) in Sweden play a prominent role in promoting a healthy lifestyle through counselling pregnant women on lifestyle, including physical activity during pregnancy.

Aims First, this thesis investigated guidelines for screening of GDM, risk factors, and pregnancy outcomes in relation to GDM. Second, it investigated physical activity during pregnancy and pregnancy outcomes. Third, it explored midwives' and pregnant women's experiences with counselling that addressed physical activity during pregnancy.

Methods Study I and III are cross-sectional studies using data from the Swedish Maternal Health Care Register and the Salut Register. A total of 184,183 pregnant women were included in Study I (2011-2012) and 3,868 in Study III (2011-2012). Study II and IV are qualitative studies applying qualitative content analysis. Study II included 41 midwives who were interviewed in eight focus group discussions (FGD). Study IV included 14 pregnant women who participated in individual in-depth interviews.

Main findings There was no consensus in Sweden regarding clinical guidelines for screening regimes or 2-hour cut-off value for diagnosis of GDM from 2011 through 2012. Four screening regimes were applied in Sweden during this time period: A) universal screening with a 2-hour cut-off value of 10.0 mmol/L; B) selective screening with a 2-hour cut-off value of 8.9 mmol/L; C) selective screening with a 2-hour cut-off value of 10.0 mmol/L; and D) selective screening with a 2-hour cut-off value of 12.2 mmol/L. Unemployment, low educational level, and non-Nordic origin were all risk factors for GDM, and a BMI ≥ 30 kg/m² almost four-doubled the risk for GDM compared to pregnant women with BMI < 30 kg/m². Increasing OGTT-values were associated with increasing risk of adverse pregnancy outcomes (Paper I). Midwives in antenatal care perceived counselling as both challenging and as an opportunity to promote a healthy lifestyle for pregnant women. As the theme "An on-going individual adjustment" reveals, the midwives tried to adjust their counselling to each pregnant woman's individual needs. Counselling pregnant women on physical activity was seen as complex and ambiguous with a risk of being rejected by the women if the advice was delivered too straightforward. Instead, the midwives were "tiptoeing" around the sensitive topics (Paper II). Almost half of pregnant women reported that they achieved the recommended level of physical activity during pregnancy (i.e., ≥ 150 minutes/week). These women were characterized by lower BMI, higher educational level, and very good or good self-rated health (SRH) compared to the women who did not achieve the recommended level (Paper III). Pregnant women reported a desire for individual counselling on physical activity during pregnancy. The theme that emerged was "Longing for fulfilment of individual needs and expectations", which reflected the wish that midwives' counselling on physical activity should be based on pregnant women's individual needs instead of merely providing general advice. Some participants reported receiving encouragement and support, but others believed they were provided insufficient counselling on physical activity and that the midwife could have her own agenda focusing mostly on medical surveillance (Paper IV).

Conclusions No consensus regarding clinical guidelines and diagnostic criterion for GDM existed in Sweden during 2011 to 2012. Obesity was a strong risk factor for development of GDM, and low socio-economic status and non-Nordic origin were also demonstrated as significant risk factors. Participants fulfilling the recommendation of physical activity were characterized by lower BMI, higher education, and very good or good self-rated health. Midwives strived to adjust and individualize their counselling on physical activity; however, some of the participants could experience the counselling on physical activity being too general. Clearly, healthcare professionals should encourage fertile and pregnant women to be physically active, especially overweight and obese pregnant women who report low levels of physical activity, in order to improve overall health in this population.

Key words Gestational diabetes mellitus, screening, pregnancy outcomes, physical activity, pregnancy, counselling, health promotion, midwife

Language
English

ISBN
978-91-7601-446-2

ISSN
0346-6612

Number of pages
72 + 4 papers