

Prevalence of Gestational Diabetes Mellitus Attributable to Obesity in Qassim Region.

Introduction: The prevalence of GDM reflects major concern in health as it is steadily increasing at higher ratio in the Saudi Arabia comparison to other populations in the world. The risk factor for gestational diabetes includes both modifiable that are life style factors (overweight, obesity) and non-modifiable factor, which is a family history of diabetes. **Therefore, the aim of this study** was to estimate the burden of Gestational diabetes mellitus (GDM) among Qassim female population and to explore the effect of obesity risk factor on the prevalence of GDM.

Background: Several potentially modifiable factors before pregnancy have been related to a lower risk of gestational diabetes.

These include maintaining a healthy body weight, adapting a healthy diet, regular physical activity, and abstinence from cigarette smoking. We examined the joint effect of lifestyle characteristics on risk of gestational diabetes.

Methods: A Quantitative observational cross-sectional study was conducted among 615 (Survey A) women to estimate the status of awareness and risk factors associated with GDM. Survey (B) of 1070 women who had pregnancy belong to Qassim region was included to evaluate the prevalence of GDM with obesity. An online and paper questionnaire was designed in Arabic to facilitate the data collection. Statistical data entry and analysis of results performed using Microsoft Excel and analyzed by EpiInfo2007 (Free download-CDC website). **References:**

- Wahabi H, Fayed A, Esmaeil S et al. (2016) "Riyadh mother and babymulticenter cohort

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-Mirghani Dirar, A. and Doupis, J. (2017). Gestational diabetes from A to Z. World Journal of Diabetes, 8(12), pp.489-511. et al.

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Result(Awarness): The awareness survey demonstrated that **87%** of women were aware to GDM and **72%** among them already had the knowledge of GDM risk factors.



Result(history of diabetes): Clinical Characteristics of the study participants grouped by healthy, GDM and Type-1 Diabetes.



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Result(sleeping duration):

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it was found an association between sleeping duration less than 7 h & GDM risk factor, being 46% with GDM & 36% without GDM.

Result(Obesity): The Differences between obesity and GDM indicated statistically significant differences in obese with GDM (19.2%), while obese without GDM was 11.8%. The **increasing** of BMI (**obesity**) is associated with <u>GDM</u> in women among Qassim region.

46% 36% GDM Non-GDM

11.8% 19.2% 0% 10% 20% 30%

■ Non-GDM ■ GDM

Conclusion:

Obese women are at a significantly elevated risk of developing GDM, as it was shown **19.2%** among **9%** GDM women.

Also, it can be demonstrated that a large proportion of the GDM (9%) was among age groups of 31-40y (48.5%) & 41-50y(35.5%). Also It's related to other lifestyle factors including physical activity, sleeping duration & routine life.

Age and GDM

