## Physical Activity Self-Efficacy among Pregnant Women with High Risk for Gestational Diabetes Mellitus: A Cross-Sectional Study

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Abstract: Aim and Objectives: To examine physical activity self-efficacy, identify its predictors, and further explore the mechanism of action among the predictors in mainland Chinese pregnant women with high risk for gestational diabetes mellitus (GDM). Background: Physical activity could protect pregnant women from developing GDM. Physical activity selfefficacy was the key predictor of physical activity. Design: A cross-sectional study was conducted from October 2021 to May 2022 in Zhengzhou, China. Methods: 252 eligible pregnant women completed the Pregnancy Physical Activity Self-efficacy Scale, the Social Support for Physical Activity Scale, the Knowledge on Physical Activity Questionnaire, the 7-item Generalized Anxiety Disorder scale, the Edinburgh Postnatal Depression Scale, and a socio-demographic data sheet. Multiple linear regression was applied to explore the predictors of physical activity self-efficacy. Structural equation modeling was used to explore the mechanism of action among the predictors. Results: Chinese pregnant women with a high risk for GDM reported a moderate level of physical activity self-efficacy. The best-fit regression analysis revealed four variables explained 17.5% of the variance in physical activity self-efficacy. Social support for physical activity was the strongest predictor, followed by knowledge of the physical activity, intention to do physical activity, and anxiety symptoms. The model analysis indicated that knowledge of physical activity could release anxiety and depressive symptoms and then increase physical activity self-efficacy. Conclusion: The present study revealed a moderate level of physical activity self-efficacy. Interventions targeting pregnant women with high risk for GDM need to include the predictors of physical activity self-efficacy. Relevance to clinical practice: To facilitate pregnant women with high risk for GDM to engage in physical activity, healthcare professionals may find assess physical activity self-efficacy and intervene as soon as possible on their first antenatal visit. Physical activity intervention programs focused on self-efficacy may be conducted in further research.

**Keywords:** physical activity, gestational diabetes, self-efficacy, predictors

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