

Example of physical activity among pregnant women literature review

[Health & Medicine](#), [Pregnancy](#)



Introduction

Pregnancy is a milestone characterized by changes in many aspects of women's lives in ways that can promote or undermine health. It is important for women to cope successfully and be healthy from conception through birth and beyond to achieve the best health outcomes for them and their newborns. Adequate physical activity has many health benefits and should be continued throughout pregnancy. Programs that promote exercise help pregnant women initiate and maintain greater physical activity and a healthier lifestyle. Such programs must consider the unique characteristics, circumstances, and health status of gravid women to be appropriate and effective. Using guidelines and best practices further ensures that interventions are supported by scientific evidence and are likely to be successful.

Physiological Characteristics

A notable change in the physiology of the pregnant body is the increase in blood volume by 45% (Melzer et al., 2010). This begins following conception and only slows down sometime during the second trimester. It is believed that progesterone and other maternal hormones are responsible for increased blood production. The need for adequate iron becomes apparent or the gravid woman will likely develop anemia. Further, hormones promote greater water retention through sodium retention with most fluids concentrated in the interstitial and intravascular spaces (Ouzounian & Elkayam, 2012). As a result, nasal congestion frequently occurs. Cardiac output similarly increases by 50% because of an increase in heart rate per

minute by around 15 to 20 beats and also a greater stroke volume or the amount of blood pumped by the heart with each beat (Melzer et al., 2010). In general, blood pressure also rises but will decrease to the point of hypotension when in body positions, such as supine, that result in uterine compression of the inferior vena cava (Ouzounian & Elkayam, 2012). The same position causes uterine compression of the femoral vein further reducing blood flow to the lower extremities. Oxygen needs while at rest moreover rises by 20-30% due to an increase in minute ventilation or the amount of oxygen inhaled with each breath (Melzer et al., 2010). Hormones cause diuresis and morning nausea that are sources of discomfort. Because of fetal growth, pregnant women experience hyperextension of the lower back which may cause pain (Brown & Johnston, 2013). The extra weight also makes it difficult to stand for prolonged periods or move around. In addition, leg cramps that occur at night are commonly reported.

Psychological Characteristics

Women commonly experience mental health issues during pregnancy.

Psychological distress can be caused by a variety of factors including disturbance in body image, lifestyle adjustments, social activity limitations, doubts on readiness to assume the role of mother, greater dependence on others, fear of giving birth, negative prior experiences with pregnancy and labor, prior miscarriage, current physical discomfort, and financial problems (Woods et al., 2010). Most of these factors create a feeling of imbalance arising from the inability to cope with the demands of pregnancy. This psychological state can lead to the clinical diagnosis of depression or anxiety

and affects from 8-24% of gravid women (Choi et al., 2012). Psychological distress has been implicated in negative maternal and neonatal outcomes such as preeclampsia and preterm delivery (Yu et al., 2013).

In a qualitative study on prenatal psychological distress, pregnant women describe their mental state as irrational feelings, anxiety, intrusive thoughts, inability to function, and social withdrawal (Furber et al., 2009). Others had difficulty making decisions, felt hopeless and helpless, were irritable and restless, developed psychosomatic conditions, and contemplated suicide (Demissie et al., 2011). They found it difficult to open up about their feelings with other people because of the perceived lack of empathy and understanding. They either lost appetite or resorted to eating more than they should. The women felt they had less energy and also spent much of their time alone crying. Anxiety reached a point where repetitive activities, akin to obsessive-compulsive disorder, were performed. Some coped with mental health issues through denial, refusing to accept the pregnancy.

Sociological Characteristics

Pregnant women find themselves confronted with new roles amid old ones. The role of mother adds to those of employee, wife, friend, daughter, or sister. With increased demands related to more roles, social support is an important buffer in the maintenance of physical health and psychological well-being (Choi et al., 2012). Social support can be emotional, problem-solving, social integration, practical or material in nature (Byrd-Craven & Massey, 2013). Family, partner, friends, and coworkers form social support networks which are sources of acceptance, understanding, encouragement,

intimacy, and experienced assistance. In the event of coexisting stresses such as loss of a job, nausea and other conditions that cause discomfort, difficulty with domestic and other physical tasks, and financial pressures, supportive relationships reduce the risks of depression occurring during the course of pregnancy.

Low socioeconomic status, however, is associated with limited or disrupted social support and more sources of stress putting women in this status at higher risks for negative outcomes (Zachariah, 2009; Byrd-Craven & Massey, 2013). For instance, the subpopulation of African-Americans is at a greater socioeconomic disadvantage compared to the mainstream population. The infant mortality rate has remained high for this minority group, double the rate among Whites. Inability to access health care, poverty, suboptimal housing, low literacy, inadequate nutrition, unhealthy lifestyles, and single parenthood are situations that predispose gravid African-Americans to higher levels of stress thought to contribute to the alarming rate of infant deaths (Zachariah, 2009).

Current Health and Activity Status

Pregnant women are at a higher risk of excessive weight gain and around one-third have above-normal body weights (Skouteris et al., 2012; de Jersey et al., 2013). Being overweight as well as obesity during pregnancy can be due to too much weight gained before and then exacerbated following conception. The increase in weight is brought on by sedentary lifestyle and poor dietary choices compounded with the greater nutritional demands associated with pregnancy. Though obstetricians recommend guidelines for

physical activity and diet, most gravid women have poor compliance (Ferrari et al., 2013). Obesity, poor nutrition, and physical inactivity increase the likelihood of birth defects, infants that are small in relation to gestational age, gestational diabetes, preeclampsia, and preterm births. On the other hand, exercise raises energy levels, eases musculoskeletal and other physical discomforts, stabilizes mood, and alleviates both labor and recovery in the postpartum period aside from giving the same benefits it confers to non-gravid women (Melzer et al., 2010). More can be done to promote healthy lifestyles during pregnancy.

Programs Supporting Well-being

There are many programs aiming to meet the various needs of pregnant women. Roman et al. (2007) describe a mental health and stress management program for low socioeconomic status Hispanic women. The intervention was carried out by a team of nurses and community health workers via home visits. Meanwhile, Mottola et al. (2011) discuss a community-based combined nutrition and exercise lifestyle intervention program for pregnant Aborigines in Australia. It was developed and implemented through participatory research. A similar, but midwife-led, program is called Eat Well Keep Active which utilized motivational interviewing techniques and goal setting (Warren, Rance & Hunter, 2012). Other initiatives focus on more specific needs such as the stability ball exercise program by Yan et al. (2013) for the management of pregnancy-related low back pain.

Factors to Consider when Designing a Physical Activity Program

An important factor to consider is the misconceptions and lack of knowledge women have of physical activity during pregnancy. In a survey, 98% of the participating women were of the opinion that only light activity has the most benefit to them (Evenson & Bradley, 2010). This is despite guidelines recognizing the equal benefit in moderate and vigorous exercise. Many pregnant women also reduce physical activity because of the perceived risks to the fetus although studies show that these are minimal and are far outweighed by the benefits (Zavorsky & Longo, 2011; Mudd et al., 2009). Moreover, pregnant women also complain of confusing and too general recommendations from obstetricians which they have difficulty adapting into their personal circumstances. It is necessary to increase women's knowledge with individualized information and correct misconceptions regarding the amount and intensity of activity to promote greater participation.

Other common reasons for the decline in exercise are the physiological, psychological, and social changes women experience (Gaston & Cramp, 2011). Fulfilling the demands of roles may preoccupy women while physical discomfort, fatigue, and safety issues present barriers to adequate physical activity (Duncombe et al., 2009). There are also limitations relating to social support and socioeconomic status. As such, physical activity programs need to address the reasons behind pregnant women's inability to comply with recommendations. An individualized and holistic approach to a complex problem coupled with ensuring women's equal access to the program will encourage successful engagement in regular exercise (Ferrari et al., 2013).

Further, adherence to guidelines and best practices is necessary to achieve the intended behavioral change and other outcomes.

Conclusion

Healthy lifestyle is as important during pregnancy as it is prior. Yet, a significant number of pregnant women reduce their activity levels or fail to exercise regularly. When coupled with an unhealthy diet, women can gain too much weight. These behaviors have adverse effects on the health of both mother and the unborn. In attempting to create effective physical activity programs, it is important to fully understand the physical, psychological, and social changes surrounding pregnancy, women's current health status, and physical activity levels. This, in conjunction with identifying the contributory factors to gravid women's health status and their lack of compliance with recommendations, generates a clear picture of the problem. This knowledge leads to the selection of an appropriate program approach. Lastly, adherence to guidelines and best practices in addressing the issue ensures effectiveness.

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