Critically evaluate the efficacy of physical activity as a treatment for Post-Natal depression

**Post Natal Depression**

Post-Natal Depression is a serious mental disorder that affects both mothers and fathers due to chemical, psychosocial, and social changes associated with having a child. PND is a serious problem across cultures and is roughly estimated that more than 14% of woman and 10% of fathers suffer from severe form of depression in their postnatal period (Ballard, 1996). It is debated that this percentage is even higher since a lot of parents don’t report their symptoms and seek for help (Dunford, 2017) because they see it as a shame. Women with post-natal depression experience symptoms such as low mood, fatigue, irritability, anxiety, guilt, lack of motivation, and thoughts of suicide (Daley et al., 2012). They have low self-esteem and lack of confidence due to unrealistic expectations of motherhood and are surrounded by guilt and shame. Post-natal depression is usually diagnosed with DSM-5 that was released by American Psychiatric Association. According to DSM-5, symptoms need to appear in the first four to six weeks for one to be diagnosed with Major Depressive Disorder with postpartum Onset, but many researchers believe that time frame should be at least 6 months to a year. PND has a huge impact on suffers’ lives as well as people around them. Women who suffer from PND are twice as more likely to experience episodes of depression later through life. Not only does PND affect mothers, it also affects the child and the family as a whole. Many studies have shown that PND negatively affects the children on emotional and cognitive development. Significant intellectual and social behavioral deficits were shown in children whose mothers suffered from depression in their first year of life (Cogill, 1986). Maternal post-natal depression was also identified as the strongest predictor of paternal post-natal depression (Goodman, 2004). PND is a debilitating mental illness that effects so many individuals and families that needs further research for treatment.

**Treatment**

The most recommended treatments for PND are psychological therapies and antidepressant. Previous studies have used cognitive behavioral therapy, interpersonal therapy, group therapy and phone support for psychotherapy (Dennis & Hodnett, 2009). CBT aims to help mothers with PND by tackling their negative and unrealistic thinking that leads to negative behaviors. Although researches have shown that psychotherapy is an effective treatment, only about 10% of women who experience PND actually seek medical help (Katon, 2003). Antidepressant helps to balance mood-altering chemicals in one’s brain and help ease symptoms such as irritability and lowered mood. Studies that looked at efficacy of antidepressants have response rates ranging from 56% to 87.5% (Fitelson et al., 2011). Randomized controlled trial using fluoxetine and paroxetine proved to be effective in decreasing depressive moods (Appleby et al., 1997; Misri, 2004). However, mothers are reluctant and more cautious to take antidepressant due to its side effects and how it can possible harm their babies (Appleby, 2017). Due to these disadvantages, it is important to further delve into future possible treatments for PND such as physical activities. Benefits of physical activities and organised sport is widely acknowledged (Warburton et al., 2006). Exercising not only have physical benefits but also have various psychosocial benefits. Physical activities can increase self-esteem, social interactions, and reduce depressive symptoms (Eime et al., 2013). This essay will evaluate two randomized control trials to assess the efficacy of physical activity in treatment of PND.

**Pram-Waling Exercise Program in Reducing PND Symptomatology**

Post-natal well-being is mainly characterized by physical, social and emotional health. Previous studies have proven that organized exercise program improve mother’s physical fitness and self-esteem, but are unsure whether they are due to indirect factors of increased social interaction and attention from research teams (Quested & Alquist 1994). Focusing on these aspects, researchers in Australia tested the effectiveness of exercise program to see if its reduced depressive symptoms in PND women compared to social support program (Armstrong & Edwards, 2004). This study was a 12-week program with two different randomized control groups: one being pram-walking exercise group, and another being social support group. 24 participants were randomly allocated to two different intervention groups. A chief investigator and child health social worker from Queensland Health attended each session each week. They were present so as to provide information and as a facilitator. Participants that were allocated in pram walking intervention group attended two walking sessions per week on Monday and Wednesday at 9:30 AM for 40 minutes. They were required to stretch their muscles before walking on flat walking paths, and their heart rates were recorded after each session. Each session was assisted by two facilitators to help them keep track of their heart rate monitors and the intensity of the work out. The chief investigators calculated their target heart rate zone to improve their fitness. Exercise recording sheets were filled out weekly by pram walking participants to record their heart rate, frequency, duration, intensity, and type of exercise. They were required to do third session if needed, to improve cardiovascular endurance independently. Social support group intervention participants attended one group session per week on Tuesday from 9:30AM to 11AM. These sessions were non-structured with no therapeutic intentions. Mothers were encouraged to openly talk about any issues and share experiences while proving emotional support for each other. Non-therapeutic approach was given to both intervention group as it was important for facilitators to provide equal care to all participants. This study’s result showed that participants in pram-walking intervention group improved not only their fitness, but also their level of depression symptoms significantly more than the participants of social support group. Surprisingly, there were no changes in depression scores throughout 12 weeks for the social support group. This study scored fairly highly on PEDro scale (8 out of 11 items), which means there is a high validity in the project (Sherrington, 2000). However, detection bias could have happened due to participants self-selecting for the study knowing what it was going to be about. This means that these participants were willing to be helped, and benefited hugely from the pram-walking programme in improving sense of achievement and self-worth. Although this study reflects a direct association between improvement in physical fitness and depression symptoms, it is still hard to determine how physiological and psychosocial processes interacted to result in the outcome. Pram-walking programme had emotional elements that depended on social aspects. Participations from the programme indicated that they found comfort in interacting and knowing that other women were also suffering from PND, which doesn’t explain why social support group’s depression level didn’t improve. This study also lacked external validity. All participants were from one geographically area, sharing similar socioeconomic and ethnic backgrounds. Larger sample size with more variety needs to be tested in order to further confirm the findings.

**Exercise Support Program in Reducing PND Symptomology in Taiwan**

Further evaluation of the efficacy of physical activity in more diverse participants, similar controlled trial done with Taiwanese women will be appraised. Lower degree of emotional support and few health interventions by professionals were reported by post-natal women in Taiwan compared to women in United Kingdom (Huang & Mathers, 2000). It is important to look at studies done in different countries with PND, since cultures have different post-natal stigmas and rituals that may impact the disorder. Group of researchers in Taiwan conducted a controlled trial to evaluate the effectiveness of exercise support programme on post-natal depression (Heh et al., 2007). 40% of postnatal women reportedly suffer from PND in Taiwan (Chen, 1994). Taiwanese women increasingly reported concerns on physical change, and lack of emotional support from the society. Previous studies suggest that organized physical activity increase positive well-being and provide sense of community. Eighty women who volunteered to participate with EPSD score higher than 10, were allocated alternately into experimental or control group, based on their earliest date of childbirth. Although it can be argued that there could be strong selection bias due non-randomized allocation, this method of allocation in this still did not allow participants and researchers to select treatment. Alternate allocation could be a possible alternative to random allocation, if applied strictly (Kerr et al., 2004). Participants were equally separated into experimental (exercise programme) and control (usual care) groups. All participants received a printed booklet on post-natal depression. Participants of intervention group were provided with exercise support guide consisting of 45-minute of whole body exercise program developed by the chief investigator. A CD record was also given to the women for them to do it at home. The program consisted of 1 hour per week in the hospital, and another two sessions at home for 3 months. Each session in hospital was done in group of 4 to 6 women. The investigators called the participants every week to remind them to follow the exercise CD at home. All the investigators of this study were professors and doctoral candidates in the department of nursing. The result showed that women who received exercise support programme had lower depression scores after childbirth compared to the control group. This study scored moderately low on the PEDro Scale, meaning there was a low validity.

**Conclusion**

Post-natal infection usually develops between one month and up to one year after a baby is born. The most recent research shows that it affects one in every seven women. postnatal depression is the name given to depression that develops between one month and up to one year after the birth of a baby. It affects about 1 in every 7 women who give birth in Australia each year. The symptoms of post-natal infection need to appear in the first four to six weeks for one to be diagnosed with Major Depressive Disorder with postpartum Onset, but many researchers believe that time frame should be at least 6 months to a year. If the case becomes too serious the woman may experience thoughts about leaving their and most of the time they are also worried that their partner may leave them. If this situation is encountered one should seek professional help immediately. Post-natal infection can be treated in a number of ways. The common methods of treatment are: counselling, group treatment, psychotherapy and by use of medications which will help to reduce depressions. According to the most recent research it shows that 11%-21% of the women face depression after giving birth. Post-natal infection is a disease and therefore early treatment should be sought.

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