**1. Physical activity, exercise, depression and anxiety disorders (Andreas Strohle, 2009)**

This paper reviews the current available literature regarding to the association between (1) physical activity and depression or anxiety disorders and (2) potential therapeutic activity and depression or anxiety disorders. Although those associations are described in many studies, but only few of them examined them prospectively. Besides, they do not pay adequate attention to symptoms and approaches to deal with depression and anxiety as well as benefits of exercise training.

**2. An exploratory study of associations of physical activity with mental health and work engagement (Jantien van Berkel, 2013)**

A study on 357 participants for a week period to measure the association between the moderate to vigorous physical activity (HVPA) and mental health (MH) as well as the association between HVPA and work engagement (WE). The study found that there is no relation between HVPA and MH nor between HVPA and WE. Furthermore, the study also pointed out the beneficial effects of HVPA impacts only on the negative aspects of MH (ie. mental disorders) but the positive ones (ie. well-being).

**3. Physical Activity and the Prevention of Depression (George Mammen, 2013)**

This paper analyzes 6 databases (MEDLINE, Embase, PubMed, PsycINFO, SPORTDiscus, and Cochrane) collected from 30 prospective studies with high methodological quality to identify factors causing depression as well as examine whether PA may protect against depression. As the matter of fact, there are majority of the studies concluding that PA may prevent future depression. This conclusion is a valuable source to develop mental health strategies to reduce the risk of depression development in population.

Total summary:

We have studied three research papers.

The \cite{strohle2009physical} paper provides a survey on the association

between physical and therapeutic activity on depression and anxiety.

The \cite{mammen2013physical} paper analyzes multiple databases to identify factors causing depression as

well as examine whether physical activity prevents depression. Both show that

physical activity reduces or prevents depression and anxiety.

The criticism on these papers are that they do not pay adequate attention to symptoms

and approaches to deal with depression and anxiety as well as benefits of exercise training.

The \cite{van2013exploratory} is a study almost shows opposite our hypothesis. The study found that there is no

relation between vigorous physical activity and mental health or well-being. We believe

the reason of this results is the vigorous nature of physical activity.