**Annotated Source & Synthesis**

Stream S03 – Team 3

<name> (<id>)

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FOUN1014 – Critical Reading and Writing in Science and Technology and Medical Sciences

L.George

Topic: Stress and Exercise

Research Question: How does exercise impact the negative effects of stress on the body?

Heaney, J.L.J., Carroll, D., & Phillips, A.C., (in press). Physical activity, life events stress,

cortisol, and DHEA in older Adults: Preliminary findings that physical activity may buffer against the negative effects of stress. *Journal of Ageing and Physical Activity*, doi: https://doi.org/10.1123/JAPA.2012-0082 [pii]

Annotation

The purpose of the authors is to study how regular physical activity, stressful events, and the stress hormone ratio are related to each other to inform whether exercise acts as a buffer against stress. The intended audience of the paper is other academics and students who would use this work to carry out further research into the relationship between stress and exercise or aid their research that is related to the topic. The paper was written in 2012, this was a period where technology and digitization were growing at a massive scale which caused people to drift further apart and caused them to only interact with each other through digital means. This caused isolation in most adults, that only contributed to how people would have to interact with their life events’ problems. This source is relevant to my research question because it will find the reason why exercise can mitigate or offset the effects of stress. Persons that usually experience stressful invents have a higher stress-causing hormonal ratio, compared to those who do experience stressful events, yet those who experience stressful events and take part in aerobic exercise do have a lower stress hormonal ratio. This paper is important as it will help us by giving us an idea of how stress relates to exercise for us to further investigate.

The first thing that pitched this source to be reliable was that the authors did explain the scientific process of how they came to their conclusion by listing out the procedure they used. It was made clear that participants were chosen and investigated on their habitual physical activity as well as their stress events, from which the results of this procedure were analyzed in tables and discussed. Another was that, when the researchers of the material were laying out the foundation for what was to be discussed, they made heavy use of references to previous research and reviews that establish the baseline, for example, the premise that stress and one’s health is related was taken from another source and priory research as stated in the discussion.

The language of the writer used in the paper consisted mostly but understandable technical jargon, this is so because references were made to other scholarly sources that gives the appropriate information. This is important to the audience as well as the context because it is appropriate in describing the information in a manner which the audience is informed in.

Synthesis

One issue that is common amongst all the three sources is that, it does not delineate how the body handles stress when physical activity is involved on a biological level, but rather it is concerned about the relation between physical activity and stress, these sources are (Wunsch et al., 2017), (Jackson, 2013) and (Heaney et al., 2014). What is common between all these sources also is that, as was mentioned earlier, they focus on the relationship between stress and physical activity, more specifically whether exercise can be used as a stress mitigation/buffer tool, (Heaney et al., 2014), (Jackson, 2013) and (Wunsch et al., 2017) all did this to the same effect. However, the demographics of the participants were completely different for each article, for instance, (Heaney et al., 2014), focused on older adults and their life events (stressors), and the other two, (Jackson, 2013) and (Wunsch et al., 2017) focused on college students. Knowing the difference between all these sources is important as it will allow the research to delve deeper into how the body handles stress when physical activity is involved on a scientific level.

**Synthesis Sources**

Wunsch, K., Kasten, N., & Fuchs, R. (2017). The effect of physical activity on sleep quality, well-being, and affect in academic stress periods. *Nature and Science of Sleep*, *Volume 9*, 117–126. https://doi.org/10.2147/nss.s132078

Jackson, E. M. (2013). STRESS RELIEF. *ACSM’S Health & Fitness Journal*, *17*(3), 14–19. <https://doi.org/10.1249/fit.0b013e31828cb1c9>

Heaney, J. L., Carroll, D., & Phillips, A. C. (2014). Physical Activity, Life Events Stress, Cortisol, and DHEA: Preliminary Findings That Physical Activity May Buffer Against the Negative Effects of Stress. *Journal of Aging and Physical Activity*, *22*(4), 465–473. https://doi.org/10.1123/japa.2012-0082