Critical Analysis Essay

Prompt 2: Emotional Wellbeing and Exercise

General findings suggest that exercise has a positive impact on emotional wellbeing (Chekroud et al., 2018). The association, however, varies when taking into account the confounding variable of individual attributes. To put things into perspective, emotional wellbeing is closely associated with not only exercise but also a wide array of variables such as lifestyle, stressor events, and individual attributes.

The most convincing evidence regarding the significant mediating effect that individual difference exerts on the seemingly straightforward association between emotional wellbeing and exercise is the one presented in Rice et al.'s (2016) systematic review. It suggests that elite athletes, who are certainly the population with the most structured, evidence-based exercise routines, experience higher levels of mental health disorders, including depression and anxiety, than the general population (Rice et al., 2016). A closer examination by Rice et al. (2016) suggests that non-sporting factors, including stressor events and body image, as well as sport-related factors including injury, competition anxiety, and aggression developed through sports, can contribute to mental health issues among athletes, thereby offering invaluable insights into individual difference being a significant mediator in the association between emotional wellbeing and exercise.

One of the insights is inherent to the specific findings themselves, wherein the intensity, modality, and duration of exercise and the purpose of exercise between individuals (e.g., exercising for a profession) can reverse or offset the positive association between emotional wellbeing and exercise (Huang & Wong, 2025). Additionally, exercise, when

prescribed/employed in clinical settings for populations such as those under high stress or those with especially moderate depression/anxiety symptoms, can produce positive effects for emotional wellbeing (Mahindru et al., 2023; Martland et al., 2024). On the contrary, Zhao et al. (2025) found that mental health, including emotional wellbeing, is negatively associated with physical activity level among more than 4000 children and adolescents, with gender and cognitive mechanisms mediating the association.

Overall, the overwhelming evidence of the positive association between exercise and emotional wellbeing becomes contradictory, mixed, and vulnerable to mediator effects when individual differences are taken into account, including but not limited to occupation and gender. It is impossible to examine all the studies regarding this three-way relationship, provided individual differences can be simplified and constitute a single mediator, so instead of elaborating on the ever-changing association, this response relates it to the issue of operationalizing emotional wellbeing and exercise, followed by the biopsychosocial model.

Operationalizing Emotional Wellbeing & Exercise

Specifically, as the lecture suggests, the way that exercise and emotional wellbeing are operationalized varies. The definition of emotion is open to interpretation (Barrett & Campos, 1987). The umbrella of terms spanning mood, affect, and emotion is also defined, measured, and determined differently in relation to temporality, physical responses, continuity vs. discreteness, personal values, sociocultural context, and so on (Ekkekakis & Russell, 2013; Koslouski et al., 2023). Moreover, the reporting of emotional wellbeing in clinical studies and real life is susceptible to cognitive distortions and biases, including self-report bias and retrospective bias (Latkin et al., 2018; Parsons et al., 2021).

On the other hand, exercise is also operationalized differently across contexts, with most studies operationalizing it in terms of duration, frequency, and intensity, whereas factors including types of exercise, the context in which it occurred, and specific individual experiences from the exercise participation are often neglected (Seelig & Fuchs, 2011). Therefore, the different operationalizations and the stereotypical, clinically operationalized constructs of emotional wellbeing and exercise indicate that the general, somewhat heuristically construed positive association between emotional wellbeing and exercise is not always valid nor causal in the first place, let alone when adding in the mediating effect of individual differences discussed above.

Biopsychosocial Model

A salient theory connected to the matter discussed is the biopsychosocial model/theory (Engel, 1977). As an integrated perspective, the biopsychosocial theory views one's medical condition, overall health, and emotional wellbeing as a confluence of biological, psychological, and social factors. It defies binary associative thinking and takes into account the complexity that individual differences can bring into the emotional wellbeing–exercise association.

Biological factors—certain exercises being detrimental for hypertension and Myasthenia Gravis populations' health and consequently compromising emotional wellbeing (O'Connor et al., 2020; Sharman & Stowasser, 2009), or genetically predisposed populations to emotional wellbeing or distress (Dfarhud et al., 2014)—matter; social factors including stress and interpersonal relationships can influence emotional wellbeing and, in turn, the motivation to participate in exercise or the effect that existing exercise participation has on emotional

wellbeing; psychological factors including cognitive bias/distortion, motivation, and personal and sociocultural ways of perceiving and experiencing the world can influence how exercise affects emotional wellbeing.

Thus, not only does individual difference become more salient in the exercise–emotional wellbeing relationship, but a whole range of other factors become salient as well. To view the three-way relationship through the biopsychosocial model is akin to realizing the difference that different operationalizations of emotional wellbeing and exercise make in the conclusion and that the association is context-dependent and individually shaped.

Proposal for a Community-based Program

Drawing from the COM-B model and Behavior Change Technique (BCT), the proposed community-based program focuses on introducing moderate to medium exercise participation/routines for young adults with sedentary lifestyles and high stress levels (Michie et al., 2011; Michie et al., 2013). Simultaneously, the program corresponds to the four-stage intervention design detailed in the lectures. By targeting highly stressed, sedentary young adults and analyzing their behaviors through interviews, questionnaires, and identification of barriers/facilitators, opportunity, and motivation informed by theories and literature, including the biopsychosocial model, the program then employs weekly group-based bodyweight exercise sessions (i.e., resistance and aerobic training) in local parks and trails for accessibility.

Through selecting community volunteers/leaders and building an exercise buddy mechanism, the adherence and self-efficacy among participants and the online/offline exposure/presence of program information are enhanced and sustained. The outcome will be

evaluated using the RE-AIM framework in terms of reach, efficacy, adoption, implementation, and maintenance through follow-up phone calls and visits made by program staff and volunteers/leaders, as well as measurement of sedentary lifestyle change, emotional wellbeing (especially stress level), and exercise capability.

Word count: 998

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