

COVID-19 Adherence to Physical Activity Guidelines Moderates the Mental Health/Toughness Relationship on Black/Hispanic Females. (limit 15 words)

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ABSTRACT

Physical activity (PA) improves mental health (MH). Mental toughness (MT) positively correlates to MH. Only 45% of Hispanics and Blacks over 18 years and less than 40% of US females meet the ACSM PA guidelines. PA has been decreasing during the COVID-19. **PURPOSE:** Investigate during the pandemic the effect of PA adherence on the MT-MH relationship on previously physically active, Black and Hispanic females. **METHODS:** Fifteen females (age 21.3 ± 3.6 yr), six Hispanic and nine Black, who met the ACSM guidelines before the pandemic, completed the Mental Health Continuum and Mental Toughness Index inventories, while reporting their PA habits during the pandemic. Data analyzed with double moderation model-2 (MH=Y; MT=X). PA habits and race were the moderators. MT centered for product construction and heteroscedasticity consistent error. Moderation and conditioning significance set at $p < 0.05$. Analyses performed using SPSS[®], PROCESS[®] v.3 by Hayes. **RESULTS:** Model significantly predicted MH ($F_{5,9} = 8.9$, $p = .003$, $R^2 = .7$). MT significantly predicted MH ($b = 11.0$, $t_9 = 3.3$, $p = .009$). Significant MTxPA interaction ($F_{1,9} = 19.0$, $p = .002$, $\Delta R^2 = .3$). PA, race, and MTxRace interaction did not predict MH. Hispanics and Blacks, who met the PA guidelines before but not during, presented significant positive relationship between MT and MH ($b = 2.9$, $t_9 = 3.7$, $p = .005$; $b = 3.5$, $t_9 = 5.4$, $p = .0004$, respectively), with Blacks to better predict MH. Hispanics, who met the PA guidelines both before and during the pandemic, presented non-significant negative relationship between MT and MH ($b = -.3$, $t_9 = -.3$, $p = .8$) having the worst prediction for MH. Blacks retained a positive non-significant relationship between MT and MH ($b = .4$, $t_9 = .6$, $p = .6$) with a weak MH prediction. **CONCLUSION:** Results infer a buffering (Black) and an antagonistic (Hispanic) moderating effect on the MT-MH relationship on previously physically-active females. This preliminary evidence suggests that adhering to PA guidelines during the pandemic would decrease the effect of MT on MH (less positive) in Black females and reverse the effect of MT on MH (becomes negative) in Hispanic females. Possible explanations include different response to the additional stress of PA due to cultural differences. Larger-scale studies are needed to examine the mechanistic explanation of this observation.