

Grit Had a Positive Impact on Moderate-to-high Intensity Physical Activity During the COVID-19 Health Crisis

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ABSTRACT

Recently, moderate-to-vigorous intensity physical activity (MVPA) has attracted additional scientific interest (e.g., ACSM recommendations) not only thanks to a) the physical and psychological benefits that can be experienced by the general population following just a single bout, but also b) since high levels of MVPA seem to mitigate the mortality risk associated with high levels of sedentary behavior, such as sitting. Non-pharmaceutical interventions against the COVID-19 (e.g., stay-at-home orders) have altered people's lifestyles (e.g., physical activity, sitting time). Grit, a higher-order personality trait based on two lower-order components (i.e., perseverance and consistency), is highly predictive of both success and performance. **PURPOSE:** To examine whether grit influenced MVPA during the first 16 weeks of the COVID health crisis on a general-population sample. **METHODS:** In total, 191 participants ($m_{age} = 37.2$, $SD = 15.8$; 78% female) agreed to participate. Grit (via the 8-item Grit Scale; max. score is 5: *extremely gritty*; lowest score is 1: *not at all gritty*) and MVPA (mins/week) data were collected at baseline. Then, MVPA data were collected weekly 16 more times. Monthly MVPAs (i.e., weeks 1-4, 5-8, 9-12, and 13-16) were used as variables in a growth model within a multilevel modeling framework. Grit was used as a predictor of the intercept of MVPA at baseline. Differences based on sex and age were also investigated. **RESULTS:** On average, male and female respondents differed only trivially on grit and the correlation estimate between grit and age was .03. Using a multilevel growth model, grit and MVPA were related at baseline and MVPA was fairly stable across time. The expected amount of MVPA at baseline was 221.7 minutes/week if grit were equal to zero; however, for each one-unit increase in grit, the expected increase in MVPA was 99.4 minutes/week. Holding grit level constant, the reported MVPA decreased by only about 7 minutes per week across the four months of physical activity data. **CONCLUSION:** MVPA tended to decrease slightly over time; however, grit had a positive impact on MVPA. That is, people with higher grit scores (regardless of age/sex) tended to have higher MVPA at baseline and, consequently, over time. Findings infer the value of grit during this unique period in this predominately female, highly active, late-thirties sample.