

## Fear of COVID-19 and Adherence to Lockdown Deteriorated Police Cadets' Handgrip Strength Relative to BMI

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### ABSTRACT

Due to COVID-19 pandemic, police academies enforced lockdowns to protect cadets' well-being. Fear of health issues (e.g., perceived severity) influences ones' adherence (e.g., readiness to act) to changes in exercise behavior. According to WHO, modifications in exercise behavior during the pandemic influence health status. A well-established clinical health marker is the handgrip strength relative to body mass index (HS<sub>R</sub>). The relationship between fear and physical well-being during COVID-19 is still under investigation. The mediating effect of adherence to COVID-19 restrictions on the fear-health status relationship in police cadets is unknown. **PURPOSE:** To explore a) the fear-HS<sub>R</sub> relationship and b) the mediating effect of adherence to COVID-19 restrictions on the fear-HS<sub>R</sub> relationship. **METHODS:** Cadets of both sexes, 98 males and 77 females, performed a bilateral HS<sub>R</sub> test and answered a) to what degree (*i.e.*, *no*, *partial*, *yes*) they apply the recommended anti-COVID-19 measures; b) a five-item Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) Fear of COVID-19 (FCV-19S) survey. HS<sub>R</sub>, adherence to COVID-19 restrictions, and composite sum mean FCV-19S score (higher score indicates higher fear) were used as outcome, predictor, and mediating variables respectively. PROCESS<sup>®</sup> v.3 by Hayes mediation analysis model 4 performed using SPSS<sup>®</sup> with significance set at  $p < 0.05$ . **RESULTS:** Fear was a significant predictor of HS<sub>R</sub> (the c pathway) ( $b = -.34$ ,  $t_{173} = -2.6$ ,  $p = .01$ ): more fear, less HS<sub>R</sub>. FCV-19S was positively related to adherence (the a pathway) ( $b = .23$ ,  $t_{173} = 2.6$ ,  $p = .009$ ): more FCV-19S, more adherence. Adherence was negatively related to HS<sub>R</sub> (the b pathway) ( $b = -.27$ ,  $t_{172} = -2.4$ ,  $p = .02$ ): more adherence, less HS<sub>R</sub>, with fear as an adjustor. The relationship between FCV-19S and HS<sub>R</sub> was lessened with adherence as an adjustor (the c' pathway) ( $b = -.27$ ,  $t_{172} = -2.1$ ,  $p = .04$ ). The indirect effect indicated that mediation occurred: indirect =  $-.07$ , 95% CI  $[-.13, -.01]$ . **CONCLUSION:** In this case, nor the lockdown nor fear were related to higher scores in the HS<sub>R</sub> index, although adherence to restrictions lessened the effect of fear alone. Administrators may need to find ways to not only decrease fear of COVID-19, but also avoid blanket measures as those may end up not protecting their cadets' wellbeing.