P8158 - Final Project
Effects of Athletic Identity, Resilience, and Healthy Lifestyle on Emotional Well-being during COVID-19

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Motivation

- The sudden outbreak of COVID-19 was unexpected to everyone. According to an article written by Healeem et al. in 2020, the COVID-19 has rapidly affected our day to day life, businesses, disrupted the world trade and movements. As informed biostatistics students, we are specifically interested to investigate people's mental health conditions or wellbeing under the COVID-19 lockdown period and whether there are any potential factors that may affect them.

Goal

► We decide to focus on a particular group people – athletes. Our hypothesis is that during the COVID-19 lockdown period, there is a negative correlation between athlete identity and wellbeing, and this effect might also be mediated by their resilience and healthy lifestyle.

Data

- Athlete Mental Healthy Survey collected in the UK after the first COVID-19 lockdown using non-athletes as comparison
- Focus on athletic identity, resilience, wellbeing, and healthy lifestyle
- Athletic Identity Scale, The Brief Resilience Scale, The Mental Health Continuum Short Form
- 753 Observations (363 athletes, 390 non-athletes)

Athletic Identity Scale (AIMS)

- Abbreviated 7-item AIMS[1]

First Order Factors	AIMS Items
Social identity	
AIMS 1	I consider myself an athlete.
AIMS 2	I have many goals related to sport.
AIMS 3	Most of my friends are athletes.
Exclusivity	
AIMS 4	Sport is the most important part of my life.
AIMS 5	I spend more time thinking about sport than anything else.
Negative affectivity	
AIMS 6	I feel bad about myself when I do poorly in sport.
AIMS 7	I would be very depressed if I were injured and could not compete in sport.

Note: Participants respond to the 7-items of the Athletic Identity Measurement Scale (AIMS) on a Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

- First-order factors (Social Identity, Exclusivity, Negative Affectivity) are subordinated to a higher-order Athletic Identity Factor

AIMS (Continued)

- Result of the confirmatory factor analysis of AMIS with athletes in data
- (insert CFA graph)
- Chronbach's alpha is 0.74, with a 95 % confidence interval of (0.70, 0.78).

The Brief Resilience Scale

▶ Assess the ability to bounce back or recover from stress[2]

	Please respond to each item by marking <u>one box per row</u>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
BRS 1	I tend to bounce back quickly after hard times	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
BRS 2	I have a hard time making it through stressful events.	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
BRS 3	It does not take me long to recover from a stressful event.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
BRS 4	It is hard for me to snap back when something bad happens.	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
BRS 5	I usually come through difficult times with little trouble.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
BRS 6	I tend to take a long time to get over set-backs in my life.	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1

▶ Higher the sum score of responses indicates higher level of resilience

The Brief Resilience Scale (Continued)

1-factor CFA -CFI 0.999 -P value = 0.110 - test statistics = 14.376 - RMSEA 0.043

The Mental Health Continuum Short Form (MHC-SF)

- Assess three components of well-being: emotional, social, and psychological[4]
- Total score ranging from 0 to 70
- Higher scores indicate greater levels of positive well-being

Healthy Lifestyle

- Formative Measurement: a composite of observed variables
- Indicators of healthy lifestyle

1. Five Fruit and Vegetables: Yes/No
2. Smoking Status: 7-point Likert scale
3. Hour Sleep: numerical variable

- Higher sum score indicates healthier lifestyle

Selected Variables

Discussion

Resources

1.https://www.tandfonline.com/doi/full/10.1080/10413200802415048
2.https://measure.whatworkswellbeing.org/measures-bank/brief-resilience-scale/
3.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7068432/#B17-ijerph-17-01265
4.https://www.hsph.harvard.edu/health-happiness/mental-health-continuum-short-form/
5.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7147210/