

# Physical activity and self-esteem

Literature review presentation

# Introduction

- Self esteem has emerged as one of the strongest predictors of subjective well being (Diener,1984). And is consequently an important element of mental health and quality of life
- The effect of PA on self-esteem is widely discussed
- **Puprose:**
  - ✓ To examine the current state of literature about the relationship of PA and SE
  - ✓ Investigate components of this relationship.

# Theoretical frameworks

- The Physical Self-Perception Profile (**PSPP**, Fox and Corbin, 1989)
- Exercise and Self-Esteem Model (**EXSEM**, Sonstroem & Morgan, 1989)

## Research questions

- What is the impact of PA on Self-Esteem?
- Which factors emerge as mediators?

# Methodology

- electronic data bases (including Academic Search Ultimate, Medline, *APA PsycInfo*, Sport Discus)
- Period: studies conducted after 2010
- Study format: full text
- Peer reviewed studies
- Keywords: Physical Activity, Exercise, Sports, Self-esteem, sedentary life, mental health, well being

# Studies

## ➤ Studies regarding

- Adults
- Minors
- Special populations
- Perspective of self-esteem as a factor leading to PA
- Testing indirect relationships between PA and SE

## ❖ Physical Activity, Self-Efficacy, and Self-Esteem: Longitudinal Relationships in Older Adults

Edward McAuley, Steriani Elavsky, Robert W. Motl, James F. Konopack, Liang Hu, David X. Marquez

- a sample of older adults ( $N = 174$ ; age,  $M = 66.7$  years)
- across a 4-year period
- 6-month exercise program
- Rosenberg Self-Esteem scale
- Physical Self-Perception Profile (PSPP; Fox & Corbin, 1989)
- **Findings:**
  - effects of PA on global esteem through subdomain levels of esteem (physical self-esteem).
  - relationships were consistent across the 4-year period.
  - support for the hierarchical and multidimensional nature of self-esteem
- Limitations: missing data, ethnic composition, two time point panel

## ❖ Longitudinal examination of the exercise and self-esteem model in middle-aged women

Steriani Elavsky, 2010

- 2 years study
- 143 middle aged women
- enrolled in a randomized controlled 4 month exercise trial (walking, yoga, control)
- Rosenberg Self-Esteem scale (RSE; Rosenberg, 1965)
- Physical Self Perception Profile (PSPP; Fox & Corbin, 1989)
- Findings:
  - demonstrated positive long-term effects of physical activity on self-esteem
  - The effects of PA in global self-esteem were mediated by changes in self-perceptions relative to physical condition and body attractiveness.
    - *These results also support the hierarchical and multidimensional structure of self-esteem*
- Limitations: biased sample, generalizability



## ❖ Rosenberg Self-Esteem Scale analyses among elite and competitive athletes, recreational athletes and inactive individuals

NemČEk, D., KraČEk, S., & PerÁČKovÁ, J. (2017)

- Analysed and compared the SE status (using RSES) among
  - elite and competitive athletes (ECA; n=154)
  - recreational athletes (RA; n=259)
  - inactive individuals (IAI; n=303);
- Pearson chi-square test was used to determine the differences
- Findings:
  - Significantly higher SE in the groups of actively living people (ECA and RA) comparing inactive group of respondents.

## ❖ Self-esteem in physically active middle school students

*Russo, G., Nigro, F., Raiola, G., & Ceciliani, A. (2019)*

- Aim: Examination of the effect of physical fitness on self-esteem of pre-adolescent children
- 72 participants (38 females)
- Rosenberg Self-esteem Scale
- MOTORFIT tests
- Findings:
  - participants who performed better the MOTORFIT test reported a higher self-esteem compared to less physical fit participants
  - no gender differences
- limitations: include different variables (type of sport practiced, sociocultural factors)

## ❖ Analysis of Self Compassion and Self Esteem between Adolescents Engaged in Physical Exercise in the form of Gym with those having Sedentary Lifestyle

*Meghna Basu Thakur and Namrata Joshi, 2016*

- teenagers between 13 and 19 (N=60)

- Rosenberg's Self Esteem Scale

- Findings:

  - self-esteem was found higher in those involved in physical exercise through gym workout as compared to those having sedentary lifestyle

- Limitations:

  - fails to give an impression if the relationship between self-esteem and exercise related behaviors is bidirectional or not.
  - generalizability (limited to areas with similar population)

## ❖ The effect of exercise on improving quality of life and self-esteem of inmates in Greek prisons

*DIMITRA PSYCHOU , DIMITRIOS KOKARIDAS , NIKOLAOS KOULOURIS, YANNIS THEODORAKIS, CHARALAMPOS KROMMIDAS, 2019*

- 80 inmates (adults 25 to 53 years old)
- randomly assigned in two groups (control and experiment)
- 12 weeks exercise intervention (3 sessions per week, 60 minutes each)
- Rosenberg Self-Esteem Scale
- **Findings:**
  - significant differences on self-esteem ( $F_{1,58} = 10.923$ ,  $p < .01$ ,  $\eta^2 = .16$ ) between the two groups in post measures
- Limitation: the only conducted in Greek settings, thus, its findings can only be compared to similar studies elsewhere.

## ❖ EFFECT OF THE PHYSICAL ACTIVITIES ON ORPHANS' ANXIETY AND SELF ESTEEM

*Kolayış, H., Sarı, İ., Soyer, F., & Gürhan, L. (2010)*

- 25 orphans (average age 11)
- 8 weeks PA intervention affect Orphans' self-esteem and anxiety
- Piers-Harris Children's Self-concept Scale (pre and post measures)
- **Findings:**
  - The results revealed a significant difference ( $P < 0.05$ ) between pre-test and post-test self-esteem points

## ❖ Motives for exercise participation: The role of individual and psychological characteristics

Zervou, F., Stavrou, N. A. M., Koehn, S., Zounhia, K., & Psychountaki, M. (2017)

- Aim: to investigate the effect of sex, body mass index (BMI), psychological characteristics (*self-esteem, trait anxiety, social physique anxiety*) on motives for exercise participation in recreation and leisure
- 306 exercise participants
- Physical Activity and Leisure Motivation Scale (PALMS; Molanorouzi et al., [2014](#))
- Self-esteem Scale (SES; Rosenberg, [1965](#))
- **Findings:** SE was not found to be related to motives of mastery and enjoyment, but significantly predicted competition/ego and physical condition motives
- Limitation: sample

## ❖ Physical activity and self-esteem: testing direct and indirect relationships associated with psychological and physical mechanisms

*Zamani Sani, S. H., Fathirezaie, Z., Brand, S., Pühse, U., Holsboer-Trachsler, E., Gerber, M., & Talepasand, S. (2016).*

- Aim: investigate the direct and indirect relationships between PA and SE, explained through BMI, Perceived Physical Fitness (PPF), and body image (BI)
- University staff members (N =264, M =38.10 years).
- Measures
  - Self-reported PA
  - Rosenberg self esteem scale
- **KEY finding:**
  - PA was associated directly (greater reported PA was associated with higher SE)
  - and indirectly with SE (higher PA linked with a higher SE through lower BI and BMI and higher PPF and SE).
  - direct association was found between BI and SE
- Limitations : possible reverse causality, self-reports, systematic sample bias e.t.c

# Discussion

- ❖ Given the importance of SE to general well-being and mental health there needs to be more focused on SE and more well-designed research conducted
  - Lack of longitudinal studies
  - Small samples
  - Subjective measurements
  - Small duration of interventions
  - Short term effects
- ❖ Most studies showed a positive effect of exercise on self-esteem but a few showed no effect
  - ✓ PA is moderately associated with SE
- ❖ More direct impact of PA in physical self-esteem than on GSE
- ❖ Clinical importance remains unclear



❖ Although there is clear evidence of the relationship it is impossible yet to determine the degree to which positive SE is the *determinant* or *outcome* of PA.

➤ simultaneous processing? as self-esteem benefits are experienced and this increases motivation to participate and so on

❖ Greatest self-esteem improvements seemed that are more likely to occur:

- In groups who have to gain the most physically from exercise participation (e.g elderly, overweight e.t.c)
- in those who are initially low in self-esteem including women, those with mild depression, physically disabled, obese and so on

# Future research

- ❖ relationship has to be further analyzed in components
  - ✓ intensity, frequency, duration
- ❖ Not enough is known about the effectiveness of specific types of exercise on SE
  - not all PA interventions are effective and some could be also detrimental to self-esteem. Therefore it is important to consider the underlying mechanisms for how and why physical activity improves self-esteem.
- ❖ More in depth qualitative research to analyze personal differences (personalization)
- ❖ Studies should test for changes in actual physical fitness
- ❖ Examine more factors as mediators (e.g fun & enjoyment)
- ❖ Design of better interventions and follow up data (long term effects)
- ❖ Focus more directly on the mechanisms of change .

Thank you!