

THE RELATIONSHIP BETWEEN PEER-CREATED EMPOWERING CLIMATE, BASIC PSYCHOLOGICAL NEEDS AND WELL-BEING IN PARA AND NON-PARA ATHLETES

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INTRODUCTION

Research indicates that prevalence rates of mental well-being symptoms are as present in para and non-para athletes as in the general population (Olive et al., 2021) or even elevated (Purcell et al., 2020), deriving the need for studies investigating determinants of mental well-being. According to Self-Determination Theory (Deci & Ryan, 2000), to achieve mental well-being, one's basic psychological needs (BPN) must be satisfied. BPN have been found to be influenced by (dis-)empowering climate, referring to the psychological atmosphere in a group (e.g., created by peers; Ntoumanis et al., 2006). Nonetheless, it can be assumed that the strength of this hypothesized relationship is different for para and non-para-athletes: para-athletes face impediments such as discrimination in everyday contexts (Dammeyer & Chapman, 2018) whereas sport can potentially facilitate positive experiences (Martin, 2013). This importance can be assumed especially for the peer-created empowering climate, since in the sport context para-athletes experience increased social integration (Martin, 2013).

OBJECTIVE

To the authors' knowledge, neither investigation has been done on empowering climate in para-athletes, nor on peer-created empowering climate.

Hence, the overall purpose of this study is to investigate possible benefits of interpersonal relationships in groups for the mental well-being of para- and non-para-athletes.

Therefore, two hypotheses have been tested (Figure 2):

H1: Basic psychological need satisfaction (BPNS) and basic psychological need frustration (BPNF) mediate the relationship between peer-created empowering climate (PCEC) and peer-created disempowering climate (PCDC) on the one hand and well-being on the other hand (mediation).

H2: The BPN-mediated relationship between PCEC/PCDC and mental well-being is stronger for para-athletes (moderation).

METHODOLOGY

The cross-sectional study assessed the test statistics via an online survey, using the software 'Sosci Survey' (Leiner, 2019).

Dependent Variable:

Mental well-being: Patient Health Questionnaire 2 (Kroenke et al., 2003); WHO 5 Well-being Index (WHO, 1998)

Independent Variable:

EC (Peers): Coach-created Empowering and Disempowering Motivational Climate Questionnaire (Appleton et al., 2016; Ohlert, 2018; adapted to peers)

Mediator Variable:

BPNS+F: Basic Psychological Need Satisfaction and Frustration Scale - Training (Aelterman et al., 2016)

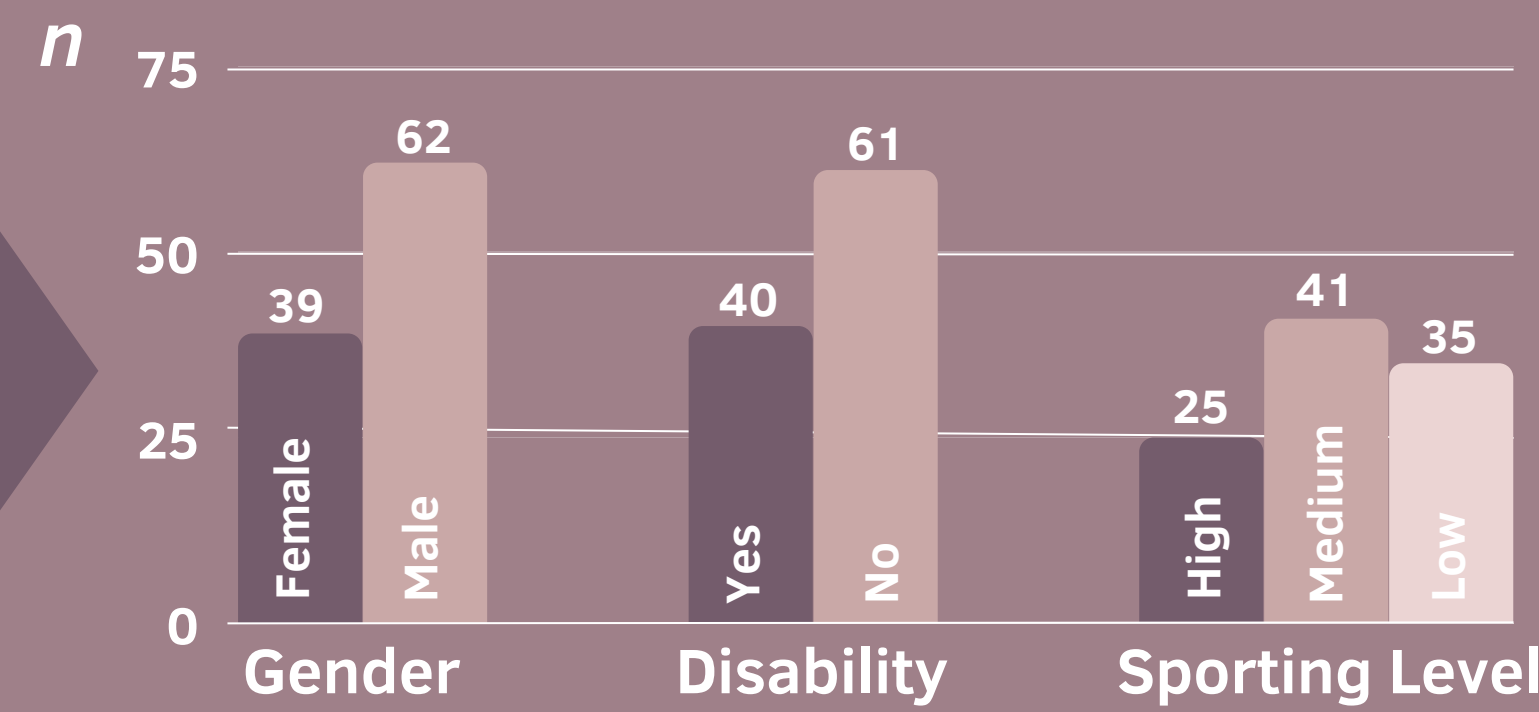
Moderator Variable:

Physical disability: self-constructed single item

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- A priori power analysis (G*Power & Schoemann et al. (2017) App)
- 101 participants from team sports
- Age: $M = 28.68$; $SD = 10.0$
- Prevalence of mental health symptoms:
 - WH05 = 20.7%
 - PHQ2 = 23.8%



- Data Cleaning & Log Transformations with SPSS
- Data analysis with SPSS
- PROCESS Macro
- Hayes Model 58

RESULTS

Main Effects

As for main effects (Figure 3), the linear regression analysis showed that PCEC is a highly significant predictor for BPNS ($R^2 = .32$, $F(1, 99) = 45.86$, $p < .001$) and PCDC is a highly significant predictor of BPNF ($R^2 = .21$, $F(1, 99) = 25.95$, $p < .001$). Furthermore, PCEC significantly predicted mental well-being ($R^2 = .06$, $F(1, 99) = 6.08$, $p = .015$). BPNS was shown to be a significant predictor of mental well-being ($R^2 = .12$, $F(1, 99) = 13.00$, $p < .001$).

Mediation

A significant effect was shown for BPNS mediating the effect of PCEC ($R^2 = .12$, $F(1, 99) = 4.52$, $p = .005$, 95% CI [0.01; 0.19]) on mental well-being (Figure 3).

Moderation

No significant effects could be shown for disability as a moderator.

Theoretical Model:

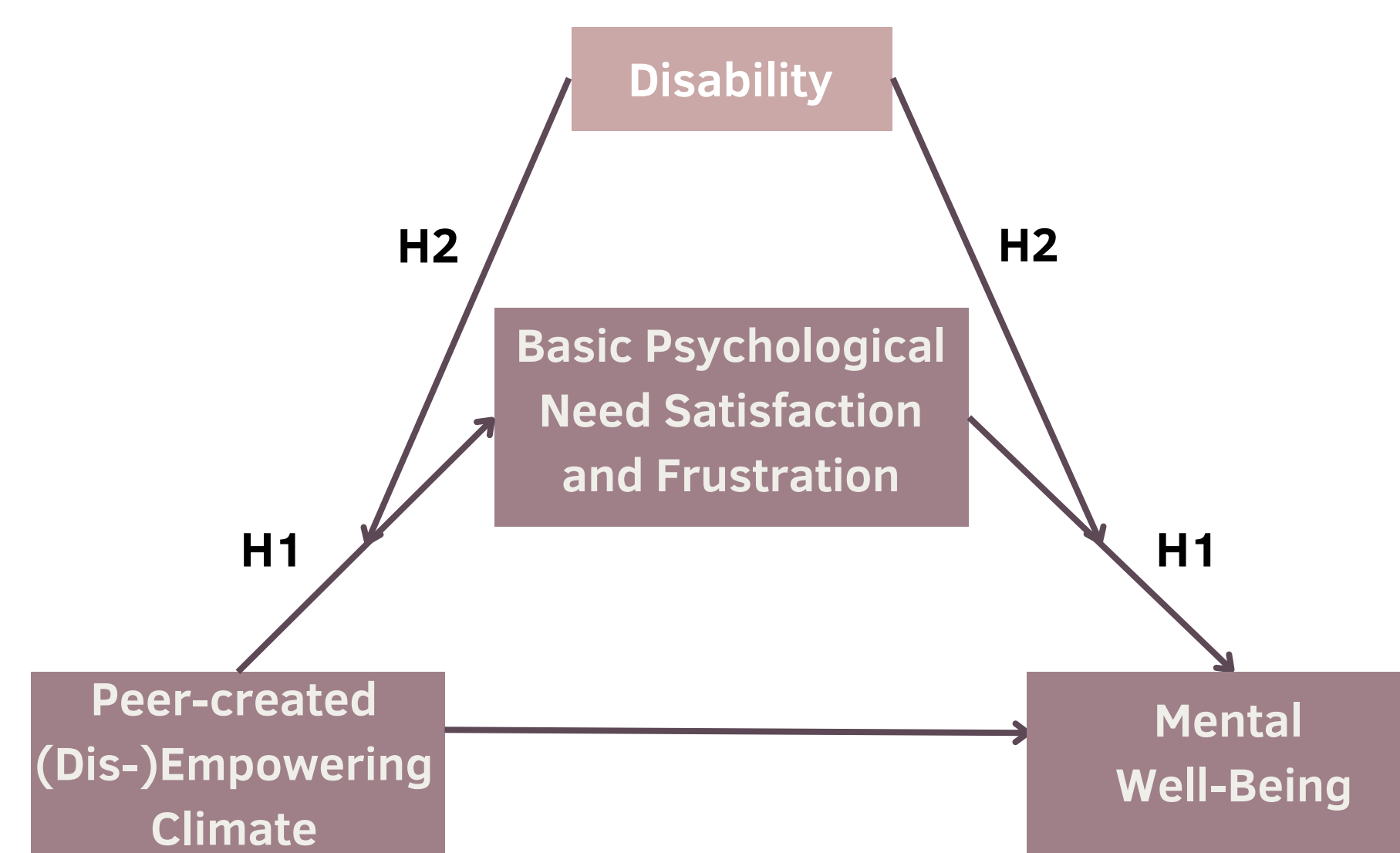


Figure 2. Hypothesised moderated mediation model

Empirical Model:

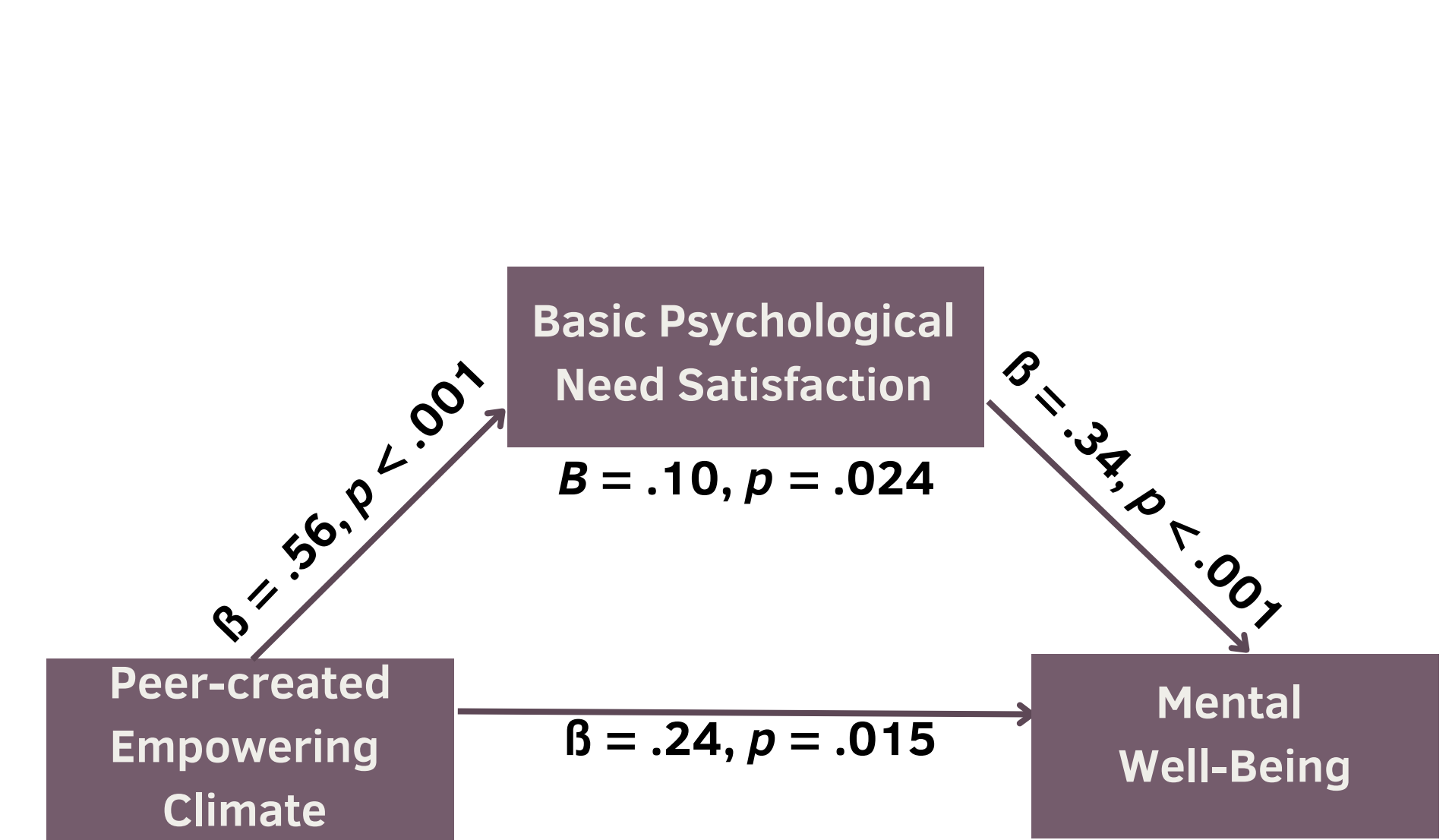


Figure 3. Model of actual findings confirming H1 and main effects

DISCUSSION

H1 was confirmed. This means that when athletes are in a PCEC that supports their sense of autonomy, competence, and relatedness, it can lead to increased satisfaction of these BPN. These feelings of need satisfaction then help improve mental well-being. This relationship, to date, was only investigated for coach-created EC (Duda, 2016). No moderation effect was present (H2). A possible explanation is that para and non-para athletes might be more similar in terms of BPNS than initially assumed. Moreso, the hypothesized differences between para and non-para athletes derived from comparison studies might be statistically flawed due to the lack of control for confounding variables (Hanrahan, 2007). This means, not taking into account other environmental and in-group confounding factors like competition level or disability type could have influenced the moderation effect. In addition, the present study assessed mental well-being on a global level, PCEC and BPN, however, on a situational, sport specific level, possibly impacting results further. As for main effects, consonant with past work, PCEC and BPNS stand in relationship with mental well-being.

No effect of PCDC on mental well-being could be identified. Duda & Appleton (2016) indicate that EC and DC are not the defining points at either end of a continuum. Moreso, they are capable of co-existing, meaning that a coach or team can create an EC and DC simultaneously (Appleton & Duda, 2016). However, if the EC is strong enough, it has the ability to overpower the DC. Inferring from this, if there was enough PCEC for the athletes included in this analysis then it may account for why the PCDC did not account for variance of the well-being levels.

A limitation of the study is the cross-sectional design, restricting the capability to provide inferences about causality and the influence of the interaction. For example, Amorose and Anderson-Butcher (2015) argue that due to continual exposure to the respective EC, an interaction becomes more meaningful over time. Besides the recommendation of applying a longitudinal design in the future a mixed design that combines both within-subject and between-subject factors, taking into account the group effects of different teams is also suggested.

ABBREVIATION KEY
EC = EMPOWERING CLIMATE
DC = DISEMPowering CLIMATE
PCEC = PEER CREATED EMPOWERING CLIMATE
PCDC = PEER CREATED DISEMPowering CLIMATE
BPN = BASIC PSYCHOLOGICAL NEEDS
BPNS = BASIC PSYCHOLOGICAL NEED SATISFACTION
BPNF = BASIC PSYCHOLOGICAL NEED FRUSTRATION
BPNS+F = BASIC PSYCHOLOGICAL NEED SATISFACTION & FRUSTRATION

CONCLUSION

This study confirmed that the relationship between PCEC and mental well-being is mediated by BPNS. Just as coaches, peers can contribute to mental well-being of para and non para-athletes, which highlights the importance of implementing those constructs into training and educating the respective stakeholders. A practical implication is to focus not only on the prevention of a PCDC but more importantly on the development of a PCEC.

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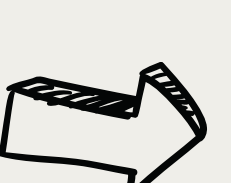
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