

- **Name of the study:** Contribution of Background Variables, Stress and Emotional Intelligence as a Mediator on Psychological Capital and Empathy among Adults with Cerebral Palsy compared to Adults with Typical Development
- **Year:** 2025
- **Type of research:** Master's Degree
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- **Research Authority:** Bar Ilan University

### Abstract

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**Background and research goal:** The present study investigated the association between background variables (group ascription, age, couple status), stress and emotional intelligence and positive variables such as psychological capital and empathy, among adults with cerebral palsy (CP) compared to adults with typical development. The research focused on understanding the differences between the research groups, testing the relations between the main variables, and clarifying the unique contribution of emotional intelligence as a mediator between stress and the dependent variables. Most studies in the field focused on weaknesses and difficulties of populations with disabilities, whereas the present study emphasized psychological and emotional strengths as the basis for improving functioning and coping in this population.

The main goal of the research was to evaluate the contribution of background variables, stress, and emotional intelligence as a mediator on psychological capital and empathy among adults with CP compared to adults with typical development.

**Participants:** The participants included 93 adults aged 18-40, of whom 46 are adults with CP and 47 are adults with typical development.

**Research instruments:** Questionnaires were used to measure stress (PSS), emotional intelligence (EQ-I), psychological capital (hope, self-efficacy, optimism and resilience questionnaires), and an empathy questionnaire (IRI). The questionnaires were chosen based on reliability and validity tested in previous studies, following adaptation to the research goals.

**Statistical analyses:** Independent samples t-tests were used to test differences in emotional intelligence, stress, psychological capital and degree of empathy between the group of adults with CP and that of adults with typical development in each of the research measures separately. Pearson correlations were performed to test correlations between emotional intelligence and

stress measures and the resilience measures as measured by psychological capital and empathy measures. Hierarchical regression analyses were performed to test the contribution of background variables, emotional intelligence and stress on psychological capital and empathy for explaining the measures of psychological capital and empathy. In order to examine the model and the predictions regarding the direct effect between background variables, emotional intelligence measure, and stress, The PROCESS software (Hayes, 2018) was used for testing the mediation model and the significance of the mediation. The mediation model will be examined whilst controlling demographic variables.

**Main Findings:** The research findings will be presented with reference to the operative goals and the hypotheses:

**Part A: Comparison between the research groups in the stress, emotional intelligence, psychological capital and empathy variables**

**Stress:** Contrary to the hypothesis, adults with CP reported on a lower level of stress compared to adults with typical development. A possible explanation for this finding is the use of defense mechanisms such as idealization of reality or social desirability. However, it is also possible that this is due to actual adjustment, since according to the “disability paradox,” people with disabilities often report on high quality of life, despite their disabilities.

**Emotional intelligence:** Adults with CP exhibited higher levels of emotional intelligence than adults with typical development. This finding is explained by the fact that coping with life difficulties develops higher emotional skills.

**Psychological capital:** Adults with CP demonstrated higher levels of hope, resilience and self-efficacy. However, no differences were found in optimism. The explanation for this finding combines defense mechanisms (idealization) and social desirability, as well as resilience that develops from daily coping with a disability.

**Empathy:** Adults with CP reported on a higher level of empathy. This finding is explained by defense mechanisms as well as by the “wounded healer” theory – the ability to identify with the pain of the other out of a personal experience of difficulty.

- **Part B: Relations between stress, emotional intelligence, psychological capital and empathy**

**Stress versus other variables:** A significant negative correlation was found between the level of stress and emotional intelligence, psychological capital and empathy – the higher the stress, the lower the other measures. These findings are in line with the research literature on the effect of stress on well-being.

**Emotional intelligence versus psychological capital and empathy:** A significant positive correlation was found – the higher the emotional intelligence, the higher the psychological capital and empathy scores. Emotional intelligence is perceived as a major predictor for psychological adjustment, positive self-esteem and interpersonal relations.

- **Part C: Contribution of background variables, stress and emotional intelligence to psychological capital and empathy**

**Background variables:** Regression analyses showed that background variables (group ascription, age, couple status) contribute to explaining the variance in the psychological capital and empathy measures. For example, ascription to the CP group was correlated to higher levels of hope, resilience, self-efficacy and empathy.

**Stress and emotional intelligence:** Stress was found to have a negative contribution, and emotional intelligence a positive contribution, to explaining psychological capital and empathy, beyond the contribution of background variables.

- **Part D: Stress and emotional intelligence as a mediator**

Emotional intelligence was found to mediate the relation between stress and psychological intelligence, except for optimism and empathy. Thus, higher levels of stress contribute to higher scores on emotional intelligence, which in turn contributes to positive psychological capital in the measures of hope, self-efficacy and resilience. These findings emphasize the importance of emotional intelligence as a major adaptive resource among adults with CP and among the general population.

**Theoretical contribution:** The present study is the first to test the complex relations between stress, emotional intelligence, psychological capital and empathy in an adult population with CP, using a theoretical-statistical model. It contributes to the research-theoretical knowledge on the dynamics between stress variables, emotional

traits and resilience factors in the population with CP, where it comprises the first comprehensive research on the contribution of emotional intelligence to psychological capital and empathy in this context. One of the main innovations of the research is the role of emotional intelligence as a variable that mediates the relation between the degree of stress and the level of the psychological capital of adults with and without CP. The research model shows that stress contributes to emotional intelligence, whereas emotional intelligence mediates between stress and psychological capital measures, in that it is related to more significant psychological capital. Without emotional intelligence, stress would have been negatively correlated to the psychological capital measures, but emotional intelligence regulates the intensity of the stress. It can therefore be said that when stress is related to a higher level of emotional intelligence, psychological capital measures (hope, self-efficacy and resilience) will be higher in stress situations.

**Practical-educational contribution:** The research findings illustrate the importance of developing and strengthening emotional intelligence among people with CP and additional populations that cope with significant stress. Intervention programs based on emotional education can help reduce the influence of stress and strengthen psychological capital and thus improve the quality of life of people with CP and strengthen their social and occupational inclusion. Furthermore, due to the critical role of emotional intelligence in mediating the effects of stress on empathy and psychological capital, it is recommended to implement programs for development of emotional abilities among populations with physical disabilities, including strategies for stress management and improvement of social abilities.

In conclusion, the present study makes a unique contribution to understanding emotional mechanisms among the population with CP. It opens the way for continuation research, with emphasis on the need for inclusion of positive psychological tools in the development of policies and educational and therapeutic programs.

## **Keywords**

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**cerebral palsy, emotional intelligence, psychological capital**

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