

# Level of Disability and Coping Strategies in Post-Operative Brachial Plexus Injury: Impacts on Mental Health

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## ABSTRACT

**Background:** The results of Brachial Plexus Injury (BPI) surgery often remain unsatisfactory, leading to ongoing disability and associated distress, manifested as depression and Post-Traumatic Stress Disorder (PTSD) in patients. Unfortunately, there is no available data on this issue in Indonesia.

**Purpose:** This study aims to investigate the correlation between the degree of disability and coping mechanisms on the incidence of depression and PTSD in post-operative BPI (PO-BPI) patients

**Methods:** This observational analytic study utilized a cross-sectional design with consecutive sampling. The study population comprised BPI patients who had undergone surgery at Dr. Soetomo General Academic Hospital, Surabaya, at least six months prior. Research measurement tools included the DASH-score for degree of disability, BriefCope for coping mechanisms, the MINI-test for depression, and the Post-Traumatic Stress Disorder Checklist for Civilians (PCL-C) for PTSD. All instruments were distributed online within the BPI community. Statistical analysis was conducted using the chi-square test, contingency coefficient (CC), and logistic regression in the SPSS software.

**Results:** Of the 31 respondents, the majority were male (71%), with a mean age of 37.19 years. Most BPI injuries were right-sided (67.7%), with at least one operation performed (54.8%) more than six months prior (77.4%). The majority of disabilities were moderate (77.4%), and the majority used emotion-focused coping mechanisms (51.6%). The incidence of depression was 38.7% and PTSD was 51.6%. There was no significant correlation between the degree of disability and depression ( $p = 1.000$ ) or PTSD ( $p = 0.833$ ), and no association between coping mechanisms and depression ( $p = 0.355$ ) or PTSD ( $p = 0.209$ ).

**Conclusion:** There are likely many other factors influencing the incidence of depression and PTSD in PO-BPI patients that were not studied. Further research is needed to explore these additional factors.

**Keywords:** post-operative brachial plexus injury, coping mechanisms, depression, PTSD.

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