

# WHAT ARE THE BIOPSYCHOSOCIAL FACTORS AFFECTING FUNCTIONAL DISABILITY AND DEPRESSION IN PATIENTS WITH OSTEOARTHRITIS? A NEW EVIDENCE FROM SURAKARTA, CENTRAL JAVA

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## ABSTRACT

**Background:** Osteoarthritis (OA) is the most common form of arthritis, affecting millions of people worldwide. It occurs when the protective cartilage on the ends of an individual bones wears down over time. OA can cause chronic pain, disability, and the patient's quality of life. This study aimed to determine the biopsychosocial factors affecting functional disability and depression in patients with OA in Surakarta, Central Java.

**Subjects and Method:** This was a case-control study conducted at Dr. Moewardi Hospital and Dr. Soeharso Orthopedic Hospital, Surakarta, Central Java, from January to February 2018. A sample of 200 OA patients was selected by simple random sampling. The dependent variables were functional disability and depression. The independent variables were age, sex, grade of OA, duration, body mass index (BMI), history of injury, pain level, family support, and peer support. Depression data were measured by Beck's Depression Inventory (BDI). Functional disability data were measured by The Western Ontario and McMaster University Arthritis Index (WOMAC). The other variables were collected by questionnaire. The data were analyzed by path analysis.

**Results:** The risk of depression increased with higher BMI ( $b = 0.23$ ;  $SE = 0.10$ ;  $p = 0.021$ ), pain level ( $b = 0.16$ ;  $SE = 0.07$ ;  $p = 0.022$ ), duration (year) ( $b = 0.27$ ;  $SE = 0.12$ ;  $p = 0.025$ ), and poor functional disability ( $b = 0.19$ ;  $SE = 0.04$ ;  $p < 0.001$ ). Depression decreased with stronger family support ( $b = -0.05$ ;  $SE = 0.03$ ;  $p = 0.031$ ) and stronger peer support ( $b = -0.09$ ;  $SE = 0.05$ ;  $p = 0.001$ ). The risk of functional disability indirectly increased with female sex, age, experienced injury, and higher grade of OA. The risk of functional disability indirectly decreased with stronger family support and stronger peer support.

**Conclusion:** Depression in OA patients is affected by BMI, pain level, duration (year), functional disability family support, and peer support. The risk Functional disability is affected by sex, age, BMI, injury experience, grade of OA, pain level, family support, and peer support.

**Keywords:** osteoarthritis, depression, functional disability, pain, BMI, family support, peer support

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