## The length of breastfeeding and mental health status in Indonesia

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## 1. Introduction

Mental illness is one of the diseases needs to be prioritized in Indonesia as it causes significant burden [1,2]. Currently, 14 million people of population above 15 years of age (6%) are suffering from emotional disorder, and more than 400,000 people are suffering from psychotic disorder [2]. Furthermore, people suffering from mental illness are still marginalized group and do not receive proper attention from development program [3]. Investment related to mental health in developing countries is relatively low, ranging between 1,5% - 2,4% of their health expenditure [4]. As Indonesia health expenditure is already low [5], this may become a problem as mental illness becomes more severe. This may worsen the condition of double burden of disease currently faced by Indonesia [5].

Mental illness is closely related to large economic burden. The cost of treating schizophrenia in England projected the cost to reach 4,46 billion pound sterling in 2026 (using 2007 price) [6], while in Australia [7], the medical cost from health system perspective in 2001 reached AUD 661 million and the non-medical cost amounted to AUD 772 million. Studies in China, Japan, England, Ireland, Spain, Belgium, Korea, United States of America, and Canada show that the non-medical costs dominate the costs of treating Schizophrenia [8–12]. Schizophrenia is indeed one of the 10 diseases that has the large impact on years lived in disability in the world [13].

Given that mental health is related to high direct and indirect costs, it is necessary to prevent the disease at the very early stage. One of the potential prevention is to provide adequate breastfeeding to infants, which include early breastfeed initiation, exclusive breastfeeding (first six months), and breastfeed up to two years (in addition to proper nutritious food) [14]. The link between breastfeeding and mental health has been studied [15], although the scope of the study is limited to one country. While the importance of providing adequate breastfeeding in Indonesia has been researched [16], the prevention of mental health through breastfeeding has never been explored. As breastfeeding is low cost and provide large economic benefit in addition to its effect on mental health status of children, and mental illness itself has large economic burden, it is worth it to investigate the role of breastfeeding in preventing mental illness. This study attempts to

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