

"NIFAS BAHAGIA" PROGRAM: Family-Role-Based Psychological Support for Postpartum Mothers After Emergency Delivery in The Maternity Unit of Kanjuruhan Regional Hospital

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ABSTRACT

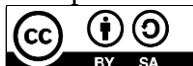
Emergency delivery often triggers acute psychological trauma in postpartum mothers, creating a high vulnerability to postpartum depression when emotional and family support systems are suboptimal. The "Nifas Bahagia" community service program was implemented to establish a family-role-based psychological support model for postpartum mothers following emergency delivery in the Maternity Unit of Kanjuruhan Regional Hospital, Malang Regency. The program utilized a structured three-stage framework: first, preparation and baseline screening using the Edinburgh Postnatal Depression Scale and the Zung Self-Rating Anxiety Scale; second, core in-hospital interventions consisting of Psychological First Aid and trauma counseling for mothers, psychoeducation and companion module training for husbands/families, and supportive touch therapy simulations (oxytocin massage); and third, post-discharge monitoring and final evaluation via home visits, teleconsultation on days 3 and 7, and a dedicated WhatsApp support group through day 14. Participants comprised 20 postpartum mothers with emergency delivery histories and their primary family companions. Evaluation demonstrated substantial psychological improvements: maternal mean anxiety index scores decreased by 44.8% from 58.4 to 32.2, mean depression scores dropped by 57.8% from 12.8 to 5.4, and the proportion of mothers at high depression risk plunged from 65% to 5%. Family supportive self-efficacy expanded markedly from 30% to 95%. All participants completed the 14-day continuity monitoring without any crisis re-referrals. In conclusion, the "Nifas Bahagia" program represents an applicable, sustainable, and empowering hospital-to-home psychological care model that effectively mitigates maternal birth trauma through family engagement.

Keywords : Emergency Delivery, Family Role, Maternity Care, NIFAS BAHAGIA, Psychological Support.

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INTRODUCTION

Emergency delivery represents a deeply distressing and disruptive medical event characterized by clinical volatility, abrupt threats to maternal and fetal survival, and unpredicted obstetric interventions such as emergency cesarean sections, unresponsive prolonged labor, intrapartum eclampsia, or massive postpartum hemorrhage. Globally, emergency cesarean births account for approximately 7% to 9% of all deliveries (Grisbrook et al., 2022) and constitute a primary predisposing determinant for postpartum post-traumatic stress symptoms (Benton et al., 2019; Orovou et al., 2025). Women undergoing emergency surgical deliveries exhibit substantially heightened levels of acute psychological traumatization, fear of death, and distress compared with those undergoing scheduled cesarean or spontaneous vaginal births (Hüner et al., 2023). This acute distress unfolds during the puerperium—a neuroendocrine and psychological transition phase uniquely vulnerable to the onset and rapid exacerbation of mood disorders (Putnam et al., 2017).

The global epidemiological burden of perinatal mood and anxiety disorders is profound. Postpartum depression affects approximately 17.22% of mothers worldwide (Wang et al., 2021), with disproportionately elevated rates observed in low- and middle-income countries exceeding 25% (Mitchell et al., 2023). In addition, postpartum anxiety manifests in roughly 17.8% of newly delivered mothers during the first four postpartum weeks (Dennis et al., 2017). In Indonesia, national health surveys have documented substantial regional disparities in peripartum depression, driven by socioeconomic vulnerabilities, limited mental health literacy, and constrained community psychosocial services (Ariasih & Budiharsana, 2023; Anas et al., 2024).

At Kanjuruhan Regional Hospital in Malang Regency—the primary public tertiary referral hospital serving a large and diverse population across southern East Java—emergency obstetric admissions represent an exceptionally high proportion of total maternity volume. Hospital registry records indicate that between 45 and 60 emergency obstetric cases are managed monthly, with emergency surgical deliveries accounting for over 52% of all births conducted in the Maternity Unit. Preliminary institutional observations revealed that routine obstetric and midwifery care remained almost exclusively oriented toward physical wound healing, hemodynamic stabilization, and neonatal survival metrics. Consequently, maternal emotional trauma, feelings of acute bereavement, and panic reactions following emergency interventions were frequently unassessed and neglected due to acute ward workload pressures and abbreviated inpatient stays.

The clinical urgency of addressing postpartum psychological trauma is underscored by the devastating multisystem consequences of postpartum depression. Psychologically, affected mothers experience pervasive emotional detachment, persistent guilt, severe loss of maternal confidence, and cognitive impairment that severely obstructs mother-infant bonding and early secure attachment (Sockol et al., 2023; Wisner et al., 2023). In severe cases, unaddressed depressive illness escalates into chronic dysthymia, psychosis, self-harm, or suicidal ideation. Furthermore, chronic maternal distress impairs the neuroendocrine let-down reflex, curtailing early colostrum and mature breastmilk flow, while inducing secondary affective strain in the father, with up to 50% of partners developing depressive symptoms in response to maternal crisis (Pilkington et al., 2026).

The pathophysiological progression from acute psychological distress to clinical postpartum depression follows a distinct trauma-mediated neuroendocrine trajectory. The sudden transition into an emergency delivery triggers intense sympathetic-adrenal activation

and overwhelming perceived loss of control. When the traumatic memory of childbirth remains unvalidated, persistent hyperactivation of the hypothalamic-pituitary-adrenal (HPA) axis sustains elevated systemic cortisol levels. Recent longitudinal path analyses have established that the impact of emergency surgical birth on postpartum depression is directly mediated by acute post-traumatic stress symptoms (PTSD) (Grisbrook et al., 2022; Orovou et al., 2025). Cognitive intrusion, negative affective appraisals, and persistent sleep disruptions gradually dismantle the mother's coping mechanisms, shifting acute post-traumatic anxiety into entrenched clinical depression within the initial puerperal weeks.

Prior to the development of the "Nifas Bahagia" model, standard clinical solutions for puerperal distress in regional hospital settings were severely limited, fragmented, and predominantly reactive. Existing care pathways typically relied on tertiary psychiatric referrals only after severe depressive crises or psychotic episodes manifested—a threshold rarely crossed by women due to pervasive cultural stigma surrounding mental illness in Indonesian communities (Surjaningrum et al., 2018). Pharmacological management, such as selective serotonin reuptake inhibitors, was frequently rejected by mothers who feared psychotropic drug transmission through breastmilk. Crucially, conventional postpartum wards positioned accompanying family members merely as passive administrative attendants or silent bystanders, failing to harness the husband as a therapeutic ally. Evidence confirms that strong paternal support reduces the risk of maternal postpartum depression by more than twofold (Ashifa et al., 2025; Pilkington et al., 2026). Therefore, an urgent need existed for an immediate, non-stigmatizing, family-centered psychoeducational model that intercepts acute birth trauma during the golden inpatient window and bridges recovery into the home environment.

To overcome these systemic gaps, the "Nifas Bahagia" community service program was designed and executed as an innovative Family-Centered Postpartum Care model. By combining immediate in-hospital Psychological First Aid (PFA) with practical companion training (affirmative communication and oxytocin touch therapy), this program transforms the family into active co-therapists, establishing a resilient support ecosystem across the hospitalization and post-discharge recovery phases.

METHODS

This community service initiative was structured around an evidence-based Family-Empowerment Model embedded into the obstetric clinical care pathway of the Maternity Unit at Kanjuruhan Regional Hospital, Malang Regency. The design builds upon established evidence demonstrating that early psychosocial buffering within the first 72 hours postpartum achieves the greatest preventative efficacy against perinatal affective disorders (Dennis & Dowswell, 2023; Wang et al., 2024). Previous intervention trials have shown that immediate Psychological First Aid effectively mitigates acute traumatic stress and restores short-term psychological equilibrium (Hermosilla et al., 2022; Khademi & Kaveh, 2024), while partner-delivered tactile stimulation (oxytocin massage) significantly attenuates maternal salivary cortisol and accelerates colostrum release within hours (Jayanti et al., 2024; Resmana & Hadianti, 2019). Implementing this combined model during inpatient hospitalization capitalizes on peak maternal receptivity and family availability before outpatient transition. The sequential activity workflow is illustrated in Figure 1.

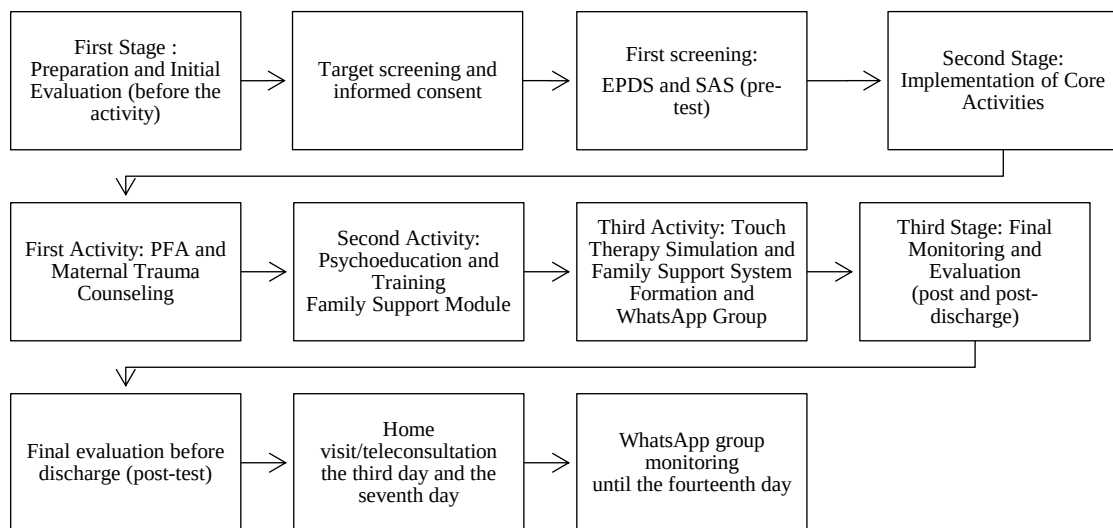


Figure.1 Operational Flowchart of the "Nifas Bahagia" Program (Three-Stage Model)

Time and Place

The community engagement activities were conducted in the Maternity Unit of Kanjuruhan Regional Hospital, Malang Regency, East Java, throughout July 2026.

Target Participants and Selection Criteria

The target population comprised 20 postpartum women who had undergone emergency delivery, paired with their husbands or primary co-residing family companions (total N = 40 individuals). Participants were identified from the central delivery ward register and emergency obstetric logs. Inclusion criteria were: (1) postpartum hospitalization duration between days 1 and 3; (2) verified history of an acute emergency obstetric procedure (emergency cesarean section due to fetal distress or severe preeclampsia, failed induction, prolonged labor, or treated intrapartum hemorrhage); (3) hemodynamic stability (normotensive, afebrile, and conscious); and (4) informed written consent to complete both inpatient activities and the 14-day post-discharge monitoring continuum.

Stages of Activity Implementation

The program was executed across three operational stages:

1. Stage 1: Preparation and Initial Assessment (Inpatient Days 1–2). The multidisciplinary team, collaborating with ward nurse-midwives, conducted individual baseline screenings using the validated Indonesian versions of the Edinburgh Postnatal Depression Scale (EPDS) (Qiu et al., 2023) and the Zung Self-Rating Anxiety Scale (SAS) (Tu et al., 2021) to quantify initial psychological trauma and anxiety indices.
2. Stage 2: Core Inpatient Interventions (Inpatient Days 2–3). Three interrelated modules were administered: Activity I provided individual Psychological First Aid (PFA) and birth trauma counseling to mothers, focusing on active reflective listening, trauma narrative validation, and physiological grounding techniques (diaphragmatic breathing and progressive relaxation). Activity II delivered interactive psychoeducation to husbands using the printed "Modul Pendamping Nifas Bahagia," emphasizing the recognition of baby blues symptoms, active empathy, non-judgmental verbal affirmation, and early identification of clinical danger signs. Activity III conducted hands-on simulation of

Supportive Touch Therapy, guiding husbands to perform gentle oxytocin back massage along the thoracic-cervical vertebrae (T1–T5) and soothing shoulder acupressure to stimulate parasympathetic tone.

3. Stage 3: Post-Discharge Monitoring and Final Evaluation (Days 3 to 14). Post-test evaluations using EPDS and SAS were conducted upon discharge. Longitudinal monitoring was maintained through structured home visits and telephonic consultations on days 3 and 7, alongside interactive daily peer and professional support via a moderated "Nifas Bahagia" WhatsApp group through day 14. A standardized referral protocol was established for any mother scoring EPDS ≥ 10 or displaying psychiatric red flags (El-Den et al., 2022).

Instruments and Evaluation Method

Maternal depression risk was measured using the 10-item EPDS (score range 0–30; cutoff score ≥ 10 denoting clinically meaningful depression risk) (Qiu et al., 2023). Anxiety severity was indexed using the 20-item SAS (standardized index score 20–80: <50 normal, 50–59 mild, 60–69 moderate, ≥ 70 severe anxiety) (Tu et al., 2021). Family supportive self-efficacy and competency were documented using structured observational rubrics evaluating communication technique and touch therapy execution. Data were summarized descriptively through percentage distributions, frequencies, and pre-to-post intervention comparative indices.

RESULTS

General Overview of Implementation

All scheduled intervention components were executed successfully in the Maternity Unit of Kanjuruhan Regional Hospital. All 20 maternal participants and their designated family companions actively completed the hospital-based psychoeducation and simulations, and subsequently maintained active engagement throughout the 14-day post-discharge monitoring window.

Participant Characteristics

Sociodemographic and obstetric clinical characteristics of the 20 participating postpartum mothers are detailed in Table 1. Applying developmental age taxonomy, participants were classified into Early Adulthood (20–30 years) and Middle Adulthood (31–40 years). The majority were in Early Adulthood (60%), completed secondary education (70%), had undergone an emergency cesarean section (55%), and were accompanied by their husbands (80%).

Table.1 Demographic and Clinical Characteristics of Participants (n = 20)

Characteristic Category	Standardized Subcategory	Frequency (n)	Percentage (%)
Maternal Age (Developmental Category)	Early Adulthood (20–30 years)	12	60%
	Middle Adulthood (31–40 years)	8	40%
Educational Attainment	Secondary Education (Junior/Senior High)	14	70%

	Higher Education (Diploma/Bachelor)	6	30%
Emergency Obstetric Procedure	Emergency Cesarean (Fetal Distress/PEB)	11	55%
	Failed Induction / Prolonged Obstructed Labor	6	30%
	Postpartum Hemorrhage / Acute Complications	3	15%
Primary Family Companion	Husband	16	80%
	Biological Mother / Parent	4	20%
Total Participants	Postpartum Mothers with Companions	20	100%

Table.1 The participant cohort predominantly comprised young adult mothers aged 20–30 years (60%) with secondary education (70%). Emergency cesarean section due to acute fetal distress or severe preeclampsia was the leading clinical indication (55%), followed by failed induction (30%). Importantly, 80% of mothers were accompanied directly by their husbands, providing high feasibility for partner-directed interventions.

Psychological Evaluation: Anxiety and Depression Indices

Baseline psychological screening revealed severe emotional distress: 75% of mothers experienced moderate-to-severe anxiety (SAS > 60), and 65% (13 of 20 mothers) met the screening threshold for high postpartum depression risk (EPDS ≥ 10). Following the "Nifas Bahagia" intervention, substantial clinical improvements were recorded across all parameters upon hospital discharge (Table 2).

Table 2. Psychological Evaluation Indicators Before and After Intervention (n = 20)

Evaluation Indicator	Pre-Intervention Mean	Post-Intervention Mean (Discharge)	Relative Reduction
Mean Anxiety Index Score (SAS)	58.4 (Moderate Anxiety)	32.2 (Normal Range)	26.2 points (44.8%)
Mean Depression Score (EPDS)	12.8 (High Depression Risk)	5.4 (Low Risk / Safe)	7.4 points (57.8%)
Mothers at Risk of Depression (EPDS ≥ 10)	13 mothers (65.0%)	1 mother (5.0%)	12 mothers (92.3%)

Table.2 The intervention achieved marked reductions in maternal psychological distress, reducing mean anxiety index scores by 44.8% and EPDS depression scores by 57.8%. Only one participant (5.0%) remained screen-positive for depressive risk at discharge and was successfully linked to mental health counseling.

Improvement of Family Skills and Supportive Self-Efficacy

Empowering family companions through module education and touch therapy simulations yielded dramatic improvements in their supportive competencies (Table 3).

Table.3 Improvement in Family Companion Supportive Competencies (n = 20)

Family Competency Indicator	Pre- Intervention (%)	Post- Intervention (%)	Relative Gain (%)
Understanding of Emergency Birth Trauma Risks	25.0% (n = 5)	90.0% (n = 18)	+260.0%
Therapeutic & Affirmative Communication Ability	30.0% (n = 6)	95.0% (n = 19)	+216.7%
Touch Therapy Execution Skills (Oxytocin Massage)	15.0% (n = 3)	85.0% (n = 17)	+466.7%

Table.3 Practical touch therapy simulations generated the highest relative skill gain (+466.7%), demonstrating that structured, hands-on hospital training effectively converts passive relatives into confident emotional caregivers.

Post-Discharge Monitoring Outcomes and Qualitative Feedback

Follow-up home visits on days 3 and 7, combined with the dedicated "Nifas Bahagia" WhatsApp group through day 14, maintained continuous engagement. All 20 participant dyads (100%) actively reported home recovery progress, submitted oxytocin massage verification, and engaged in peer discussions. No instances of postpartum psychiatric emergencies or emergency readmissions occurred during the 14-day observation window (Table 4).

Table.4 Post-Discharge Longitudinal Monitoring Outcomes (14-Day Continuum)

Longitudinal Continuity Indicator	Observed Outcome (n = 20)
Active consultation and peer engagement via WhatsApp group through Day 14	20 dyads (100.0%)
Severe maternal mental health crises requiring psychiatric hospital re-referral	0 cases (0.0%)

Table.4 Longitudinal digital peer monitoring attained complete adherence (100%) and successfully prevented acute psychiatric decompensation in the community.

Qualitative testimonies reinforced these empirical outcomes. One participating husband reflected: "Initially, I felt utterly helpless and terrified of saying something wrong because my wife wept inconsolably after the emergency cesarean surgery. Once the team trained me in affirmative communication and gentle oxytocin back massage, she visibly calmed down, and her breastmilk began flowing abundantly."

DISCUSSION

A thorough examination of participant demographic and obstetric profiles provides profound context for interpreting the intervention's success. In this study, 60% of participating mothers were in Early Adulthood (20–30 years). Emerging and early adulthood represents a critical life transition wherein maternal identity and self-expectations are formulated. For these younger mothers, sudden emergency operative delivery causes an acute breach of natural childbirth expectations, eliciting intense cognitive dissonance, feelings of reproductive failure, and severe vulnerability to traumatic stress. Furthermore, 70% of participants had secondary educational backgrounds (junior or senior high school), reflecting the typical socio-educational profile of regional Malang Regency. This demographic reality underscores why conventional, dense text-based medical handouts often fail: women and their partners benefit far more from

visually intuitive, simulation-based, and hands-on psychoeducational modalities that foster experiential self-efficacy. Obstetrically, emergency cesarean section (55%) and prolonged obstructed labor (30%) dominated. These clinical events inherently involve heightened fear of maternal-fetal demise, sensory trauma from rushed operating theater environments, and acute postoperative surgical pain, which synergistically accelerate acute stress symptom onset. Crucially, 80% of mothers were accompanied directly by their husbands. In the Indonesian family structure, the husband holds paramount decision-making and emotional influence; thus, actively co-opting the husband transformed a potential source of emotional alienation into an immediate, primary therapeutic resource.

The high baseline vulnerability observed—75% moderate-to-severe anxiety and 65% elevated depression risk—mirrors national epidemiologic data identifying emergency obstetric delivery as a primary catalyst for perinatal affective disorders (Ariasih & Budiharsana, 2023; Orovou et al., 2025). Emergency cesarean delivery disrupts maternal agency and provokes profound feelings of physical powerlessness. The literature confirms that acute birth trauma mediates postpartum depression through intrusive post-traumatic symptoms; thus, deploying immediate Psychological First Aid (PFA) during hospitalization intercepts this pathological cascade at its genesis (Grisbrook et al., 2022; Khademi & Kaveh, 2024).

PFA functions by establishing psychological safety, validating normal emotional reactions to abnormal medical events, and teaching simple somatic grounding techniques (Hermosilla et al., 2022; Wang et al., 2024). This immediate emotional stabilization reduces sympathetic hyperarousal, allowing the mother to process her obstetric experience without internalizing toxic guilt or despair. Integrating psychological care within the immediate postpartum window directly aligns with Cochrane systematic reviews establishing that early puerperal psychosocial support significantly reduces the incidence of depressive symptomatology (Cuijpers et al., 2021; Dennis & Dowswell, 2023).

The central innovation of the "Nifas Bahagia" model lies in redefining the family's paradigm from passive hospital attendants to active emotional co-regulators. Prior studies have established that partner support is a modifiable protective factor that reduces the odds of postpartum depression by more than twofold (Ashifa et al., 2025; Pilkington et al., 2016). When husbands were trained to perform Supportive Touch Therapy (oxytocin massage), tactile mechanoreceptor stimulation along the paravertebral ganglia triggered bilateral neurochemical cascades. In the mother, gentle tactile friction stimulates hypothalamic oxytocin synthesis, which inhibits amygdalar hyper-reactivity, lowers circulating cortisol, elevates maternal mood, and prompts myoepithelial mammary contraction to facilitate rapid colostrum ejection (Astuti et al., 2025; Jayanti et al., 2024; Resmana & Hadiani, 2019; Resmana et al., 2025). Concurrently, performing touch therapy bolsters the husband's caregiving self-efficacy, actively countering paternal helplessness and mutual withdrawal (Bella et al., 2025; Habboush & Alotti, 2025).

The longitudinal continuity established through home visits and the dedicated WhatsApp group proved indispensable for sustaining clinical gains. Global hospital trends over recent decades have markedly shortened postpartum inpatient stays (Jones et al., 2021), frequently discharging mothers at the precise onset of the hormonal baby blues (days 3–5 postpartum). Structured home visits on days 3 and 7 bridge this critical institutional gap, reinforcing maternal coping and preventing acute distress from evolving into chronic clinical disorders (Baziyants et al., 2025; Goldfeld et al., 2021; Jester et al., 2025; Yonemoto et al., 2021). Within the Indonesian health landscape, utilizing community-based task-sharing

strategies and digital mobile platforms ensures accessible, low-stigma support (Surjaningrum et al., 2018). Furthermore, moderated digital peer-support groups have consistently been demonstrated to foster social connectedness, enhance health literacy, and significantly suppress postpartum depressive symptoms (Dol et al., 2020; Liu et al., 2022; Patel et al., 2018; Trude et al., 2021; Yeo et al., 2023). Complete monitoring retention (100%) and zero psychiatric emergency re-admissions validate the safety, acceptability, and sustainability of the "Nifas Bahagia" paradigm.

CONCLUSION

The "Nifas Bahagia" community service program demonstrated notable efficacy as a family-role-based psychological support intervention for postpartum mothers recovering from emergency delivery in the Maternity Unit of Kanjuruhan Regional Hospital. The multi-phase intervention successfully achieved a 44.8% reduction in mean maternal anxiety index scores, a 57.8% decrease in mean depression scores, and an overwhelming 92.3% reduction in the proportion of mothers exhibiting high depression risk (EPDS ≥ 10). Furthermore, family supportive competency and self-efficacy surged from 30% to 95%, and a 100% digital follow-up adherence rate was sustained without any crisis readmissions. By shifting husbands and relatives from passive observers into active therapeutic companions, the program established a seamless, dignified, and empowering care continuum from hospital bedside to home. It is strongly recommended that regional hospitals and maternity wards adopt the "Nifas Bahagia" protocol as a standard operating procedure for holistic perinatal care.

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