Open Access

Implementation of coaching methods to decrease the parenting stress levels among teenage mothers in Indonesia: A quasiexperimental study



Belitung Nursing Journal Volume 10(2), 192-200 © The Author(s) 2024 https://doi.org/10.33546/bnj.3071



Ariyanti Saleh¹*^(D), Andi Masyitha Irwan¹^(D), Aulia Insani Latif¹^(D), Syahrul Syahrul ¹^(D), Veni Hadju²^(D), Irma Andriani³^(D), and Indah Restika⁴^(D)

¹ Faculty of Nursing, Hasanuddin University, Makassar, Indonesia

² Faculty of Public Health, Hasanuddin University, Makassar, Indonesia

³ Faculty of Mathematics and Natural Sciences, Hasanuddin University, Makassar, Indonesia

⁴ STIKes Nani Hasanuddin, Makassar, Indonesia

Abstract

Background: The high rate of early marriage, teenage pregnancy, and teenage mothers increases the prevalence of emotional and mental disorders, depression, parenting stress, and child stunting. Parenting coaching is among the effective ways to overcome parenting stress and improve parents' knowledge, skills, and behaviors, thereby avoiding child stunting. However, studies on parenting coaching are not widely conducted, particularly in Indonesia.

Objective: This study aimed to present the current status of parenting stress among teenage mothers and assess whether parenting coaching effectively reduces parenting stress among teenage mothers.

Methods: A quasi-experimental design was used. The participants were randomly selected into two groups: the intervention group receiving parenting coaching intervention and the control group receiving standard education using a leaflet. Data were collected in June 2021 in Takalar Regency, South Sulawesi, Indonesia. Statistical Program for Social Science version 21 (Armonk, NY, USA) was employed for all statistical analyses.

Results: The parenting coaching intervention had a significant effect on parenting stress (p < 0.001), with significant positive changes in knowledge, attitude (p < 0.001), behavior (p < 0.001), self-efficacy (p < 0.001), and maternal function (p < 0.001). Additionally, a significant difference in the achievement of z-score values was observed between the intervention and control groups based on Body Weight/Age (BW/A) (p < 0.001) and Body Length/Age (BL/A) (p < 0.001). However, Body Weight/Body Length (BW/BL) did not show a significant difference in the achievement of z-score (p = 0.34) in the third month.

Conclusion: Parenting coaching can reduce parenting stress among teenage mothers and improve their knowledge, attitudes, behavior, self-efficacy, and maternal function; hence, this intervention can be used as a reference in the nursing process to reduce parenting stress and prevent child stunting.

Keywords

Indonesia; parenting coaching; stunting; adolescent; marriage; self efficacy; parenting stress; nursing process

Prof. Ariyanti Saleh, S.Kp., M.Si Faculty of Nursing, Hasanuddin University Jl. Perintis Kemerdekaan km. 10, Tamalanrea, Makassar, Indonesia 90245 Email: ariyanti.saleh@gmail.com Article info:

Received: 29 October 2023 Revised: 1 December 2023 Accepted: 3 February 2024

*Corresponding author:

This is an **Open Access** article distributed under the terms of the Creative Commons. Attribution-NonCommercial 4.0 International License, which allows others to remix, tweak, and build upon the work non-commercially as long as the original work is properly cited. The new creations are not necessarily licensed under the identical terms.

E-ISSN: 2477-4073 | P-ISSN: 2528-181X

Background

Depression is among the most common mental and emotional disorders worldwide. Globally, approximately 280 million people experience depression, with over 50% of cases occurring in women (World Health Organization, 2023b). Furthermore, there are numerous instances of depression during adolescence or even earlier, with over 10% of these cases affecting pregnant women and new mothers (Wilson & Dumornay, 2022; World Health Organization, 2023b).

The incidence of depression among teenagers is steadily increasing each year, rising from 8.1% in 2009 to 15.8% in

2019 (Mojtabai et al., 2016). According to data from the 2018 Basic Health Research in Indonesia, 9.8% of Indonesians are affected by depression, with 19 million of them being teenagers experiencing mental and emotional disorders and 12 million diagnosed with depressive disorders (Indonesian Ministry of Health, 2018).

The prevalence of mental and emotional disorders is on the rise due to the high rate of early marriage (age < 19 years) (World Health Organization, 2023a) and the increasing number of teenage pregnancies and mothers, a global concern (Kirchengast, 2016). Annually, an estimated 21 million girls aged 15–19 years in developing countries become pregnant, with approximately 12 million giving birth. Shockingly, at least 777,000 births occur in girls aged <15 years in developing countries (World Health Organization, 2023a).

Previous research by Kumar and Huang (2021) and Pangaribuan et al. (2020) has demonstrated a significant association between early pregnancy and childbirth and physical, mental, and emotional disorders that are harmful to mothers and may adversely affect their infants' physical and mental health. Physically, teenage mothers face a higher risk of eclampsia, puerperal endometritis, systemic infections, and even death. Additionally, infants born to teenage mothers are at a higher risk of low birth weight, stunting, preterm labor, poor cognitive development, low productivity, and more severe neonatal conditions (Pangaribuan et al., 2020; World Health Organization, n.d.). Teenage mothers also experience psychological impacts, including mental health issues such as depression, substance abuse, posttraumatic stress disorder, parenting stress, and even suicide among pregnant women and new mothers (Fakhari et al., 2022; Hodgkinson et al., 2014).

Parenting stress presents a common challenge for certain parents, particularly teenage mothers. This stress includes the challenges of parenting, the demands of their new roles in terms of maternal resources, and the presence of complex and temperamental traits in newborns (Sommer et al., 2018). Various factors contribute to parenting stress, including young age, psychological stressors, physical changes during pregnancy, environmental factors, financial conditions, and a lack of social support, all of which elevate levels of parenting stress (Scorza et al., 2021; Westrupp et al., 2023).

Parenting stress is linked to psychological disorders such as depression and anxiety. During infancy, parenting stress doubles the odds of mental health problems (Hattangadi et al., 2020). Left untreated, parenting stress can have adverse effects, including straining parent-child relationships, anxiety, depression, sleep disorders, and dissatisfaction with parenting (Williams et al., 2021).

Various interventions have been implemented to reduce parenting stress among teenage mothers. A previous systematic literature review examined 26 experimental and quasi-experimental studies describing interventions to reduce parenting stress. These interventions include empowerment and skill development, condition care, parent-child relationships, support and cognition enhancement, and prophetic parenting. While most interventions successfully decrease levels of parenting stress, they often fail to demonstrate long-term benefits. Moreover, the majority of interventions target families with children affected by mental or neurodevelopmental disorders, such as autism, Down syndrome, behavioral problems, and intellectual disabilities (Golfenshtein et al., 2016; Habibah et al., 2021).

One effective intervention for reducing parenting stress and enhancing parental attitudes, norms, self-efficacy, and attention is parenting coaching. Furthermore, parent coaching interventions facilitate behavioral changes that can yield longterm impacts (Pacia et al., 2023; Pellecchia et al., 2020). However, studies on parenting coaching are not widely conducted, particularly in Indonesia.

Parenting coaching was initially introduced and justified in 2004 by the Individuals with Disabilities Education Act. This

approach is facilitated by interventionists who utilize a relationship-oriented, directive method, employing protocols designed to equip parents with specialized training. The Hanen approach to parent coaching, which features a fourstep coaching model, is straightforward and easily applicable. These steps involve preparing parents to learn, explaining new strategies, supporting parents in implementing them and collaborating with parents to plan their next steps (McGill, 2020).

The significant prevalence of parenting stress in Indonesia highlights the importance of all stakeholders in managing and, particularly, preventing such conditions. However, data concerning parenting stress among teenage mothers remains scarce in several regions. For instance, data on parenting stress in Takalar Regency, South Sulawesi Province, Indonesia—listed among the top 10 areas with the highest rate of early marriages in the country (16.24%)-are lacking (Muhadara et al., 2016). Hence, the present study aimed to describe the status of parenting stress among teenage mothers and evaluate the effectiveness of parenting coaching in mitigating this stress. This study holds significance for nurses as it evaluates the efficacy of parenting coaching in alleviating stress among teenage mothers, offering evidencebased insights to enhance maternal and child health outcomes.

Methods

Study Design

This study used a quasi-experimental pre-post control group design and divided the participants into two groups: the intervention group receiving the parenting coaching intervention and the control group receiving a standard education using leaflets. The study was conducted in Takalar Regency, one of the regions in South Sulawesi Province, Indonesia, for six months, from June to December 2021.

Samples/Participants

The study utilized a simple random sampling technique. Participants were selected based on specific inclusion criteria: teenage mothers aged under 19 years (UNICEF, 2024), with infants aged 0-24 months who showed no stunting according to the standard criterion using height-for-age Z scores (World Health Organization, n.d.), and who consented to participate. The exclusion criterion was the presence of any illness. According to the G*power sample size calculation (Kang, 2021), 30 samples were required for each group. Sixty-one participants who met the criteria were enrolled in the study. Each participant was assigned a number written on a small piece of paper, then rolled up and placed into a box. The researcher then randomly drew numbers from the box. The first number drawn was assigned to the intervention group, while the subsequent number was assigned to the control group. In total, 30 participants were allocated to the intervention group and 31 to the control group.

Interventions

In the intervention group, the coaching procedure comprised four steps formulated by the research team based on the executive coaching framework developed in a previous study (Osatuke et al., 2017). The present study was conducted in the following stages: pre-coaching or pretest (week 1), involving obtaining informed consent, measuring maternal functioning, completing self-efficacy questionnaires, and taking anthropometric measurements (such as body weight and length, arm circumference, and head circumference); session 1 (week 2), involving coaching session 1, setting goals, and creating action plans; session 2 (week 3), involving coaching session 2 and follow-up; session 3 (week 4), involving coaching session 3 and follow-up; session 4 (week 5), involving coaching session 4 and follow-up; and week 6 for completing the posttest postcoaching questionnaire. Certified coaches, including AS, AMI, and AU, administered parenting coaching interventions. The timeline and procedure of the intervention are outlined in Table 1.

Timing	Component Activities	Activities Description	Learning Method	Outcome	Instrument
Week 1	Pre-coaching or pre-test	 Informed consent Measurement of maternal functioning Filling out knowledge, attitude, and behavior questionnaire Filling out the self-efficacy questionnaire Anthropometric measurement 	Discussion and measurement of questionnaires	There were 30 coachee pretest results in the intervention group and 31 respondents in the control group.	 Demographic data questionnaire Anthropometric questionnaire Knowledge, attitude, and behavior questionnaire Stress parenting questionnaire Parenting self-efficacy questionnaire Maternal functioning questionnaire
Week 2	Coaching Session I	 Preparation Building and Exploring Goals Ask-Tell-Ask (Education about stunting growth and development) Situation Exploration Action Plan Accountability and Commitment Teach Back / Closing 	Coaching	Eight goals and ten action plans were achieved during the parenting coaching process. A total of 30 coaches participated for 60 minutes.	
Week 3	Coaching Session II	 Preparation Building and Exploring Goals Ask-Tell-Ask (Education about balanced nutrition) Situation Exploration Action Plan Accountability and Commitment Teach Back / Closing 	Coaching	A total of 30 coaches completed 60 minutes of mandatory training.	
Week 4	Coaching Session III	 Preparation Building and Exploring Goals Ask-Tell-Ask Situation Exploration Action Plan Accountability and Commitment Teach Back / Closing 	Coaching	A total of 30 coaches completed 60 minutes of mandatory training.	
Week 5	Coaching Session IV	 Preparation Building and Exploring Goals Ask-Tell-Ask (Education about Love, Teach, and Nurture Patterns) Situation Exploration Action Plan Accountability and Commitment Teach Back / Closing 	Coaching	A total of 30 coaches completed 60 minutes of mandatory training.	
Week 6	Posttest	Filling out post-test questionnaire	Questionnaire measurement	There were 30 coachee post-test results in the intervention group and 31 respondents in the control group (none of which dropped out)	 Demographic questionnaire Anthropometric questionnaire Knowledge, attitude, and behavior questionnaire Stress parenting questionnaire Parenting self-efficacy questionnaire Maternal functioning questionnaire

The control group received standard treatment from a public health center. Participants underwent standard treatment, including a 30-minute health education session on child nutrition using leaflets, conducted once a month at the Integrated Healthcare Center (IHC) or called Posyandu by health workers. IHC is a basic health program of the Indonesian government aimed at monitoring and enhancing public health, especially in the toddler age group. This program includes various activities, including health cadre providing counseling at the Posyandu using leaflets, flip charts, or flip sheets (Martiyana et al., 2018; Profita, 2018).

Instruments

Data collection involved several questionnaires, including demographic questionnaires, to gather respondents' demographic information. Anthropometric measurements were conducted using various instruments. The Baby Sales Onemed type OD231B was utilized to measure the baby's weight and length. The Digital Scales Onemed type EB9362 was used to measure the weight of mothers and children over one-year-old. The Stature meter GEA medical type SH2A was employed to measure the height of mothers and children over one-year-old. The Waist ruler Onemed type OD235 was utilized to measure the arm circumference of mothers, children, and babies and the head circumference of children and babies.

Parenting stress was assessed using the Parenting Stress Index questionnaire developed by Abidin (1995), with a Cronbach alpha of 0.81, and adapted into Indonesian by Fatimah (2015). Meanwhile, parenting self-efficacy was measured using the Parenting Sense of Competence compiled by Gibaud-Wallston and Wandersman (1978) and the Self-Efficacy Parenting Task Index compiled by Coleman and Karraker (2000), with a Cronbach alpha of 0.88, and has been adapted into Indonesian by Fatimah (2015). The maternal functioning variable was assessed using the questionnaire compiled by Barkin et al. (2010), with a Cronbach alpha of 0.87, and adapted into Indonesian by Ansariniaki et al. (2021). Furthermore, the knowledge, attitude, and behavior variables were measured using the questionnaire compiled by Nourmoradi et al. (2020), with a Cronbach alpha of 0.80, and adapted into Indonesian by Juliansen et al. (2021). Permission to use all questionnaires was obtained from the original authors or copyright holders of the instruments.

Data Collection

Data collection was conducted in June 2021 and continued for four months. It involved the utilization of several questionnaires to gather information regarding parenting stress, maternal self-efficacy, functioning, knowledge, attitude, behavior, and anthropometric data. Data, including measurement variables of parenting stress, maternal functioning, knowledge, attitude, behavior, and self-efficacy, were obtained from maternal respondents in both the intervention and control groups. The data collection in this study occurred twice, at pre-test and post-test. In the intervention group, the pretest was conducted prior to the parenting coaching intervention (week 1), and the posttest (week 6) occurred after the four sessions of parenting coaching intervention (weeks 2–5).

Conversely, in the control group, the pretest was conducted before the standard treatment (week 1), and the posttest (week 6) took place after the standard treatment. Subsequently, data collection was performed on child respondents in both the intervention and control groups. This involved collecting follow-up anthropometric data (body weight and length) once a month for three consecutive months (Months I–III) in both groups.

Data Analysis

Statistical Program for Social Science version 21 (Armonk, NY, USA) was employed for all statistical analyses in this study. The normality test was conducted by examining the Kolmogorov–Smirnov results (n = 61). Data that were normally distributed with a *p*-value >0.05 were subjected to parametric tests, such as the independent *t*-test. Conversely, non-normally distributed data with a *p*-value <0.05 were assessed using the Mann–Whitney and unpaired *t*-test to identify any differences in the various variables between the two groups. Changes or improvements before and after the intervention were identified using the Wilcoxon test and paired *t*-test. Lastly, the Chi-square test was employed to determine the difference in nutritional status of the intervention group and the control group.

Ethical Considerations

The study was approved by the Ethics Committee for Health and Medical Research of Hasanuddin University (Number: 493/UN4.6.4.5.31/PP36/2020 Makassar, Indonesia). Informed consent was obtained from all participants after they were provided with an explanation of the study objectives, procedures, benefits, confidentiality, and risks. They were also informed of their right to decline participation or withdraw freely before or during the study without facing any consequences. Prior to data collection, the researchers thoroughly explained to prospective participants the importance of their involvement based on the prevailing conditions to prevent the occurrence of the Hawthorne effect. The confidentiality of the participants was maintained, and the data were secured.

Results

As shown in **Table 2**, the intervention group and the majority of the control group had a higher proportion of mothers aged 19 years with an educational level of junior high school. Moreover, the majority of the participants were housewives. The number of male and female infants was similar in the intervention group, whereas, in the control group, the infants were more likely to be males. Moreover, regarding the lactation status, the intervention group and the majority of the control group were exclusively breastfeeding. No significant differences were observed between the intervention and control groups regarding the mother's age, occupation, child gender, lactation status, and anthropometric measures (p>0.05). However, a significant difference was found in the mother's education level between the intervention and control groups (p <0.05).

Table 2	Characteristics	of the	study	participants
---------	-----------------	--------	-------	--------------

n (%) / Mean ± SD (Min-Max) n (%) / Mean ± SD (Min-Max) Mother's Characteristics 0.175 ^a Mother's Age 17.97 ± 1.27 (15 - 19) 18.35 ± 0.91 (15 - 19) 0.175 ^a Mother's Education 0.049 ^b 0.049 ^b Elementary School 5 (14.7) 11 (32.4) 0.049 ^b Junior High School 10 (29.4) 5 (14.7) 0.542 ^b Mother Occupation 0.542 ^b 0.542 ^b Housewives 28 (82.4) 30 (88.2) 0.164 ^b Entrepreneur 2 (5.9) 1 (2.9) 0.164 ^b Male 15 (44.1) 27 (79.4) 0.727 ^b Exclusive breastfeeding 27 (19.4) 27 (79.4) 0.727 ^b Exclusive breastfeeding 27 (19.4) 27 (79.4) 0.727 ^b Anthropometric Measures 27 (19.4) 27 (79.4) 0.330 ^b	Characteristics	р	Control (<i>n</i> = 31)	
Mothers' Characteristics Mother's Age 17.97 ± 1.27 (15 - 19) 18.35 ± 0.91 (15 - 19) 0.175 ^a Mother's Education 0.049 ^b Elementary School 5 (14.7) 11 (32.4) Junior High School 15 (44.1) 15 (44.1) High School 10 (29.4) 5 (14.7) Mother Occupation 0.542 ^b Housewives 28 (82.4) 30 (88.2) Entrepreneur 2 (5.9) 1 (2.9) 0.164 ^b Male 15 (44.1) 27 (79.4) 0.164 ^b Female 15 (44.1) 27 (79.4) 0.727 ^b Exclusive breastfeeding 27 (19.4) 27 (79.4) 0.727 ^b Exclusive breastfeeding 3 (8.8) 4 (11.8) 0.727 ^b Mathropometric Measures 27 (79.4) 30.30 ^b		Max)	n (%) / Mean ± SD (Min-Max)	
Mother's Age 17.97 ± 1.27 (15 - 19) 18.35 ± 0.91 (15 - 19) 0.175ª Mother's Education 0.049b Elementary School 5 (14.7) 11 (32.4) Junior High School 15 (44.1) 15 (44.1) High School 10 (29.4) 5 (14.7) Mother Occupation 0.542b Housewives 28 (82.4) 30 (88.2) Entrepreneur 26 (9.9) 1 (2.9) Child Gender 0.164b 0.164b Male 15 (44.1) 4 (11.8) 0.727b Exclusive breastfeeding 27 (19.4) 27 (79.4) 0.727b Not exclusive breastfeeding 3 (8.8) 4 (11.8) 0.727b BW/A (Body Weight/Age) C7 (19.4) 27 (79.4) 0.330b	Mothers' Characteristics			
Mother's Education 0.049 ^b Elementary School 5 (14.7) 11 (32.4) Junior High School 15 (44.1) 15 (44.1) High School 10 (29.4) 5 (14.7) Mother Occupation 0.642 ^b Housewives 28 (82.4) 30 (88.2) Entrepreneur 2 (5.9) 1 (2.9) Child Gender 0.164 ^b Male 15 (44.1) 4 (11.8) Female 15 (44.1) 4 (11.8) Lactation Status 0.727 ^b Exclusive breastfeeding 3 (8.8) 4 (11.8) Anthropometric Measures 0.330 ^b	Mother's Age	0.175 ^a	18.35 ± 0.91 (15 - 19)	
Elementary School 5 (14.7) 11 (32.4) Junior High School 15 (44.1) 15 (44.1) High School 10 (29.4) 5 (14.7) Mother Occupation 0.542 ^b Housewives 28 (82.4) 30 (88.2) Entrepreneur 2 (5.9) 1 (2.9) Child Gender 0.164 ^b Male 15 (44.1) 27 (79.4) Female 15 (44.1) 4 (11.8) Lactation Status 0.727 ^b Exclusive breastfeeding 3 (8.8) 4 (11.8) Not exclusive breastfeeding 3 (8.8) 4 (11.8) Anthropometric Measures 0.330 ^b	Mother's Education	0.049 ^b		
Junior High School 15 (44.1) 15 (44.1) High School 10 (29.4) 5 (14.7) Mother Occupation 0.542 ^b Housewives 28 (82.4) 30 (88.2) Entrepreneur 2 (5.9) 1 (2.9) Child Gender 0.164 ^b Male 15 (44.1) 27 (79.4) Female 15 (44.1) 4 (11.8) Lactation Status 0.727 ^b Exclusive breastfeeding 27 (19.4) Not exclusive breastfeeding 3 (8.8) 4 (11.8) Anthropometric Measures 0.330 ^b	Elementary School		11 (32.4)	
High School 10 (29.4) 5 (14.7) Mother Occupation 0.542 ^b Housewives 28 (82.4) 30 (88.2) Entrepreneur 2 (5.9) 1 (2.9) Child Gender 0.164 ^b Male 15 (44.1) 27 (79.4) Female 15 (44.1) 4 (11.8) Lactation Status 0.727 ^b Exclusive breastfeeding 27 (19.4) Not exclusive breastfeeding 3 (8.8) 4 (11.8) Anthropometric Measures U 0.330 ^b	Junior High School		15 (44.1)	
Mother Occupation 0.542 ^b Housewives 28 (82.4) 30 (88.2) Entrepreneur 2 (5.9) 1 (2.9) Child Gender 0.164 ^b Male 15 (44.1) 27 (79.4) Female 15 (44.1) 4 (11.8) Lactation Status 0.727 ^b Exclusive breastfeeding 27 (19.4) 27 (79.4) Not exclusive breastfeeding 3 (8.8) 4 (11.8) Anthropometric Measures U BW/A (Body Weight/Age) 0.330 ^b	High School		5 (14.7)	
Housewives 28 (82.4) 30 (88.2) Entrepreneur 2 (5.9) 1 (2.9) Child Gender 0.164 ^b Male 15 (44.1) 27 (79.4) Female 15 (44.1) 4 (11.8) Lactation Status 0.727 ^b Exclusive breastfeeding 27 (19.4) 27 (79.4) Not exclusive breastfeeding 3 (8.8) 4 (11.8) Anthropometric Measures Unit (11.8) Unit (11.8) BW/A (Body Weight/Age) Unit (11.8) Unit (11.8)	Mother Occupation	0.542 ^b		
Entrepreneur 2 (5.9) 1 (2.9) Child Gender 0.164 ^b Male 15 (44.1) 27 (79.4) Female 15 (44.1) 4 (11.8) Lactation Status 0.727 ^b Exclusive breastfeeding 27 (19.4) 27 (79.4) Not exclusive breastfeeding 3 (8.8) 4 (11.8) Anthropometric Measures U U BW/A (Body Weight/Age) U 0.330 ^b	Housewives		30 (88.2)	
Child Gender 0.164 ^b Male 15 (44.1) 27 (79.4) Female 15 (44.1) 4 (11.8) Lactation Status 0.727 ^b Exclusive breastfeeding 27 (19.4) 27 (79.4) Not exclusive breastfeeding 3 (8.8) 4 (11.8) Anthropometric Measures U U BW/A (Body Weight/Age) 0.330 ^b	Entrepreneur		1 (2.9)	
Male 15 (44.1) 27 (79.4) Female 15 (44.1) 4 (11.8) Lactation Status 0.727 ^b Exclusive breastfeeding 27 (19.4) 27 (79.4) Not exclusive breastfeeding 3 (8.8) 4 (11.8) Anthropometric Measures U U BW/A (Body Weight/Age) 0.330 ^b	Child Gender	0.164 ^b		
Female 15 (44.1) 4 (11.8) Lactation Status 0.727 ^b Exclusive breastfeeding 27 (19.4) 27 (79.4) Not exclusive breastfeeding 3 (8.8) 4 (11.8) Anthropometric Measures 0.330 ^b	Male		27 (79.4)	
Lactation Status0.727bExclusive breastfeeding27 (19.4)27 (79.4)Not exclusive breastfeeding3 (8.8)4 (11.8)Anthropometric Measures0.330bBW/A (Body Weight/Age)0.330b	Female		4 (11.8)	
Exclusive breastfeeding 27 (19.4) 27 (79.4) Not exclusive breastfeeding 3 (8.8) 4 (11.8) Anthropometric Measures 0.330 ^b	Lactation Status	0.727 ^b		
Not exclusive breastfeeding 3 (8.8) 4 (11.8) Anthropometric Measures 0.330 ^b	Exclusive breastfeeding		27 (79.4)	
Anthropometric Measures BW/A (Body Weight/Age) 0.330 ^b	Not exclusive breastfeeding		4 (11.8)	
BW/A (Body Weight/Age) 0.330 ^b	Anthropometric Measures			
	BW/A (Body Weight/Age)	0.330 ^b		
Excessive Nutrition 0 (0.0) 0 (0.0)	Excessive Nutrition		0 (0.0)	
Well-Nourished 24 (80.0) 20 (64.5)	Well-Nourished		20 (64.5)	
Undernourished 2 (6.7) 10 (32.3)	Undernourished		10 (32.3)	
Malnutrition 4 (13.3) 1 (3.2)	Malnutrition		1 (3.2)	
BL/A (Body Length/Age) 0.144 ^b	BL/A (Body Length/Age)	0.144 ^b		
Normal 19 (63.3) 12 (38.7)	Normal		12 (38.7)	
Short 4 (13.3) 5 (16.1)	Short		5 (16.1)	
Very Short 7 (23.3) 14 (45.2)	Very Short		14 (45.2)	
BW/BL (Body Weight/Body Length) 0.326 ^b	BW/BL (Body Weight/Body Length)	0.326 ^b		
Excessive Nutrition 1 (3.3) 0 (0.0)	Excessive Nutrition		0 (0.0)	
Well-Nourished 26 (86.7) 26 (83.9)	Well-Nourished		26 (83.9)	
Undernourished 2 (6.7) 3 (9.7)	Undernourished		3 (9.7)	
Malnutrition 1 (3.3) 2 (6.5)	Malnutrition		2 (6.5)	

b: probability with Chi-Square test.

Table 2 Devention stress	منطوم ويتبام والمتح			/hater	~~~~
anie 3 Parentino stress	KUUM/IEUUE	ammine	and penavior	ineiween	arounsi
		autuade.			aloubor

Variable	Intervention (n	= 30)	p ^a	t ^a	Control (<i>n</i> = 31)		p ^a	ť	p ^b	ť	Cohen's d
	Mean ± SD	Min - Max	-		Mean ± SD	Min - Max	-				
Parenting	stress										
Pre	86.53 ± 13.37	62 - 121	<0.001	8.229	54.94 ± 5.36	45 - 65	0.067	1.899	0.014	2.535	0.621
Post	58.80 ± 10.11	41 - 77			53.45 ± 5.87	43 - 64					
Knowledg	je										
Pre	18.30 ± 2.83	10 - 22	0.049	-2.056	18.35 ± 2.15	14 - 22	0.080	1.813	<0.001	3.826	0.884
Post	19.87 ± 2.82	16 - 25			17.16 ± 2.69	161 - 20					
Attitude											
Pre	31.50 ± 3.72	27 - 40	<0.001	-7.986	33.65 ± 4.20	24 - 41	0.028	-2.310	0.002	3.248	0.772
Post	37.37 ± 1.73	34 - 40			35.45 ± 2.74	29 - 39					
Behavior											
Pre	41.93 ± 8.32	16 - 54	<0.001	-5.924	46.77 ± 6.20	31 - 57	0.018	-2.502	0.813	-0.237	-0.061
Post	50.50 ± 4.10	43 - 56			50.81 ± 5.80	39 - 61					
Self-effica	асу										
Pre	201.00 ± 13.13	172 - 235	<0.001	-15.173	182.71 ± 28.46	154 - 253	0.067	1.903	<0.001	17.637	1.818
Post	253.03 ± 13.91	238 - 280			174.2 ± 20.28	145 - 240					
Maternal f	function										
Pre	111.27 ± 15.98	84 - 138	<0.001	-6.064	118.87 ± 12.40	88 - 140	<0.001	-3.748	0.457	0.748	0.192
Post	130.73 ± 5.14	118 – 137			129.45 ± 7.90	113 - 139					

a: Probability with paired t-test or Wilcoxon

b: Probability with Independent t-test on post-measurement values between the intervention group and the control group

As shown in **Table 3**, the parenting coaching intervention significantly affected parenting stress (p < 0.001). Furthermore, this intervention also resulted in significant positive changes in the mother's knowledge (p = 0.049), attitude (p < 0.001), behavior (p < 0.001), self-efficacy (p < 0.001), and maternal function (p < 0.001). As measured by Cohen's d, the effect size

was Parenting coaching d = 0.621, indicating a medium effect, and Knowledge d = 0.884, indicating a large effect. Conversely, in the control group, no significant differences were observed in all variables with a *p*-value >0.001, except for the maternal function variable (*p* <0.001).

Table 4 The difference in nutritional	parameters between	the intervention	group and the	control group
			J	

Variable Measurement	Intervention (n = 30)	Control (<i>n</i> = 31)	pa	t	Cohen's d
	Mean ± SD	Mean ± SD			
Month I					
BW/A (Body Weight/Age)	-1.38 ± 1.04	-1.50 ± 1.25	0.69	0.398	0.102
BL/A (Body Length/Age)	-1.32 ± 2.05	-2.20 ± 2.01	0.09	1.69	0.434
BW/BL (Body Weight/Body Length)	-0.61 ± 1.58	0.00 ± 1.67	0.14	-1.47	-0.378
Month II					
BW/A (Body Weight/Age)	-0.85 ± 1.13	-1.12 ± 1.45	0.42	0.79	0.204
BL/A (Body Length/Age)	-0.42 ± 1.54	-1.29 ± 1.72	0.04	2.06	0.528
BW/BL (Body Weight/Body Length)	-1.02 ± 1.50	-0.84 ± 1.44	0.63	-0.47	-0.121
Month III					
BW/A (Body Weight/Age)	-0.30 ± 1.68	-1.40 ± 1.06	<0.001	3.05	0.781
BL/A (Body Length/Age)	0.81 ± 2.55	-0.70 ± 1.73	<0.001	2.72	0.699
BW/BL (Body Weight/Body Length)	-0.76 ±1.42	-1.08 ± 1.17	0.34	0.96	0.246

a: probability using t-test independent

As shown in **Table 4**, BW/A in the well-nourished category, BL/A in the normal category, and BW/BL in the normal category were observed in the intervention group. A significant difference in the achievement of *z*-score values was observed between the intervention and control groups based on BW/A (p < 0.001) and BL/A (p < 0.001). However, there was no significant difference in BW/BL in the achievement of *z*-score (p = 0.34) in the third month.

Discussion

Effects of Parenting Coaching on Parenting Stress

The level of parenting stress significantly decreased before and after the intervention. Gagné et al. (2023) noted that parenting coaching reduces parenting stress in child-rearing, enhances parenting skills, and implements positive parenting patterns. This finding is consistent with Chaplin et al. (2021), which indicated that parenting coaching interventions incorporating mindfulness positively impact the emotional aspects of parenting, including heightened emotional awareness and feelings of closeness in relationships, while reducing negative emotions that can lead to stress in parentchild interactions.

A previous study has demonstrated that coaching parents can reduce their parenting stress, influenced by the application of encouragement, a can-do attitude, empowerment of choices, self-control, and respect for people's feelings. Encouragement enables parents to express positive emotions, while a can-do attitude fosters positive traits in children. Choices aid decision-making, self-control imparts selfregulation skills, and respect for people's feelings underscores the importance of understanding children's emotions ((Khoiriyyah, 2020).

Parenting coaching interventions can also enhance mothers' knowledge to prevent child stunting. This knowledge strengthening involves examining mothers' experiences in caring for their infants. Increased knowledge in each coaching session indicates the success of the intervention. This is consistent with the theory that clients and parents focus on what they learn from their experiences between coaching sessions, aiding in determining the next steps toward achieving further goals (Schwellnus et al., 2020).

Our results, based on the evaluation of the attitudes of teenage mothers in the intervention group at pre-and post-test, indicated significant differences in maternal attitudes. This finding is consistent with Olsa et al. (2018), who demonstrated a relationship between maternal attitudes and the incidence of stunting in children. Furthermore, parenting coaching fosters and nurtures mothers' ability to respect children's opinions and behavior, facilitating the establishment of harmonious relationships with their children (Monalisa et al., 2023).

Moreover, the results of the present study revealed that the coaching intervention can encourage behavioral changes to prevent stunting, particularly among mothers with toddlers. According to Kusuma and Pangesti (2023), parenting coaching offers guidance in caring for toddlers. It is integrated into various parenting activities, enhancing mothers' comfort and understanding and enabling them to enhance their skills, which are crucial in stunting prevention. This finding is supported by Susi Wahyuning et al. (2023), who reported that coaching support assists mothers in acquiring knowledge, attitudes, and skills related to food selection, processing, serving, and providing nutrition directly to children, thereby promoting optimal nutritional status and preventing stunting and other malnutrition-related conditions. Consequently, children can avoid stunting and reduce child morbidity and mortality rates (Erika et al., 2023).

Furthermore, parenting coaching interventions have been shown to improve mothers' self-efficacy. This is supported by concurrent findings indicating that participants gain increased confidence to learn how to continue harnessing their strengths. The participants reportedly acquire positive experiences and valuable skills through participation in solution-focused coaching interventions (Schwellnus et al., 2020). Additionally, self-efficacy is crucial in designing behavioral changes to achieve specific targets and promote healthy behaviors (Saleh et al., 2021).

Parenting coaching interventions significantly affect maternal function. Our results demonstrate that parenting coaching interventions can enhance maternal function. Parenting coaching is highly recommended for teenage mothers to improve their maternal function, which may be impacted by their various developmental challenges. This aligns with the findings of a previous study indicating that teenage mothers simultaneously encounter various developmental challenges related to transitioning to adulthood, marriage, and motherhood pregnancy, responsibilities (Erfina et al., 2019).

Coaching interventions offer numerous benefits to parents, including a) increased responsiveness assessment, b)

enhanced positive perceptions about children's communication success, c) reduced perceptions of the severity of children's language difficulties, d) strengthened working alliances with significant interventions, and e) decreased parental stress (Kemp & Turnbull, 2014). Additionally, another study reported different sets of results for parents, including a) heightened perceptions of personal abilities, b) increased perceptions of motor and social skills in their children, c) elevated feelings of self-efficacy, d) greater parental involvement, and e) increased incorporation of educational actions (such as spending short periods playing in a child's preferred activity; incorporating variation and trial and error in daily activities) into daily routines (Salisbury & Copeland, 2013).

The Impact of Parenting Coaching Intervention on the Nutritional Status of Children

The coaching intervention provided to parents has positively impacted parenting stress, knowledge, attitudes, behavior, self-efficacy, and maternal function. This has also positively affected the nutritional status of children, although direct testing was not conducted. It appears that when the mother's indicators improve after receiving guidance, the child's nutritional status also improves during monitoring in the third month. Parenting coaching in teenage mothers is expected to serve as an early intervention in improving children's nutritional status, particularly in stunting prevention. This approach is considered one of the strategies to engage participants across various regions. Parenting coaching is effective and often anticipated as an early intervention for infants and toddlers with disabilities and their families (Kemp & Turnbull, 2014).

The reduction in parenting stress scores will significantly impact mothers' parenting abilities, particularly in managing the nutritional development of their children (Delvecchio et al., 2020). Mothers will find it easier to establish communication with their children and strive to understand that each child has unique nutritional needs and eating habits (Scaglioni et al., 2018). Additionally, parenting coaching positively enhances mothers' understanding and control, enabling them to manage their children's eating behavior without causing psychological distress (Van Rinsum et al., 2018). The emotional stability gained by mothers after undergoing parenting coaching interventions will create a pleasant atmosphere, allowing them to prepare nutritious meals for their children (Yendi et al., 2017). Moreover, mothers will more readily adopt healthy eating habits that can become long-term family practices (Di Pasquale & Rivolta, 2018), thereby enhancing their children's nutrition and influencing the quality of physical, cognitive, and motor development during childhood (Gmmash et al., 2021).

The differences in nutritional parameters between the intervention and control groups indicate that both groups reported benefits from the program. However, the intervention group described prominent benefits from involvement in the parenting coaching intervention compared to the control group who received standard care. These findings align with Karmali et al. (2020), which shows that this research expands the utility of parenting coaching to change behavior and improve nutritional status compared with education alone.

Strengths and Limitations

The strength of this study lies in being the first to present the current status of parenting stress among teenage mothers in Indonesia. Additionally, the effectiveness of parenting coaching in reducing parenting stress among teenage mothers was assessed. However, the study also has limitations, including the coaching intervention conducted in only one location, which limits the generalizability of the results from other parts of Indonesia. Therefore, additional research sites are required to produce more generalized findings.

Implications

The study highlights the significant levels of parenting stress experienced by teenage mothers, highlighting the importance of implementing parenting coaching interventions to address this issue. These interventions aim to reduce stress, enhance self-efficacy, and improve maternal function, attitudes, and behaviors, ultimately contributing to reducing stunting rates in children. However, it is recommended that future research expands its scope and includes longer and more frequent follow-ups to further explore the effectiveness of these interventions. Nurses can play a crucial role in implementing parenting coaching interventions to alleviate parenting stress among teenage mothers. Nurses can enhance maternal knowledge and promote positive parent-child interactions by offering guidance on infant care and nutrition. Additionally, nurses can empower mothers to adopt healthier behaviors and attitudes, thus fostering optimal growth and development in children. Furthermore, nursing professionals can support mothers in improving their self-efficacy and enhancing maternal function through coaching interventions, ultimately contributing to overall family well-being and child health.

Conclusion

Our study revealed the effectiveness of parenting coaching in reducing parenting stress among teenage mothers, influencing their knowledge, attitudes, behavior, self-efficacy, and maternal function, ultimately aiding in the prevention of child stunting. Nurses can employ these interventions to enhance maternal well-being, strengthen self-efficacy, and support optimal child development. By integrating parenting coaching into nursing practice, healthcare professionals can actively address the challenges faced by teenage mothers and promote positive health outcomes for both mothers and children. Future research should investigate the long-term effects of these interventions and devise tailored strategies for broader implementation in healthcare settings.

Declaration of Conflicting Interest

The authors declare no conflict of interest.

Funding

This study was funded by the Ministry of Research and Technology/ National Agency for Research and Innovation.

Acknowledgment

The authors thank all who participated in this study. The authors also wish to thank their colleagues at the Faculty of Nursing, Hasanuddin University, and all who have helped in this study.

Authors' Contributions

All authors contributed equally according to ICMJE authorship criteria.

Authors' Biographies

Dr. Ariyanti Saleh, S.Kp., M.Si is a Professor at the Faculty of Nursing, Hasanuddin University, Makassar, Indonesia.

Andi Masyitha Irwan, RN, PhD is a Lecturer at the Faculty of Nursing, Hasanuddin University, Makassar, Indonesia.

Aulia Insani Latif, RN, MN is a Lecturer at the Faculty of Nursing, Hasanuddin University, Makassar, Indonesia.

Syahrul, RN, PhD is a Lecturer at the Faculty of Nursing, Hasanuddin University, Makassar, Indonesia.

dr. Veni Hadju, M.Sc, PhD is a Professor at the Faculty of Public Health, Hasanuddin University, Makassar, Indonesia.

Dr. Irma Andriani, M.Si is a Lecturer at the Faculty of Mathematics and Natural Sciences, Hasanuddin University, Makassar, Indonesia.

Indah Restika, RN, MN is a Lecturer at the Nursing Department, STIKes Nani Hasanuddin, Makassar, Indonesia.

Data Availability

All data analyzed for this study are available from the corresponding author upon reasonable request.

Declaration of Use of AI in Scientific Writing

Nothing to declare.

References

- Abidin, R. R. (1995). *The parenting stress index* (3rd ed.). Odessa, FL: Psychological Assessment Resources.
- Ansariniaki, M., Lamyian, M., Ahmadi, F., Rahimi Foroushani, A., Curry, C. L., & Barkin, J. L. (2021). Persian version of the Barkin Index of Maternal Functioning (BIMF): A cross-cultural adaptation and psychometric evaluation. *BMC Pregnancy and Childbirth*, *21*, 83. https://doi.org/10.1186/s12884-021-03556-4
- Barkin, J. L., Wisner, K. L., Bromberger, J. T., Beach, S. R., Terry, M. A., & Wisniewski, S. R. (2010). Development of the Barkin index of maternal functioning. *Journal of Women's Health*, *19*(12), 2239-2246. https://doi.org/10.1089/jwh.2009.1893
- Chaplin, T. M., Turpyn, C. C., Fischer, S., Martelli, A. M., Ross, C. E., Leichtweis, R. N., Miller, A. B., & Sinha, R. (2021). Parenting-focused mindfulness intervention reduces stress and improves parenting in highly stressed mothers of adolescents. *Mindfulness*, 12, 450-462. https://doi.org/10.1007/s12671-018-1026-9
- Coleman, P. K., & Karraker, K. H. (2000). Parenting self-efficacy among mothers of school-age children: Conceptualization, measurement, and correlates. *Family Relations*, 49(1), 13-24. https://doi.org/10.1111/j.17 41-3729.2000.00013.x
- Delvecchio, E., Germani, A., Raspa, V., Lis, A., & Mazzeschi, C. (2020). Parenting styles and child's well-being: The mediating role of the perceived parental stress. *Europe's Journal of Psychology*, 16(3), 514-531. https://doi.org/10.5964%2Fejop.v16i3.2013
- Di Pasquale, R., & Rivolta, A. (2018). A conceptual analysis of food parenting practices in the light of self-determination theory: Relatedness-enhancing, competence-enhancing and autonomyenhancing food parenting practices. *Frontiers in Psychology*, 9, 2373. https://doi.org/10.3389/fpsyg.2018.02373
- Erfina, E., Widyawati, W., McKenna, L., Reisenhofer, S., & Ismail, D. (2019). Adolescent mothers' experiences of the transition to motherhood: An integrative review. *International Journal of Nursing Sciences*, 6(2), 221-228. https://doi.org/10.1016/j.ijnss.2019.03.013
- Erika, K. A., Latif, A. I., Hasbiah, N., Baso, A. J. A., & Achmad, M. H. (2023). Stunting prevention application in health services: A scoping review. *Community Practitioner*, 20(11), 282-291.
- Fakhari, A., Allahverdipour, H., Esmaeili, E. D., Chattu, V. K., Salehiniya, H., & Azizi, H. (2022). Early marriage, stressful life events and risk of suicide and suicide attempt: A case–control study in Iran. *BMC Psychiatry*, 22, 71. https://doi.org/10.1186/s12888-022-03700-0
- Fatimah, S. (2015). The influence of parenting self-efficacy and social support on parenting stress in parents of children with special needs [in Bahasa]. UIN Syarif Hidayatullah Jakarta]. https://repository. uinjkt.ac.id/dspace/bitstream/123456789/41351/1/SITI%20FATIMAH-FPSI.pdf

- Gagné, M.-H., Brunson, L., Piché, G., Drapeau, S., Paradis, H., & Terrault, Z. (2023). Effectiveness of the Triple P Program on parental stress and self-efficacy in the context of a community roll-out. *Journal of Child and Family Studies*, 32(10), 3090-3105. https://doi.org/10.1007/s10826-023-02663-4
- Gibaud-Wallston, J., & Wandersman, L. P. (1978). Parenting Sense of Competence Scale. Canadian Journal of Behavioural Science. https://doi.org/10.1037/t01311-000
- Gmmash, A. S., Effgen, S. K., Skubik-Peplaski, C., & Lane, J. D. (2021). Parental adherence to home activities in early intervention for young children with delayed motor development. *Physical Therapy*, 101(4), pzab023. https://doi.org/10.1093/pti/pzab023
- Golfenshtein, N., Srulovici, E., & Deatrick, J. A. (2016). Interventions for reducing parenting stress in families with pediatric conditions: An integrative review. *Journal of Family Nursing*, 22(4), 460-492. https://doi.org/10.1177/1074840716676083
- Habibah, R., Nashori, H. F., & Kumolohadi, R. (2021). Pelatihan prophetic parenting untuk menurunkan stres pengasuhan pada ibu dengan anak disabilitas tunanetra [Prophetic parenting training to reduce parenting stress in mothers with children with visual impairments]. *Philanthropy: Journal of Psychology*, *5*(2), 317-328. https://doi.org/10.26623/ philanthropy.v5i2.4456
- Hattangadi, N., Cost, K. T., Birken, C. S., Borkhoff, C. M., Maguire, J. L., Szatmari, P., & Charach, A. (2020). Parenting stress during infancy is a risk factor for mental health problems in 3-year-old children. *BMC Public Health*, 20, 1726. https://doi.org/10.1186/s12889-020-09861-5
- Hodgkinson, S., Beers, L., Southammakosane, C., & Lewin, A. (2014). Addressing the mental health needs of pregnant and parenting adolescents. *Pediatrics*, 133(1), 114-122. https://doi.org/10.1542/ peds.2013-0927
- Indonesian Ministry of Health. (2018). Basic Health Research 2018 report (Riskesdas) [in Bahasa]. https://www.litbang.kemkes.go.id/laporanriset-kesehatan-dasar-riskesdas/
- Juliansen, A., Octavius, G. S., Tan, A. O., Pardede, C. S. B., Thandy, C. C., Fisca, C. A. L., & Wijaya, J. H. (2021). Knowledge, attitude, and behavior of parents toward school reopening amidst coronavirus disease 2019 pandemic in Indonesia. *Open Access Macedonian Journal of Medical Sciences*, 9(B), 1190-1197. https://doi.org/10.3889/oamjms.2021.6869
- Kang, H. (2021). Sample size determination and power analysis using the G* Power software. *Journal of Educational Evaluation for Health Professions*, 18, 17. https://doi.org/10.3352/jeehp.2021.18.17
- Karmali, S., Battram, D. S., Burke, S. M., Cramp, A., Johnson, A. M., Mantler, T., Morrow, D., Ng, V., Pearson, E. S., & Petrella, R. J. (2020). Perspectives and impact of a parent-child intervention on dietary intake and physical activity behaviours, parental motivation, and parental body composition: A randomized controlled trial. *International Journal of Environmental Research and Public Health*, *17*(18), 6822. https://doi.org/10.3390/ijerph17186822
- Kemp, P., & Turnbull, A. P. (2014). Coaching with parents in early intervention: An interdisciplinary research synthesis. *Infants & Young Children*, 27(4), 305-324. https://doi.org/10.1097/IYC.00000000000 0018
- Khoiriyyah, A. (2020). Efektivitas pelatihan keterampilan pengasuhan untuk menurunkan stres pengasuhan pada ibu yang memiliki anak retardasi mental [Effectiveness of parenting skills training to reduce parenting stress in mothers of mentally retarded children]. *PSIKOVIDYA*, 24(2), 125-132. https://doi.org/10.37303/psikovidya. v24i2.177
- Kirchengast, S. (2016). Teenage pregnancies: A worldwide social and medical problem. In R. Laratta (Ed.), *An Analysis of Contemporary Social Welfare Issues* (Vol. 13). InTechOpen. https://doi.org/10. 5772/65462
- Kumar, M., & Huang, K. Y. (2021). Impact of being an adolescent mother on subsequent maternal health, parenting, and child development in Kenyan low-income and high adversity informal settlement context. *PloS One*, *16*(4), e0248836. https://doi.org/10.1371/journal.pone. 0248836
- Kusuma, I. R., & Pangesti, W. D. (2023). Implementasi model edukasi bimbingan pada ibu hamil untuk pencegahan resiko stunting di Kabupaten Banyumas: Studi kualitatif [Implementation of a guidance education model for pregnant women to prevent the risk of stunting in

Banyumas Regency: Qualitative study]. *Jurnal Kesehatan Reproduksi*, *13*(2), 161-171. https://doi.org/10.58185/jkr.v13i2.48

- Martiyana, C., Huriyati, E., & Padmawati, R. S. (2018). Discussion with leaflet versus lecture with flip chart in improving knowledge, attitude and belief of childbearing age about IDD in Rural Endemic to IDD. *Media Gizi Mikro Indonesia*, 9(2), 83-98. https://doi.org/10.22435/ mgmi.v9i2.586
- McGill, F. (2020). Parent Coaching: How far have we come and how far can we go? *The Hanen Centre*. https://www.hanen.org/Site Assets/Articles---Printer-Friendly/Clinical---Program-Support/Parentcoaching-how-far-have-we-come-PF.aspx
- Mojtabai, R., Olfson, M., & Han, B. (2016). National trends in the prevalence and treatment of depression in adolescents and young adults. *Pediatrics*, 138(6), e20161878. https://doi.org/10.1542/ peds.2016-1878
- Monalisa, M., Nomiko, D., & Ekawati, F. (2023). Pengaruh modifikasi positive parenting program terhadap keterampilan mindful orang tua dalam pengasuhan anak usia dini [The effect of modified positive parenting programs on parents' mindful skills in caring for early childhood children]. *Murhum: Jurnal Pendidikan Anak Usia Dini*, 4(2), 285-296. https://doi.org/10.37985/murhum.v4i2.316
- Muhadara, I., Parawangi, A., & Malik, I. (2016). Peran pemerintah daerah dalam pengendalian perkawinan usia dini di Kecamatan Polongbangkeng Utara Kabupaten Takalar [The role of local government in controlling early marriage in North Polongbangkeng District, Takalar Regency]. Kolaborasi: Jumal Administrasi Publik, 2(3), 284-300. https://doi.org/10.26618/kjap.v2i3.884
- Nourmoradi, H., Kazembeigi, F., Kakaei, H., Jalilian, M., & Mirzaei, A. (2020). Assessment of knowledge, attitude, and practice toward covid-19 among a sample of iranian general population. *Open Access Macedonian Journal of Medical Sciences*, 8(T1), 167-174.
- Olsa, E. D., Sulastri, D., & Anas, E. (2018). Hubungan sikap dan pengetahuan ibu terhadap kejadian stunting pada anak baru masuk Sekolah Dasar di Kecamanatan Nanggalo [The relationship between maternal attitudes and knowledge on the incidence of stunting in children just entering elementary school in Nanggalo District]. Jurnal Kesehatan Andalas, 6(3), 523-529. https://doi.org/10.25077/jka. v6i3.733
- Osatuke, K., Yanovsky, B., & Ramsel, D. (2017). Executive coaching: New framework for evaluation. *Consulting Psychology Journal: Practice and Research*, 69(3), 172-186. https://doi.org/10.1037/cpb0000073
- Pacia, C., Gunning, C., McTiernan, A., & Holloway, J. (2023). Developing the parent-coaching assessment, individualization, and response to stressors (PAIRS) tool for behavior analysts. *Journal of Autism and Developmental Disorders*, 53(9), 3319-3342. https://doi.org/10.1007/ s10803-022-05637-5
- Pangaribuan, I. K., Sari, I., Simbolon, M., Manurung, B., & Ramuni, K. (2020). Relationship between early marriage and teenager pregnancy to stunting in toddler at Bangun Rejo Village, Tanjung Morawa District, Tanjung Morawa, Deli Serdang 2019. *Enfermería Clínica*, 30(Supplement 5), 88-91. https://doi.org/10.1016/j.enfcli.2019.11.028
- Pellecchia, M., Beidas, R. S., Mandell, D. S., Cannuscio, C. C., Dunst, C. J., & Stahmer, A. C. (2020). Parent empowerment and coaching in early intervention: Study protocol for a feasibility study. *Pilot and Feasibility Studies*, 6, 22. https://doi.org/10.1186/s40814-020-00568-3
- Profita, A. C. (2018). Beberapa faktor yang berhubungan dengan keaktifan kader posyandu di Desa Pengadegan Kabupaten Banyumas [Several factors are related to the activity of posyandu cadres in Pengadegan Village, Banyumas Regency]. Jurnal Administrasi Kesehatan Indonesia, 6(2), 68-74. https://doi.org/10.20473/jaki.v6i2.2018.68-74
- Saleh, A., Wirda, W., Irwan, A. M., & Latif, A. I. (2021). The relationships among self-efficacy, health literacy, self-care and glycemic control in older people with type 2 diabetes mellitus. *Working with Older People*, 25(2), 164-169. https://doi.org/10.1108/WWOP-08-2020-0044
- Salisbury, C. L., & Copeland, C. G. (2013). Progress of infants/toddlers with severe disabilities: Perceived and measured change. *Topics in Early Childhood Special Education*, 33(2), 68-77. https://doi.org/ 10.1177/0271121412474104
- Scaglioni, S., De Cosmi, V., Ciappolino, V., Parazzini, F., Brambilla, P., & Agostoni, C. (2018). Factors influencing children's eating behaviours. *Nutrients*, *10*(6), 706. https://doi.org/10.3390/nu10060706

- Schwellnus, H., King, G., Baldwin, P., Keenan, S., & Hartman, L. R. (2020). A solution-focused coaching intervention with children and youth with cerebral palsy to achieve participation-oriented goals. *Physical & Occupational Therapy in Pediatrics*, 40(4), 423-440. https://doi.org/ 10.1080/01942638.2020.1711841
- Scorza, P., Merz, E. C., Spann, M., Steinberg, E., Feng, T., Lee, S., Werner, E., Peterson, B. S., & Monk, C. (2021). Pregnancy-specific stress and sensitive caregiving during the transition to motherhood in adolescents. *BMC Pregnancy and Childbirth*, 21, 1-8. https://doi.org/ 10.1186/s12884-021-03903-5
- Sommer, M. S., Staerkind, M. E. B., Christensen, J., Vibe-Petersen, J., Larsen, K. R., Pedersen, J. H., & Langberg, H. (2018). Effect of postsurgical rehabilitation programmes in patients operated for lung cancer: A systematic review and meta-analysis. *Journal of Rehabilitation Medicine*, 50(3), 236-245. https://doi.org/10.2340/ 16501977-2292
- Susi Wahyuning, A., Asmuji, Supriyadi, & Devita Norma, Y. (2023). Intervensi Keperawatan Coaching Support pada keluarga terhadap upaya pemenuhan nutrisi Balita Stunting di desa Klungkung Sukorambi Jember [Nursing Development Support Intervention for families towards efforts to fulfill nutritional requirements for Stunting Toddlers in the village of Klungkung Sukorambi Jember]. *Professional Health Journal*, 5(1sp), 329-334. https://doi.org/10.54832/phj.v5i1sp. 441
- UNICEF. (2024). Early childbearing. https://data.unicef.org/topic/childhealth/adolescent-health/
- Van Rinsum, C., Gerards, S., Rutten, G., Philippens, N., Janssen, E., Winkens, B., Van de Goor, I., & Kremers, S. (2018). The coaching on lifestyle (CooL) intervention for overweight and obesity: a longitudinal study into participants' lifestyle changes. *International Journal of Environmental Research and Public Health*, 15(4), 680. https://doi.org/ 10.3390/ijerph15040680
- Westrupp, E. M., Bennett, C., Berkowitz, T., Youssef, G. J., Toumbourou, J. W., Tucker, R., Andrews, F. J., Evans, S., Teague, S. J., & Karantzas, G. C. (2023). Child, parent, and family mental health and functioning in Australia during COVID-19: Comparison to prepandemic data. *European Child & Adolescent Psychiatry*, 32(2), 317-330. https://doi.org/10.1007/s00787-021-01861-z
- Williams, J. R., McCabe, B. E., Tantillo, L. d., Levoy, K., & Behar-Zusman, V. (2021). Health correlates of abuse history and moderating effect of parenting stress for mothers with mental disorders. *Issues in Mental Health Nursing*, 42(6), 555-563. https://doi.org/10.1080/01612840. 2020.1820121
- Wilson, S., & Dumornay, N. M. (2022). Rising rates of adolescent depression in the United States: Challenges and opportunities in the 2020s. *Journal of Adolescent Health*, 70(3), 354-355. https://doi.org/ 10.1016/j.jadohealth.2021.12.003
- World Health Organization. (2023a). Adolescent pregnancy. https://www.who.int/news-room/fact-sheets/detail/adolescentpregnancy
- World Health Organization. (2023b). Depressive disorder (depression). https://www.who.int/news-room/fact-sheets/detail/depression
- World Health Organization. (n.d.). Weight-for-age. https://www.who.int/ tools/child-growth-standards/standards/weight-for-age
- Yendi, Y. D. N., Eka, N. L. P., & Maemunah, N. (2017). Hubungan antara peran ibu dalam pemenuhan gizi anak dengan status gizi anak prasekolah di TK Dharma Wanita Persatuan 2 Tlogomas Kota Malang [The relationship between the mother's role in fulfilling children's nutrition and the nutritional status of preschool children at Dharma Wanita PBB 2 Tlogomas Kindergarten, Malang City]. *Nursing News: Jurnal Ilmiah Keperawatan*, 2(2), 761-771. https://doi.org/10.33366/ nn.v2i2.537

Cite this article as: Saleh, A., Irwan, A. M., Latif, A. I., Syahrul., Hadju, V., Andriani, I., & Restika, I. (2024). Implementation of coaching methods to decrease the parenting stress levels among teenage mothers in Indonesia: A quasi-experimental study. *Belitung Nursing Journal*, *10*(2), 192-200. https://doi.org/10.33546/bnj.3071