



Parenting Peer Education on Adolescent Mothers: A Scoping Review



Dewi Rokhanawati ^a, Harsono Salimo ^b, Tri Rejeki Andayani ^c, Mohammad Hakimi ^d

Manuscript submitted: 1 October 2021, Manuscript revised: 9 December 2021, Accepted for publication: 30 January 2022

Corresponding Author ^a



Keywords

adolescent mother;
cultural health capital;
health problem;
healthy children;
mental health;
parenting;
peer education;
young motherhood;

Abstract

The study aims to review the evidence related to the application of parenting peer education in several countries and to find out the effectiveness of parenting peer education for adolescent mothers. This study used Scoping Review-PRISMA-ScR on the Wiley Online Library, PubMed, Science Direct, and EBSCO databases. Articles that meet the inclusion and exclusion criteria were then subjected to a critical appraisal using the Joanna Briggs Institute tools. 12 articles were identified in this review. The results showed that there were four themes: partner support, family support, social support, and the effectiveness of peer education. Partner support could provide inner peace, while parents could advise during the transition period as parents. In addition, peer counseling could also be used as a strategy to assist women in becoming new roles as mothers. Peer counseling was able to increase the mother's trust due to similar experiences. They offered a unique empathic understanding, conveyed information in simple language, and were able to help in making the right decision. The support needed by adolescent mothers depends on the context of their relationships with others.

International Journal of Health Sciences © 2022.

This is an open access article under the CC BY-NC-ND license (<https://creativecommons.org/licenses/by-nc-nd/4.0/>).

Contents

Abstract	405
1 Introduction	406
2 Materials and Methods	407
3 Results and Discussions	408
3.1 Results	408
3.2 Discussions	416

^a Universitas Sebelas Maret, Surakarta, Indonesia

^b Universitas Sebelas Maret, Surakarta, Indonesia

^c Universitas Sebelas Maret, Surakarta, Indonesia

^d Universitas Gadjah Mada, Yogyakarta, Indonesia

4	Conclusion	418
	Acknowledgments.....	419
	References	420
	Biography of Authors	423

1 Introduction

Children's nutrition intake and quality are affected by parental feeding practices, especially in the early five years. Health experts have concerned about nutrition status; however, malnutrition problems have become the major health problem in the world. There is a 10.6% of toddlers experiencing a delay in growth and development (Dabar et al., 2016). Around 144 million toddlers face stunting, 47 million of wasting, and 38.3 million of overweight or obese. Approximately, 45% of child mortality is caused by malnutrition (UNICEF/WHO, 2015). In 2017, about 150.8 toddlers or 22.2% faced stunting, 55% in Asia countries and 39% in Africa. Of 83.6 million stunting toddlers in Asia, the largest proportion is in South Asia (58.7%), and the lowest in Central Asia (0.9%) (WHO, 2017). Based on Lancet Series data, there are 250 million (43%) children face stunting in a poor and developing country (Black et al., 2017).

The nutritional problem becomes one of determining qualities of human resources. Therefore, it is necessary to pay attention to the aspects. The nutritional problem in a certain period will cause future development problems, such as the nutritional problems which cause the body susceptible to diseases. Consequently, the children need more attention in child development (Khomsan, 2012). In Indonesia, the average prevalence of toddlers' stunting 2005-2017 based on the World Health Organization (WHO) is 36.4% in the third place, the highest rank in South-East Asia Regional (SEAR). The *Data Riset Kesehatan Dasar (Riskesdas)* 2018, the incidence of toddlers' stunting is 30.8% (Ministry of Health RI, 2018)

The children aged two years old who experience severe stunting have a strong relationship with cognitive delays in childhood and long-term effects on resource quality and slow motor development (Brinkman et al., 2011; Martorell et al., 2010). Stunting of children aged 9 – 25 years old leads to the intelligence level, locomotor assessment, hand, and eye coordination, hearing, and speaking being lower than normal children (Chang et al., 2010). WHO conveyed that the short-term impacts of stunting in the health cause the enhancement of mortality and morbidity, in developing fields cause lowering cognitive, motoric, and language development than in economic field leads to the enhancement of health expenses (WHO, 2013).

Parents have a key role in the child development process (Bowman et al., 2010). Parenting by parents has some impacts on child development (Walker, 2008). In positive parenting, the child grows well and the attitude problems are less happening. Positive parenting supports child development, avoiding violence and punishment, and conducting fun activities consistently rather than negative parenting such as being harsh, ignoring, etc. (Piquero et al., 2009). Positive parenting can increase the trajectory of child development although there are many other risks, whereas inconsistent and bad parenting has a negative effect (Steele et al., 2016). Intervention promoting parenting can also increase healthy bonds between children and parents, positive children's behavior, and the health result generally (Aitken et al., 2015; Furlong et al., 2013; Sanders et al., 2014).

Parenting challenges in child development are the low level of knowledge and preparation to be a parent (Smetana, 2017). Low-level parents' knowledge is caused by the low parenting skills and abilities because of young marriage (Kitano et al., 2018). A study carried out by UNICEF and *Badan Pusat Statistik (BPS)* showed that the marriage of children aged 15 years old is around 11% and 35% is 18 years old (BPS and UNICEF, 2016). The data of BPS (2017), showed that around 67% of the Indonesian region faces early marriage emergencies. The distribution rate > 10% are evenly distributed in almost all provinces of Indonesia. In 2015, 25% spread across 21 provinces and increased to 23 provinces in 2017.

Based on Social Policy Research Centre (SPRC) Report about Young motherhood and child outcomes, several studies showed that adolescent mothers become less sensitive and responsive (Moran et al., 2008). They are likely to use limitations and punishment because they do not have enough knowledge about parenting and child development (Bradbury, 2011). Women who experience young marriage tend to have low-level of education and are not ready to contribute to their family, especially child development (BPS,

2017). Moreover, becoming parents at a young age will impact parenting limitations and double-burden responsibility that affects the child's development (UNICEF, 2015).

The application program of parenting peer education in adolescent mothers has been implemented. Preyde (2007), conveyed that premature baby mothers carry out contact by phone with other parents and build the confident parenting enhancement. They feel to have more knowledge in healthy children and report less stress, anxiety, and depression. A similar program has been conducted in parents with developing delayed children (Iscoe & Bordelon, 1985; Vlahovicova et al., 2017) by using a model parent training program. The other studies have been applied peer education nutrition training (PeerENT) programs for new mothers. Peer education is a valuable method for spreading information related to child nutrition and feeding between new mothers. 76% of respondents conveyed that they are interested in accepting information from trained peer educators (Duncanson et al., 2014). Mahat & Scoloveno (2010), conducted research on HIV peer education for students in grade IX showed that there is an enhancement of knowledge and adolescent-self efficacy of HIV-AIDS.

Based on the explanation above, this scoping review is arranged for mapping systematically the research conducted on the application of peer education in several countries and understanding the effectiveness of parenting peer education for adolescent mothers. The research question was determined by using the framework of Khan et al. (2003), namely PEO (Khan et al., 2003). PEO or PET stands for Population – Exposure (intervention/exposure) – Outcome/Theme (outcome/result). Therefore, this scoping review investigates literature from several countries of parenting peer education application on adolescent mothers.

2 Materials and Methods

This scoping review was guided by the Scoping Review protocol - PRISMA-ScR (Tricco et al. 2018). PRISMA Extension for Scoping Reviews (PRISMA-ScR) was used as a guide with four stages: identification, screening, eligibility, and included articles (Danquah et al., 2019). This research was conducted in November 2020 - January 2021 using four databases: the Wiley Online Library, PubMed, Science Direct, and EBSCO. Google Scholar was also utilized as a search engine in the grey literature search. The search strategy was done by determining keywords and synonyms for the focus of the study. Keywords and synonyms were associated with logical connectors/Boolean “OR” and “AND” to help organize flexible article searches (EBSCO, 2018). The following were the keywords used in this scoping review ((((((((((peer education *) OR peer counselor *) OR peer-group *) AND parenting *) OR parenthood *) OR parents *) OR adolescent mother *) AND young mother *) OR teens mother *) OR teenage mom *) OR teenage mother *) OR young motherhood *). The last result search was expanded in Zotero, and the duplication article was removed by the library technician (Strobino et al., 1992).

Inclusion and exclusion criteria

The inclusion criteria were applied to identify relevant articles. The selected articles were the original articles published in Indonesian and English within the last 10 years (2010-2020). Open access articles were also selected for better screening and review.

Data items

The data item is a list of essential aspects in determining the variables in the collected articles and making simplifications of the data (Tricco et al. 2018). The data were abstracted from articles' characteristics, the family characteristics and the social involvement, and the effectiveness in the application of peer education to adolescent mothers.

Synthesis of results

The data synthesis was conducted in two steps. First, all extracted statements were associated with skills, knowledge, or attitudes for assessment of the arranged and duplicated information. This produces a list of the new statement results. Second, after thematic analysis, the statements were grouped and emerged into themes (Bazeley 2009). Last, data saturation was done after identifying no new information from the data (Guest et al., 2006).

3 Results and Discussions

3.1 Results

Selection of sources of evidence

Identifying the characteristics and quality of the reviewed publications are displayed in Figure 1.

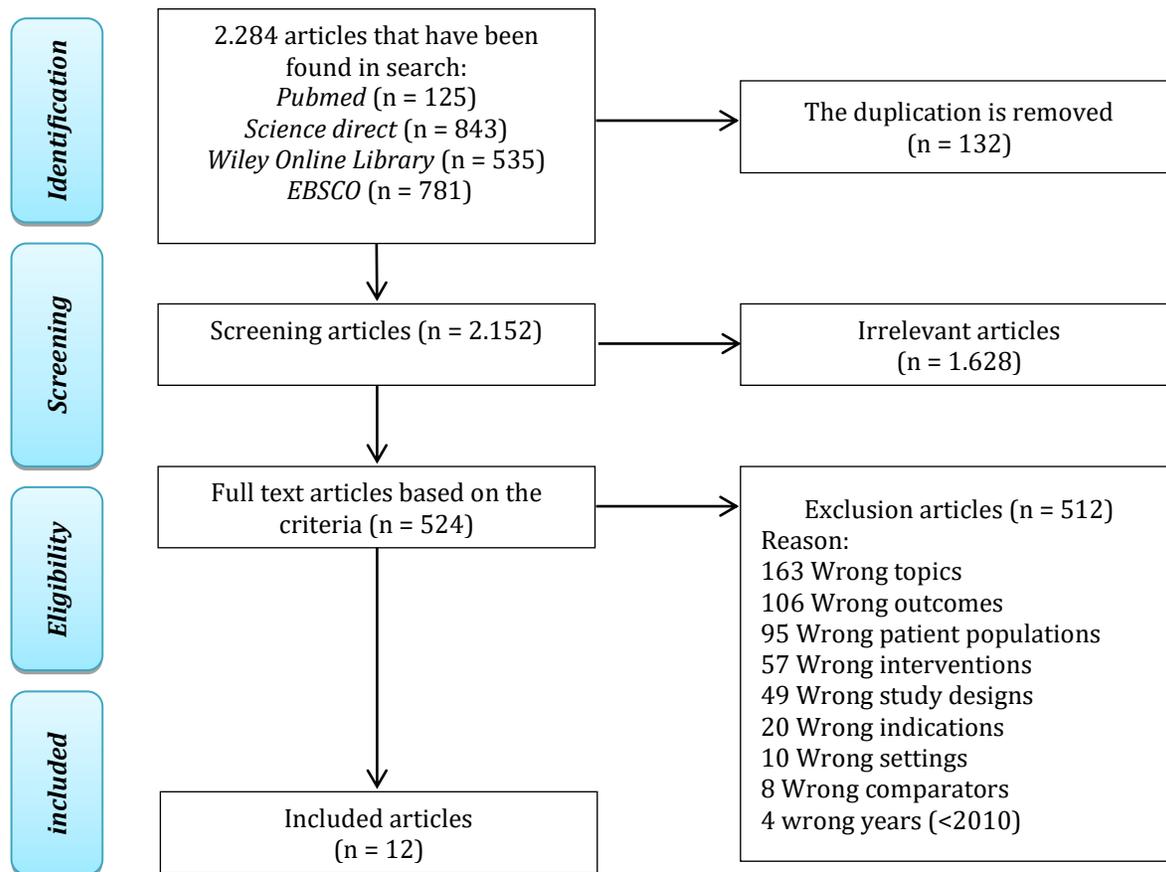


Figure 1. PRISMA-ScR

Article collection from three databases was found 2,284 articles relevant to the scoping review questions (Figure 1. PRISMA-ScR). 132 duplicated articles were found and immediately eliminated. The articles were screened further to get accurate and complete references regarding the application of parenting peer education to adolescent mothers. First is the screening process through titles and abstracts and eliminated 1,628 articles. The second is screening through full-text reading and obtaining 524 articles. As a result, 12 articles based on predetermined inclusion and exclusion criteria were obtained and used for the scoping review.

Critical appraisal of individual sources of evidence

After selecting articles, the next step is the critical appraisal, a step for knowing the quality of the article. This step was carried out using a checklist from The Joanna Briggs Institute (JBI). JBI is an independent international research organization and development in the Faculty of Health and Medical Sciences at the University of Adelaide, South Australia.

There were 12 appropriate articles with inclusion criteria that had been appointed based on the critical appraisal steps. The selection of the article employed a quantitative study with multiple research designs such

as RCT, four articles, a cohort study, three articles, a qualitative study, four articles, and a quasi-experiment. Each research method had a different checklist critical appraisal. The quality assessment was implemented to grade 12 articles into three categories: the Good category (Grade A), Good Enough (Grade B), Bad (Grade C), every point is represented by numbers 1-4 with qualification:

- 1 : No
- 2 : Not Applicable
- 3 : Unclear
- 4 : Yes

The following is the assessment range in the critical appraisal step.

Table 1
The assessment range of critical appraisal

Assessment Range (%)	Grade	Category
100 – 70	A	Good
69 – 40	B	Good Enough
39 – 0	C	Bad

The following is the result of critical appraisal.

Table 2
The critical appraisal assessment process used randomized controlled trials for article selection based on the inclusion criteria

No	Component	Article			
		(Edwards et al. 2012)	(Wambach et al. 2011)	(Ara et al. 2019)	(Hans et al. 2013)
1.	The usage of randomization in selecting intervention group	4	3	4	4
2.	The randomization of division in the intervention group was kept secret	3	3	4	4
3.	The suitability of the characteristic intervention group in the study	4	3	4	4
4.	The respondent does not know the given intervention (blind)	4	2	4	4
5.	The intervention provider does not know the given intervention (blind)	3	2	4	4
6.	The intervention provider does not know (blind) to the assessment of the intervention result	3	2	4	4
7.	The intervention group is given the same treatment, or there are other interventions given simultaneously with the investigated intervention	3	2	4	4
8.	The clarity and completeness of follow-up if there is no clarity and completeness, is it explained and analyzed about the differences in follow-up between groups in detail?	4	3	3	4
9.	The intervention group is analyzed in	4	3	4	4

	groups in which they are randomized				
10.	The result is measured in the same way for the intervention group	4	3	4	4
11.	The result is measured by using reliable manner	4	3	4	4
12.	The suitability of statistical analysis used	4	3	4	
13.	The suitability of the RCT design used by the research topic and deviations from the implementation of the RCT design standards are analyzed?	4	3	3	4
Total		48	35	50	51
Percentile (%)		92%	67%	96%	98%
Overall		A	B	A	A

Table 3
The assessing process of the critical appraisal using cohort study method for selected articles based on the inclusion criteria

No	Component	Article		
		(Huang et al. 2014)	(Angley et al. 2014)	(Brown et al. 2012)
1.	Are the two groups similar and recruited from the same population?	3	4	4
2.	Is the exposure measured in the same way to assign people to the exposed and non-exposed groups?	4	1	3
3.	Is the exposure measured validly and reliably?	4	3	4
4.	Are confounding factors identified?	4	3	4
5.	Are the strategies for dealing with confounding factors stated?	4	1	3
6.	Are the groups/ participants independent from the beginning result of the study?	1	3	2
7.	Are the results measured validly and reliably?	3	2	3
8.	Is follow-up time reported and long enough to produce results?	3	4	3
9.	Is the follow-up complete, if not, is there a reason for loss explained and explored?	4	3	3
10.	Are the strategies for dealing with the incomplete follow-up being used?	4	3	3
11.	Is appropriate statistical analysis used?	3	4	4
Total		48	37	31
Percentile (%)		92%	84,9%	70,4%
Overall		A	A	A

Table 4
The assessing process of critical appraisal using qualitative study method for selected articles based on the inclusion criteria

No	Component	Article			
		(Jamie et al. 2020)	(Nesbitt et al. 2012)	(McLeish and Redshaw 2017a)	McLeish et al (2019)
1.	The suitability between philosophical perspective and research method	3	4	4	4
2.	The suitability between research methodology and research question or objectives	2	3	4	4
3.	The suitability between research methodology and the method of collecting data	3	3	4	4
4.	The suitability between research methodology, representation, and data analysis	3	4	4	4
5.	The suitability of research methods and result interpretation	3	3	4	4
6.	There are statements that place researchers culturally and theoretically	2	2	3	3
7.	The management of research influences on research (processes, events, the selection of study participants)	2	3	3	3
8.	The representation of research participants' voices/ opinions	3	4	4	4
9.	Ethical approval by the appropriate organization	3	2	4	4
10.	The research conclusions are based on data analysis and interpretation	3	3	4	4
Total		27	31	38	38
Percentile (%)		67%	77	95%	95%
Overall		B	A	A	A

Table 5
The assessing process of the critical appraisal by a quasi-experimental method for selected articles based on the inclusion criteria

No	Component	Article (Kushwaha et al. 2014)
1.	Is it clear in this study 'what cause is' and 'what effect is' (that is there is no confusion about which variable comes first)?	3
2.	Are the participants in a similar comparison?	4
3.	Do the participants in any comparison receive similar treatment, other than the exposure or intervention interest?	4
4.	Is there a control group?	4
5.	Are there multiple outcome measures both before and after the intervention/exposure?	4
6.	Is there any follow-up and if not, are there differences between groups in terms of the follow-up being adequately described and analyzed?	4
7.	Are the participants' results included in the comparison measured in the same way?	4

8. Are the results measured reliably?	4
9. Is statistical analysis appropriate to use?	4
Total	34
Percentile (%)	85
Overall	A

Table 6
Result of data charting from selected articles based on inclusion criteria

No	Author (Year)/ Title/ Country	Aim of Study	Method and Design Study	Result	Themes	Grade
1	“(Huang et al. 2014)”	Examining the relationship between social support (parental) and depression in teen mothers	Quantitative study Secondary data with 180 samples of African-America or Latino/ Hispanic adolescent mother	<ul style="list-style-type: none"> - Evidence that mothers experienced parenting stress, previous levels of depression played an important role in determining mental health conditions. Childhood stress and low levels of social support have less impact on depression in adolescent mothers and can also affect embryonic development. - The interview at home with three people as guardian, friend, or neighbor. The participants may be influenced by them in responding to the questions related to social support and depression symptoms. 	<ul style="list-style-type: none"> - Social support - Parenting pattern history and family support acceptance 	A
2	“(Edwards et al. 2012)”	Investigating changes in depressive symptoms and supportive relationships between partners (infant's fathers) and mothers with depressive symptoms in adolescent mothers from conception to early postnatal two years	Quantitative Study A randomized controlled trial with 248 samples of a mother from doula intervention, conducted at home visit	<ul style="list-style-type: none"> - Half sample of the mothers experienced severe depressive symptoms during pregnancy and significantly higher before delivery than at birth. - The results show further evidence that parenting figures of adolescent mothers and the spouses can have an important role in supporting mental health 	Partner support	A
3	“(Wambach et al. 2011)”	Peer counselors increase breastfeeding initiation and duration up to 6 months postpartum in adolescent mothers.	Quantitative Study A randomized controlled trial with 289 samples registered from several prenatal clinics	<ul style="list-style-type: none"> - The classes organized by lactation consultants focused on the benefits of breastfeeding for mothers and babies, decision-making, and how to breastfeed and manage breastfeeding after returning to work and/ or school. - The family of the sample is requested to attend the class so social support can be enhanced in deciding breastfeeding initiation and continuation. 	Peer counselor effectiveness	B

No	Author (Year)/ Title/ Country	Aim of Study	Method and Design Study	Result	Themes	Grade
				<ul style="list-style-type: none"> - Participants must attend at least one class - Peer counselors make a call to provide support and information in making decision continuation. - Professional lactation consultants provide expertise, accurate information, and hands-on support, while peer counselors' calls provide the experience of adolescent mothers and increase intervention. - the 4 weeks continuous support of breastfeeding after discharging from the hospital significantly affects the duration of breastfeeding proven by the longer duration of breastfeeding in the experimental group than the control group. 		
4	“(Anglely et al. 2014)”	<p>a. Knowing the relation between social support, the function of the family for parenting competency, including self-efficacy and the satisfaction of adolescent mother and her couple.</p> <p>b. Examining the changing relation of a young couple in pregnancy period change to be a parent.</p>	<p>Quantitative Study</p> <p>A longitudinal study (Cohort study)</p> <p>Secondary data with a big sample was selected from July 2007 - February 2011 from gynecological obstetrics clinics and ultrasound clinics at four hospitals in Connecticut.</p>	<ul style="list-style-type: none"> - The couples complete individual structured interviews through self-interview by assisting audio computer (ACASI), and self-paced audio computer-assisted interviews (ACASI) - Social support has an impact on parenting and positively relates to self-efficacy. 	Family support during pregnancy	A
5	“(Brown et al. 2012)”	Understanding the relationship between social support and depression symptoms during a year postpartum on adolescent mothers.	<p>Quantitative Study</p> <p>A longitudinal study (Cohort study)</p> <p>With adolescent mother samples (Early N = 120, N in a year = 89; age = 19 years old) postpartum.</p>	<ul style="list-style-type: none"> - Using CES-DC instrument and questioner. The Duke-UNC Functional Social Support - More than 50% of young pregnant women in urban areas experience depressive symptoms in the postpartum (baseline, 12 weeks, and one year) period. Social support has positive impacts on depression mothers 	Social support for adolescent mother	A

No	Author (Year)/ Title/ Country	Aim of Study	Method and Design Study	Result	Themes	Grade
6	“(Jamie et al. 2020)”	Understanding the adolescent mothers’ experience in breastfeeding, especially in providing information and relation with a health practitioner.	Qualitative Study Focus Groups Discussion with semi-structured in-depth interview samples on 27 adolescent mothers.	<ul style="list-style-type: none"> - Adolescent mothers’ behavior in breastfeeding - The information received by adolescent mothers about breastfeeding. Adolescent mothers know about the benefits of breastfeeding, but lack information about the basic practices leading to early breastfeeding cessation and information-seeking in social media by non-evidence-based. - The interaction of adolescent mothers with health workers is poor caused by the intersection of age and socio-economic status resulting in low cultural health capital. 	Social supporter for adolescent mother	B
7	“(Nesbitt et al. 2012)”	Providing new conceptual knowledge to the health care providers and the understanding about the factors that influenced the adolescent decision for “trying” breastfeeding and giving breast milk continually for their babies.	Qualitative Study Interpretive description with a homogeneous sample of 16 adolescent mothers (15-19 years old) collected through face-to-face interviews and semi-structured.	<ul style="list-style-type: none"> - The breastfeeding decisions were made before giving birth and based on partner and family members’ opinions about the effect of breastfeeding initiation. - Self-efficacy support of parents can foster positive energy during pregnancy. - For mothers who tried the duration was lower. - Breastfeeding has many positive effects for both mother and baby 	Social support for adolescent mother	A
8	“(Kushwaha et al. 2014)”	Evaluating the influence of peer counseling by mother support groups (MSG’s) in enhancing infant practice and young child feeding (IYCF) in society.	<ul style="list-style-type: none"> - Quasi-experiment with a population of bearing mothers within 0-3, 3-6, 6-12, and 12-24 months. The participants varied in age: <19 years, 20-29, and 30-3 	<ul style="list-style-type: none"> - The intervention has a significant effect on the baby and the IYCF practice on the first re-assessment. All evaluated practices improved after the intervention (p <0.001 for all). A similar effect was found on the second reassessment (T2) with all IYCF practices showing a significant improvement in baseline data (p <0.001 for all) - After receiving the intervention, the mother’s majority (42-47%) asked for help from professionals rather than family members (8-20%). 	Peer counseling effectiveness	A
9	“(Ara et al. 2019)”	Assessing the peer counseling impacts combined with psychosocial stimulation about feeding practices	The community-based randomized controlled trial with 350 samples of mother-baby allocated to	<ul style="list-style-type: none"> - Combining peer counseling and psychosocial stimulation had a positive effect on infant feeding practice (IFP) and socio-emotional development at 12 months. The children in the peer counseling (PC) + psychosocial stimulation (PCS) group 	Peer counseling effectiveness	A

No	Author (Year)/ Title/ Country	Aim of Study	Method and Design Study	Result	Themes	Grade
		and child development in slum areas of Bangladesh.	receive peer counseling about feeding practices plus psychosocial stimulation (PC + PCS; n = 175) or regular health messages 9control; n = 175).	were found more active socially and emotionally. - They had a higher expressive communication score. Moreover, the infant length increased at 12 months (P <0.005).		
10	“(Hans et al. 2013)”	Examining the effectiveness of doula community intervention in supporting behavior, attitude, and emotional aspects of the initial relation between parent and children.	Randomized control trial. Intervention group: combining usual service and doula intervention. Control group: accepting the usual prenatal health care and social services offered by the clinic.	- The intention analysis showed that mothers with doula services were able to obtain more insight into the values of child-centered parenting. - A doula has positive impacts in interacting between parents and children and mothers' attitudes about parenting practice and is capable of decreasing mothers' stress. However, the intervention impacts on mothers' behavior decrease when intervention end.	Social support (community)	A
11	“(McLeish and Redshaw 2017a)”	Identifying the specific issues related to volunteer support for vulnerable mothers (young mothers, mothers with immigration status from a volunteer perspective.	Descriptive Study Qualitative with a semi-structured interview with thematic analysis.	- The result shows that volunteer is capable to build strong relationships and empower some disadvantages during and after pregnancy, mothers are not ready involved professionally. - Supporting women's emotionally complex needs is challenging, so the volunteers need to be carefully selected, trained realistically, supervised, and strong during their interventions.	Social support (community)	A
12	“(McLeish and Redshaw 2019)”	Exploring how the roles of doula community in antenatal and postnatal services on disadvantages women which they support.	A qualitative study with an in-depth and semi-structured interview with the theory of phenomenological approach to social psychology.	- According to Dola, their support is very much needed for pregnant women and when raising children	Social support (community)	A

Characteristics of sources evidence

The article characteristics were arranged as a development effort for confirming relevancy and extracting studies such as publication year, the type of publication, the type of study, terminology, the use of publication framework, the quality assessment of individual study, the type of data source, the number of reviewers and the reported challenge and limitation (Pham et al., 2014).

The result of characteristic distribution from the articles used in this scoping review (Figure 2. The Article Characteristics) showed that 4 articles were using randomized controlled trial methods, three articles using cohort study, an article using quasi-experiment, and four articles that use a qualitative method. Ten articles were grade A and two articles were grade B. The research location was from various countries, ten articles from modern countries (USA, America, UK, Canada, and England) and 2 articles were from developing countries (Bangladesh and India). From 12 articles, there were 4 articles from the PubMed database, 2 articles from the Science Direct database, 5 articles from the Wiley database, and an article from EBSCO.

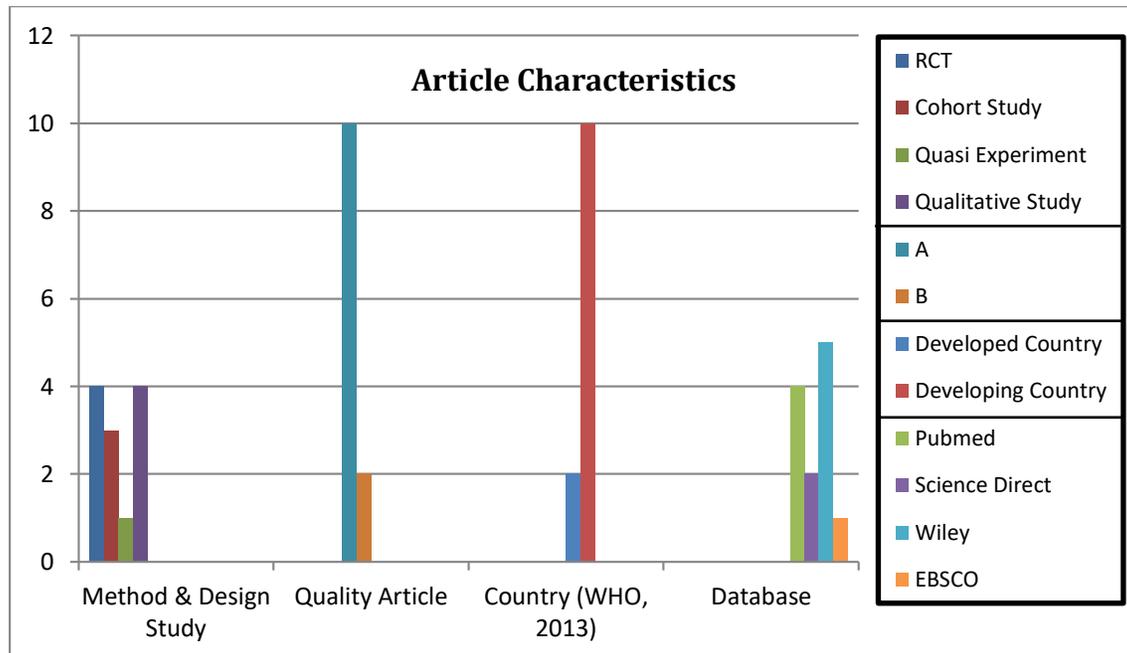


Figure 2. Article characteristics

Synthesis of results discussion

The result of the scoping review indicates that there are four (4) themes with sub-themes on each, namely (1) Theme 1: Partner Support, (2) Theme 2: Family support, (3) Theme 3: Social support, and (4) Theme 4: The effectiveness of peer counseling

3.2 Discussion

Summary of evidence

Partner support

Self-acceptance and support from external are necessary for adolescent mothers who face their new role as mothers. The results of this scoping further prove that the role of the baby's father (husband) has an important role in supporting adolescent mothers' mental health (Edwards et al., 2012). The existence of partner support provides inner peace and pleasure feeling in adolescent mothers. Husband influences the sustainability of the breastfeeding process. Many adolescent mothers stated that they had decided to breastfeed/initiate early breastfeeding before giving birth because they are motivated by the effect of breastfeeding on their babies' health. This decision is agreed upon by the spouses or family members (Nesbitt et al., 2012; Malaka et al., 2021).

Negative partner support can cause externalization problems in children. Unharmonized relations can destroy the parenting that should be done together which can lead to disturbed parent-child interaction because parents are less sensitive emotionally to children's needs. Parenting management is concerned with co-management of the family and the division of parents' labor, agreements on childcare, and support for the

care of one another (Parkes et al., 2019). Therefore, positive partner support is essential, especially for young parents.

Family support

Becoming a mother is a critical transition period for adolescent mothers. The perceptions of adolescent mothers and adult mothers on parenting behavior are different. Adolescent mothers tend to be less sensitive than adult mothers during interactions with children (Firk et al., 2018). Previous research by Edwards et al. 2012, showed further evidence that the parents' role of adolescent mothers has an important role in changing the transition to parenting. The parents of adolescent mothers can provide advice, opinions, discussions by providing experiences that can foster enthusiasm and pleasure for future mothers and fathers. Besides psychological support, parental experiences also have the same role as the husbands in deciding to breastfeed for adolescent mothers (Nesbitt et al., 2012).

This scoping review suggests that adolescent mothers' difficult histories or parenting experiences can influence how they care for their children. Adolescent mothers experience traumatic and distressing events during childhood that affects their psychological functioning and quality of life before and after the birth of their children (Yoon et al., 2019). In addition, adolescent mothers who experienced sexual and physical abuse often give birth to infants with insecure attachments, leading to more severe externalizing problems in preschool and early adolescence (Pasalich et al., 2016). Referring to the above discussion, it is necessary for further observation related to the relationship between adolescent mothers and their spouses or families. The intervention can be carried out through the couple and family who can provide support. If this is not possible, another approach can be conducted.

Social support

Social support has long been recognized as one of the important points that can help a person's well-being. Social support is defined as a resource provided by others (Hudson et al., 2016). The results of this scoping showed that the low social support influences the mental health status of pregnant adolescents, the development of their fetuses, and continue to the mental condition of adolescent mothers (Huang et al., 2014). More than 50% of adolescent mothers in urban areas of the US were found to experience depression symptoms at three points in the postpartum period: the initial period, 12 weeks, and one year caused by a lack of social support in the community (Brown et al., 2012).

The result of the scoping review indicated that several countries such as India, Bangladesh, Chicago, and the UK have made several approaches with communities. The case is similar to the scope of Early Breastfeeding Initiation (IMD) conducted by Jamie's research in the United Kingdom (Jamie et al., 2020). Professionals have conducted IMD consultations in clinics and hospitals. However, to continue breastfeeding depends on several other factors. First, mothers often have difficulty feeding their babies after returning from the clinic/hospital. Second is the level of support to mothers for exclusive breastfeeding at home. Third, various breastfeeding questions cannot be answered while in the clinic/hospital. Although some adolescent mothers are considered to have sufficient knowledge about the benefits of breastfeeding, they lack information about basic breastfeeding practices, leading to early termination of the breastfeeding process. They are also constrained by seeking information through social media that may not be valid (Asman et al., 2021; Herliah et al., 2022).

This study also explains an unfavorable relationship with health workers because of the difference in age and economic status with adolescent mothers resulting in low health in culture (Jamie et al., 2020). Therefore, Jamie's research suggests peer support as a more comprehensive approach to young maternal health. Meanwhile, other studies have found that peer support interventions may have the potential to be effective in preventing or reducing the risk of perinatal depression. This treatment can be considered as part of the management of mild to moderate depression in perinatal or postpartum women (Huang et al., 2020).

One of the community supports for adolescent mothers to succeed and develop is the doula. Doulas can help overcome stress, anxiety, and dissatisfaction, become knowledgeable and competent, develop self-esteem and self-efficacy, use services effectively, and connect with the local environment (McLeish & Redshaw, 2019). McLeish's research conveyed those volunteers or doulas who serve adolescent mothers had the same

experience of being vulnerable mothers (especially adolescent mothers) so that they can offer a unique empathic understanding. However, it cannot be denied that peer counseling's assignment is not easy because it requires continuity, systematic and long-term efforts. This is supported by Huang's Research, 2014 that every mother has different perceptions, such as the differences in the support level provided by their families or other support systems (Huang et al. 2014; Widana et al., 2021).

The effectiveness of peer counseling

The individual ability to receive complete and accurate information depends on their knowledge and experience, family members' influence, and social media's use to their geographic location (Wilson et al. 2016). Peer counseling requires preparation and strategies to achieve maximum results. This can be proven from the results of previous scoping reviews conducted by Kushwaha et al. (2014), and Ara et al. (2019). They revealed that the main strategies adopted in the study are community-based and facility-based. The community is a group of trained counselors for 7-10 days by several experts, namely from the WHO.

The other important factor that conveys from these results is maternal trust. Kushwaha's research found that most mothers (42-47%) asked for help from professionals rather than family members (8-20%) after the intervention. Initially, most of the mothers had poor knowledge of IYCF practices and did not seek proper help for their problems. Through MSG's intervention and counseling, mothers show improvement over time and continually (Kushwaha et al., 2014). This indicates that trust can be built through a community approach. It is also stated in the results of scoping review (Hans et al., 2013). The doula has a positive impact on parents' interaction with their children, delay or reduce maternal stress, and help increase a mother's self-confidence and parenting skills (McLeish & Redshaw, 2019). Wambach's research also indicated that the use of education by lactation consultants/peer counselor teams is an effective method for increasing the duration of breastfeeding among adolescent mothers (Wambach et al., 2011).

Peer counseling has a positive impact on increasing infant length at 12 months ($P < 0.005$). The results of the linear regression model show that peer counseling is positively related to the changes in infant length (coefficient, 0.82; 95% CI: 0.15, 1.48; $P < 0.021$). The increased child length is associated with the mother's height (coefficient, 0.14; 95% CI: 0.009, 0.19; $P < 0.000$). A person's stature reflects the genetic potential that will be inherited and the history of a person's nutritional status (Ara et al., 2019).

Peers can be effective for patients. This may be because peers have the same experience with the problem in very simple language and help make informed decisions (Ebrahimi et al. 2021; McLeish & Redshaw 2017b). In addition, peer counseling is successful in influencing knowledge and positive attitudes about the effectiveness of contraceptive use among adolescents with abortion (Wilson et al., 2016). Mahat's research found that peer education can increase knowledge about HIV (Mahat & Scoloveno, 2010). This status is important for building close relationships and deepening the understanding of adolescent parents and mothers, as they need to adapt interventions to the status of young mothers (Kåks & Målqvist 2020). Positive feelings emerge when pregnant with family support (Anglely et al., 2014; McLeish & Redshaw, 2017a).

Limitation

This scoping review is open to some limitations. First, the articles were mostly collected from journals published in both English and Indonesian. Second, since this study is a qualitative method, the findings cannot be generalized to other contexts regarding the effectiveness of parenting peer education on adolescent mothers.

4 Conclusion

From the 12 articles, this scoping review showed that partner support can provide inner peace and a happy feeling to support mental health in adolescent mothers. The parent's role is necessary for guiding the transition of being a mother. The mother of the adolescent mother can give advice and experience to grow spirit and happy feelings for future mother and father. Peer counseling from Mother Support Groups (MsGs) is assessed effectively in Infant and Young Child Feeding (IYCF) and parenting practices. Peer counseling can

increase the mother's confidence due to the same experiences. They offer unique empathy, deliver information using simple language, and help make decisions correctly. The evidence of intervention conducted in developed and developing countries can be referenced and conducted in other countries. Policymakers are also encouraged to include peer counseling or peer education in adolescent mothers in regular health programs to improve public health status.

Acknowledgments

We are grateful to two anonymous reviewers for their valuable comments on the earlier version of this paper.

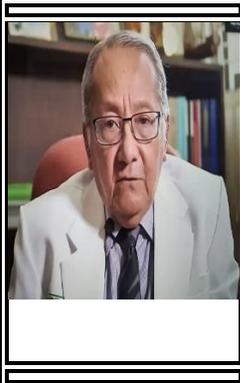
References

- Aitken, Z., Garrett, C. C., Hewitt, B., Keogh, L., Hocking, J. S., & Kavanagh, A. M. (2015). The maternal health outcomes of paid maternity leave: A systematic review. *Social Science & Medicine*, *130*, 32-41. <https://doi.org/10.1016/j.socscimed.2015.02.001>
- Angley, M., Divney, A., Magriples, U., & Kershaw, T. (2015). Social support, family functioning and parenting competence in adolescent parents. *Maternal and child health journal*, *19*(1), 67-73.
- Ara, G., Khanam, M., Papri, N., Nahar, B., Kabir, I., Sanin, K. I., ... & Dibley, M. J. (2019). Peer counseling promotes appropriate infant feeding practices and improves infant growth and development in an urban slum in Bangladesh: A Community-based cluster randomized controlled trial. *Current Developments in Nutrition*, *3*(7), nzz072.
- Asman, A., Asman, A., & Dewi, A. K. (2021). Community nursing strategies for tourism health families during COVID-19 pandemic. *International Journal of Health Sciences*, *5*(3), 224-231. <https://doi.org/10.53730/ijhs.v5n3.1449>
- Bazeley, P. (2009). Analysing qualitative data: More than 'identifying themes'. *Malaysian Journal of Qualitative Research*, *2*(2), 6-22.
- Black, M. M., Walker, S. P., Fernald, L. C., Andersen, C. T., DiGirolamo, A. M., Lu, C., ... & Lancet Early Childhood Development Series Steering Committee. (2017). Early childhood development coming of age: science through the life course. *The Lancet*, *389*(10064), 77-90.
- Bowman, R. A., Scotti, J. R., & Morris, T. L. (2010). Sexual abuse prevention: A training program for developmental disabilities service providers. *Journal of Child Sexual Abuse*, *19*(2), 119-127.
- BPS & UNICEF. (2016). *Analisis Data Perkawinan Usia Anak di Indonesia*, Jakarta: Badan Pusat Statistik.
- BPS. (2017). *Perkawinan Usia Anak di Indonesia 2013 dan 2015*, Jakarta: Badan Pusat Statistik.
- Bradbury, B. (2011). Young motherhood and child outcomes (SPRC Report 1/11). *Canberra, Australia: Australian Government Department of Families, Housing, Community Services and Indigenous Affairs*.
- Brinkman, W. P., Vermetten, E., van den Steen, M., & Neerincx, M. A. (2011). Cognitive Engineering Of A Military Multi-Modal Memory Restructuring System. *Journal of CyberTherapy & Rehabilitation (JCR)*, *4*(1).
- Brown, J. D., Harris, S. K., Woods, E. R., Buman, M. P., & Cox, J. E. (2012). Longitudinal study of depressive symptoms and social support in adolescent mothers. *Maternal and child health journal*, *16*(4), 894-901.
- Chang, S. M., Walker, S. P., Grantham-Mcgregor, S. A. L. L. Y., & Powell, C. A. (2010). Early childhood stunting and later fine motor abilities. *Developmental Medicine & Child Neurology*, *52*(9), 831-836.
- Dabar, D., Das, R., Nagesh, S., Yadav, V., & Mangal, A. (2016). A community-based study on growth and development of under-five children in an urbanized village of South Delhi. *Journal of tropical pediatrics*, fmw026.
- Danquah, L. O., Hasham, N., MacFarlane, M., Conteh, F. E., Momoh, F., Tedesco, A. A., ... & Weiss, H. A. (2019). Use of a mobile application for Ebola contact tracing and monitoring in northern Sierra Leone: a proof-of-concept study. *BMC infectious diseases*, *19*(1), 1-12.
- Duncanson, K., Burrows, T., & Collins, C. (2014). Peer education is a feasible method of disseminating information related to child nutrition and feeding between new mothers. *BMC Public Health*, *14*(1), 1-7.
- Ebrahimi, H., Abbasi, A., Bagheri, H., Basirinezhad, M. H., Shakeri, S., & Mohammadpourhodki, R. (2021). The role of peer support education model on the quality of life and self-care behaviors of patients with myocardial infarction. *Patient Education and Counseling*, *104*(1), 130-135. <https://doi.org/10.1016/j.pec.2020.08.002>
- Edwards, R. C., Thullen, M. J., Isarowong, N., Shiu, C. S., Henson, L., & Hans, S. L. (2012). Supportive relationships and the trajectory of depressive symptoms among young, African American mothers. *Journal of Family Psychology*, *26*(4), 585.
- Firk, C., Konrad, K., Herpertz-Dahlmann, B., Scharke, W., & Dahmen, B. (2018). Cognitive development in children of adolescent mothers: The impact of socioeconomic risk and maternal sensitivity. *Infant Behavior and Development*, *50*, 238-246. <https://doi.org/10.1016/j.infbeh.2018.02.002>
- Furlong, M., McGilloway, S., Bywater, T., Hutchings, J., Smith, S. M., & Donnelly, M. (2013). Cochrane review: behavioural and cognitive-behavioural group-based parenting programmes for early-onset conduct problems in children aged 3 to 12 years. *Evidence-Based Child Health: A Cochrane Review Journal*, *8*(2), 318-692.

- Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field methods*, 18(1), 59-82.
- Hans, S. L., Thullen, M., Henson, L. G., Lee, H., Edwards, R. C., & Bernstein, V. J. (2013). Promoting positive mother-infant relationships: A randomized trial of community doula support for young mothers. *Infant Mental Health Journal*, 34(5), 446-457.
- Herliah, A., Baso, Y. S., Hidayanty, H., Syarif, S., Aminuddin, A., & Bahar, B. (2022). Effect of web-based she smart education models on adolescent girl's knowledge, attitudes, and practice about obesity. *International Journal of Health & Medical Sciences*, 5(1), 50-55. <https://doi.org/10.21744/ijhms.v5n1.1832>
- Huang, C. Y., Costeines, J., Kaufman, J. S., & Ayala, C. (2014). Parenting stress, social support, and depression for ethnic minority adolescent mothers: Impact on child development. *Journal of child and family studies*, 23(2), 255-262.
- Huang, R., Yan, C., Tian, Y., Lei, B., Yang, D., Liu, D., & Lei, J. (2020). Effectiveness of peer support intervention on perinatal depression: A systematic review and meta-analysis. *Journal of Affective Disorders*, 276, 788-796. <https://doi.org/10.1016/j.jad.2020.06.048>
- Hudson, D. B., Campbell-Grossman, C., Kupzyk, K. A., Brown, S. E., Yates, B., & Hanna, K. M. (2016). Social support and psychosocial well-being among low-income, adolescent, African American, first-time mothers. *Clinical nurse specialist CNS*, 30(3), 150.
- Iscoe, L., & Bordelon, K. (1985). Pilot parents: Peer support for parents of handicapped children. *Children's Health Care*, 14(2), 103-109.
- Jamie, K., O'Neill, R., Bows, H., & Hackshaw-McGeagh, L. (2020). Healthcare practitioner relationships, cultural health capital and breastfeeding support for adolescent mothers. *Health Education Journal*, 79(8), 901-913.
- Kåks, P., & Målvqvist, M. (2020). Peer support for disadvantaged parents: a narrative review of strategies used in home visiting health interventions in high-income countries. *BMC health services research*, 20(1), 1-15.
- Khan, K. S., Kunz, R., Kleijnen, J., & Antes, G. (2003). Five steps to conducting a systematic review. *Journal of the royal society of medicine*, 96(3), 118-121.
- Khomsan, A. (2012). *Ekologi masalah gizi, pangan, dan kemiskinan*. Alfabeta.
- Kitano, N., Yoshimasu, K., Yamamoto, B. A., & Nakamura, Y. (2018). Associations between childhood experiences of parental corporal punishment and neglectful parenting and undergraduate students' endorsement of corporal punishment as an acceptable parenting strategy. *Plos one*, 13(10), e0206243.
- Kushwaha, K. P., Sankar, J., Sankar, M. J., Gupta, A., Dadhich, J. P., Gupta, Y. P., ... & Sharma, B. (2014). Effect of peer counselling by mother support groups on infant and young child feeding practices: the Lalitpur experience. *PloS one*, 9(11), e109181.
- Mahat, G., & Scoloveno, M. A. (2010). HIV peer education: Relationships between adolescents' HIV/AIDS knowledge and self-efficacy. *Journal of HIV/AIDS & Social Services*, 9(4), 371-384.
- Malaka, I. G., Syarif, S., Arsyad, M. A., Baso, Y. S., & Usman, A. N. (2021). Development of women's reproductive health application as android-based learning media of adolescent knowledge. *International Journal of Health & Medical Sciences*, 4(2), 182-188.
- Martorell, R., Horta, B. L., Adair, L. S., Stein, A. D., Richter, L., Fall, C. H., & Victora, C. G. (2010). Consortium on Health Oriented Research in Transitional Societies Group. Weight Gain in the First Two Years of Life Is an Important Predictor of Schooling Outcomes in Pooled Analyses from Five Birth Cohort from Low and Middle Income Countries. *J. Nutr*, 140, 348-354.
- McLeish, J., & Redshaw, M. (2017). "I didn't think we'd be dealing with stuff like this": A qualitative study of volunteer support for very disadvantaged pregnant women and new mothers. *Midwifery*, 45, 36-43. <https://doi.org/10.1016/j.midw.2016.12.003>
- McLeish, J., & Redshaw, M. (2017). Mothers' accounts of the impact on emotional wellbeing of organised peer support in pregnancy and early parenthood: a qualitative study. *BMC pregnancy and childbirth*, 17(1), 1-14.
- McLeish, J., & Redshaw, M. (2019). "Being the best person that they can be and the best mum": a qualitative study of community volunteer doula support for disadvantaged mothers before and after birth in England. *BMC pregnancy and childbirth*, 19(1), 1-11.
- Moran, G., Forbes, L., Evans, E., Tarabulsy, G. M., & Madigan, S. (2008). Both maternal sensitivity and atypical maternal behavior independently predict attachment security and disorganization in adolescent mother-infant relationships. *Infant Behavior and Development*, 31(2), 321-325. <https://doi.org/10.1016/j.infbeh.2007.12.012>

- Nesbitt, S. A., Campbell, K. A., Jack, S. M., Robinson, H., Piehl, K., & Bogdan, J. C. (2012). Canadian adolescent mothers' perceptions of influences on breastfeeding decisions: a qualitative descriptive study. *BMC pregnancy and childbirth*, *12*(1), 1-14.
- Parkes, A., Green, M., & Mitchell, K. (2019). Coparenting and parenting pathways from the couple relationship to children's behavior problems. *Journal of Family Psychology*, *33*(2), 215.
- Pasalich, D. S., Cyr, M., Zheng, Y., McMahon, R. J., & Spieker, S. J. (2016). Child abuse history in teen mothers and parent-child risk processes for offspring externalizing problems. *Child abuse & neglect*, *56*, 89-98. <https://doi.org/10.1016/j.chiabu.2016.04.011>
- Pham, M. T., Rajić, A., Greig, J. D., Sargeant, J. M., Papadopoulos, A., & McEwen, S. A. (2014). A scoping review of scoping reviews: advancing the approach and enhancing the consistency. *Research synthesis methods*, *5*(4), 371-385.
- Piquero, A. R., Farrington, D. P., Welsh, B. C., Tremblay, R., & Jennings, W. G. (2009). Effects of early family/parent training programs on antisocial behavior and delinquency. *Journal of Experimental Criminology*, *5*(2), 83-120.
- Preyde, M. (2007). Mothers of very preterm infants: perspectives on their situation and a culturally sensitive intervention. *Social work in health care*, *44*(4), 65-83.
- Sanders, M. R., Kirby, J. N., Tellegen, C. L., & Day, J. J. (2014). The Triple P-Positive Parenting Program: A systematic review and meta-analysis of a multi-level system of parenting support. *Clinical psychology review*, *34*(4), 337-357. <https://doi.org/10.1016/j.cpr.2014.04.003>
- Smetana, J. G. (2017). Current research on parenting styles, dimensions, and beliefs. *Current opinion in psychology*, *15*, 19-25. <https://doi.org/10.1016/j.copsyc.2017.02.012>
- Steele, H., Bate, J., Steele, M., Dube, S. R., Danskin, K., Knafo, H., ... & Murphy, A. (2016). Adverse childhood experiences, poverty, and parenting stress. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, *48*(1), 32.
- Strobino, D. M., Ensminger, M. E., Nanda, J., & Kim, Y. J. (1992). Young motherhood and infant hospitalization during the first year of life. *Journal of Adolescent Health*, *13*(7), 553-560. [https://doi.org/10.1016/1054-139X\(92\)90368-L](https://doi.org/10.1016/1054-139X(92)90368-L)
- Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., ... & Straus, S. E. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Annals of internal medicine*, *169*(7), 467-473.
- UNICEF. (2015). *Child Marriage: Progress and prospects*. New York: UNICEF.
- Vlahovicova, K., Melendez-Torres, G. J., Leijten, P., Knerr, W., & Gardner, F. (2017). Parenting programs for the prevention of child physical abuse recurrence: a systematic review and meta-analysis. *Clinical child and family psychology review*, *20*(3), 351-365.
- Walker, J. M. (2008). Looking at teacher practices through the lens of parenting style. *The Journal of Experimental Education*, *76*(2), 218-240.
- Wambach, K. A., Aaronson, L., Breedlove, G., Domian, E. W., Rojjanasrirat, W., & Yeh, H. W. (2011). A randomized controlled trial of breastfeeding support and education for adolescent mothers. *Western journal of nursing research*, *33*(4), 486-505.
- WHO. (2013). *Interpretation Guide Nutrition Landscape Information System (NLIS)*, Switzerland:WHO Press.
- WHO. (2017). *Stunted Growth and Development*. Geneva: World Health Organization.
- Widana, I.K., Sumetri, N.W., Sutapa, I.K., Suryasa, W. (2021). Anthropometric measures for better cardiovascular and musculoskeletal health. *Computer Applications in Engineering Education*, *29*(3), 550-561. <https://doi.org/10.1002/cae.22202>
- Wilson, S. F., Degaiffier, N., Ratcliffe, S. J., & Schreiber, C. A. (2016). Peer counselling for the promotion of long-acting, reversible contraception among teens: a randomised, controlled trial. *The European Journal of Contraception & Reproductive Health Care*, *21*(5), 380-387.
- Yoon, Y., Cederbaum, J. A., Mennen, F. E., Traube, D. E., Chou, C. P., & Lee, J. O. (2019). Linkage between teen mother's childhood adversity and externalizing behaviors in their children at age 11: Three aspects of parenting. *Child abuse & neglect*, *88*, 326-336. <https://doi.org/10.1016/j.chiabu.2018.12.005>

Biography of Authors

	<p>Dewi Rokhanawati, SSiT., MPH Dewi Rokhanawati is a lecturer at the Midwifery Study Program, Faculty of Health Sciences, Aisyiyah University of Yogyakarta (UNISA). She was born in Sleman on March 10. She is the mother of two who is concerned with midwifery, maternal and child health, and reproductive health. In 2009, she completed his postgraduate study at Gadjah Mada University. She currently pursues her doctoral studies at the IKM S3 Study Program, University of Sebelas Maret (UNS). She currently works as a writer, journal manager, and reviewer of National Journals, as well as a speaker in scientific activities. In addition, she also publishes some scientific journals; some of her works are also published in proceedings and books. Email: dewirokhanawati@unisayogya.ac.id</p>
	<p>Prof. Dr. dr. Harsono Salimo, SpA (K) Prof. Dr. dr. Harsono Salimo, SpA (K) was born in Kediri on December 26, 1944. He currently lives at Jl. Gatot Subroto 196, Surakarta. Educational History: Graduated as a doctor in 1973 and a Pediatrician at the Faculty of Medicine UNAIR, as well as a Child Development Consultant at the Faculty of Medicine UI (2004). In 2006, he was inaugurated as a Professor at the State University of Sebelas Maret. Work history. He works as a Doctor at Tulung Agung Public Health Center from 1973 to 1979. In 1979-1983, he studied Pediatrician at FK Unair. In 1983 – 1984, he was a Pediatrician at Solok Hospital, West Sumatra. From 1984 to present. Email: profharsono2612@gmail.com</p>
	<p>Dr. Tri Rejeki Andayani, S.Psi., M.Si. Study Program of Psychology, Faculty of Medicine, UNS She is familiarly called Menik who was born in Boyolali with the complete name of Tri Rejeki Andayani. She completed her undergraduate study at the Faculty of Psychology, the University of Muhammadiyah Surakarta (UMS, graduated 1996), and postgraduate study at Gadjah Mada University (UGM, graduated 2001) with a specialization in Social Psychology, and graduated cum laude from Doctoral study in 2016 at the Faculty of Psychology, Gadjah Mada University (UGM). Email: menikpsy@staff.uns.ac.id</p>
	<p>Prof. dr. Mohammad Hakimi, SpOG(K), PhD. He was graduated to be a Doctor (1971) and Specialist in Obstetrics-Gynecology (1976) from the Faculty of Medicine (FK) UGM Yogyakarta and to be Consultant of Social Obstetrics-Gynecology from the Indonesian College of Obstetrics-Gynecology (2003). He completed his doctoral education at the University of Newcastle, NSW, Australia, and obtained his Ph.D. in Clinical Epidemiology in 1989. He also achieved some additional education and training at the Women & Infant's Hospital of Rhode Island/Brown University, Providence, Rhode Island, USA (1976-1977), Johns Hopkins University, Baltimore, Maryland, USA (May 1981), Cornell University Ithaca, New York, USA (October 1991), The University of Toronto, Toronto, Canada (July 1993), Umeå University, Umeå, Sweden (June 1996) and Oxford University, Oxford, UK (July 1999). Email: moh.hakimi@yahoo.com</p>