Original Article

THE EFFECTIVENESS OF NEUROLINGUISTIC PROGRAMMING ON PERCEIVED INSUFFICIENT MILK

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Abstract

Introduction: The problem of perception of insufficient breast milk, anxiety, and concerns about breastfeeding practices are closely related to the mother's psychological condition, so a solution must be found. This study focuses on mothers with problems regarding breastfeeding, such as perceived insufficient milk supply, anxiety, and fear of breastfeeding. Methods: This study is a quasi-experimental pre-post-test study on 30 breastfeeding mothers. Participants were searched online through social media and Facebook and given a questionnaire regarding screening for breastfeeding problems. Each respondent received NLP method therapy with sub modality techniques and anchoring as needed starting 1-2 hours and evaluated on days three and six after therapy. The evaluation was carried out immediately after therapy, three days after therapy, and six days after therapy. Results: The results of this study estimated that neurolinguistic programming for six weeks reduced feelings of perceived insufficient milk supply ($P < 0.001$). These results also show that neurolinguistic programming has a very large effect (Cohen, 1988) on reducing feelings of perceived insufficient milk supply (1.00). During the six weeks of implementing neuro linguistic programming, respondents' feelings about perceived insufficient milk supply of respondents. PIM experience also decreases over time. PIMS feelings will decrease 0.17 to 0.57 points shortly after neurolinguistic programming up to 6 days later. Conclusion: Perceived insufficient milk supply caused by maternal stress factors, maternal malnutrition, and traditional beliefs about food and eating can be treated with neurolinguistic programming because NLP with communication and persuasive concepts to change behaviour can increase endorphin production, which further increases the release of the hormone oxytocin so that breast milk production will not decrease and reduce the prevalence of early weaning in the first six months. We suggest that this method be implemented in every health facility by a certified health worker in the field of NLP.

Keywords: Neuro Linguistic Programming; Perceived Insufficient Milk Supply; Breastfeeding.

INTRODUCTION

Exclusive breastfeeding has many advantages for infants and mothers in well-established low, middle, and high-income countries (Lawrence & Lawrence, 2021; Victora, Bahl, Barros, França, Horton, Krasevec, Murch, Sankar, Walker, Rollins, et al., 2016). Therefore, the World Health Organization and the American Academy of Paediatrics recommend that infants be exclusively breastfed until the age of 6 months and continued in combination with complementary foods until the age of 2 years (Eidelman et al., 2012; World Health Organization, 2022).

Although breastfeeding has many benefits, the global breastfeeding rate has not reached the recommended duration, and regulations have not carried out the practice of early breastfeeding initiation.

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The perception of insufficient breast milk (PIM) is one of the most frequently expressed reasons for weaning breastfeeding during the first year of life (Atchan et al., 2011; Li et al., 2008; Martines et al., 1989; Odom et al., 2013).

In Indonesia, the coverage of exclusive breastfeeding in 2021 is 56.9%, and the coverage of exclusive breastfeeding in Yogyakarta is 74.7% (Ministry of Health, 2021). One of the causes of mothers giving additional drinks or food to babies before six months is the perception of insufficient breast milk and breast inflammation. The mother is infected with Covid-19, so she must isolate and separate from her baby (Santacruz-Salas et al., 2020)(Santacruz-Salas et al., 2020)(Gianni et al., 2019). Another reason that causes the failure of exclusive breastfeeding is that mothers have to return to work after the maternity leave period is over (Al-Katufi et al., 2020). Research in several countries shows that many women experience problems when starting the breastfeeding process, which are not resolved properly, resulting in early cessation of breastfeeding (Gianni et al., 2019).

Evidence for factors that cause physiological insufficiency of milk production due to hormonal or genetic predisposition, or ignorance of early breastfeeding, is still unclear (Galipeau et al., 2017). At the same time, exclusive breastfeeding can improve the nutritional status of infants and toddlers and can reduce infant mortality (Moon et al., 2022). In addition, several studies have also reported that the benefits of breastfeeding can have long-term effects and last into adulthood, such as reducing the risk of obesity and type 2 diabetes (Kim, 2018).

Other studies also explain that the benefits that can be felt directly by the mother are that it can be used as a method of lactation amenorrhea (Glasier et al., 2019), accelerates weight loss (Tahir et al., 2019), and can reduce the risk of gynaecological tumours such as cancer. Breast (Jelly & Choudhary, 2019) and ovarian cancer (Babic et al., 2020). Another benefit of breastfeeding is reducing family expenses in providing formula milk and its accessories.

Babies exclusively breastfed have a better immune system, so they do not get sick easily (Prentice, 2022). This also has an impact on reducing costs for medical care. Problems with the perception of insufficient breast milk, anxiety, and concerns about breastfeeding practices are closely related to the mother's psychological condition, so a solution must be found. Several studies have revealed that one of the interventions that can be applied is neurolinguistic programming (NLP) therapy (Lewis Walker, 2021).

This NLP therapy method is one of the complementary therapies for body and mind therapy (Barcan, 2020). This method works by giving positive affirmations and helping mothers reduce anxiety and increase self-confidence so mothers can breastfeed (Dilts, 2017) (Lestariningsih, 2020). If the mother is sure that she can breastfeed, the anterior pituitary will release the hormone prolactin, which is the hormone for producing breast milk (Victora, Bahl, Barros, França, Horton, Krasevec, Murch, Sankar, Walker, & Rollins, 2016). This study focuses on mothers with problems regarding breastfeeding, such as perceived insufficient milk supply, anxiety, and fear of breastfeeding.

Materials and methods

This study is a quasi-experimental pre-post-test study conducted on 30 breastfeeding mothers. The search for participants was conducted online through social media Facebook from July to September 2020, and a questionnaire was given regarding screening for breastfeeding problems. Each respondent received NLP method therapy with sub modality techniques and anchoring as needed starting 1-2 hours and was evaluated on days three and six post-therapy. Therapy is carried out by a therapist who has been certified and has a practice permit from the Bantul District Health Office Number 448/4803/IX/2020. the evaluation was carried out in stages immediately after therapy, three days after therapy, and six days after therapy. Data processing is carried out using the Wilcoxon test with the help of the Jamovi application (Jamovi, 2021).

Results

A total of 30 participants completed this study with an average age of 27.6 years with a college education level and have worked. As many as 60% of respondents had one child through vaginal delivery (53.3%) and had a history of early breastfeeding initiation. The data are presented in table 1.

Table 1. Characteristics of Respondents

Variable	Frequency (N)	Percentage (%)
Age (mean,SD), year	27.6	
Level Of Education		
University	16	53.3
Senior High School	12	40
Junior High School	2	6.7
Occupation		
Employ	19	63.3
Not Working	11	36.7
Parity		
1	18	60
2	8	26.7
3	4	13.3
Childbirth History		
Vaginal	16	53.3
C-Section	14	46.7
History of Early Initiation of Breastfeeding		
Never	8	26.7

Ever	22	73.3

The results of this study estimated that neurolinguistic programming for six weeks reduced feelings of perceived insufficient milk supply ($P < 0.001$). These results also show that neurolinguistic programming has a very large effect (Cohen, 1988) on reducing feelings of perceived insufficient milk supply (1.00). The data are presented in Table 2.

Table 2. Test results on the effect of neurolinguistic programming on perceived insufficient milk supply

	N	Mean	SD	SE	p	Mean difference	SE difference	Effect Size
Pre Test	30	2.00	0.000	0.0000	< .001	1.00	0,6388	1.00
Shortly After Therapy	30	1.43	0,35	0,6388				
Pre Test	30	2.00	0.000	0.0000	< .001	1.00	0,5451	1.00
Day 3	30	1.23	0,298	0,5451				
Pre Test	30	2.00	0.000	0.0000	< .001	1.00	0,2312	1.00
Day 6	30	1.03	0,127	0,2312				

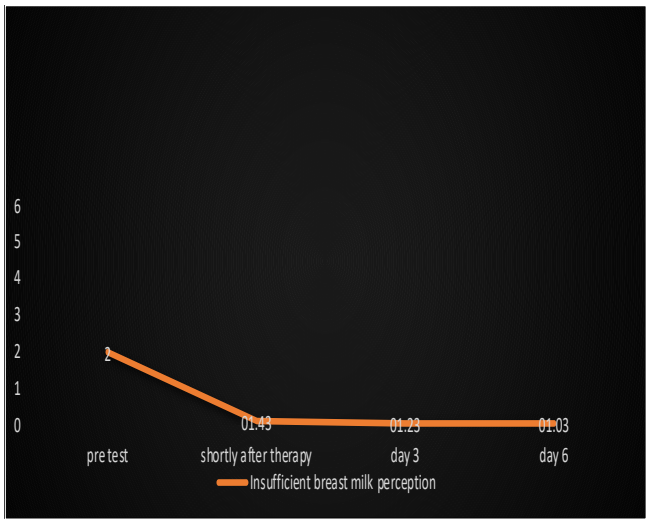

Figure 1. Decreased feeling of perceived insufficient milk supply after six weeks of neuro linguistic programming intervention.

We found that during six weeks of implementing neuro linguistic programming, respondents' feelings about perceived insufficient milk supply were felt by respondents. PIM experience also decreases over time. PIMS feelings will decrease 0.17 to 0.57 points shortly after neurolinguistic programming up to 6 days later.

Discussion

In this analysis, we find that neurolinguistic programming has a very large effect on reducing feelings of perceived insufficient milk supply. The potential explanation for neurolinguistic programming has been confirmed by several studies showing that stress will decrease after treatment (HemmatiMaslakpak et al., 2016; Nompo et al., 2021). In addition, the NLP method can help improve the ability to manage problems that cause stress (Gökdere inar & Baykal, 2022).

Perceived insufficient milk supply is related to factors such as maternal stress, maternal malnutrition, and traditional beliefs around food and eating (Piccolo et al., 2022). The study's results (Ziomkiewicz et al., 2021) found that perinatal psychosocial stress hurt energy density and fat and medium-chain and long-chain saturated fatty acids in breast milk.

Psychological stress will cause delayed secretory activation and decreased duration of exclusive breastfeeding. The physiological mechanism explaining this relationship is that psychological stress can interfere with the release of oxytocin, a hormone that plays an important role in milk production during breastfeeding (Nagel et al., 2022).

Impaired milk production on an ongoing basis can lead to decreased milk production due to incomplete breast emptying with each feeding. Maternal stress can also result in increased serum cortisol levels and decreased insulin sensitivity, which is associated with decreased milk production. The relationship between psychological distress and breastfeeding tends to be bidirectional. However, breastfeeding appears to reduce maternal psychological distress. When breastfeeding, oxytocin stimulates the release of endorphins so the mother will feel happy and appreciated and it has a calming effect.

Interventions to reduce stress and support breastfeeding goals are urgently needed. One of them is with neuro linguistic programming. Neuro-linguistic programming is a new technology in primary care that uses communication to facilitate thought and behaviour change. The main principles of NLP are communication and persuasion (Mustamu, 2015). The study's results (Sturt et al., 2012) showed that NLP could reduce psychological stress and improve quality of life.

It can be concluded that how NLP works is that communication and persuasion can regulate thoughts and stimulate the release of endorphins. These endorphins will

stimulate the release of the hormone oxytocin, which increases the release of oxytocin and further increases breast milk production. When breastfeeding, mothers will feel happy and appreciated so that the release of endorphins and oxytocin will continue to be produced so that Perceived insufficient milk supply will not occur.

When new-born colostrum is still a little, this adjusts to the baby's needs (Lawrence & Lawrence, 2021). However, the colostrum is very much needed. Therefore, Perceived insufficient milk supply should not occur. If there is an insufficient milk supply, then NLP can be carried out. Mothers with high breastfeeding self-efficacy will believe they can produce enough breast milk to satisfy their babies. However, mothers who doubt their breastfeeding abilities do not think they can breastfeed their babies without supplements (De Roza et al., 2019).

Conclusion

We conclude that Perceived insufficient milk supply caused by maternal stress factors, maternal malnutrition, and traditional beliefs about food and eating can be treated with neurolinguistic programming because NLP with communication and persuasive concepts to change behaviour can increase endorphin production, which further increases the release of the hormone oxytocin. So that breast milk production will not decrease and reduce the prevalence of early weaning in the first six months. We suggest that this method be implemented in every health facility by a certified health worker in the field of NLP.

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ETHICS OF STUDY

This research received an ethical feasibility test from the research ethics commission of the Faculty of Health Sciences, Universitas Respati Yogyakarta Number 212.3/FIKES/PL/X/2020. Informed consent was obtained from all respondents before data collection.

CONFLICT OF INTEREST

None

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