Analysis of Characteristics, Activity of Postpartum Mothers, and Social Support in Exclusive Breastfeeding Against the Onset of Lactation

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ABSTRACT

For new mothers, nursing is an inevitable part of their experience. Be that as it may, a ton of mothers really experience difficulty nursing. Hindrances to breastfeeding much of the time emerge in the underlying days following childbirth, making disturbances the ordinary movement of lactogenesis II and the resulting smooth start of lactation. The second stage of lactogenesis is the point at which the infant begins to deliver milk 72 hours after birth. The lactation cycle might be upset because of this defer in the beginning of nursing. This prompts the mother to give equation milk to her kid since it makes her stress over whether her child will get sufficient bosom milk from now on. The point of this examination was to analyze the characteristics, ways of behaving, and social support frameworks of new mothers in Wonokromo Village, Surabaya, comparable to the commencement of lactation. This sort of study utilizes a cross-sectional philosophy and is logical in nature. Each postpartum lady who breastfed her kid made up the review's populace. A random example of 66 respondents was the example strategy utilized. Characteristics (education, parity, type of birth, age), postpartum maternal activity (frequency of breastfeeding, rest, and mobilization), and social support (support from family, community, and cadre) were the autonomous elements. The start of lactation is the reliant variable. The structural equation model partial least square (SEM-PLS) test is utilized in information analysis to decide the main factors at an importance edge of $p < 0.05$. That's what the discoveries showed, with every p-worth of 0.000, puerperal mother highlights, physical activity, and social support altogether affected the commencement of lactation. The free factor of lactation onset had a coefficient of assurance (R2) of 81.7%, implying that trademark factors, physical activity, and social support represented 81.7% of the variety in lactation onset's size, with other variables outside the model representing the leftover 18.3%. This study infers that various variables influence when lactation starts. In this manner, to accomplish a solid start of lactation since the arrival of colostrum and empower mothers to successfully keep up with breastfeeding exclusively, postpartum mothers' readiness, ability to breastfeed, and support from all parties are required.

1. Introduction

One sign that lactogenesis phase II is happening is the initiation of lactation, still up in the air by the mother's feeling of when her breasts feel hard, full, or weighty and until milk or colostrum emerges. (Hruschka, Sellen, Stein, & Martorell, 2003). Mothers who give birth experience different lactation onset times, the onset of lactation is said to be late if the duration of labor with the emergence of maternal perceptions of lactation onset more than 72 hours postpartum (Dewey, 2001).

During the principal hour, the newborn child will figure out how to nurture or become familiar with sucking the areola, which will prepare the mother to begin making colostrum milk. (Sakha & Behbahan, 2005). Since breastfeeding has so many health advantages for the two mothers and babies, it is emphatically encouraged to begin breastfeeding straightaway. Infants have life reflexes from birth that assist them with remaining alive. The main opportunity to begin nursing is the primary week following conveyance (Bobir et al., 2024). Following birth, milk creation commonly diminishes in the first to two days prior to expanding in days three to five because of a drop in the progesterone chemical. The mother and kid figure out how to nurture during this period. (Anwar & Munira, 2017; Dewey, 2001). As on the discoveries of Riskesdas 2018, 37.3% of babies aged 0-5 months in Indonesia exclusively breastfeed, 9.3% partially breastfeed, and 3.3% generally breastfeed. (Anwar & Munira, 2017). In 2018, 68.74% of babies cross country got exclusive breastfeeding care. (Kemenkes RI, 2019). On the other hand, the percentage of individuals who exclusively breastfed in 2019 dropped to 67.74%. (Kemenkes, 2020).

And fell again to 66.06% in 2020 (Kemenkes, 2021). It is known that the percentage of exclusively breastfed babies in East Java was 68.2% in 2019 and dropped to 61.0% in 2020, in view of information from areas and urban communities (K. N. S. Babu, & R. Jeyshankar. 2019). Additionally, the percentage of Surabaya occupants who exclusively breastfed in 2019 was 72.48%, however that number dropped to 68.60% in 2020. This is because in early 2020 Indonesia and countries in the world

experienced the COVID-19 pandemic, which affected people's mobilization to get access to health services (Khasanah et al., 2022). The results showed that breastfeeding on the first day will save 16% of neonatal deaths and if breastfeeding early in the first 1 hour will save 22% of toddler deaths per year from death (Edmond et al., 2006). According to Gartner et al, 2005 and Gupta, 2007 quoted by Hartini (2011) that breastfeeding protection will increase in line with the younger age of breastfeeding in infants (Istinarini & R, 2010). Early breastfeeding has been displayed to enjoy a few benefits, including keeping up with exclusive breastfeeding, building invulnerability to different sicknesses, lessening hypothermia, invigorating the areola pull reflex, and animating the arrival of the chemical oxytocin, which will increment milk supply. In a recent report by Chapman and Escamilla on mothers' impression of lactation starting past three days, 24% of ladies chose not to breastfeed their kids (Chapman & Pérez-Escamilla, 1999).

As per other examination, a mother's conviction that bosom milk is deficient to fulfill her child's needs and her absence of trust in her capacity to breastfeed her kid are connected to a deferred commencement of breastfeeding. Likewise, short breastfeeding is connected to the mother's young age and absence of education. (Hruschka et al., 2003). Another element that presents a test is that nursing begins later in mothers who deliver by means of cesarean segment than in mothers who deliver vaginally. (Dewey, 2001). Research Ahluwalia et al. (2005), found that 13% of mothers who quit any pretense of nursing inside the primary month did so on the grounds that their babies couldn't attendant and they accepted their bosom milk yield was deficient for their necessities (Ahmad et al., 2024). As indicated by Wallace et al. (2006), breastfeeding rates dropped from 71% at birth to 54% in the initial fourteen days following delivery. (Ali et al., 2015). The expense of milk is one of the maternal factors that obstructs breastfeeding. Absence of oxytocin volatility might be the justification for issues with milk supply in the primary day postpartum. For primiparous mothers, conceiving an offspring is the primary occasion that might prompt pressure both during and after work and delivery. Stress among mothers of their firstborn kids can raise blood cortisol levels. Increased cortisol leads to decreased oxytocin levels resulting in a delay in the onset of lactation. Cortisol hormone levels in primiparous mothers are 2 times more than in multiparous mothers so that the delay in the onset of lactation in primiparous mothers is higher. Anxious mothers will shed less milk than mothers who are not anxious (Leiwakabessy & Azriani, 2020).

2. Methodology

Materials

This study is a 1-stage study, namely explanatory research that analyzes exogenous variables that affect the onset of lactation including characteristics (education, parity, type of labor, age), postpartum maternal activity (frequency of breastfeeding, rest, mobilization), and social support (family support, community support and cadre support). Utilizing a cross-sectional strategy and observational analytics, the review configuration surveys the free and subordinate factors either all the while or each in turn. It is expected for this review to involve 66 people as tests, chose utilizing chance inspecting techniques (Padmanabhan et al., 2019). This study was done in the Wonokromo subdistrict.

Data collection procedures

Subsequent to getting endorsement from Nahdlatul Ulama College Surabaya's moral foundation, the exploration was completed. The review's instrument was a survey that was made accessible through a Google Structure. Information was gathered for multi week by chance determination of postpartum ladies in the Wonokromo sub-locale area on days 40 and 41 who marked an educated authorization structure to become responders.

Data analysis

The structural equation model partial least square was utilized for both unmistakable and structural equation model partial least square (SEM-PLS). If a variable's importance esteem is under 0.05, it is viewed as compelling.

3. Results and discussion

The results of the study of factors that influence the onset of lactation of postpartum mothers include characteristics (education, parity, type of delivery, age), postpartum maternal activity (frequency of breastfeeding, rest, mobilization), and social support (family support, community support and cadre support). The table beneath will give a descriptive analysis in view of the data collection that was finished.

Characteristics of postpartum mothers

The characteristics of postpartum mothers in this study include the mother's last education, parity, type of childbirth and age can be explained in table 1:

Table 1. Overview of the characteristics (Education, parity, type of childbirth, age) of postpartum mothers in Wonokromo Village

Characteristic	Category	Frequency	Percentage (%)
Education	Primary	9	13.64
	Intermediate	21	31.82
	High	36	54.55
Parity	Primipara	43	65.15
	Multipara	21	31.82
	Grandemultipara	2	3.03
Types of childbirth	Normal	51	77.27
	Sectio caesarian	15	22.73
Age	20-35 year	53	80.30
	>35 Year	13	19.70

Source: Primary data, July 2023

Based on table 1 on respondent characteristics, out of 66 respondents there were 54.55% of higher education respondents, 65.15 primiparous respondents, 77.27% of vaginal deliveries and 80.30% of productive age between 20-35 years. The characteristics of postpartum mothers in Wonokromo Village Surabaya with indicators of education, parity, type of childbirth and age have shown good characteristics inherent in being internal factors for postpartum mothers.

The capacity to get data is impacted by one's educational foundation. Advanced education fundamentally affects programs that support exclusive breastfeeding. Higher educated people are commonly more interested in finding out about the advantages of exclusive breastfeeding for their kids. The level of information an individual has will likewise work with their capacity to ingest and fathom data. The more the mother's educational foundation, the more prominent her cognizance of exclusive breastfeeding practices. (Istinarini & R, 2010). This is because of the way that mothers with more significant levels of education have more extensive points of view and find it simpler to assimilate new data, particularly with regards to nursing, which assists with accelerating the beginning of lactation. (Pramesi, Toyibah, & Wahyu, 2021). According to Notoatmodjo (2010), Education is the method involved with utilizing data to propel all human potential and lead. A higher education level will work on one's information. An individual who has a quality education will foster experience that impacts decisive reasoning, which can prompt new bits of knowledge. A high degree of education likewise makes it feasible for an individual to be more responsive to others since information and knowledge assume a significant part in a singular's capacity to understand data, particularly with regards to nursing data.

The review's discoveries showed that primiparous mother parity offset other parities. Research Dewey (2004) which guarantees that parity influences the time at which lactation starts. This is on the grounds that lactation doesn't necessarily continue without a hitch and mothers might experience hardships while nursing their kids. One such trouble is the absence of earlier breastfeeding experience for mothers with primi parity, which can bring about a postponed start to lactation. The hypothesis of the specialists is that maternal parity might affect when lactation starts. a primiparous mother who experiences

hardships creating milk because of temperamental chemical levels during the beginning phases of delivery and mothers without earlier breastfeeding experience. This will make the mother anxious, which will defer or drag out the beginning of lactation by over three days. This is predictable with concentrate by Fitriyana (2012), which shows that for multiparous mothers, childbirth isn't their most memorable experience. There is an association between the human lactation process and the experience of childbirth. Multiparous mothers who have conceived an offspring before feel more calm during the conceiving an offspring cycle, which assists with keeping away from overproduction of cortisol. Prolactin and oxytocin chemical creation stays unaffected assuming that the overproduction of cortisol is kept away from. The mother's related knowledge dealing with an infant can likewise support the development of milk.

Normal labor types and cesarean segments are among the characteristics of postpartum mothers that likewise impact the onset of lactation. This is on the grounds that cesarean segments include a delayed timeframe between the finish of labor and the beginning of breastfeeding, or whenever the child first breastfeeds (Sakha & Behbahan, 2005). Furthermore, the utilization of anesthesia eases back the arrival of bosom milk. Children with low birth weight have a decreased ability to nurse, which incorporates breastfeeding less regularly and for more limited timeframes than infants with normal birth loads. This diminishes the feeling of the chemicals prolactin and oxytocin, which brings about the development of bosom milk. (Sari, 2015). The 20-to 35-year-advanced age range is viewed as a decent regenerative age, implying that a lady will encounter less issues all through her pregnancy and delivery. Maternal health is fundamentally impacted by the mother's age since it influences how she will conceive an offspring, adapt to the postpartum period, and care for her baby. As indicated by the Service of Health RI (2014), mothers younger than twenty are as yet youthful and ill-equipped both physically and socially for pregnancy, childbirth, and raising their babies. North of 35-year-elderly people ladies are more helpless against healthful sickliness, which can debilitate milk creation. It has been shown by Streams et al. (2010) that being more established than thirty years of age can significantly defer the inception of lactation. Pregnancy-related glucose narrow-mindedness is more normal in more established grown-ups (Lain, 2007).

Physical activity of postpartum mothers

The physical activity of postpartum mothers in this study consisted of 3 indicators, namely the frequency of breastfeeding, rest and mobilization. More details are described in table 2:

Table 2. Overview of Physical activity (frequency of breastfeeding, rest, mobilization) of postpartum mothers in Wonokromo Village

Sub Variabel dan variabel	Category	Frequency	Percentage (%)
Feeding frequency	Good	34	51.52
	Enough	32	48.48
Rest	Good	35	53.03
	Enough	20	30.30
	Less	11	16.67
Mobilization	Good	30	45.45
	Enough	36	54.55
Physical activity	Good	54	81.82
	Enough	12	18.18

Source: Primary data, July 2023

Based on table 2. It demonstrates that 81.82% of postpartum moms engage in good physical activity. This is also supported by the indicator of breastfeeding frequency 51.52% good, postpartum mothers also have good rest patterns (53.03%) and the mobilization carried out by mothers is also quite good (54.55%).

As per Fatmah (2010), physical activity is characterized as appendage development that outcomes in an energy consumption and is critical for keeping up with both physical and psychological well-being.

As per concentrates on directed on postpartum mothers in Wonokromo Village, Surabaya, 81.82% of them engage in healthy physical activity. The physical exercises that postpartum mothers engage in are nursing their babies, getting rolling, and enjoying reprieves. The onset of lactation will be great assuming every one of the three markers are great. This study showed that the frequency of postpartum mothers in breastfeeding their babies was 51.52% good. This achievement needs to be improved by all postpartum mothers so that the onset of lactation is getting better. In Riana's research, 2018 explained that the more often mothers breastfeed, the more breast milk expenditure will be. Contrasted with mothers who nurture infrequently, the people who breastfeed frequently have a 2,438-overlap expanded likelihood of creating smooth milk (Angriani, 2018).

Devi's 2017 review's discoveries likewise explained how to battle the perfection of bosom milk consumption, explicitly by encouraging mothers to figure as frequently as they can to invigorate their breasts and influence the pituitary gland's arrival of the chemicals oxytocin and prolactin. To guarantee that milk creation is smooth and the child is breast fed enough, the chemicals prolactin and oxytocin impact the amount and interaction of milk creation, individually. (Aprilia & Krisnawati, 2017). This study also shows that there is still less rest for postpartum mothers in Wonokromo Village, Surabaya (16.67%). Rest factors affect milk production and expenditure. If the mother's condition is too tired, lack of rest then breast milk is also reduced. One thing that women need to do after giving delivery is rest. Many postpartum mothers who have just given birth experience fatigue and feel like sleeping continuously. Puerperal mothers who are exhausted will tend to be lazy to guess and cause milk production to be disrupted and affect the onset of lactation. Based on Devi's research, 2017 explained that resting patterns greatly affect milk production (Aprilia & Krisnawati, 2017). The third indicator of physical activity is mobilization. Mobilization in postpartum mothers begins with a right tilt, left tilt and moves the legs so that the mother can sit and stand without the help of family or health workers. The review's discoveries showed that 54.55% of new mothers prepared actually. There is an association between postpartum breast milk expenditure and mobilization. This is because mothers who do active mobilization can move actively so that it can spur the hormone oxytocin which can secrete breast milk. Mothers can be calmer and feel more comfortable. So that when breastfeeding her baby in a sitting position, mothers can focus more on breastfeeding their babies (Hanifah, 2020).

Overview of social support for postpartum mothers

Social support for postpartum mothers in this study consists of 3 indicators, namely family support, community support and cadre support. More fully described in table 3:

Table 3. Overview of Social Support (Family support, community support and cadre support) Nifas mothers in Wonokromo Village

Sub Variabel dan variabel	Category	Frequency	Percentage (%)
Family support	Good	41	62.12
	Enough	25	37.88
Community support	Good	39	59.09
	Enough	16	24.24
	Less	11	16.67
Cadre support	Good	24	36.36
	Enough	29	43.94
	Less	13	19.70
Social Support	Good	44	66.67
	Enough	17	25.76
	Less	5	7.58

Source: Primary data, July 2023

Based on table 3 on social support obtained by postpartum mothers, most of them have received good social support (66.67%). This is also supported by the support obtained by postpartum mothers from

families in providing exclusive breastfeeding is mostly good (62.12%). The support obtained from the community around the postpartum mother was 59.09% good, but for cadre support, 43.94% was still sufficient in providing support.

There are three types of social support that can be offered: instrumental, instructive, and profound. As per a review directed in Wonokromo Village, Surabaya, 66.67% of postpartum mothers got great social support. However, it is unfortunate that there are still postpartum mothers (7.58%) who get less support in breastfeeding, so this will affect the mother's activity to breastfeed and eventually will affect the onset of lactation. The results showed that among the three indicators of social support, cadre support was actually the support that was less felt by postpartum mothers. This is because communication between health cadres and breastfeeding mothers is still less intensive and is only carried out periodically when there are posyandu activities. Not all cadres pay attention, for example by making home visits to postpartum mothers. Absence of support for nursing mothers in regards to the meaning of exclusive breastfeeding and how this impacts postpartum mothers' start of lactation is one outcome of this ineffectual social support framework. Social support impacts breastfeeding rates well and is a significant indicator of a mother's choice to breastfeed. One asset that others offer as a system that influences health is social support. Deficient social support and the presence of social standards and convictions might lead mothers to decide not to breastfeed and rather give their children more equation milk. (Nisa et al., 2021). Various examination directed in various countries have given adequate proof that the term of exclusive breastfeeding is decidedly affected by social support for breastfeeding (Garcia Falceto, et al, 2004; Wolfberg et al., 2004). a few drives to encourage breastfeeding, starting with the help of families and husbands. Good feelings will surface assuming the mother feels really focused on, supported, and adored. These feelings will help the synthesis of the chemical oxytocin, guaranteeing smooth milk creation. (Garcia Falceto et al., 2004; Kehler, et al, 2009). When fathers/partners support breastfeeding and have a responsive relationship with their baby, there is an improvement in breastfeeding practices and parental relationships. In addition, fathers also become closer to their babies, and their babies develop faster (World Alliance for Breastfeeding Action, 2019).

Features of onset of lactation

The onset of lactation in this study consisted of 3 indicators, namely colostrum excretion, transitional milk and mature milk. Details are presented in table 4:

Table 4. Features of the onset of lactation of puerperal mothers with indicators of colostrum production, transitional breast milk and mature breast milk

Sub Variabel dan variabel	Category	Frequency	Percentage (%)
Kolostrum	Good	25	37.88
	Enough	31	46.97
	Less	10	15.15
Transitional breast milk	Good	41	62.12
	Enough	25	37.88
Mature breast milk	Good	45	68.18
	Less	3	4.55
Onset Laktasi	Good	50	75.76
	Enough	16	24.24

Source: Primary data, July 2023

Based on table 4 which describes the onset of maternal lactation during the puerperium, most (75.76%) are good. This is supported by transitional breast milk expenditure, most (62.12%) experienced good breast milk expenditure and mature breast milk expenditure also 68.18% experienced good breast milk expenditure.

The puerperium period is the postpartum recovery period until all female reproductive organs recover before the next pregnancy. This puerperium lasts about 6-8 weeks postpartum. In this puerperium the mother experiences the lactation process, which is the entire process of breastfeeding starting from the milk produced until the baby sucks and swallows breast milk (Ambarwati, 2012). While lactation starts when the body begins to create more milk until the milk is quick to emerge, the mother's impression of the milk coming out causes the breasts to feel heavy, firm, and swollen until the milk comes out (Sakha & Behbahan, 2005). As per this review, 75.76% of postpartum mothers in Wonokromo Village, Surabaya, had a good lactation starting. A healthy breastfeeding will impact the mother's capacity to deliver only her own milk. The mother's goal to give exclusive breastfeeding from the start of her pregnancy, early breastfeeding commencement, dynamic breastfeeding since the arrival of colostrum, and momentary breastfeeding to foster breast milk during the puerperium are fundamental for the progress of exclusive breastfeeding. The stage of breastfeeding begins the release of colostrum should not be skipped by puerperal mothers because the onset of lactation in the first 3 days after childbirth determines the smooth release of transitional milk and mature milk. In this study, it was found that puerperal inu who breastfed since the release of colostrum 46.97% was good enough. So that the transition milk expenditure of 62.12% is good and the mature breast milk expenditure of 68.18% is good. If the onset of lactation of these three indicators is good, the achievement of exclusive breastfeeding will increase. One sign that lactogenesis phase II is happening is the initiation of lactation, not entirely set in stone by the mother's feeling of when her breasts feel hard, full, or heavy and until milk or colostrum comes out (Hruschka, 2003). The lactogenesis II phase is a period of massive milk production that begins after the placenta is born until 72 hours postpartum, in response to the birth of the placenta causing a sudden drop in levels of progesterone and estrogen, but at that time the hormone prolactin increases. Mothers who give birth experience different lactation onset times, the onset of lactation is said to be late if the duration of labor with the emergence of maternal perceptions of lactation onset more than 72 hours postpartum (Dewey, 2004).

Model Analysis

To assess the fit model of an examination model, data handling approaches using the Partial Least Square (PLS)- based SEM strategy require two stages: assessing the outer model, otherwise called the estimation model, and testing the inward model (Ghozali, 2014). These are the stages:

Measurement Model Testing Analysis (Outer Model)

The estimation model (Outer Model) analysis technique is led by assessing the dependability and legitimacy of indicators that measure dormant factors/constructs. In this review, the dormant factors incorporated the commencement of lactation (Y1), physical activity (X2), social support (X3), and maternal elements (X1). On the off chance that the worth of the average variance extracted (AVE) is more noteworthy than 0.5 and the outer stacking factor is more noteworthy than 0.7, then the indicator is considered substantial for estimating or making sense of a dormant variable. It is still alright to have a stacking factor that is basically as low as 0.40 or practically 0.40. If the factor's (construct) number is little. for the AVE worth to stay around or above 0.5. (Sharma, 1995)(Ferdinand, 2014). The benefit of stacking factors among indicators and factors, as well as the coefficient of impact of the connection between factors, are remembered for the SEM-PLS analysis of the Lactation Onset model. A clarification of the outer model's merged legitimacy test discoveries is given in the table underneath:

Table 5. Convergent test results for factor validity (construct)

No	**Variabel faktor**	**Indikator**	**Outer loadings**	**AVE**	**Keterangan**
1	X1_ characteristics	X11_Education	0.684	0.762	Konvergen
		X12_Parity	0.961		
		X13_Type_of_childbirth	0.899		
		X14_Age	0.922		
2	X2_Pysical_Activity	X21_Frek_of_breastfeeding	0.913	0.635	Konvergen
		X22_Rest	0.570		
		X23_Mobilization	0.864		

3	X3_Social_support	X31_Family_support	0.815	0.691	Konvergen
		X32_Community_support	0.872		
		X33_Cadre_support	0.805		
4	Y_Onset _Laktasi	Y11_Kolostrum	0.944	0.896	Konvergen
		Y12_Transitional_breast_milk	0.960		
		Y13_Mature_breast_milk	0.935		

Regarding the factor legitimacy united test discoveries, table 5 shows the factor stacking esteem in the model outcomes. It is laid out that the stacking factor worth of every sign is more than or equivalent to 0.7. X22 is the main indicator. A break that is worth about 0.57. So in general, the AVE value of a factor will get a value of more than 0.5. So it can be concluded that the constituent indicators of factors are having convergent validity. In this study there are four latent factors or variables formed by each indicator. The first is the characteristic variables of postpartum mothers with indicators of education, parity, type of childbirth and age. The second is the variable physical activity of postpartum mothers with indicators of the frequency of breastfeeding, rest and mobilization. The third is the social support variable formed by indicators of family support, community support as well as cadre support. The beginning of lactation, which is set apart by the development of mature breast milk, momentary breast milk, and colostrum, is the fourth stage. All indicators are considered authentic to construct the factor, as per the factor legitimacy test results.

Structural Model Testing Analysis (Inner Model)

Analysis of inner model testing by evaluating several criteria, namely testing the significance of the coefficient of the relationship path between factors, and the coefficient of determination (R2) and predicted relevance (Q2).

Testing the Significance of the Influence Value of the Structural Model (*Inner Model*)

Inspecting the effect of the impact coefficient of exogenous factors on endogenous parts involves deciding the sum and importance of the impact esteem on the internal model. A two-tail t-test is utilized in the test. Assuming the handling result's t-measurement esteem is altogether higher than the t-table worth ($|t\text{-statistics}| \geq t\text{-table}$), then the test rules ought to be applied. The end came to was that endogenous factors are altogether affected by the coefficient of impact of exogenous ones. While 5000 bootstrapping data focuses are utilized and adaptation to internal failure (α) = 5%, the worth of the t-table is $t(df=n-1;\alpha/2) = t(4999;0.025) = 1.96$. Based on the results of relationship testing using t-tests, it is concluded that all relationships between exogenous factors and endogenous factors are significant. Visual model of Lactation Onset which contains the outer loading value and the coefficient of influence and the coefficient of determination, as follows.

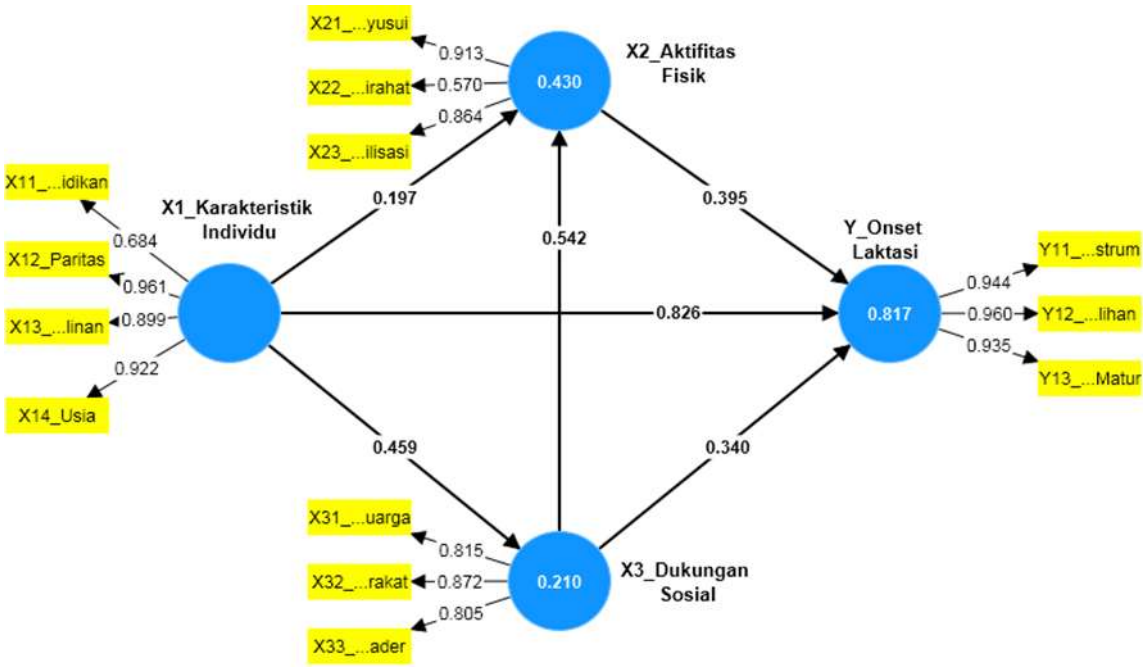

Figure 1. Lactation onset model: loading factor and influence coefficient and determination coefficient

The outcomes of the relationship between the factors in the Inner Model of Onset of Lactation are as follows: total value of influence:

Table 6. The results of the influence test in the inner model: total relationship

No	Jenis	Hubungan Kausalitas	Nilai pengaruh	T-Statistik	p-Value	Keterangan
	Direct	X1_ characteristics -> X2_ Pysical_Activity	0.197	2.085	0.037	Signifikan
	Indirect	X1_ characteristics -> X2_ Pysical_Activity	0.248	3.48	0.001	Signifikan
1	Total	X1_ characteristics -> X2_ Pysical_Activity	0.446	4.297	0.000	Signifikan
	Direct	X1_ characteristics -> X3_ Social_support	0.459	4.75	0.000	Signifikan
	Indirect	-	-			-
2	Total	X1_ characteristics -> X3_ Social_support	0.459	4.75	0.000	Signifikan
	Direct	X1_ characteristics -> Y_Onset _Laktasi	0.826	15.29	0.000	Signifikan
	Indirect	X1_ characteristics -> Y_Onset _Laktasi	0.332	7.21	**0.000**	Signifikan
3	Total	X1_ characteristics -> Y_Onset _Laktasi	1.158	46.205	0.000	Signifikan
	Direct	X2_ Pysical_Activity -> Y_Onset _Laktasi	0.395	5.705	0.000	Signifikan
	Indirect	-	-			-
4	Total	X2_ Pysical_Activity -> Y_Onset _Laktasi	0.395	5.705	0.000	Signifikan
	Direct	X3_ Social_support -> X2_ Pysical_Activity	0.542	4.875	0.000	Signifikan
	Indirect	-	-			-
5	Total	X3_ Social_support -> X2_ Pysical_Activity	0.542	4.875	0.000	Signifikan
	Direct	X3_ Social_support -> Y_Onset _Laktasi	0.34	5.091	0.000	Signifikan
	Indirect	X3_ Social_support -> Y_Onset _Laktasi	0.214	3.571	0.000	Signifikan
6	Total	X3_ Social_support -> Y_Onset _Laktasi	0.554	7.56	0.000	Signifikan

The research hypothesis test is subsequently addressed using the total influence test results. The full findings of the study hypothesis test are listed below.

H1: There is an influence of individual characteristics (Education; Parity; type of labor; Age) to Physical activity. Conclusion: H1 is accepted that there is a significant influence of individual characteristics on physical activity. This is concluded from the results of p value = 0.000 and t-statistic of 4.29. Where the type of relationship is direct and indirect through social support

mediators.

H2: There is an influence of individual characteristics (Education; Parity; type of labor; Age) to Social support.

Conclusion: H2 is accepted i.e. there is a significant influence of individual characteristics on social support. The t-measurement of 4.75, which is higher than the t-table of 1.96, and the aftereffects of the p esteem = 0.000 support this end. at the point when there is just an immediate type of relationship.

H3: There is an influence of individual characteristics (Education; Parity; type of labor; Age) to the Onset of Lactation.

Conclusion: H3 is accepted i.e. there is a significant influence of individual characteristics on the onset of lactation. This is concluded from the results of the p value = 0.000 and the t-statistic is 46.20. Where the type of relationship is direct and indirect through mediators Physical activity and social support.

H4: There is an influence of physical activity (frequency of breastfeeding; Rest; Mobilization) to the onset of lactation.

Conclusion: H4, according to which physical activity has a major impact on the initiation of lactation, is approved. The t-statistic of 5.70 and the p value of 0.000 lead to this conclusion. when there is simply a direct form of relationship.

H_5 : There is an influence of Social support (Family support; Community support; Cadre support) to physical activity.

Conclusion: H5 is accepted i.e. there is a significant effect of social support on physical activity. This is inferred from the value of p-value = 0.000 and the t-statistic of 4.87. Where the type of relationship is only direct.

H6: There is an influence of Social support (Family support; Community support; Cadre support) against the onset of lactation.

Conclusion: Accepted is H6, which states that social support has a major impact on when lactation begins. The t-statistic of 7.56 and the p-value of 0.000 lead to this conclusion. When a relationship is direct or indirect and is mediated by physical activity.

The coefficient of determination (R^2)
The inward model's coefficient of determination (R2) assesses the degree to which endogenous factors' change can be represented by outer factors. A R2 value of under 0.25 is thought of as frail, 0.25 to 0.5 is viewed as adequate, 0.5 to 0.75 is thought of as satisfactory, and > 0.75 is viewed as generally excellent.

The R2 value is shown written in the endogenous factor in view of figure 1. This is the inward model's Coefficient of Determination (R2) value.

Table 7. The inner model's coefficient of determination (R2) value

Faktor endogen	R-square (R^2)
X2_ Pysical_Activity	0.430
X3_ Social_support	0.210
Y_Onset _Laktasi	0.817

Table 7 demonstrates that the endogenous variable's coefficient of determination has three values.

Every one of the three has a value inside an unmistakable classification. With a coefficient of determination value of 81.7%, the variable Onset of Lactation (Y) has the best class value. The class of very great was remembered for the endogenous variable Physical activity (X2), which added up to 43%. Also, frail classes in the endogenous variable Social support (X3). because of the coefficient of determination's low value of 21%. The onset of lactation's coefficient of determination, which stands at 81.7%, demonstrates how well exogenous factors explicitly, physical activity (X2), social support (X3), and postpartum mother characteristics (X1) make sense of the variety in the onset of lactation (Y). Other factors outside the model made sense of the excess 18.3%. Moreover, the meaning of the coefficient of determination's value for extra endogenous factors.

***Predicted Relevance* (Q^2)**

Evaluation of Q2 values aims to determine the predictive relevance of endogenous factor variables in the inner model of the final model. Hair (2014) states that if the Q2 value is greater than zero, then the endogenous factor means that it has a relevant ability to predict. Here is the Q2 value generated from PLSPredict.

Table 8. Q2 values of endogenous factor variables

Variabel endogen	Q^2predict
X2_ Pysical_Activity	0.166
X3_ Social_support	0.181
Y_Onset _Laktasi	0.703

Based on table 8, it is known that the Q2 value of the endogenous factor variable is X2_Aktifitas Fisik 0.166; X3 Dukungan Sosial of 0.181; Y Onset Laktasi of 0.703. Where all three have a Q2 value of more than 0. So it is concluded that the three endogenous factor variables have relevant abilities in predicting.

Path Diagram Analysis

Based on the value of influence between factors in the structural model (inner model), where in it has a path diagram. A representation of the value of the way's effect on the immediate, backhanded, and in general connections between exogenous factors and endogenous factors is displayed in the Internal Model's way chart. The value of outside factors' effect on endogenous factors is shown in the visual route chart that follows.

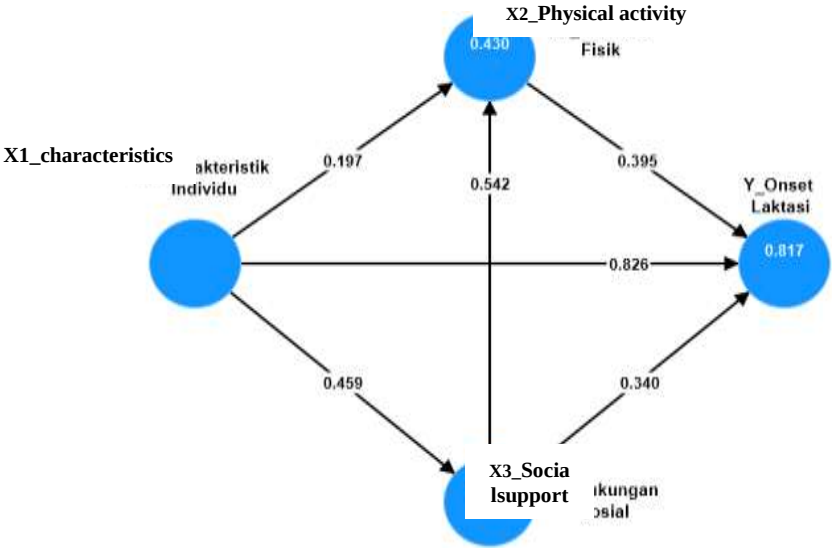

Figure 2. Path diagram: the amount to which external factors influence endogenous factors

Figure 2 of the path diagram contains the value of the influence of the relationship path of exogenous

factors to endogenous factors. Immediate, backhanded, and total impact values are undeniably remembered for the relationship's way of impact value. The values of the immediate, backhanded, and aggregate impacts of exogenous factors on endogenous parts in the first route graph are displayed in Table 6. The significance of the association pathway in the Onset of Lactation model can be understood utilizing these discoveries. Based on the pathway of influence of the relationship to endogenous factors Onset of Lactation. It is known to be influenced by 3 exogenous factors, namely the characteristics of postpartum mothers (X1), physical activity (X2) and social support (X3). So as to facilitate understanding, grouped into 3 paths of relationship influence. Based on the three values of the influence pathway on the onset of lactation, it is known that the largest value of the influence path is from the X1 factor. The characteristic of Mrs. Nifas is 1,158. Then from the Social Support factor (X2) of 0.554 and the physical activity factor of 0.395. Where the three relationship pathways have a mixed type of direct and indirect relationship or only direct type to the onset of lactation.

4. Conclusion and future scope

The mother feels the arrival of breast milk during the start of lactation, starting with the arrival of colostrum. Colostrum comes out in the first 3 days after the mother gives birth in response to the birth of the placenta causing a sudden drop in progesterone and estrogen levels, at which time the hormone prolactin increases. This is influenced by internal maternal factors which include education, parity, type of delivery and age. Like this, physical activity not long from now following childbirth essentially affects the productive progression of breast milk. This incorporates breastfeeding mothers' frequency of breastfeeding, their examples of rest, and their mobilization. Psychologically, social support also greatly affects the mother's breastfeeding attitude, social support in this case includes family support, community support and cadre support. The onset of lactation will experience good expenditure if the factors support the mother well in breastfeeding her baby's.

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Conflict of interest

There is no conflict of interest, as per the authors. and each creator has given their endorsement to the paper's final manuscript

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