

# Sociocultural Transformation in Efforts to Reduce Mortality of Infants in Bone Regency, Indonesia

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## ABSTRACT

Global development can only be achieved if the goals apply to all children everywhere. It means that children's welfare today is an important marker of progress in the process of achieving the SDGs. The purpose of this study was to determine the influence between concepts related to morbidity that will cause infant mortality from a socio-cultural aspect. This type of research is Mixed Methods with a sequential exploratory approach implemented in Bone Regency. Qualitative research results show that mothers tend to have education up to elementary school, family status is still classified as less capable of fulfilling the needs of all family members, traditional birth attendants are often used in childbirth and baby care, and community trust in infant mortality is caused by parakang. The quantitative research result study indicates that there is a significant relationship between economic status (0.045 < 0.05) and traditional birth attendants' role (0.006 < 0.05) with infant care. However, there is no relationship between education level (0.742 > 0.05) and trust in parakang (0.330 > 0.05) with infant care. The conclusion from this research is the factors that influenced the morbidities that cause infant mortality from a socio-cultural point of view in terms of baby care are economic status and traditional birth attendants. The form of transformation that should be carried out is the creation of a collaboration between midwives and traditional birth attendants in the process of childbirth and baby care. Providing education on household financial management can set a budget for baby needs. Increased free BPJS/Health Insurance coverage for poor families.

**Keywords:** Infant Mortality, Economic Status, Traditional Birth Attendant, Morbidity, Infant Care

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## INTRODUCTION

The Sustainable Development Goals place a strong emphasis on justice and equality: global development goals can only be achieved if they also apply to all children everywhere. This means that the welfare of children today is an important marker of progress in the process of achieving the SDGs (1).

Globally, neonatal mortality (age 0-28 days/infant) was 19 per 1000 live births in 2015. Indonesia which is included in the SEAR region (South East Asia Region) category has a neonatal rate of > 20 deaths per 1000 live births. Meanwhile, the target of reducing the neonatal mortality rate/infants aged 0-28 days is 12 per 1000 live births by 2030 (2).

Data from the Bone District Health Office in 2019 shows that during the 2018 period, the number of infant deaths in all Public Health Center working areas in the Bone Regency area was 90 deaths. The Public Health Center's working areas that had the highest infant mortality were Puskesmas Mare (7 cases), Puskesmas Palakka Kahu (6 cases), and Puskemas China (7 cases).

Belief in spirits has also received special attention for the Bugis, spirits who are accused of being responsible for various diseases such as Poppo and Parakang. Paddengeng is known as the cause of sudden death (atikengeng), making children scream because of being feared (coe-coereng) or redness and itching all over the body (arawukeng), was once very trusted, especially in the era of 4-5 decades ago (3). Belief in spirits persists in the timeless society.

From various socio-cultural aspects related to baby nurture and care, several aspects do not provide benefits and even give negative risks to survival and baby health. However, there is a tradition that provides a positive side in baby care, therefore it is necessary to have a society sociocultural transformation so that it can gradually leave a culture that is not in line with health and improve a culture that is in line with babies health to improve the quality of baby health and reduce infant death's number. This study purpose determined the influence between concepts related to morbidity that will cause infant mortality from a socio-cultural aspect.

## METHODOLOGY

This research was conducted in Bone Regency in three working areas of the Public Health Center. The type of research used is Mixed Methods (4) with a sequential exploratory approach (5). In qualitative research, the informants consisted of mother babies, religious leaders, cultural figures, traditional birth attendants, and village officials. Interview results with informants were processed using the N-Vivo application. Analysis results at the qualitative stage are the first steps in the quantitative research stage.

Quantitative research with a sample of 121 babies (aged 0-11 months) in the Kahu Public Health Center working area, Mare, and China in 2019 was selected by purposive sampling who fulfills the criteria. These were 0-11 months old and willing to sign informed consent. Primary data collection was obtained from direct interviews with

respondents and made observations on several variables. The data collected was processed using the Statistical Package for the Social Sciences (SPSS) program for windows, Statistics and Data Science (STATA), and the Children’s Nutrition Calculator application.

**RESULTS**

**Stage 1 / Qualitative**

N-Vivo results analysis shows that the education of the informants varies from low education (SD and SMP) to higher education (SMA and Higher Education) and predominantly mother babies have a low level of education, only completing elementary school. The economic condition of the infant family is still dominated by underprivileged families as indicated by the low income with the standard per capita income of Bone Regency.

**Stage 2/Quantitative**

The midwife's role is still high. Public Health Center still provides services to pregnant women, childbirth, and baby care. Some Traditional Birth Attendants receive a warning by the midwife when providing services to mothers, but on the other hand, there are traditional birth attendants who can collaborate with midwives in efforts to deliver the mother. Belief in spirits called Parakang. Belief in Parakang as one of the causes of infant mortality which is believed by mothers, and tried to protect from disturbance by these creatures. Protection measures are usually assisted by traditional birth attendants or older family members and can even be carried out by the mother herself.

**Table 1.** Socio-Cultural Variables Influence on Infant Care Variables

Socio-Cultural Variable	Baby Nurture				Total		ρ value
	Good		Bad		n=121	%	
	n	%	n	%			
<b>Education Level</b>							
Upper	12	27,91	31	72,09	43	100	0,742
Low	24	30,77	54	69,23	78	100	
<b>Economy Status</b>							
Upper	22	38,60	35	61,40	57	100	0,045
Low	14	21,88	50	78,13	64	100	
<b>Midwife Role</b>							
Sufficient	26	40,63	38	59,38	64	100	0,006
Deficient	10	17,54	47	82,46	57	100	
<b>Beliefs in Parakang</b>							
Yes	20	33,90	39	66,10	59	100	0,330
No	16	25,81	46	74,19	62	100	

Table 1 shows that of the 43 mothers with higher education. There were 12 (27.91%) who can provide good care to their babies and 31 (72.09%) mothers who are unable to provide good care for their babies. Meanwhile, 78 mothers with low education, there were 24 (30.77%) mothers who were able to provide good care for their babies and 78 (69.23%) mothers were unable to provide good care. The chi-square statistical test resulted in a value of ρ value = 0.742 > ρ standard / 0.05 which proved that there was no effect of education level on infant care.

The family's economic condition also contributes to the baby's care. From 57 households with high economic status, there were 10 (27.8%) babies who were given good care and 35 (61.40) babies who did not get good care. Meanwhile, households that had low economic status but cannot provide good care were 14 (21.88%) and 50 (78.13%) babies who did not get good care. The chi-square statistical test resulted in a value of ρ value = 0.045 < ρ standard / 0.05, which proved that there was an effect of economic status on infant care.

Traditional birth attendants who have quite a role in the delivery process, baby care, and ritual events related to the birth of a baby in the community and show good caring results for the babies by 19 (41.30%) and poor care for 38 (59.38%) ). Meanwhile, the lack of traditional birth attendants role results in 10 (17.54%) good care for babies and 47 (82.46%) that were not good. The chi-square statistical test resulted in a value of ρ value = 0.006 < ρ standard / 0.05, which proved that there was an influence on the role of the traditional birth attendant on infant care. Mothers who still believed in the existence of parakang as creatures that could disturb babies and able to provide good care were 20 (33.90%) while mothers unable to

provide good care were 39 (66.10%). Mothers who did not trust parakang in their care, able to provide good care for 16 (25.81%) while mothers unable to provide good caregivers were 46 (74.19%). The chi-square statistical test resulted in a value of ρ value = 0.330 > ρ standard / 0.05 which proved that there was no effect of trust on parakang on infant care.

Poor parenting will have an impact on nutritional baby status. The results showed that babies with normal nutritional status were 103 (85.1%), malnutrition was 16 (13.2%) and malnutrition status was 2 (1.7%). Babies who do not have a good nutritional status have the opportunity to experience a decline in the immune system and experience pain. 36 babies received good care, there were 17 (47.22%) babies who were in good health in the last 3 months and 19 (52.78%) babies who experienced illness during the last 3 months. Meanwhile, 85 babies who did not get good care, there were 24 (28.24%) babies who were in good health, and 61 (71.76%) babies who experienced illness during the last 3 months. The chi-square statistical test resulted in a value of ρ value = 0.044 < ρ standard / 0.05 which proved that there was an effect of infant care on morbidity/pain in infants. Mothers who had experienced infant mortality at a previous birth were 18 (14.9%) and mothers who had no experienced infant mortality were 103 (85.1%).

Multiple logistic regression multivariate analysis shows that among the variables of economic status and traditional birth attendants role in infant care, it is found that the role of traditional birth attendants has the greatest influence, the results of the multivariate analysis can be seen in the table above;

**Table 2.** Results of Multiple Logistic Regression Analysis of Socio-Cultural Variables on Infant Care

Independent variable	Exp (B)	Std. Err.	z	P>  z	[95% Conf. Interval	
					lower	upper
Economy Status	2,652	1,563	1,65	0,098	0,835	8,424
Misdwife Role	7,595	4,925	3,13	0,002	2,131	27,074
Constant	-11,134	0,006	-5,29	0,000	0,000	0,0408

Analysis results show the value of  $\rho$  economic status = 0.098 and the role of the traditional birth attendant = 0.002. By paying attention to the value of  $\rho$ , the variable of midwife role has a value of  $\rho < 0.05$ . This means that the variable that has the strongest influence on infant care is the midwife role. It has a value of Exp (B) / OR = 7.595 > 1 which is a risk factor and the value of Conf. The 95% interval is more than 1 (2,131-27,074) so the OR decreases. This means that midwives, who have a sufficient role in the care of the baby, will receive good care for the baby 7,595 times compared to babies whose care has less role than the midwife

## DISCUSSION

### Mother's Education

Education aims to educate community members so that people can fulfill their life needs properly and also provide the right alternatives to overcome problems in their lives (6). Qualitative results study found that the social aspects of the mother's education as respondents in the study were still dominated by a very low level of education. Infant mothers who only completed primary school education were more numerous than infant mothers who completed junior high school, senior high school, and college.

Quantitative research results provide consistent results with qualitative research. Statistically, it does not show that there is an effect of education level with care, but the number of mothers with low education and provide poor care has the largest number in this study are 69.23%. Mothers with low education, marry at an early age and have more than one child provide opportunities for mothers to have experience in parenting based on previous parenting lessons.

For mothers, education is one of the important things in life that everyone must have and use in raising and fostering their descent. Mothers with low or high education are expected to always improve their knowledge and insight into good childcare. It democratic parenting so that delays in child development can be detected as early as possible and can be immediately consulted with health workers so that children's development becomes optimal. A good parenting pattern will determine the next child's development. Apart from formal education, mothers must also take part in parenting programs, both government and private programs (7).

A study entitled "Determinants of Infant Mortality in Pakistan: evidence from Pakistan Demographic and Health Survey 2017-2018" shows that women's low educational status, poor economic conditions, and low levels of use of public health services are closely related to very high infant mortality rates high in Pakistan. Health Interventions in Pakistan have not reached women and children in rural areas (8).

### Economic Status

The study result found that the figures were very different between the income that the family had with the UMR standard and the average individual expenditure. Quantitative research results also provide a similar picture that the dominant family of infants is still in low economic

status. Infants with low family income cannot afford and consume nutritious food and additional vitamins for the baby's health, so the baby is at risk of experiencing malnutrition and a decline in the immune system so that they get sick easily and even die. Although family income is not the direct cause of infant mortality, it has a major impact on the risk of infant mortality. In contrast, there are families with high economic status but do not provide good care. This can be caused by a lack of knowledge about parenting and mothers who work with them so that they do not play an active role in caring for babies.

This is supported by Chor Foon Tang's research in Malaysia in 2019 which explores the causes of infant mortality. The study shows that family income, health insurance, maternal education, and advances in technology have a significant impact on infant mortality rates (9).

### Traditional Birth Attendants Roles

The role of a traditional birth attendant in childbirth and baby care is still very often involved in childbirth efforts, starting from taking pregnant women to Puskesmas to giving birth. Besides, there is a midwife who is reprimanded by health workers and is prohibited from providing childbirth services. This difference occurs in each Public Health Center working area. Even so, the use of traditional birth attendants during childbirth and postpartum baby care is still widely used in the community. Statistical results analysis shows that the midwife's role has the greatest influence, so that collaboration between midwives and traditional birth attendants is needed to improve the health of mothers and babies.

In contrast, other research conducted by Muhammad Syukur in 2017 shows that there are 3 patterns of contestation of knowledge between midwives and *dukun pamana*, namely the contestation pattern of dominance, hybridization, and coexistence. Contestation patterns of dominance whereby this pattern occurs in the pregnancy arena, where the knowledge of traditional birth attendants dominates the knowledge of the midwife; the two-hybrid contestation patterns where this pattern occurs in the arena of the delivery process, namely the knowledge of the midwife and the *dukun pamana* being present together in a complementary collaboration. Whereas the third shows a pattern of coexistence contestation where the knowledge of the midwife and *pamana* are present together but have their respective parts without interfering with each other in the postpartum aid process (10).

### Belief in Parakang

The results of the study showed that the dominant informant stated that the community had a strong belief in spirit existence called *parakang* as the cause of infant mortality. Hereditary beliefs that are still very strong today prove that modernization does not have a strong influence on this. Cultural figures also stated that society has gone through time so that many changes have occurred. However, the belief in the existence of *parakang* as the cause of infant mortality is a community belief that remains strong today.

Statistically, belief in *parakang* does not have a relationship with childcare. This is because belief in *parakang* is only one part of parenting is protection. However, this protection is meant to protect from objects or other materials (physically visible) that may injure the baby. Meanwhile, protection from the supernatural is not part of parenting theory. However, in society concept believe, Spirit protection is very important because subtle-beings or *parakang* are causing infant death. The protection of babies from *parakang* is carried out by traditional birth attendants or *sanro* who have proven their ability to do this.

A study entitled "Social Autopsy To Identify The Socioeconomic Dimensions and Determinates of Infant Mortality In Haryana" shows that social, cultural, and behavioral factors have a strong influence on infant mortality. Social autopsy assessment is one method of identifying various risk impact negatively on infants' health (11).

#### Sociocultural Transformation

The behavior patterns of ancient and nowadays society regarding birth concepts and death have undergone many changes. The previous societal traditions relating to birth and death were increasingly being eroded by time. Many traditions are then abandoned gradually as people are familiar with education and technology in health (12-14). Transformation form that can be done to reduce infant mortality is increasing the level of mother's education by extending school age and minimizing the tradition of early marriage, providing education to mothers about effective and economical care, the collaboration between midwives and traditional birth attendants in maternal and infant services.

#### CONCLUSION

Parenting involves many aspects, not only from the mother and the baby itself but from traditions and traditional birth attendants which include aspects outside the mother and baby. The results showed that there was an influence on the economic status of the family and the traditional birth attendant's role in infant care. The mother's education level and belief in Parakang ineffective in infant care. Family income that is still can meet household needs, traditional birth attendants has a high role in society, so there is a need for collaboration between midwives and traditional birth attendants to improve the health status of mothers and babies. Trust in Parakang will continue to exist in society as time passes. Providing education to mothers and families about baby care must be implemented from an early age by involving traditional birth attendants so that parenting behavior that is not in line with health can be abandoned and replaced with parenting behavior that is in line with health.

#### FUNDING

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#### COMPETING INTEREST

None stated

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