

EFFECT OF TRADITIONAL BIRTH ATTENDANT TRAINING ON MATERNAL KNOWLEDGE OF PREGNANCY AND NEWBORN RISK FACTORS.*

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ABSTRAK

Sebagai bagian dari studi intervensi di Tanjungsari, telah dilaksanakan dua survei di suatu kecamatan di Jawa Barat. Tujuan survei adalah untuk mengetahui tingkat pengetahuan mengenai faktor-faktor risiko dari penduduk wanita usia reproduktif dalam kecamatan tersebut.

Hasil penelitian menunjukkan adanya tingkat pengetahuan yang cukup tinggi pada responden mengenai faktor-faktor risiko, yang kurang diketahui sebagai faktor-faktor risiko ialah berat badan lahir, penurunan berat badan bayi baru lahir, panjang badan, lingkaran lengan atas dan kelahiran kembar. Dapat disimpulkan bahwa meskipun tingkat pengetahuan cukup tinggi, masih perlu diusahakan peningkatan pengetahuan tersebut. Pengetahuan saja belum cukup untuk terjadinya perubahan dalam perilaku.

Faktor yang menunjang untuk melaksanakan rujukan seperti perbaikan jalan dan transportasi, tersedianya pelayanan kesehatan dan perbaikan sosial ekonomi juga sangat penting untuk berubahnya perilaku rujukan.

Introduction.

The present paper gives an overview of two surveys held in 1987 and 1990 respectively. The objective of the surveys is to determine the knowledge and attitudes of the female population in a rural area regarding high-risk factors. Both surveys are part of the evaluation data collected for a larger study commonly called the Tanjungsari Intervention Study (TIS).

The Tanjungsari Intervention Study.

This study is carried out since 1987 as a community intervention project in one kecamatan (subregency) of West-Java, Indonesia. The study area (population 87.000, according to a census done by the research team in 1990) is divided into an intervention area (17 villages) and a control area (10 villages). Both areas are rural. The study area is located some 40 kilometers from the city of Bandung

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(45 minutes drive where the research team has its office.

The intervention consists of training traditional birth attendants (TBA) in the intervention area. In the control area no additional training other than the routine government training is given. The main objective of the TIS is to evaluate the intervention based on the risk-approach on the basis of process, effect and impact factors. Examples of process evaluation indicators are Women and Infants at risk identified. Referrals; examples of effect : Use of Mother & Child Card, Use of antenatal care. Compliance with referral; examples of impact : Weight increase during pregnancy, mortality, birthweight, infant morbidity.

The Risk-approach Strategy.

In the intervention area, the TBA training consists of a modified version of the risk-approach strategy (RAS), developed by the World Health Organization¹. This strategy directs the available care to those who are in need most².

It is therefore important to identify those with the highest need and to give them the kind of care they require.

This calls for a list of risk-factors to be used as a guidance during TBA training. During their training the TBAs are taught to identify pregnant women, mothers and newborn at risk. The list of risk-factors is elaborate and comprises, among others factors such as maternal history, height/weight of the pregnant woman, position of the fetus, bleeding and fever during labour, birthweight of the infant, etc.

As can be seen from these examples, the risk-factors relate to the mother as well as to the infant, and to pregnancy, intrapartum, and postpartum factors.

Besides identification of cases at risk, the TBAs are also trained in the proper management of the risk cases. Appropriate management can be either (a) referral to a higher level of care, (b) treatment, or (c) health education³.

The list of risk-factors are derived from previous studies⁴ and from the general literature in maternal and child health. The major criteria for inclusion of a factor as a risk-factor are the following^{5,6}.

- (a). The strength of the association between a potential risk-factor and the adverse outcome.
- (b). The (absolute) numbers of risk cases to expected.
- (c). Finally, the popular views on the risk-factors and acceptance by both TBAs and the general population was considered.

The surveys : material and methods.

For the reasons mentioned above knowledge and attitudes of the general population are important to study in the total study area. Two surveys were conducted (in 1987 and 1990) as part of the TIS. They are of descriptive nature and intend to give information on the level of knowledge on risk-factors of the female population in the study area.

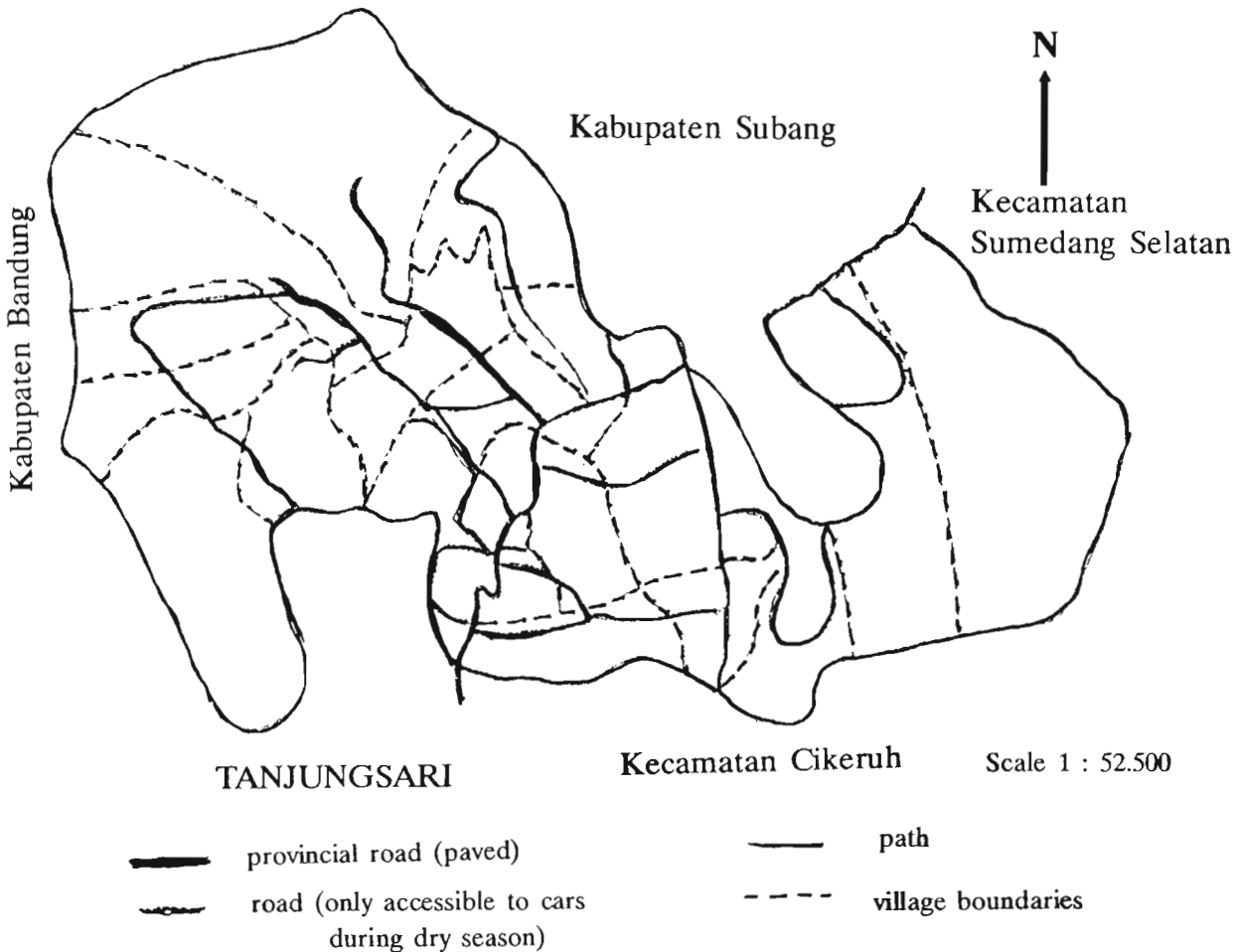
Although the intervention was geared primarily at TBAs, it can be anticipated that through intensive interactions between TBAs and the female population in reproductive age-the perception of risk factors in the intervention area (and perhaps in the control area as well) will change between 1987 and 1990.

Both surveys were organized in the total study area (intervention and control). The 1987 survey took place before the intervention

started, the 1990 was done at the end of the intervention.

Figure 1 shows as map of the area, with to the North the intervention and to the South the control area.

Before the surveys a census was done in order to create a sampling frame and also to collect the necessary basic data on the area.



The census revealed that the total population in the kecamatan is 87.000 (1990). The total female population (1990) is 45.000.

A systematic sample of all women in the reproductive age (15-49 years) was taken in both years. The sample size in 1987 was 600. In 1990 it was 1200 (response rate 97%). The results are not very different between 1987 and 1990 so that in the following section only findings from 1990 will be presented.

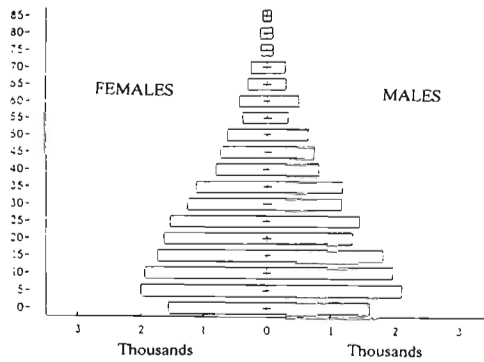
Results.

General features of the area.

The demographic data are summarised in the population pyramid, taken from the 1990 census (Figure 2).

Table 1 gives an overview of the basic features of the area (both for intervention and control area).

DEMOGRAFIC TREE FOR CONTROL AREA
SENSUS DATA



DEMOGRAFIC TREE FOR INTERVENTION AREA
SENSUS DATA

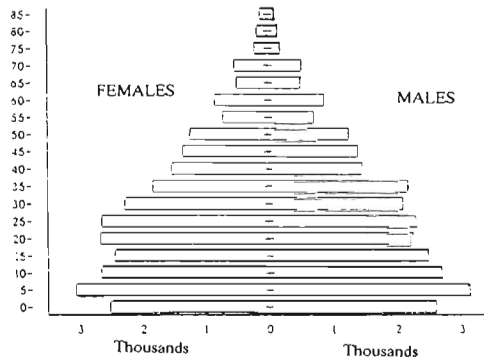


Table 1. General features of the area (1990).

	Control	Intervention
X years education	5.8	5.9
% primary school not finished	36	28
% married < 15 years	11	14
% delivered < 15 years	2.8	3.1
parity (average)	2.7	2.3
children ever born:alive/still alive(average)	2.3	2.0
children ever born:now death(average)	0.28	0.24
delivery attendant TBA	88 %	88 %
midwife private practice	5.4 %	5.0 %
site of delivery : home mother	77 %	81 %
home grandmother	14 %	9 %

Perception of risk-factors.

Table 2 (a,b,c) gives an overview of the major results concerning the perception of risk-factors. In the data collection, respondents were asked about each risk-factor whether they considered a particular factor as harmful for safe pregnancy/delivery or newborn. These answers were then classified as correct or incorrect. The table gives the proportions of the respondents with the correct answers. The risk-factors can be divided into two groups : those correctly perceived by the respondents and those with room for improvement. As can be seen from table 3, several factors during pregnancy, intra and postpartum as well as for the newborn are correctly identified as potentially harmful by over 80 % of the population.

On the other hand a number of factors is only correctly perceived by less than 40 % of the respondents. Among these are height and mid-upper arm circumference, twins and birthweight.

It is difficult to discern any major differences between the results of the 1987 and the 1990 survey. Given the fact that the perception of harmful factors was already high in 1987, it may have been difficult to improve it further on the short term. Also, the intervention carried out between 1987 and 1990 was geared towards the TBA and could only have affected the perception of the general population in an indirect way. Indeed, changes in mothers knowledge of risk-factors cannot occur through training of TBAs alone.

Looking at differences between the intervention and the control area, it seems that between 1987 and 1990, the results remained more or less stable in the intervention area and that an

increase in knowledge can be seen in the control area. Differences are calculated between the 1987 and the 1990 survey in both areas separately. Any significance at $p < 0.5$ is indicated with.

Tabel 2a. Perception of risk factors during pregnancy in intervention and control area.
Percentages show proportion of respondents answering "harmful".

	Intervention area		Control area	
	1987	1990	1987	1990
During pregnancy				
Stillbirth (2 or more)	71.7 *	79.8	68.4 *	80.6
Miscarriage (3 or more)	80.7 *	86.6	81.9	87.3
Caesarean section	81.5	83.2	74.3 *	78.1
Pregnancy after miscarriage (in less than 5 months)	77.2	73.5	66.1 *	78.1
Height (less than 145 cm)	51.8	46.2	48.0	48.5
MUArm Circumference (< 22 cm)	57.5	49.8	56.1	50.2
Weight decrease	91.3	91.1	86.5 *	94.1
Oedema (arms & face swollen)	84.6	89.9	90.6 *	82.8
Fever (< 3 days)	46.9	49.5	42.7	49.7
Fever (> 3 days)	90.6	91.6	92.4	93.5
Bleeding	93.3	96.1	91.8 *	96.0
Cough (< 3 days)	50.6	53.1	41.5 *	56.6
Cough and dyspnoe	96.8	96.2	98.2	97.1
No tetanus vaccination	85.8	90.4	84.2 *	93.1
	(n = 254)	(n = 584)	(n = 172)	(n = 581)

Tabel 2b. Perception of intrapartum/postpartum risk-factors in intervention and control area.**Percentages show proportion of respondents answering "harmful".**

	Intervention area		Control area	
	1987	1990	1987	1990
Breech position	87.8	83.4	88.3	90.2
Twins	63.4	65.6	56.7 *	69.5
Transverse position	96.9	98.6	95.3 *	99.1
Prolonged labour (>12 hours)	96.8	96.4	92.4	95.2
Antepartum bleeding	79.8 *	69.0	67.8 *	76.2
Antepartum excessive bleeding	96.9	98.8	97.7	99.0
Fever	78.7	76.7	60.2 *	70.6
Fouly amniotic smell intrap	92.9 *	81.0	83.0 *	74.5
Convulsions during delivery	96.1	97.8	94.7	91.9
Postpartum bleeding	92.9 *	79.5	95.3 *	79.5
Massive bleeding	97.2	99.0	97.1	98.3
Loss of blood and anemia	96.1	96.1	95.3	96.0
Postpartum fevere	82.7 *	74.7	60.2 *	74.2
Fouly amniotic smel postpart	94.1 *	83.6	86.5 *	78.0
Convulsions	95.7	97.1	95.3	93.5
	(n = 254)	(n = 584)	(n = 172)	(n = 581)

Tabel 2c. Perception of infant risk factors in intervention and control area.**Percentages show proportion of respondents answering "harmful".**

	Intervention area		Control area	
	1987	1990	1987	1990
Low birth weight (<2000 gr)	81.5	78.3	69.0	71.9
High birth weight(>4000 gr)	63.8	70.2	57.3	58.7
Pale colour	96.0	93.5	91.8	93.3
Cyanotic colour	97.6	94.2	94.2	94.8
Weak and passive	98.4 *	94.3	92.4	91.7
Diarrhoea	87.0 *	70.0	68.4	69.7
Serious diarrhoea	98.0	99.7	98.2	99.1
Cough	83.4 *	73.5	69.0 *	76.9
Cough and dyspnoe	98.0	99.3	96.5	98.6
Fever	60.2	66.6	46.5 *	73.3
Serious fever	98.8	98.5	95.9	97.2
Convulsions	99.6	98.5	95.9	96.7
Weight loss	91.3 *	79.8	79.5	84.4
No tetanus vaccination	92.1	92.3	91.8	94.0
	(n = 254)	(n = 584)	(n = 172)	(n = 581)

Tabel 3. Perception of risk factors (1990).

% responding "harmful"	Intervention area	Control area
PREGNANCY Weight decrease Bleeding during pregnancy Edema (arms/face) Obstetrical history	INTRA-/POSTPARTUM Position Prolonged labour Excessive bleeding Convulsions	INFANT Serious diarrhoea Cough & dyspnoe Serious fever Convulsions
80 %	80 %	80 %
Height MUAC Cough < 3 days Fever < 3 days	Twins pp fever	High BW LBW Weight loss
40 %	40 %	40 %

Conclusion and discussion.

The results show a minor improvement in knowledge levels of the respondents between 1987 and 1990. In general and for most risk-factors the knowledge levels remain high however. There are some marked exceptions : risk-factors with low knowledge levels that remain low throughout the study period. This is particularly the case for birthweight, mid-upper arm circumference, height, twins, cough and fever during less than 3 days, postpartum fever and weight loss of the newborn.

Knowledge remains an essential prerequisite for attitude change and eventually for a change in behaviour. However, knowledge increase is not an end in itself if it does not lead to a change in practice. The general evaluation data from the TIS show that compliance with referral and the referral

behaviour of the population have not been able to follow the relatively good knowledge trend⁷. This points to the need to take other measures of a more policy-oriented nature and directed towards enabling people to make the choices they know are healthy. Factors such as improvement of transport, roads, better accessibility of the formal health services and a general socio-economic improvement are of importance here.

This enabling process, it seems, still has to go a long way.

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