

ORIGINAL RESEARCH ARTICLES

Safe Motherhood Perspectives and Social Support for Primigravidae Women in Lusaka, Zambia

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ABSTRACT

The safe motherhood goals of being attended by a skilled attendant at birth have not been met in Zambia. Almost all (93%) of Zambian pregnant women attend antenatal care, though only 43% deliver in maternity units. This study was conducted to explore low-risk Zambian primigravidae's preparation for pregnancy including contraceptive use, content of antenatal care, preparation for childbirth and the extent of social support. Two hundred and ninety nine healthy primigravidae, who attended the antenatal clinic at the University Teaching Hospital (UTH), Lusaka, Zambia, were interviewed using a structured interview guide. The women's mean age was 20.7 years; 41% were adolescents. The adolescent group had significantly less years of education ($p < 0.0000$). In total, 78% had never used any contraceptive method. The main source of information on sexual issues was friends and the mass media. Only 2% of the women had received information on sexual and reproductive health matters from health staff. Nearly half did not want the pregnancy. Sixty three per cent of the women had made their first antenatal visit during the second trimester. There had been no antenatal preparation of the women for parturition and their parenting role. Eighty five per cent of the pregnant women had identified a social support person to assist them during pregnancy and after childbirth. The results suggest that preparation for parenthood had a low priority as part of the antenatal care. We recommend that as part of the integrated reproductive health approach, parenthood classes should be organised and social support network should be utilised and involved in the care. (*Afr J Reprod Health* 2003; 7[3]: 29–40)

RÉSUMÉ

Perspectives de la maternité sans risque et l'appui social pour les femmes primigestes à Lusaka, Zambie Les objectifs visés par la maternité sans risque de profiter du service des sage-femmes traditionnels bien habileté au moment de l'accouchement n'ont pas été atteints en Zambie. Presque toutes (93%) les femmes zambiennes enceintes vont à la consultation prénatale, quoique seules 43% accouchent dans des maternités. Cette étude a été menée pour explorer comment la primigeste zambienne à bas risque se prépare pour la grossesse y compris l'usage du contraceptif, le contenu des soins prénatals, les préparatifs pour la naissance et le niveau de l'appui social. Deux cent quatre-vingt dix primigestes qui ont fréquenté la consultation prénatale au Centre Hospitalier Universitaire (CHU) de Lusaka, Zambie ont été interviewées à l'aide d'un guide d'interview structuré. L'âge moyen des femmes était de 20,7ans; 41% d'elles étaient des adolescentes. Le groupe adolescent était remarquablement moins scolarisé ($p < 0,0000$). Au total, 78% n'avaient jamais utilisé aucune méthode contraceptive. Les sources principales d'information en matières sexuelles et de la santé reproductive étaient des amis et les médias. Il n'y avaient que 2% des femmes qui s'étaient renseignées sur les questions sexuelles et la santé reproductive auprès du personnel médical. Presque la moitié n'ont pas voulu la grossesse. Soixante-trois pour cent des femmes avaient eu leur première visite à la consultation prénatale au cours du deuxième trimestre. Il n'y avait aucun préparatif prénatal des femmes pour la parturition et leur rôle de parent. Quatre-vingt-cinq pour cent parmi les femmes enceintes avaient identifié la personne qui leur serviraient comme appui social au cours de la grossesse et pendant l'accouchement. Les résultats ont montré que les préparatifs pour le rôle de parent avait été accordé une faible priorité en ce qui concerne les soins prénatals. Comme approche de la santé reproductive intégrée, nous proposons que les cours soient organisés pour les parents et qu'un réseau d'appui social soit utilisé et fasse partie des soins. (*Rev Afr Santé Reprod* 2003; 7[3]: 29–40)

KEY WORDS: *Antenatal care, safe motherhood, social support*

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Introduction

The formal health system introduced antenatal care in the high income countries nearly a century ago, with the aim of providing opportunity for health promotion, early detection and management of pregnancy complications such as pre-eclampsia, anaemia and sexually transmitted diseases.¹ The concept and model of antenatal care was transferred to the low-income countries and antenatal care programmes prescribed a number of visits, suggesting that the pregnant woman should visit the antenatal clinic up to 12 times. This type of prophylactic care continued for about fifty years before anyone thought of evaluating its effectiveness.²

More than fifteen years ago, the Safe Motherhood Initiative (SMI) was launched with the aim of reducing the high levels of maternal mortality.^{3,4} Antenatal care practised all over the world is today considered one of the four pillars of safe motherhood, the other three are family planning, clean safe delivery and essential obstetric care, and postnatal care, as formulated by the Maternal Health and Safe Motherhood Programme.^{5,6} Effectively organised, routine antenatal visits may raise awareness among women about their need for clean safe delivery, for skilled attendance at delivery and family planning.⁷ It can also familiarise the women and their families with health facilities, enabling them to seek help more efficiently during a crisis.⁸ Appropriate antenatal care should also give pregnant women an opportunity to prepare for parenthood including breastfeeding.⁹ However, adherence to and content of antenatal care programmes vary greatly, both regarding attendance rates and the time of the first visit, most of the African countries having the poorest records.¹⁰

Recently a large WHO-initiated trial to answer the effectiveness of a new model of antenatal care with only four visits for low-risk pregnant women was completed. Compared to the standard model of antenatal care, the new model with four visits was found to be as good as the traditional model of antenatal care in all the pre-selected maternal and child outcomes, besides being cheaper.^{10,11}

Antenatal Care in Zambia

Antenatal care services in Zambia are available both at government and private clinics and Zambian

women are encouraged to visit the antenatal care services during the first trimester. Surveys in Zambia reveal that most of the women come for antenatal care just before or during the second trimester and over 70% make a minimum of four or more antenatal visits. In total, 93% of the women attend antenatal care though coverage is slightly higher in urban areas than in rural areas.¹² The antenatal care service is free according to the Zambian health policy,¹³ but payment out of mother's pocket is requested for syringes, prescribed investigations and drugs. The hard currency travel cost for the women is generally minimal as most women walk to the nearest health centre. The pregnant women receive care from professional providers, occasionally obstetricians and more commonly from midwives. In less than one per cent, pregnant women receive antenatal care from a trained traditional birth attendant (TTBA).¹⁴ In spite of high antenatal coverage, only 43% deliver in maternity units attended by a skilled attendant at birth. The discrepancy is higher in rural areas. Zambia has one of the highest maternal mortality ratios in the world.¹⁵

Cultural Childbearing Practices

A highly practised cultural custom in Zambia, as in most cultures,¹⁶ is that a woman who is pregnant with her first baby usually has a female member of the family (mother, aunt, grandmother) designated to look after her from the time the pregnancy is announced until the baby is born.¹⁷ The family caregiver continues rendering help during the postpartum period.¹⁸ A similar custom is described from Zimbabwe¹⁹ and Botswana.²⁰

To our knowledge, there is no documentation about first time Zambian pregnant women's knowledge, practice and compliance of the four cornerstones in the safe motherhood programme; family planning service before pregnancy, antenatal care and preparation for childbirth including social support. Such documentation could provide information on important gaps in health care provision as a base for opportunities for improving care for primigravidae and pregnant women in general.

The aim of this study was therefore to explore low-risk primigravidae's planning for pregnancy

including contraceptive use, content of antenatal care, preparation for delivery and motherhood, and the extent of social support.

Material and Method

Study Setting

This study was carried out in 1998 at the Department of Obstetrics and Gynaecology, University Teaching Hospital (UTH), Lusaka, Zambia. The Department of Obstetrics and Gynaecology provides ante-, intra- and postnatal care and gynaecological health services. In 1998, there were 17,158 new antenatal attendees at UTH. The hospital statistics did not indicate the proportion of primigravidae out of the total number of women attending the clinic. An average of 200 women visited the antenatal clinic per study day. A midwife, sister-in-charge, assisted by registered midwives, ran the clinic, which operated in the mornings from Monday to Thursday. Qualified midwives did the general screening of the mothers-to-be such as history-taking, measurement of blood pressure, weight, height, urinalysis, etc, while obstetricians reviewed the clients. In the afternoons the clinic was used to screen women with gynaecological problems, family planning consultations and contraception prescription.

Study Population

Between 7.00 a.m. and 12.30 p.m. on selected study days, the first six pregnant women who attended antenatal clinic and who fulfilled the inclusion criteria were informed about the study. They were then enrolled in the study after informed consent was obtained. The inclusion criteria were: healthy primigravidae, uncomplicated pregnancy, gestational age 36 weeks and above, singleton fetus on palpation, vertex presentation, and the woman expected to go through a normal delivery as assessed by the attending doctor. In total, 299 primigravidae were included in the study.

Interviews

A structured interview guide with close and open-ended questions was used to collect data on: (i) socio-demographic characteristics such as age and education; (ii) preparation for pregnancy such as if

the woman ever had used contraceptives before present pregnancy and perceptions about pregnancy; (iii) gestational week at time of first visit to the antenatal clinic and who had advised the woman to go to the antenatal clinic; (iv) content of antenatal care such as coverage of tetanus toxoid (TT), iron supplementation and screening for sexually transmitted infections (STIs); (v) preparation for delivery; and (vi) social support during childbirth.

Data Collection

Trained research assistants (midwives) conducted all interviews in a private room in Tonga, Nyanja, Bemba or Lozi, the local languages spoken in the area. The interviews were thereafter translated to English. Every interview lasted approximately 60–90 minutes.

Data Analysis

Data were analysed using EPI-INFO software.²¹ They were organised, coded and analysed in collaboration with a statistician. The women were categorised into three age groups. Group I (14–19 years, mainly adolescents), group II (20–24 years) and group III (25+ years). The chi-square test (χ^2) was used for determining significant differences between age groups, and distributions were considered statistically significant if p values were less than 0.05.

Ethical Approval

The research ethics committees of the University of Zambia, Lusaka, and the Karolinska Institutet, Stockholm, Sweden, approved the study.

Results

Socio-Demographic Characteristics of the Women

The mean age of the 299 primigravidae included in the study was 20.7 years (range 14–33 years). Nearly half of the women (124 or 41%) were adolescents, 137 (46%) were between 20 and 24 years old, and 38 (13%) were above 25 years old. The adolescent group had significantly less years of education ($p < 0.0000$), significantly more of them were single ($p < 0.0057$), and fewer of them were employed ($p < 0.0000$). Group II and group III women more

Table 1 **Comparison of Socio-Demography Characteristics between Groups**

Variable	Group I (14–19 years) n = 124		Group II + III (20+ years) n = 175		p value
	n	%	n	%	
Education < 7 years	68	55	30	17	0.0000
Married	79	64	138	79	0.0057
Employed	12	97	84	48	0.0000
High density residence	64	51	44	25	0.0000
Living with husband	65	52	122	70	0.0034
Growing up in urban area	86	69	112	64	0.1317
Brought up by parents	72	58	131	75	0.0032
Not enough food to eat	17	14	14	8	0.1605
Water tap inside the house	39	31	78	45	0.0300
Functioning electricity	48	39	92	53	0.0245
Functioning radio	75	60	114	65	0.4830
Functioning telephone	4	3	13	7	0.1961

commonly lived with husbands ($p < 0.0034$). More adolescents were brought up by people other than their parents ($p < 0.0032$) and more of them lived in a high density area of Lusaka ($p < 0.0000$). Table 1 illustrates the socio-demographic characteristics of the adolescents compared to women in age groups II and III.

Contraceptive Use before First Pregnancy and Information about Sexual Issues

Two hundred and thirty four (78%) of the women had never used any contraceptives. The proportion of non-users was higher among adolescents ($n = 105$, 85%). Thirty four (11%) of the women's partners had ever used condoms. The major source of information on sexual issues in the adolescent group was friends ($n = 57$, 46%), whereas in groups II ($n = 79$, 58%) and III ($n = 22$, 58%) the main source of information was the mass media.

Perceptions about the Pregnancy

At the end of the pregnancy, nearly half of the women in group I ($n = 61$, 49%) and one-fourth in groups II ($n = 36$, 26%) and III ($n = 9$, 24%) described their pregnancy as unwanted. Significantly

more women in the adolescent group were sad when they realised that they were pregnant ($p < 0.002$). Sixty seven (54%) of the interviewees in group I reported that their parents were unhappy and had mixed feelings about their daughter's pregnancy, while nearly 70% of parents in groups II and III were happy to learn about their daughter's pregnancy. In all the three groups more than one quarter of respondents reported that they had health and/or financial problems and worries that disturbed their general well being during pregnancy.

Informing the Father of the Baby

In most cases, in all the groups (I–III) the woman told the father of the baby-to-be about the pregnancy herself (79%, 84% and 79% respectively).

Antenatal Care Attendance

Although all pregnant women in Zambia are encouraged to visit an antenatal clinic during their first trimester of pregnancy, 190 (63%) of our subjects waited till the second trimester. However, more women in groups II and III, compared to women in group I, attended the antenatal clinic during their first trimester ($p < 0.013$). Forty two (14%) of them decided on their own to attend

Table 2 Antenatal Preparation for Motherhood (n =299)

Variable	Group I 14–19 years n = 124		Group II 20–24 (years) n = 137		Group III 25+ years n = 38		Total n = 299	
	n	%	n	%	n	%	n	%
<i>First antenatal visit</i>								
1st trimester	13	10	35	25	14	37	62	21
2nd trimester	84	68	83	61	23	60	190	63
3rd trimester	27	22	19	14	1	3	47	16
<i>Who advised you to go to antenatal clinic?</i>								
My own decision	18	14	17	12	7	18	42	14
My husband/partner	42	34	58	42	11	29	111	37
My mother	39	32	24	18	9	24	72	24
Others	25	20	38	28	11	29	74	25
<i>Has the clinic staff involved social network in health education?</i>								
Yes	55	44	46	34	8	21	109	37
<i>Injection tetanus toxoid immunization</i>								
No dose	26	21	20	15	2	5	48	16
One dose	43	35	29	21	9	24	81	27
Two doses	55	44	88	64	27	71	170	57
<i>Has the clinic staff advised to take ferrous sulfate/folic acid?</i>								
No	40	32	25	18	7	18	72	24
<i>Previous diagnosis?</i>								
Gonorrhoea	3	2	1	1	1	2	5	2
Syphilis	12	9	8	5	2	5	22	7
Medical disease	12	10	15	10	3	8	30	10

Medical disease includes cystitis, diabetes mellitus, sickle cell anaemia and hypertension

antenatal clinic, 111 (37%) were advised by their husbands/partners, 72 (24 %) by their mothers and 74 (25%) by relatives and nurses (Table 2).

Coverage of Tetanus Toxoid (TT), Iron Supplementation and Screening of STIs

According to the Zambian recommendation, every pregnant woman should receive three doses of tetanus toxoid immunisation. Significantly more women in the adolescent group received incomplete TT immunisation coverage when compared to women in groups II and III ($p < 0.016$). Forty (32%) of the adolescents were advised to take iron

supplementation compared to 112 (82%) and 31 (82%) in groups II and III respectively ($p < 0.000$). The study revealed that 57 (19%) of the women had had a medical complaint, out of which 27 (47%) were related to STIs (gonorrhoea and syphilis). More than half of the STI infections were found in group I (Table 2).

Preparation for Delivery

When the women were asked about their source of information on preparation for delivery and motherhood, 80 (27%) of them said they had not received any information, while 59 (19%) said relatives had given them some information (Table 3).

Table 3 **Information about Present Pregnancy and Delivery (n=299)**

Variable	Group I 14–19 years n = 124		Group II 20–24 years n = 137		Group III 25+ years n = 38		Total n = 299	
	n	%	n	%	n	%	n	%
<i>Who has given you childbirth education?</i>								
Nobody	37	29	32	23	11	29	80	27
Books/press	0	0	2	2	1	3	3	1
Friends	5	4	8	6	3	8	16	5
Nurse	58	47	51	37	11	29	12	40
Relatives	18	15	32	23	9	24	0	0
More than one	6	5	12	9	3	8	36	12
<i>What labour positions have you heard about?</i>								
None	71	57	54	39	9	24	13	45
Lie on back	49	39	71	52	27	71	4	49
Sitting	2	2	4	3	0	0	14	2
Others	2	2	8	6	2	5	7	4
<i>What have you heard about giving birth in hospital?</i>								
Nothing	46	37	34	25	5	13	85	28
You have to obey	70	57	85	62	26	68	181	61
Heard a lot of things	7	5	12	9	3	8	22	7
It is good	1	1	6	4	4	11	11	4
<i>Where do you want to deliver?</i>								
Hospital	118	95	128	93	38	100	284	95
Clinic	5	4	5	4	0	.0	10	3
Home/not decided	1	1	4	3	0	.0	5	2
<i>What have you prepared for childbirth?</i>								
Nothing	12	10	12	9	5	13	29	10
Baby clothes	74	60	93	68	24	63	191	64
Hygienic requirements and clothes	38	30	32	23	9	24	79	26

Table 4 Social Support during Pregnancy, Intranatal and Postnatal (n = 299)

Variable	Group I 14–19 years n = 124		Group II 20–24 (years) n = 137		Group III 25+ years n = 38		Total n = 299	
	n	%	n	%	n	%	n	%
<i>Anybody assisting you during this pregnancy?</i>								
Nobody	23	19	19	14	2	5	44	15
Husband/partner	21	17	39	29	15	40	75	25
Mother/sister	56	45	56	41	14	37	126	42
Mother in-law	4	3	5	3	0	0.0	9	3
Employer	1	1	4	3	1	2	6	2
Aunt	6	5	4	3	3	8	13	4
More than one	13	10	10	7	3	8	26	9
<i>Who will escort you to labour ward?</i>								
Nobody	12	10	5	3	4	10	21	7
Husband	32	26	49	36	13	34	94	31
Mother/sister	54	43	59	43	13	34	126	42
Mother in law	8	7	5	4	1	3	14	5
More than one	12	10	13	10	4	10	29	10
Aunt	6	4	6	4	3	8	15	5
<i>Who would you prefer to stay with you during labour?</i>								
Nobody	3	2	5	4	2	5	10	3
Husband	16	13	29	21	14	37	59	20
Mother	52	42	62	45	15	40	129	43
Auntie/other relatives	53	43	41	30	7	18	101	34
<i>What could a support person do for you during labour?</i>								
Don't know	64	51	76	55	18	47	158	53
Give me comfort	53	43	58	43	20	53	131	44
Help me	7	6	3	2	0	0.0	10	3
<i>Where will you stay after the birth of the baby?</i>								
In my present house	64	51	62	45	26	68	152	50
Move to a female relative	58	47	68	52	10	26	136	46
Others	2	2	2	2	0	0.0	4	1
<i>How long will the person assisting you stay with you?</i>								
4 weeks+	70	56	67	49	20	53	157	52
1–4 weeks	41	33	52	38	14	37	107	36
1 week	6	5	12	9	2	5	20	7
I do not know	7	6	6	4	2	5	15	5
<i>What type of work will that person assisting you be doing?</i>								
Household work	20	16	24	18	7	18	51	17
Look after me	46	37	50	36	10	26	106	35
Advise about the baby	44	36	51	37	19	50	114	38
Advise about breastfeeding	14	11	12	9	2	5	28	9

Books and newspapers had been minimally used as sources of information. One hundred and twenty (40%) women said the health staff had prepared them for delivery and motherhood, while more than one third of the adolescents 46 (37%) had not received any information.

When the women were asked where they wished to deliver, majority (95%) said they preferred to deliver in a hospital.

When they were asked what they had heard about labour positions, 71 (57%) of the adolescents said they had not heard anything. More than half of the women in groups II and III said they had heard that during labour the woman lies on her back.

When the women were asked what they had been told to prepare for delivery, all of them, except 29 (10%), said they were told to prepare and bring hygienic requirements and baby clothes to the maternity unit. More than half of the women in all groups said they wished to have their babies close to them when they were asked about what they would like to be done to their baby immediately after birth.

Social Support during Childbirth

One hundred and ninety (64%) of the primigravidae reported that clinic staff had never encouraged the involvement of a social support person at the clinic (Table 4). The majority (255 or 85%) of the women said they had a social support person who assisted them at home, while 44 (15%) had nobody. Twenty one (7%) of the women had not identified any social support person to escort them to labour ward at the onset of labour. When asked who they wanted to have near them during labour and delivery in maternity units, almost half in groups I–III (42%, 45% and 40%) preferred their own mother, while 43%, 30% and 18% in the three groups respectively preferred female relatives. Only 10 (3%) reported that they did not want anybody. Significantly more women in groups II and III wanted their husbands to stay with them ($p < 0.026$). In response to the question about what they thought a support person staying with them during labour could do, 131 (44%) of the women said the social support person would give them comfort and they themselves would feel more relaxed.

When asked where they would stay after delivery, 136 (45%) said they planned to move to a female relative's house, 1562 (50%) said they would stay in their present home and have their mothers move in with them. The duration of time that the social support person was expected to stay with the newly delivered mother varied, from one to four or more weeks. Twenty (7%) primigravidae said the social support person would stay less than a week with them, while 15 (5%) did not know how long the person should stay.

When the women were further asked the type of care a social support person would provide for them, 114 (38%) said they would seek advice on how to care for the baby, while 106 (36%) wanted to be cared for so that they (the delivered mothers) could look after the baby. Thirty nine (13%) said they needed assistance with cooking, while 10% needed advise on breastfeeding.

Most of the women expected to get financial support from the father of the baby or relatives, while 21 (7%) did not know if the father of the baby would support them financially.

Discussion

Socio-Demographic Characteristics

The study shows that 40% of the primigravidae were adolescents, out of which 36% were single. It was more common that other people than their parents brought up the adolescent group. A study from Cape Town revealed that pregnant teenagers were more likely to come from larger households and less likely to live with their biological parents. Parental strictness was seen as a protective factor and was particularly related to the presence of the father.²² The adolescent group had significantly less education than the pregnant women in the other two groups. Education affects a woman's chances of employment opportunities and ability to care for herself and her baby. In order to improve the health of Zambian women, there is need to invest in the education of the girl-child, and pregnancy should not force girls to leave education.^{23,24}

The result of this study corresponds to other findings in Zambia, which show that childbearing starts early.¹⁴ It is well-documented that adolescent

pregnancy is associated with substantial risks of physical, psychological and social complications to the health of both mother and child.^{25,26} Adolescents face a greater risk of pre-term labour,²⁷ obstructed labour due to cephalo-pelvic disproportion, vesico-vaginal fistulae²⁸ and low birth weight.²⁹ Furthermore, many young women resort to unsafe abortion rather than carry an unwanted pregnancy to term, and death rates from clandestine abortions are especially high among adolescents.³⁰

Sexual and Reproductive Health

Very few of the pregnant women had obtained information from schools and/or health sector about sexual and reproductive health issues. The option for them then was to obtain such information from friends and the media, and such information may have gaps or be misleading. Similar findings are presented in a study from Nigeria³¹ where friends were the most common source of information on contraception, and health staff and schoolteachers the least common. As a consequence of the gaps in reproductive health service needs of young Zambians, the pregnant women had used contraceptive methods only to a small extent and more than one third of the pregnancies were neither planned nor wanted.

Generally, school programmes in Zambia lack systematic education on sexual, reproductive health and contraceptive awareness. Furthermore, interpersonal communication within families about sexuality and fertility regulation is a taboo.³² Grandparents, aunts or other elderly distant relatives were previously responsible for giving cultural information on sexuality. This social network has to a great extent been disrupted because of the declining socio-economic situation and urbanisation.³² It is also well known that some religious groups have contributed to the anti-sexual health education programmes and that family planning programmes have been accessible to married couples only.³³ When it is revealed that a young girl is pregnant, apart from being afraid, ashamed or desperate, she usually gets punished and expelled from school. At this stage the adolescent girl may be prepared to risk her life and end an unplanned pregnancy.³⁴

After birth of the baby, parents and other relatives have to take on extra financial burden by caring for the single mother and her newborn. This situation also puts the young mother in a risky situation and she has to find means to contribute to the daily living of her baby and the family. It is known that in order for many young girls to meet their needs they resort to prostitution with the risks of contracting STIs/HIV/AIDS or having an illegal abortion.^{23, 34}

Preparation for Motherhood

Most of the primigravidae started attending antenatal clinic during the second trimester. This pattern is similar to findings from an earlier study in Zambia, where only 6% of the pregnant women attended antenatal clinic at 16 weeks or earlier.³⁶ Late registration could be attributed to the fact that the women were not aware of the need for care early in pregnancy. Condemnation from society may make the primigravidae reluctant to seek antenatal care services early.^{37,38} It appears Zambian women register for antenatal care mainly because they may need assistance from the health service during labour if complications arise rather than the need for early screening and other preventive care.¹⁵

Coverage of TT, Iron Supplementation and STI Screening

The study also revealed that there was incomplete coverage of tetanus toxoid immunisation and iron supplementation within the study population. Both tetanus toxoid and iron supplementation coverage are essential in countries like Zambia where there is high prevalence of neonatal tetanus, iron deficiency anaemia and coincidental malaria.³⁹

Proportionally more women in the adolescent group (I) had had a sexually transmitted infection (gonorrhoea or syphilis). Several studies conducted in sub-Saharan Africa have shown that prevalence rates of syphilis in pregnancy are 6–16%, and those teenagers are a special vulnerable group in this respect. Syphilis in pregnancy is known to contribute significantly to infertility, fetal loss, and neonatal morbidity and mortality in sub-Saharan Africa.^{40,41} Antenatal syphilis screening and treatment are considered a cost-effective intervention.

Preparation for Labour and Delivery

The primigravidae in this study had only heard about the lying on the back (supine position) as the maternal position used during labour and delivery. Evidence has shown that the supine position causes a reduction in cardiac output and that it can compromise uterine blood flow during labour.⁴² The use of upright positions such as standing, kneeling, sitting on special designed chair, or squatting for delivery is common in many cultures. Despite this, in many hospitals, women are expected to adopt the supine position for childbirth. There is evidence that upright postures shorten second stage of labour and results in less frequent episodes of severe pain.

It is mandatory to purchase and bring childbirth items to the maternity. This may create an obstacle in attending delivery care since some women can simply not afford to buy such items, and subsequently may feel ashamed and embarrassed to come to the health facility.

Social Support during Prenatal, Intranatal and Postnatal Periods

The fact that nearly one third of the women had identified a support person to assist them during pregnancy, intranatal and postnatal period indicates that women rely on the social network. However, it has not been the hospital policy to involve a social support person to give companionship during antenatal clinic attendance or delivery.⁴³ The social support person also shares the woman's cultural understanding of pregnancy.^{19,20} Society shapes key values that dictate how their families regard birth. From our previous studies it is evident that most of the mothers and health staff in maternity units reported that including a support person would be beneficial if well-oriented to her role, but that hospital policy hinders the practice.^{43,44} Furthermore, from the 1980's onward there has been increasing evidence from randomised controlled trials that continuous companionship of a trained 'doula' in an obstetric maternity setting results in a significantly shorter labour and fewer interventions.⁴⁵

Limitation of the Study

If more than six primigravidae attended the antenatal clinic that day, only the first six who fulfilled the

inclusion criteria were included. This created a bias against all other primigravidae who could have attended the clinic on the same day and were eligible for the study. Another limitation is the generalisability of this study of urban primigravidae to women of different parity and in other areas of Zambia.

Conclusion and Policy Implications for Practice

Findings from the study indicate that several factors may contribute to or prevent a positive outcome of pregnancy: a healthy mother and baby. The study shows that the youngest primigravidae were particularly vulnerable. The findings also reflect that there is lack of appropriate reproductive health information and preparation for safe motherhood among primigravidae. Information would help them to avoid harmful practices and make them understand why they need access to available maternity care for skilled attendance at birth. Some of the impediments to achieving better maternity care can be identified within the health system institutional level itself. The youngest women in group I were not only deprived of formal education including sexual health education, they also received less attention within the health care services. Updated policies and improved resource allocation could be corrected at this level. Nevertheless, more qualitative research is needed to increase understanding of why more labouring women in Zambia do not come to maternity units to deliver.

Zambian midwives have an important role to play in promoting safe motherhood and should actively develop and promote parenthood classes for the primigravidae. Through health education and interactive discussions with mothers-to-be about the four pillars of safe motherhood, awareness about the need for pregnancy care, how to prepare for birth and what to expect during the childbirth process including preparation for the postpartum period, breastfeeding, parenthood and contraceptive use may increase among pregnant women and their families. Midwives should work with the community to strengthen the social aspect of antenatal care by integrating social support network in maternity care. Close social network of labouring women should be included in maternity care at health clinics and hospitals to give support to the women during pregnancy and in labour.

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