Original article

Parturients' need of continuous labor support in labor wards

Million Teshome[1], Ahmed Abdella[2], Solomon Kumbi[2]

Abstract

Introduction: The presence of a companion during labor and delivery benefits for both the laboring women and neonate. Continuous labor support is practiced in different parts of the world. In Ethiopia, it is neither practiced well nor researched in-depth.

Objective: The purpose of the study was to assess the attitude of women in response to labor support based at institutional deliveries.

Methods: This is a cross-sectional study by design. Data on labor support was collected from 406 women who delivered at three University hospitals in Addis Ababa through trained nurses using a pre-tested questionnaire. The result was analyzed using EPI INFO version 6 software packages.

Results: Seventy-three percent of the study women had fear of labor mainly due to associated pain (66.1%). About 53% of them need to have a companion during labor. The reasons given for wanting companion were emotional (49.5%), information (25%) and physical (21.7%) supports. About 54% and 37% of women at labor need to have respectively their mothers and husbands as companions. The need for labor companion was significantly associated with maternal age (x^2=13.57, p=0.00), educational status (x^2=8.7, p=0.000), monthly household income (x^2=14, p=0.00), marital status (x^2=16.77, p=0.00), and mode of delivery (x2=9.69, p=0.02).

Conclusion: There is a need of introducing labor companion system in our labor wards. Significant proportion of women preferred their mothers as companions. Further exploratory and operational researches suggested to be done in addressing providers, companion and programmatic issues to introduce policies and guidelines of labor support into labor wards. [*Ethiop.J.Health Dev.* 2007;21(1):35-39]

Introduction

Supporting women at delivery is an essential part of public health care. The term 'labor support' refers to continuous non-medical care of a laboring woman. It includes physical comforting such as touching, massaging, bathing, grooming, applying warmth or cold; and emotional support such as continuous companion, reassurance, encouragement, anticipatory guidance, information provision, and non-medical advice. Labor support and care may also involve procedures and facilitation of communication between the woman and staff to assist her in making informed choices. Furthermore, it may comprise emotional support for the woman's partner (1-3).

Besides to midwives, non-medical people such as a husband (partner), family members (mother, sister etc), friends and doula can provide supports for women at labor. Doula is a Greek word referring to experienced woman who helps other women. The word has now come to mean a woman experienced in childbirth that provides continuous physical, emotional and informational support to the women before, during or just after delivery (4).

Supporting women in labor has many advantages like having shorter labors, reduced need for oxytocin, anesthesia, analgesia, instrumental deliveries, and a decreased by 50% of cesarean section (1-10). Furthermore, Anxiety, postpartum-depression, postpartum-bleeding, postpartum fever, low APGAR score of neonates (<7 at 5 minutes), and prolonged infant hospitalization can be also decreased (3,8-13). Such advantages were seen among ethnically diverse populations. Disadvantageous women having low-income or who are primiparous and young were the greatest beneficiaries from labor support who otherwise would have higher cost and labored alone (8,9). Labor support by trained laypersons constitutes a low cost preventive intervention.

Studies in human population have shown the association between acute maternal anxiety and disturbance in the progress of labor. Long time presence, physical touch, reassurance, explanation, anticipatory guidance of a supportive labor companion and interaction with the laboring woman decreases labor-anxiety. This makes the parturient feel safer and calmer that may reduce catecholamine levels, facilitate uterine contractility and placental blood flow leading to less obstetric intervention (17,18).

In Ethiopia, 6.5-10% of women have received delivery service at health facilities. The proportion is higher in urban (30.5 %) than rural (2.2%) areas and being in Addis Ababa is 70% (9). Having lower institutional delivery service could partly be explaining women's need of being with someone they know or trust during labor and delivery (11). These companions are not available at institutional deliveries rather at home. In Ethiopia, there are no locally relevant research findings or experiences to be a base for programmatic and policy changes regarding labor support. As part of such an effort, this study was

[1]Awassa College of Health Sciences, Medical Faculty, Debub University, P.O. Box 788 Awassa Ethiopia, E-mail christmilli2000@yahoo.com, Tel. 0916824004; [2]Department of Obstetric and Gynecology, Faculty of Medicine, Addis Ababa University

conducted to assess women's attitude towards labor support based at institutional deliveries.

Methods

This is a cross-sectional descriptive study which was conducted at three university hospitals in Addis Ababa; Saint Paul's (SPH), Gandhi Memorial (GMH) and Tikur Anbessa (TAH).

Using 50% *p-value* (in the absence of real proportion of parturient needing support) and 5% margin of error, a sample of 384 parturient was calculated. All women who fulfill the inclusion and exclusion criteria and delivered during the study period were included in the study. Four hundred and six parturients were recruited and interviewed among 990 parturients who delivered from August 12 to September 11, 2004 at the three university hospitals. Women who were unconscious or admitted with a cervical dilatation of more than 6 centimeters were excluded from the interview. Sixteen cases were also excluded due to incomplete entries in their questionnaires.

At each site of labor ward, trained nurses made interview women after delivery and before discharge while the women were comfortable. The interviewers were recruited from any ward other than the labor wards and the interview was undertaken after ascertaining verbal consent. The questionnaire had no identifier. Ethical clearance was obtained from Department of Obstetric and Gynecology, Addis Ababa University.

EPI INFO version 6-statistical software was used for data entry and analysis. A p-value of ≤ 0.05 was considered as a statistical significant difference.

Result

More than half of 406 women (n=218, 53.7%) were 25-34 years of age with a range of 16 to 46 and a mean ($\pm$ SD) of 26.2 ($\pm$ 5.5). The majority were ethnically Amhara (n=178, 43.8%), married (n=362, 89.2%), Orthodox Christians (n=284, 70.0%) and residence in Addis Ababa (85%, n=346). About 50% of the interviewees had attended more than elementary school and had a monthly income of less than 500 Birr (Table 1). Prior to the study most of the women (n=306, 75.4%) had one up to four children. Two hundred fifty (61.6%) and 80 (19.7%) women had spontaneous vaginal and cesarean deliveries, respectively. The duration of labor in the wards of 355 (87.4%) women was 12 or fewer hours (Table 2).

Two hundred and ninety-eight (73%) women had fear of labor at health institution. They gave a total of 307 reasons; 273 provided one and the remaining 17 provides two different reasons for their fear. Some of the reasons forwarded by the respondents were labor pain (n=203, 66.1%), operation (n=54, 17.6%), being among unfamiliar people (n=13, 4.2%) or unfamiliar environment (n=12, 3.9%), and others (n=25, 8.2%).

More than half (n=216, 53.2%) of women wanted to have a companion during labor and a total of 232 preferred companions were mentioned. Participants of 200 women and 16 women cited one and two such an importance of companions, respectively. The most preferred companions in orders were *their mothers* (n=124, 53.4%), *husbands/ partners* (n=86, 37.1%) and *sisters/ girl friends* (n= 22 (9.5%).

The reasons given for wanting a companion were "psychologically emotional support" (n=107, 49.5%), "information" (n=54, 25%), "physical support" (n=47, 21.7%) and others (n=8, 3.7%). On the other hand, the reasons for not wanting a companion at delivery were "no need for such a companion" (n=65, 34.2%), "reliance on the health workers" (n=44, 23.1%), "not being our culture" (n=19, 10%), and various others (n=56, 29.5%).

During the study, significant proportions of women show a need of increasing trends of companion at labor with increasing education level (x^2 = 8.71, p=0.033) and family income (x^2= 14, p=0.007). Furthermore, an inverse relationship (x^2=13.5, p=0.034) between need of companion and increasing age was seen. A significantly higher (x^2=16.77, p-value=0.00) proportion of married women (n=197, 54.4%) preferred having a companion than unmarried (n=9, 20.4%). Significant associations among four of the six possible ethnic groups was found whereas there were no such differences among two of them. Regarding to companion needs of wonen differences were observed among 'Tigre vs. Gurage', 'Tigre vs. Amhara', Oromo vs. Gurage' and 'Oromo vs. Amhara' but no difference was found among 'Tigre vs. Oromo' and 'Gurage vs. Amhara' (Table 1).

A higher proportion of women delivered by Cesarean section wanted to have companion in labor than either with spontaneous or instrumental (forceps/vacuum) deliveries. There was no significant difference between spontaneous vaginal and instrumental deliveries (Table 2). Address, religion parity, duration in labor in labor-ward and cervical dilation at admission showed no significant association with want of companion (Table 2).

When the parturient were requested to suggest possible measures to improve the delivery services, five interventions were proposed. These measures have taken were 'increasing the number of health workers' (n=192, 34.0%), 'providing adequate analgesia' (n=141, 25.0%), 'allowing family member/ partner' (n=112, 19.8%), 'health educations' (n=92, 16.3%) and various others (n=27, 4.7%).

Table 1: **Need of labor companion and socio-demographic characteristics of women delivered at three teaching hospitals, Addis Ababa, Ethiopia, 1994**

Characteristics	Wanted labor companion No (Row %)	Total No (Column %)	χ^2 (p-value)
Age			
15-24	182 (50.6)	162 (39.9)	13.57 (0.00)
25-34	126 (57.7)	218 (53.7)	
35+	8 (30.7)	26 (06.4)	
Ethnicity			
Amhara	29 (50.5)	178 (43.8)	*Ψ
Gurage	46 (46.4)	99 (24.4)	*Ψ
Oromo	53 (62.3)	85 (20.9)	
Tigre	22 (75.8)	29 (07.1)	
Others	5 (33.3)	15 (03.7)	
Marital status			
Married	197 (54.4)	362 (89.2)	16.77 (0.00)
Unmarried	9 (20.4)	44 (10.8)	
Address			
Addis Ababa	180 (52.0)	346 (85.2)	1.31 (0.25)
Out of Addis Ababa	36 (53.3)	60 (14.4)	
Religion			
Orthodox	149 (52.4)	284 (70.0)	*NS*
Muslim	43 (51.1)	84 (20.7)	
Protestant	22 (61.1)	36 (08.9)	
Others	2 (100.0)	2 (00.4)	
Educational status			
Illiterate	43 (58.1)	74 (18.2)	8.7 (0.00)
Elementary	75 (56.0)	134 (33.0)	
Secondary	75 (45.5)	165 (40.6)	
College	23 (69.7)	33 (08.1)	
Family income Birr per month			
<249	67 (43.8)	153 (37.7)	14.00 (0.00)
250-499	36 (50.0)	72 (17.7)	
500-749	35 (55.6)	63 (15.5)	
850-999	37 (68.5)	54 (13.3)	
>1000	41 (64.1)	64 (15.8)	
Total	**216 (53.2)**	**405 (100)**	

*Significant difference (p<0.05) as Tigre (reference) compared to either Gurage or Amhara; ΨSignificant difference (p,0.05) as Oromo (reference) compared to either Gurage or Amhara; All other pairs of ethnic group comparison showed no significant difference; *NS* No significant difference among the major three pairs of religion groups

Table 2: **Need of labor companion and obstetric factors of women delivered at three teaching hospitals in Addis Ababa, 2004**

Characteristics	Wanted labor companion No (Column %)	Total No (Column %)	χ^2 (p-value)
Parity			
0	43 (19.9)	82 (20.2)	0.64 (0.72)
1-4	165 (76.3)	306 (75.4)	
≥5	8 (03.7)	18 (04.4)	
Mode of delivery			
Spontaneous vaginal delivery	123 (6.9)	250 (61.6)	[1]
Forceps/vacuum	38 (17.6)	76 (18.8)	[2]
Cesarean section	55 (25.5)	80 (19.7)	
Duration of labor in labor ward			
0-4 hours	29 (13.4)	51 (12.6)	6.74 (0.34)
5-8 hours	110 (50.9)	202 (49.8)	
9-12 hours	48 (22.2)	102 (25.1)	
≥13	29 (13.4)	51 (12.6)	
Cervical dilatation on admission			
0-3 cm	70 (32.4)	134 (33.0)	0.07 (0.78)
4-6 cm	146 (67.6)	272 (67.0)	
Total (raw %)	**216 (53.2)**	**406 (100)**	

[1]No significant difference (p-value>0.05) between spontaneous and forceps/ vacuum delivery

[2]Significant difference (p-value<0.05) when Cesarean (reference) was compared to either spontaneous or instrumental deliveries

Discussion

Maternal fear is associated with increased catecholamine level and dysfunctional labor, leading to more intervention (9). Most of the women (73%) were afraid of labor. Continuous labor support ameliorates such fear and addresses some of the common reasons underlying their fear. Labor pain, fear of undergoing operative deliveries and being with unfamiliar people during labor in health facilities were the common reasons given for their fear. Besides alleviating fear arising from unfamiliar environment and people and unsubstantiated operations, labor support decreases the need for analgesia and anesthesia in early labor (12).

Home delivery is the common practice in the country accounting for more than 90% of the deliveries (12). Earlier studies revealed that women preferred home deliveries because they want to be with relative (43%), trust in traditional birth attendance (TBA) or relatives (20.2%) and dislike the behavior of health professionals (13.1%) (11). Here again, slightly more than half of the interviewed women showed need of labor support by non-medical personnel during labor.

A significantly higher (68.8%) proportion of the women delivered by Cesarean section preferred having companions than those delivered spontaneously (49.2%) or by forceps/ vacuum (50%). The increased need by women delivered by Cesarean may be influenced by their experience of the abdominal delivery or/ and the longer stay in the hospital. As all of them are interviewed before discharge and at a time when they were comfortable, the longer stay in hospitals due to Cesarean delivery may also influence their need of having companions.

Generally, institutional based deliveries in Ethiopia don't allow any companion into labor wards. Women are left alone with unfamiliar health professionals and environment with all their fears and worries. To make matters worse, analgesia and anesthesia are not used for vaginal deliveries whether instrumental or not. Providing adequate analgesia and decreasing parturients' fear improve progress of labor. Presence of continuous labor support has a great impact on emotional strength of the women to cope with labor and in facilitating communication with health workers. This is useful in participation of the women in decision-making.

In this study, 'mothers' were the most preferred labor companion whereas in other countries 'husbands' are the common companions. This is mainly due to cultural and social differences. In our culture, women especially mothers play vital role in labor and delivery while men are put aside. Since father/partners lack experience and objectivity due to their emotional involvement, and it is the presence of the doula that has a significant and better out come. Even though the presence of a doula results in the most extensive and consistently positive effects on obstetric and psychological outcome (12), introduction of doula into Ethiopian labor wards needs to be substantiated by locally relevant research outputs (13-16).

In general, this study shows that there is a need for introducing companions into our labor wards when requested by the laboring women in such a way that it does not compromise the desire of other women who do not want to have companion, privacy and clinical care. Further researches including operational research addressing provider, companion and programmatic issues are essential to enrich policy and programmatic changes.

Acknowledgement

We would like to thank all women and data collectors participated in this study. We also appreciate Dr Samson J and Dr Sisay T for their help in data management and Dr Atsede A, Christian and Tinsae M. for their continuous help and encouragement.

Reference

1. Klaus MH, Kennell JH. The doula: an essential ingredient of childbirth rediscovered. Acta Paediat 1997; 86:1034-6.
2. Kathryn D.S, Gale B, Marshall K. A comparison of intermittent and continuous support during labour: a meta analysis. Am J Obstet Gynecol 1999; 180:1054-9.
3. Penny P, Smikin, MA. Non pharmacological relief of pain during labour: Systemic review of five methods. Am J Obstet Gynecol 2002; 186(supp):131-59.
4. Rubin R, Scrutton JP. Pain relief in labour. BMJ 1997; 25-9.
5. Chalmers WW. Social support in labour: a selective review. J Psychosom Obstet Gynecol 1993; 14(1):1-15.
6. Lederman RP, Lederman E, Work BA, McCan DS. The relationship of maternal anxiety, plasma catecholamines and plasma cortisol to progress in labour. Am J Obstet Gynecol 1978; 132:425-9.
7. Adamsons KM, Herbath E, Myers RE . Production of fetal asphyxia in the Rhesus Monkey by administration of cathecolamines to the mother. Am J Obstet Gynecol 1971; 109:248-62.
8. Lourder C, Garcia C, Diaz C, Ortiz O, Regnoso S, Langer A. "Alone I wouldn't have known what to do" A qualitative study on social support during labour and delivery in Mexico. Soc Sci Med 1989; 47:395-403.
9. Planing and Programming Department Ministry of Health Ethiopia. Health and Health indicators. 2001; 17.
10. Mekonen Y, Asnakech M. Utilization of Maternal health care services in Ethiopia. Maryland, USA: ORC Macro, 2002.

11. Mesganew F, George Ot, Desta S. Determinants of antenatal care attendance and preference of site of delivery in Addis Ababa. Eth J Health Development 1992; 6(2):17-21.
12. Alan HD, Martin LP. Current Obstetric & Gynecologic Diagnosis and Treatment. Eighth edition. 1994: 226.
13. Hodnett EC [update, software]. The Cochrane LibraryVersion 1. Oxford: Oxford; 2002.
14. Roberto S, Jhon K, Marshall K, Steven. R, Juan U. The effect of Supportive companion on perinatal problems, length of labour, and mother infant interaction. N Eng J Med 1989; 303:597-600.
15. Jhon K , Marshall K, Susan M, Steven R, Clark H. Continuos emotional support during labour in a US hospital. JAMA 1991; 265:2197-201.
16. Zhang J, Bernasko JW, Leyborich E, Fahs M, Hatch MC. Continuos labour support from labour attendant for primiparous women: a metal analysis. Obstet Gynecol 1996; 88(4pt 2):379-84.
17. Wang D, Mao X, Qian S. Clinical observation on Doula deivery. Zhonghua - Fu-Chan-Ke-Za-Ahi 1997; 32(11):659-61.
18. Ellen DH. Pain and women's satisfaction with the experience of childbirth: A systemic review. Am J Obslet Gynecol 2002; 186(w):160-72.