



Title	Perception of bleeding as a danger sign during pregnancy, delivery, and the postpartum period in rural Nepal.
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Many developing countries implement the safe motherhood program to tackle high maternal mortality ratio. The approach requires recognition of the signs of emergency obstetric cases in order to have immediate careseeking taken place, followed by immediate medical care provided. Whether such signs are timely recognized at community level is associated with how community people perceive health problems. This article aims to explore the local understanding of one of the danger signs, bleeding during pregnancy and at delivery, and the meaning attached to it. The study was conducted in Kavrepalanch district, Nepal. Different qualitative methods were applied. The findings include that community's perception of bleeding might be quite different from health professionals, perceptions and meanings attached to bleeding vary depending on the actors in the family. They all have significant programmatic implications for what should be the focus of the health education and who should be involved in promoting maternal health.

1. Introduction

1.1. Maternal Health in Nepal

Maternal health is of major concern in Nepal. The measured maternal mortality ratio (MMR) is one of the highest in the South Asia region, with an official figure of 539 deaths per 100,000 live births (Ministry of Health, Nepal, 1998); however, MMR has recently been estimated to be 826 (Hill, AbouZhar & Wardlaw, 2001). The Safe Motherhood Program in Nepal is attempting to decrease maternal mortality via two approaches: the continuous provision of essential obstetric services in health facilities and ensuring skilled attendance at deliveries (Ministry of Health, Nepal, 2001a). To be effective, both approaches require the recognition of high risk or emergency obstetric situations that require immediate medical care followed by immediate careseeking. Maternal health interventions worldwide commonly stress community education concerned with danger signs as the cornerstone of their efforts to ensure that women access emergency obstetric care when required. Even when community education concerning danger signs is done well, this may not result in an increase in careseeking, as demonstrated in a Nigerian study (Gummi, Hassan, Shehu & Andu, 1997).

Many other factors affect careseeking, as demonstrated by the responses to the 2001 Nepal Demographic and Health Survey. Almost all the women surveyed (86.5%)

reported experiencing major problems in accessing healthcare for themselves when they were sick. The various reasons for this problem included difficulty in obtaining money for treatment (66.3%), not wanting to go alone (57.2%), lack of transport (51%), the distance to the health facility (50.5%), concern there may not be a female provider (49.4%), not knowing where to get treatment (27.9%), and difficulty in obtaining permission to seek treatment (17%) (Ministry of Health, Nepal, 2001b). A number of programs have attempted to address these barriers to careseeking via interventions such as community contact persons and emergency transport systems (Kwast, 1995; Nwakoby , Akpala, Nwagbo, Onan, Okeke, Chukudebelu & et al., 1997).

Community education regarding danger signs during pregnancy, labor, delivery, and the postpartum period should thus be considered as necessary but not sufficient to increase the early and appropriate use of emergency obstetric care services. The strategic framework for working with individuals, families, and communities, as developed for the WHO Making Pregnancy Safer initiative, is encompassed by the first of the four priority areas of interventions: “Developing capacities to stay healthy, make healthy decisions and respond to obstetric and neonatal emergencies (Portela & Santarelli, 2003).” It has been demonstrated in literature that studies on community perception on illness and health care lead to pathways for better health seeking behavior (Rashid, 2001; Watkins & Plant ,

2004) Further study of the local understandings of danger signs and the meanings attached to them are required to improve communication with pregnant women and their families regarding when and where to seek care for problems encountered during pregnancy, labor, delivery, and the postpartum period.

In this article we focus on one danger sign in particular, bleeding, and examine how it is understood by different family members. Specifically, we describe what constitutes ‘abnormal’ bleeding for rural Nepali women, and what the perceived causes of bleeding are. Finally, we discuss the implications of these findings for maternal health programs in Nepal.

1.2. Meanings of bleeding over the life cycle

‘Blood’ and ‘bleeding’ have a vast range of meanings in South Asia. They have symbolic associations with the concepts of caste rank, purity and pollution, and hot and cold, and may be a key element in ethnophysiological models of digestion, sexuality, and reproduction (McGilvray, 1994). Local understandings of menstruation may view both menstrual and postpartum blood loss as a natural way to rid the body of contamination, excess heat, or excess blood, and a crucial step in restoring balance.

In an ethnographic study on Nepali women, Bennett (1981) describes menstruation blood as “representing sexuality which is dangerous but necessary and potentially good if

it can be controlled, for it is the substance from which a child is formed". She further discusses a symbolic association between menstrual blood and women, especially in their roles as wives. The patrilineal unit considers affinal women, like menstrual blood, to be both necessary and dangerous. Women must be brought in to produce children if the lineage is to continue. At the same time, these women are a threat to the family unit and to their own husbands individually (ibid.).

In South Asia, pregnancy itself is usually not described as a polluting condition, but menstruation, sexuality, and childbirth are (McGilvray, 1994). When any of these three conditions are present, women may be prohibited from coming into contact with other family members, especially males, cooking food, or entering the kitchen (Afsana & Rashid, 2000; Blanchet, 1984; Jeffery, Jeffery & Lyon, 1985, 1989; McGilvray, 1994; Thompson, 1985). The period of postpartum seclusion, during which these behavior proscriptions apply, varies from 7 to 40 days, and may end either when the baby receives its name or when some rite of purification, such as a ritual bath, is performed. The postpartum pollution is termed "sitting in a corner", and mother and baby are confined to a small hut or room (Bennett, 1981).

Birth, like death, states Bennett (1983), is one of the most radical assertions of man's involvement with the organic processes of life that governs *samsara* (the wheel of life),

and is consistent with the South Asian view that birth creates severe pollution (Afsana & Rashid, 2000; Blanchet, 1984; Jeffery et al., 1985, 1989; McGilvray, 1994; Thompson, 1985). Pregnancy is ritually recognized after the fifth or sixth month, when the life breath (*sas*) is believed to have entered the embryo. The woman then becomes “two-bodied” (*dujiu*) and is barred from participating in religious ceremonies, especially memorial rituals for the ancestor spirits (*sraddha*), and from cooking rice for adults (Bennett, 1981). The formal period of birth pollution (*sutak*) begins with the cutting of the umbilical cord and extends until the morning of the eleventh day after birth.

In patriarchal societies, such as that found in the study area, authority and control are traditionally vested in the eldest male family members. In reality, however, it is the mother of the son, the mother-in-law (*sasu*), who frequently exercises control over the household tasks, resources, and the activities of her son’s wife (*buhari*) (Ministry of Health, His Majesty’s Government of Nepal and UNICEF, Nepal, 1996; Bennett, 1983). The latest UNICEF situation analysis also states that inequitable gender relationships and power imbalances between key family members, such as husbands and mothers-in-law, hinder many women from making the decision to seek medical care (UNICEF Nepal, 2006). While the significance of such a power imbalance has been noted at a household

level, thus influencing the decisions of women to seek health care, there is a lack of substantial data regarding the gaps that exist in terms of the perceived risk among the different actors of the household and how it may delay the care seeking behavior of women. The present study, therefore, will aim to reduce the knowledge gap via the gathering of evidence that records the dynamics of the family interrelationships of those experiencing a perceived reproductive health risk.

2. Objective

The objective of this article is to describe local knowledge, perceptions, and care seeking behavior concerned with health problems during pregnancy, delivery, and the postpartum period, with a special focus on bleeding. This danger sign has been selected because it is relatively easy to recognize compared to other danger signs such as those related to pre-eclampsia.

3. Materials and methods

3.1. Study Site

The study site is located in the Kavrepalanchowk District, adjacent to Kathmandu, the Nepalese capital. The distance from the district to Kathmandu ranges from 40 to 60 km. The central and surrounding parts of the site are relatively urbanized, with access to electricity, several primary schools and a secondary school, and a well-equipped primary

health care center. The remote part of the site is hilly, and it can take up to three hours to walk to the health center. Just outside the study site, a hospital run by a non-governmental organization in a town called Banepa; this facility is the equivalent of a district hospital. There is a further district hospital at Dhulikhel, not far from Banepa, which is the capital of the Kavrepalanchowk District. Both hospitals provide emergency obstetric care services. For the majority of the locals, a two to five hour journey, by foot and bus, is required to get to the hospitals. Even so, people have reasonably good access to the medical facilities compared to the more remote regions of Nepal.

The dominant ethnic/caste groups, nearly half of the residents, are Brahmin and Chhetri (both are higher caste Hindus). The second-largest group, accounting for nearly one-fourth of the population, is the Tamang. The Tamang are of Tibetan descent, and live in the hillier sections of the district, although some run small shops and restaurants in Khopasi town. They are Buddhists and maintain a tradition of ancestor worship. The Newar constitute nearly one-tenth of the population, and are a mixture of Hindus and Buddhists, living primarily in Khopasi town. The lower-caste Hindus are a small group, and most live near the central part of the study area. Despite the multi-ethnic background, however, the study site is predominantly influenced by Hindu culture and tradition.

3.2. Methods

Following the principles of the grounded theory, an inductive approach was used to generate codes (Campero, Herrera, Kendall & Caballero, 2007) into several emerging themes. Qualitative research methods used to elicit information and data included key informant interviews, case histories, free-listing, ranking, and pile sorting. The female research assistants, all with a good command of the English language, were trained in qualitative research by one of the authors. The training was conducted in collaboration with the local research institute, CREHPA (Center for Research on Environment, Health, and Population Activities). The interviews and other information were all recorded in Nepali and later translated into English.

The number of informants interviewed for the key informant interviews totaled 28, participating in 2 to 5 interviews each. The number of case histories totaled 72, with 70 cases concerned with health problems during pregnancy, delivery, and the postpartum period, and 2 cases with maternal deaths. The informants were identified via a snowball approach. Some informants were introduced to the researchers by the health center staff in the study area, whereas others were identified through their personal networks.

The “key” informants were carefully selected after an initial interview, based on their meeting certain criteria concerned with levels of knowledge, willingness, and articulation

regarding the study topics. Once the appropriate key informants were selected, they were interviewed repeatedly on various sub-topics, two to five times. The key informants included village wise-men, wise-women, village health volunteers, mothers-in-law, women with small children, husbands, traditional birth attendants (TBA), traditional healers, and pharmacists. The semi-structured interviews were conducted using ethnographic interview guides. The guides included such questions as “What are common health problems that women face related to child birth?”, “How do you know if women are not doing well?”, “What are the ways that women cope with health problems during pregnancy, delivery, and the postpartum period?”, and “What are the kind of people or places women go to when they have health problems during pregnancy, delivery, and the postpartum period, and why?”

The case histories were identified mainly via the health center staff, village health volunteers, and TBAs. For the mortality cases, we interviewed family members such as the husband, mother-in-law, neighbors, and friends; for obstetric emergency and high-risk cases, we interviewed the women themselves and other family members.

After the key informant interviews were conducted and case histories taken, we undertook systematic data-collection methods such as free-listing, ranking, and pile sorts. Each exercise was conducted with 20 respondents per group; women with children under

five, mothers-in-law, husbands, traditional healers, and TBA. Some of the respondents were the same in each exercise, but others were recruited separately. In this article, only the results for women, mothers-in-law, and husbands are presented. First, free-listing was carried out and each respondent was asked to provide answers to the question “What are the kinds of health problems the women have during pregnancy, delivery, and the postpartum period?” followed by “What do you think causes such health problems?”

The 15 most reported health problems, as given by the respondents, were chosen from the free-listing and the ranking was performed by a further 20 respondents. These respondents were asked to classify each health problem into one of three categories according to their perceived level of seriousness: serious, in-between, or mild. Scores were given to each category of seriousness; the total score was then calculated and the rankings assigned. The higher the rank, the more serious the health problem is perceived by the respondents. Pile sorts were used to investigate how people classify different types of health problems, as it was thought that this approach might provide insights into the reasons for the perceptions of severity. Respondents were asked to arrange the health problems according to their perception of what “went together” (Weller & Romney, 1988). Reasons for the arrangements were also requested with regard to health problems categorized into the same pile. BETA, software developed for textual analysis, was used

to perform the content analysis for data obtained from the key informant interviews and case histories. The content analysis, based on generated coding, emerged into the main themes. The data from the systematic data-collection methods were analyzed using Anthropic 3.2 software. All data and information were generated using these types of multiple methods in an attempt to attain convergent validity.

Ethical approval to proceed with the study was received from the Technical and Ethical Review Sub-committee of the Nepal Health Research Council and the Committee on Human Research of the Johns Hopkins Bloomberg School of Public Health. All informants or respondents for each method had the purpose of the study explained to them and their consent was sought. Given that many of the informants and respondents were illiterate, and the fact that the writing of signatures could raise unnecessary suspicion due to political unrest in Nepal, oral consents were taken.

4. Results

4.1. Normal and abnormal bleeding

Informants viewed bleeding, from pregnancy through to the postpartum period, quite differently from the health professionals, who consider it to be a danger sign indicating the need to seek immediate medical attention. Respondents believe that heavy bleeding does not normally occur during pregnancy. This belief is indicated in the free-listing of health

problems, with more than half of all the sub-groups, women, mothers-in-law, and husbands, not recognizing bleeding as a “problem”.

This lack of awareness may be due to their local understanding of blood being the source of the forming fetus. As stated by one informant (Mother-in-law, Chhetri, 55 years), “a fetus is believed to be formed by blood being collected in a womb”, which is similar to findings in Sri Lanka and elsewhere in South Asia (McGilvray, 1994). It is therefore important to ask how people distinguish between “too much” bleeding during pregnancy and bleeding that is “not serious”. A female informant suggested that people draw the line between normality and abnormality based on the quantity of blood and/or the duration of the bleeding.

If there is bleeding during pregnancy for 2–3 days, the women usually remain quiet about it. If bleeding continues for 6–7 days, some women may still remain quiet about it but other women may seek advice from other women and then seek medical help. Usually if a woman changes 2–3 talo (a piece of old saree used as a sanitary napkins) a day, it may not be considered too much. If she has to change 3–4 talo a day, it is considered too much. (Woman, Chhetri, 32 years)

While bleeding during pregnancy is considered an uncommon occurrence, bleeding

after delivery is considered “normal” by many people. Many informants did not draw a distinction between normal and abnormal amounts of bleeding in the days following delivery, and a number of them appeared to feel “the more the better”.

Budhapaka (older people) say, “Jati ragat gayo, teti ramro huncha (the more bleeding there is, the better it is for the woman’s health”).

(Husband, Chhetri, 34 years)

“Excessive bleeding after delivery” is defined both by the quantity of blood and the pattern of bleeding. Bleeding for up to 6–7 days after delivery is considered normal; however, if it continues past this point it is considered “too much”. The resumption of bleeding after the initial post-delivery bleeding has stopped is also considered “abnormal” or “excessive”. If the women have to change the *talo* more than 6–7 times a day or the amount of blood per day is 3–4 *copara* (a bowl usually used for urination/defecation inside the house), it is regarded as excessive and requires some action to stop it.

Even when women consider that bleeding is becoming problematic, they often do not take any immediate action, but rather adopt a wait-and-see approach. Informants feel that there are very few effective methods at the community level to deal with the problem of bleeding once it occurs. Only when bleeding becomes excessive, by their definition, do informants consider that a woman should be sent to hospital.

4.2. Naturalistic and personalistic causes of bleeding

Women take a variety of actions to limit bleeding when they feel it is excessive or that it follows an abnormal pattern. The actions taken usually bear some relation to the perceived cause of bleeding.

Foster applies the term “naturalistic” to natural forces or conditions that are thought to produce illness, such as “cold, heat, dampness and, above all, an upset in the balance of the basic bodily elements”, as occurs when excessive heat or cold enters the body (Foster, 1976). He applies the term “personalistic” to illnesses that are thought to be due to “the active, purposeful intervention of an agent who may be a human (witch or sorcerer), nonhuman (a ghost, an ancestor, an evil spirit), or supernatural (a deity or other powerful being) (ibid.)”. Informants recognized both naturalistic and personalistic causes of bleeding, as shown in Table 1. Naturalistic causes include heavy or excessive work, lack of rest or food, a hot–cold imbalance, and normal changes to the body following childbirth. Personalistic causes include *bokshi* (human witch), *lagan* (malevolent spirit), and the entry of lower caste people (*sano jat ko*) into the womb.

[Insert Table 1 here]

4.3. Imbalances as perceived causes of bleeding: heavy work, weakness, and

imbalance between “hot” and “cold”

Foremost among the naturalistic causes of bleeding, both during pregnancy and post-delivery, is work and lack of rest, including working too much, working too long, carrying very heavy loads, going to bed late, getting up early, and never having a break.

Informants’ views of work are paradoxical to an outsider. On the one hand, work is seen as extremely beneficial to the woman. Hard work during pregnancy is thought to make delivery easier, and hard work after delivery is thought to speed recovery.

Pregnant women do every kind of work. The harder you work during pregnancy, the easier it will be for delivery. If you stay idle and take rest during pregnancy, it will be even more difficult. So the women do all types of work during pregnancy right up until the delivery. (Husband, Newar, 32 years)

On the other hand, it is recognized that work can be excessive, resulting in imbalance. Work should be limited to restoring balance, but informants felt there was little chance of a woman, especially a younger woman with a mother-in-law at home, avoiding hard work.

We village women have to be engaged in hard work anyway, regardless of whether we are pregnant or not (Woman, Chhetri, 28 years)

The issue of work and workload cannot be discussed without reference to the relationship between the son’s wife (*buhari*) and her mother-in-law (*sasu*). In the study

site, 56% of women were living with their mother-in-law, and 24% were living under the influence of their mother-in-law. The mother-in-law/son's wife (*sasu/buhari*) relationship is "traditionally fraught with tension" among the Brahmin and Chhetri (Bennett, 1983).

Excessive work is only one of a number of imbalances that are thought to contribute to abnormal patterns of bleeding before and after childbirth. Lack of food and *kamjori* (weakness) are other common types of imbalance cited by informants. In the case of *kamjori*, various traditional and modern medicines are often taken to re-establish balance, including Horlicks, a popular soft drink, vitamin tablets, herbal medicine, and over-the-counter drugs. During the postpartum period, a special locally produced medicine termed *sutkeriko aausadi* (medicine of the postpartum woman) is given, supposedly to restore energy to women with postpartum *kamjori*. This medicine is a paste made from a long list of herbs and expensive spices fried in *ghee* (oil), with milk added. This mixture is boiled slowly for several hours. The *sutkeriko aausadi* is to be given to a woman twice a day for one month at the husband's house, and for another month at the *maiti* (maternal house) when she returns. In reality, the quantity and duration of the dose of *sutkeriko aausadi* depends on the economic status of the household. The *sutkeriko aausadi* is believed to bind or close up the mother's body after childbirth and make the

body tight again. Since some people ascribe excessive bleeding after delivery to *kamjori* (weakness), providing the postpartum women with locally made “medicine”, such as the *sutkeriko aausadi* that gives them energy, is considered an important form of therapy for blood loss. It is something, regardless of whether the bleeding after delivery is perceived as excessive or not, which the women enjoy during the postpartum period.

As described by various authors, an imbalance of *garmi* (hot) and *chiso* (cold) within the body is a common model of illness causation for pregnant and recently delivered women in South Asia (Bennett, 1983; Jeffery et al., 1989; McGilvray, 1994); indeed, some informants also attribute bleeding during pregnancy to this imbalance.

Bleeding (during pregnancy) occurs due to garmi bhayera (heat inside body).

When one eats food like chapatti (bread made of wheat) without ghee (oil)

and work in the field under the sun for a long time, she bleeds. (Woman,

Chhetri, 35 years)

4.4. Postpartum bleeding as a natural phenomenon

As mentioned earlier, while bleeding during pregnancy is considered an uncommon occurrence and is therefore considered more often to be abnormal, bleeding after delivery is considered “normal” and even beneficial. There are a number of explanations for why bleeding at this time is considered normal and requiring no treatment (see Table 1); it is

viewed as a “normal transition that occurs after delivery”. Informants stated that “*bigreko ragat*” (bad/broken blood) is meant to be expelled after delivery. The blood remaining in a womb after producing a fetus is thought to be bad blood that needs to be washed out. Rather than viewing the bleeding as a problem, women view a lack of bleeding as problematic.

I did not bleed much at my first delivery, so I had the problem of heavy bleeding (ragat tali) this time. All the dirty blood, accumulated since the last pregnancy, was coming out all together. (Woman, Brahmin, 27 years)

Some people say it is good to have a lot of bleeding after delivery.

They believe that a lot of bleeding makes swollen stomach smaller.

(Mother-in-law, Chhetri, 48 years)

These perceptions also support the supposed benefits of hard work, especially carrying heavy loads, during the postpartum period, as work is thought to accelerate the bleeding.

It is good to carry heavy loads after delivery because, then, all the bad blood left behind inside the woman's body would come out and be washed away.

(Husband, Newari, 26 years)

Other informants related that bleeding occurs because the body is loose after delivery (*jue khakulo byayekole*); therefore, bleeding is to be expected and is natural.

Rather than taking medicine or treatment to control postpartum bleeding, women may be given treatments that increase blood flow.

After delivery, most women are given rakti, which is blood obtained from a goat after its head has been cut off and blood allowed to congeal to help increase blood in a woman's body to replace the blood lost at delivery."

(Woman, Female Community Health volunteer, Chhetri, 40 years)

Rakti is not given to the woman on the first day after delivery because it might induce a "fever in the women's *aart* (internal heat inside the women's body)".

4.5. Personalistic causes of bleeding

People living in the study site sometimes attributed abnormal bleeding to personalistic causes when the bleeding occurred during pregnancy. Among the higher castes, Brahmin and Chhetri, bleeding during pregnancy may be regarded as a result of the deed of a *bokshi* (human witch). Witchcraft is generally thought to be performed by people from the lower castes.

Among less educated Brahmin and Chhetri families, people think that bleeding occurs because a person of low caste (sano jat ko) like damai (tailors) or

kami (blacksmith) has entered into the womb of the woman and that bleeding would stop on its own after some time. They do not consider it to be a serious problem. If the bleeding is light, people think it is because of this reason but if bleeding occurs and continues for 3-4 days, it is considered excessive. If a woman has to change talo/kapada (a piece of old saree used as a sanitary napkin) 3 to 4 times a day, it is considered excessive bleeding. If the trace of blood is seen during the early stage of pregnancy, the bleeding is not considered normal. (Woman, Chhetri, 25 years)

Bleeding caused by witchcraft via “*sano jat ko manche*” (people from the lower caste entering the womb) is not considered a serious problem, and serious action is not taken. For bleeding caused by malevolent spirits or *lagaan*, traditional healers such as the *dhami-jankri* or *janne manchhe* may be consulted. The effects of the external agents, such as *bokshi*, *lagaan*, the anger of the ancestral God, or jealous people, on one’s health is believed by many to be removable only by the *dham-jankri* or *janne manchhe*. People may, nevertheless, also seek treatment with modern medicines for any ill health caused by these agents. “Hospital drugs” are thought to work only after the adverse effects caused by the external agents have been removed by the *dhami-jankri* or *janne manchhe*.

4.6. Differences in perceptions of bleeding amongst different actors

It was observed that older and less educated informants were more likely to ascribe bleeding during pregnancy and after delivery to “traditional” causes. Younger women tended to attribute abnormal bleeding to either a heavy workload or a physical state of weakness (*kamjori*). *Kamjori* was often attributed in turn to a lack of rest or lack of nutritious food during pregnancy. Data from the free-listing supported this belief. Younger women did not report that bleeding after delivery as “natural” or “good to have”; nor did they tend to refer to external agents such as *bokshi, lagaan*, anger of God, or punishment by ancestral spirits. In contrast to the young women, quite a few mothers-in-law provided answers that substantiated the local knowledge on bleeding after delivery as being “natural and good to have”.

The results of the ranking also revealed differences in perceptions of bleeding related to pregnancy and delivery among the women, mothers-in-law, and husbands (Table 2). In the ranking exercise, younger women and mothers-in-law ranked bleeding during pregnancy as the second-most and most important health problem, respectively, while husbands ranked it in fifth place. Husbands paid less attention to and demonstrated less concern regarding women’s health problems during pregnancy and after delivery, and attributed greater importance to the problems of the unborn child and the newborn baby. The husbands appear to be unaware of the health problems their pregnant wives are

experiencing.

[Insert Table 2 here]

With regard to (excessive) bleeding after delivery, interesting differences were also identified between the group of younger women and the group of mothers-in-law. The former ranked it the most serious health problem, whereas the latter ranked it only third-most important. As previously stated, bleeding after delivery is sometimes viewed as something natural or as a positive occurrence. The older and less educated women are, the more likely they are to hold such a traditional idea concerning post-delivery bleeding. This belief may be the reason why the mothers-in-law group ranked post-delivery bleeding in third place.

Pregnancy and childbirth is scarcely, if at all, considered as an excuse for women to be exempt from a heavy workload in the study villages. While many women feel pregnancy is the period during which they need care and rest, most mothers-in-law regard it as a natural event in a woman's life, for which special care is not required.

Women have problems like vomiting, lower stomachache, swelling of hands and legs, dizziness during pregnancy. But we (older generation) did not regard them as "problems" because we had to go to the field

to work and the forest to collect fuel woods anyway. Nowadays, women have less work compared with our time. They do not have to go to the forest early in the morning because (she believes) most people nowadays use kerosene for cooking or hire somebody to cut tress in winter and store them. (Mother-in-law, Chhetri, 35 years)

A graphical presentation of the results of the pile sorts exercise also points toward such differences in the perceptions of the mothers-in-law and younger women. The women viewed bleeding during pregnancy and after delivery as being closely related: “they are serious, life-threatening problems” (the response that many women gave as their reason for grouping the two bleeding problems together). The mothers-in-law group did not always agree on this point: some stated that it is serious while others did not necessarily consider it so (see the results of the pile sorts, Figure 3 for women and Figure 4 for mothers-in-law). The distance between ‘bp’ (bleeding during pregnancy) and ‘bd’ (bleeding after delivery), illustrated by the filled circles in Figure 3 and Figure 4, may reflect this difference.

[Insert Figures 1 and 2 here]

While there are differences in the perceptions of bleeding between mothers-in-law

and the younger women, the women's behavior remains under the strict control of the mothers-in-law.

The sasu (mother-in-law) makes us cook in the kitchen from the 11th day (after delivery) though sasu stays at home, doing nothing. They may know our problems but they do not feel like letting us take a rest. We are buhari (daughter-in-law) and sasu think that buhari should work more. Sometimes we feel that sasu do not regard us, buhari, as human beings but as a working machine. (Woman, Brahmin, 28 years)

My husband makes the decision but my sasu is interested in where I go and what I do. If I go somewhere, she always asks me where I had gone. I tell her the truth sometimes but I have to lie at other times. For example, she does not like it when I go to Khopasi primary health center for antenatal care. She said, "I had delivered many children and we have never heard or seen a hospital. Now, why should you go to the health center.?" My husband sent me for an antenatal care check-up. He also lied to his mother. (Woman, Brahmin, 25 years)

However, some mothers-in-law, likely to be a minority, have realized that some care

is needed for their daughters-in-law during pregnancy, delivery and the postpartum period.

I sent her (buhari) to hospital. If I had not sent her to the doctor and she suffered a lot and some bad things had happened to her and her baby in the womb, it would have been very bad. So I sent her to hospital (for antenatal care). (Mother-in-law, Newar, 40 years)

Husbands, conversely, were found to have little knowledge about and involvement in their wives' problems during pregnancy and delivery. When interviewed about his wife having been sent to a hospital due to an obstructed labor, a male informant failed to provide even basic information such as what the problem was and for how many days she had been admitted. There are many men who show little interest in their wives' problems during pregnancy and delivery.

We have not been trained to deal with the complications that may occur during pregnancy, delivery and after delivery. We do not have any knowledge about them. So we do not know the signs and symptoms of complications. (Husband, Chhetri, 30 years)

We do not pay too much attention to women's problems because we are males and women themselves know better about their

own problems. (Husband, Chhetri, 30 years)

These statements clearly indicate that the husbands feel that “childbearing and childbirth are women’s business”. In addition, there is a reticence (*laaz lagnue* = shamefulness) on the part of the women to talk to males about problems related to their own body and childbirth, even when it is with their own husband; therefore, men maintain a distance from being involved in reproductive issues.

During pregnancy, the woman herself tells her problems to her husband.

If the wife laaz lagnu (feels shy/embarrassed), she tells her problems to mother-in-law and then, the mother-in-law tells these problems to her son.

During delivery, many women come to help, amongst those who are there is the trained TBA called by a woman’s parents-in-law. The TBA checks the woman and judges if a woman has difficulty or problems. That is how a husband comes to know if his wife has any problems. Unless a TBA or other people tell a husband about the wife’s complications, he would not know. (Husband, Chhetri, 31 years)

5. Discussion and Conclusion

Vaginal bleeding is one of the most important danger signs during pregnancy and after delivery. Women are advised to go to the nearest health post, health center, or hospital

(Ministry of Health, Nepal, 2001a); however, health-education messages fail to explain the level of bleeding considered to be dangerous and why this is so. People do not consider bleeding during pregnancy as a common complaint; moreover, the community's definition of "excessive bleeding" results in people waiting at home for longer periods than they should. Bleeding after delivery, on the other hand, is regarded as something natural. Sometimes it is even considered necessary to wash away bad blood from the woman's body after delivery: the more blood, the better. Furthermore, popular medicine (e.g., herbal medicine) is often relied upon to stop bleeding once it is recognized as "excessive bleeding". Again, the community's definition of "excessive bleeding" results in women remaining at home with bleeding for an inappropriate length of time. These findings imply that at the community level, there is a delay in the recognition of bleeding problems during pregnancy.

Given that some people regard "bleeding after delivery" as normal, it may be ineffective to attempt to educate these people that bleeding can be a danger sign. The definition of "abnormal" bleeding within the community is not the same as the biomedical definition. There is also a need to better explain how long is too long for antepartum and postpartum bleeding, and why it is too long (e.g., the possible health problems indicated by bleeding). At the same time, beneficial practices in relation to the community's

perception of bleeding, including providing nutritious food such as *sutkeriko aausadi*, should be endorsed and promoted, as it positively affects the general health of postpartum women.

Mothers-in-law are central figures in decisions related to reproductive issues among young married women in Nepal and elsewhere in South Asia (Afsana & Rashid, 2000; Al-Nahi & Post, 1998; Bennett, 1983; Blanchet, 1984; Blanchet & Zaman, 1999; Chawla, 1994; Jeffery et al., 1985, 1989; Kadir et al., 2003; McGilvray, 1994). How they perceive childbearing, childbirth, and the health problems during their daughters-in-law reproductive period affect, to a great extent, what type of care the women receive or do not receive. For example, many mothers-in-law consider bleeding after delivery to be normal and even a positive occurrence. They seem to consider, therefore, that only “excessive” bleeding after delivery is unusual. This suggests that their recognition of “excessive” bleeding after delivery as a “problem” may be delayed due to their possession of such local knowledge. Bleeding during pregnancy is also associated with external agents such as *bokshi* by some mothers-in-law. On the other hand, for young daughters-in-law who are generally more highly educated than the mothers-in-law, “excessive bleeding” would be an uncommon and life-threatening problem. Young daughters-in-law also rarely ascribe “bleeding after delivery” to external agents such as

bokshi; instead, the women are likely to attribute not only bleeding after delivery, but also bleeding during pregnancy, to a “heavy workload” and “lack of rest”. Many women feel they are overworked during pregnancy and even during the postpartum period, as these are times when their family, mothers-in-law in particular, regard hard work as a woman’s (daughter-in-law’s) duty. The mothers-in-law, many of them bound by traditional knowledge, have tight control over the daughters-in-law’s care seeking behavior. The young daughters-in-law, who may have different views on the etiology of the bleeding problem, are not in a position to express their opinions openly or act against their mothers-in-law.

The mother-in-law is often regarded as an “obstacle” to women seeking adequate medical care from the programmatic viewpoint; however, there are some mothers-in-law who are ready to accept innovative ideas, realizing that times have changed and that care for pregnant and postpartum women is available and should be utilized. Such mothers-in-law can be the role models for their fellow mothers-in-law within the community, and should be identified and asked to talk at health education programs regarding how they feel about care for the *buhari* during pregnancy, delivery, and after delivery. This strategy would be more successful than merely targeting women of childbearing age and teaching them about biomedically defined signs and symptoms of

obstetric emergencies.

The husband's role in decision-making in Nepal is often emphasized (Al-Nahi & Post, 1998; Subedi, 1993); nevertheless, data collected in the present study demonstrate that husbands have little knowledge and interest in issues related to childbearing and childbirth. Such husbands, however, take an active part in decision-making, especially when it comes to deciding whether to send their wives to hospital. Husbands play a major role in decisions involving financial issues. Today's husbands are generally better educated than the previous generation, and they are potentially a strong supporter of women seeking adequate medical care, if empowered with sufficient information. As with mothers-in-law, it is important to identify those husbands who can be role models for other males in a village. It was observed that some younger, more highly educated husbands who are free from parental influence (e.g., those from nuclear families) even accompany their wives to the health center for antenatal care. Such husbands could potentially talk to other male villagers on the importance of care for women during pregnancy, delivery and the postpartum period.

A further study on the health seeking behavior of women experiencing obstetric emergencies should be conducted to discover what interventions are necessary to support women within patriarchal societies. In particular, there needs to be an examination of the

dynamics concerning the perceptions of health problems, the personal differences demonstrated in this study, and other socio-economic and cultural factors, as well as how these dynamics interact with the actual decisions made in seeking care behavior; thereby, contributing to the better design of a Safe Motherhood Program.

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Table 1

Perceived causes of bleeding during and after pregnancy

Category of cause of bleeding	Specific causes of bleeding	Suggested actions to cope with the problem
Naturalistic causes of bleeding		
Both during pregnancy and after delivery 【Imbalance: either excess or lack of something】	Doing too much work	Avoid hard work
	Doing heavy work	Do not carry heavy loads
	Carrying heavy loads	Go to hospital
		Herbal medicine
		Over the counter drugs
	Lack of rest	Take rest
		Avoid hard work
	Lack of food	Take nutritious food
		Medicine
	<i>Kamjori</i> (weakness)	Medicine <i>Horlicks</i> (popular soft drink) Vitamin tablets Herbal medicine Over the counter drug <i>Sutkeriko aausadi</i> for the postpartum only
Internal imbalance of <i>garmi</i> (hot) and <i>chiso</i> (cold)	Avoid food that is too <i>garmi</i> Avoid hard work under the sun Horlicks Vitamin tablets	
Specific to after delivery 【Part of normal transition that occurs after birth of the baby】	<i>Bigreko ragat</i> (bad blood) is supposed to come out after delivery	No action needed
	It happens after baby is born, natural to bleed after delivery or even beneficial to woman	No action needed
	Weak uterus	Hospital Herbal medicine Over the counter drug
	Due to the body being loose (<i>je khakulo byayekole</i>) after	No action needed

	delivery	
	Just happens to some women, inherited from mother	Herbal medicine Over the counter drug
Personalistic causes of bleeding due to external agent		
Both before and after delivery	<i>Bokshi</i> (human witch)	Traditional healers (Dhami jankri or janne manche)
Specific to pregnancy	during <i>Lagaan</i> (evil spirit)	Traditional healers (Dhami jankri or janne manche)
	<i>Sano jat ko</i> (small people= low caste_ enter the womb	No action needed as it is not considered to be a serious problem

(Source: Information from key informant interviews, free-listing, and case histories).

Table 2

Ranking: Perceived severity of health problems during pregnancy, delivery and postpartum period by women, mothers-in-law and husbands groups

(N=20 for each group)

Health Problems	Women	Mother-in-law	Husbands
Excessive bleeding after delivery	1	3	2
Bleeding during pregnancy	2	1	5
Placenta does not come out for a long time	3	2	1
Baby in transverse or upside down position (breach delivery)	3	5	3
Long <i>beta</i> (labor)	5	4	4
Lack of blood (Anemia)	6	6	6
Breast-mil does not come out for a baby	7	7	7
Lower abdominal pain	8	8	9
Swelling of hands, legs, and face	9	9	8
Headache during pregnancy	10	10	10
Poor appetite	11	13	12
Persistent vomiting	12	13	11
Sweating during pregnancy	13	10	12
Dizziness	14	12	15
Weariness/Laziness	15	15	14

* The number in the table shows the rank perceived by the each group as magnitude of severity. Each health problem is scored and the ranks are same when they get the same score.

Figure Captions

Figure 1. Pile sorts of 20 women regarding their perceived similarities of health problems during pregnancy, delivery, and postpartum period.

Figure 2. Pile sorts of 20 mothers-in-law regarding their perceived similarities of health problems during pregnancy, delivery, and postpartum period.

bup:	baby upside down
pla:	placenta does not come out
dd:	difficult delivery
ane:	anemia
bp:	bleeding during pregnancy
bd:	bleeding after delivery
abp:	abdominal pain
swl:	swelling of hands, legs, & face
ha:	headache
swe:	sweating
diz:	dizziness
wea:	weariness
ape:	poor appetite
vot:	persistent vomiting
bm:	breast-milk does not flow

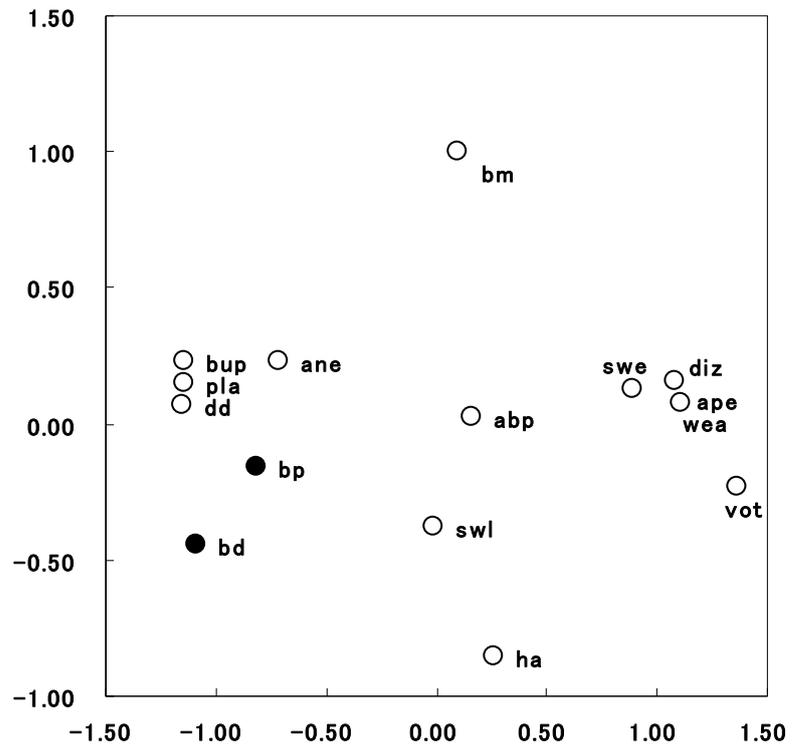


Figure 1.

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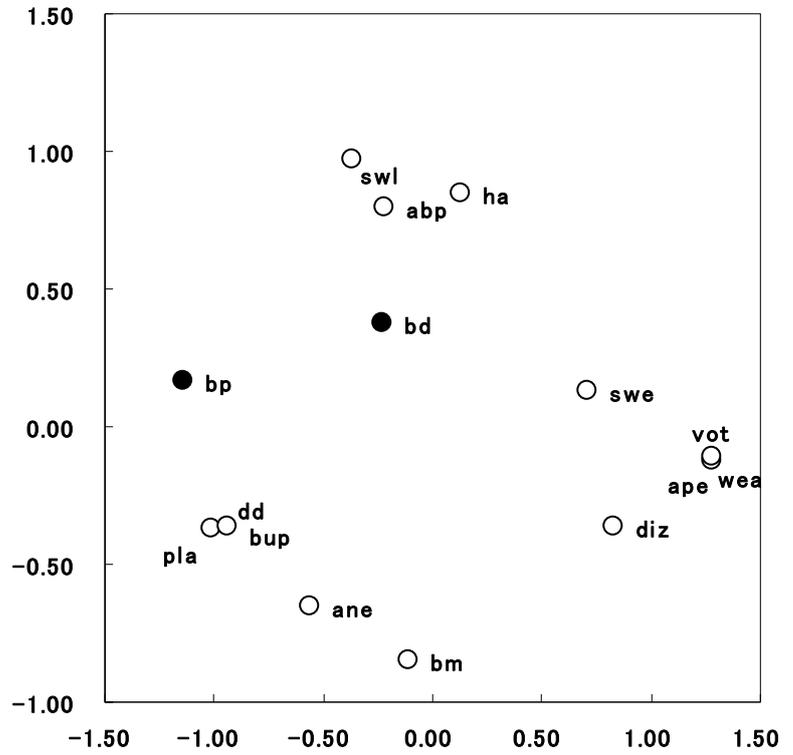


Figure 2.