Views on Unassisted Childbirth among Mothers at a Teaching Hospital in Kuala Lumpur, Malaysia
(Pandangan Tentang Kelahiran Tanpa Bantuan dalam kalangan Ibu di Hospital Pengajar di Kuala Lumpur, Malaysia)

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ABSTRACT

A cross-sectional study was conducted among mothers visiting clinic in UKMMC from 1st to 19th August 2016 to acquire opinions on unassisted childbirth and the determinant factors among mothers at a teaching hospital. Structured questionnaires were used in assessing their opinions on unassisted childbirth. A total of 259 respondents were recruited, 229 of them who met the inclusion criteria were included for analysis. Majority (87.3%) was Malay and 98.7% of respondents were more than 25 years old. The prevalence for mothers who agreed with unassisted childbirth was 6.6%. Bivariate analysis showed Malay (p=0.013) and non-working mothers (p=0.000) are the significant factors. There was no significant association between opinions on unassisted childbirth and quality of government healthcare services. Multivariate analysis showed middle income and non-working mothers were the significant factors contributing to opinions on unassisted childbirth. The outcome showed minority of mothers agreed with unassisted childbirth, middle income group and non-working mothers agreed on unassisted childbirth. Dissatisfaction to the quality of care at government healthcare services was not found to be the reason for unassisted childbirth. However, there could be other factors contributing to opinions on unassisted childbirth delivery which were not studied. Community-based study should be conducted to determine the other factors.

Keywords: Childbirth; government; mothers; teaching hospital

ABSTRAK

Suatu kajian keratan rentas telah dijalankan terhadap ibu yang melawat klinik antenatal di UKMMC dari 1 hingga 19 Ogos 2016 untuk mendapatkan pandangan terhadap kelahiran tanpa bantuan dan faktor yang mempengaruhinya dalam kalangan ibu di hospital pengajar. Borang soal selidik berstruktur telah digunakan untuk menilai pandangan mereka terhadap kelahiran tanpa bantuan. Sejumlah 259 responden telah direkrut dan seramai 229 yang memenuhi kriteria rangkuman telah diambil kira untuk dianalisa. Majoriti (87.3%) adalah Melayu dan 98.7% responden berusia 25 tahun ke atas. Prevalen ibu yang bersetuju dengan kelahiran tanpa bantuan adalah sebanyak 6.6%. Analisis bivariat menunjukkan bahawa berbangsa Melayu (p=0.013) dan ibu yang tidak bekerja (p=0.000) merupakan faktor yang signifikan. Tidak terdapat perkaitan yang signifikan antara pandangan terhadap kelahiran tanpa bantuan dengan kualiti perkhidmatan di pusat kesihatan kerajaan. Analisis multivariat menunjukkan bahawa pendapatan isi rumah sederhana dan ibu yang tidak bekerja adalah faktor signifikan yang menyumbang kepada pandangan terhadap kelahiran tanpa bantuan. Hasil kajian menunjukkan bahawa hanya minoriti ibu, pendapatan isi rumah sederhana dan ibu yang tidak bekerja bersetuju dengan kelahiran tanpa bantuan. Ketidakpuashatian terhadap kualiti perkhidmatan di pusat kesihatan kerajaan didapati bukan faktor penyumbang terhadap kelahiran tanpa bantuan. Walau bagaimanapun, kemungkinan juga terdapat faktor lain yang menyumbang kepada pandangan terhadap kelahiran tanpa bantuan yang tidak dikaji. Kajian berasaskan komuniti perlu dilakukan bagi menentukan faktor-faktor lain tersebut.

Kata kunci: Ibu; hospital pengajar; kelahiran; kerajaan

INTRODUCTION

Normal childbirth could take place without unnecessary medical interventions for most pregnancies especially among healthy and low-risks mothers. However, the complications that might arise throughout the birth processes are absolutely unpredictable (Olsen & Clausen 2012). In recent years, the rate of home birth has increased around the world (Aliyev et al. 2017). In the United States of America (USA), the number of out-of-hospital births have increased, in which it goes up from 1.26% in 2011 to 1.36% in 2012 and in overall two-thirds of USA populations (66%) have practiced out-of-hospital births (Aliyev et al. 2017; MacDorman et al. 2014).

American College of Obstetrician and Gynaecology (ACOG 2011) has defined unassisted childbirth as the planned delivery typically using natural childbirth methods. Such delivery takes place in a non-clinical setting, preferably at home rather than in a hospital or a birth centre and accompanied by an expert midwife or lay attendant in dealing with home births. Meanwhile, in Malaysia, it is defined as a delivery in a clean and safe non-clinical setting attended by skilled birth attendants who have registered with the Ministry of Health (MOH) (Family Health Development Division 2013).

The previous study has concluded that there was a three-fold increase in the neonatal mortality rate in association with less medical intervention during planned home births compared to a planned hospital birth (Wax et al. 2010). However, the randomized trials showed no strong evidence of differences to favour the low-risk pregnant women for both planned hospital birth and planned home birth (Wax et al. 2010).

In Malaysia, maternal mortality rate (MMR) has shown a declining pattern from 1950 to 2010 due to the implementation of several health programmes over this 60 years including the Maternal and Child Health programme (MCH) (Yadav 2012). Recently, revolution in the living style, education, internet surfing and experience has contributed in increasing trend of unassisted childbirth in Malaysia. Those who favoured unassisted childbirth build their own network to support this mode of delivery. The success rate of the program was based on the ideology obtained from internet sources in which might lead to an increasing pattern of MMR in future.

Thus, the objective of this study was to assess the opinions or views on unassisted childbirth (without assistance of medical personnel) among the mothers at a teaching hospital. Findings from this study will be able to assist and improve MCH related healthcare system in Malaysia.

MATERIALS AND METHODS

A cross-sectional study was conducted among antenatal mothers who visited antenatal clinic at Universiti Kebangsaan Malaysia Medical Centre (UKMMC) from 1st until 19th of August 2016. Respondents who fulfilled the study criteria were selected by using simple random sampling method. The inclusion criteria of this study include being Malaysian citizen and had experience at least once with public healthcare services for antenatal, intrapartum, and postnatal care. The sample size was calculated using formula adhere to the guideline and a minimum sample size of 246 respondents were required to conduct the study (Lwanga & Lemeshow 1991). However, the targeted sample size was not able to achieve as many respondents were reluctant to participate in the study.

Data was collected using structured questionnaires to assess the opinion of unassisted childbirth without the assistance of medical personnel, demographic and socioeconomic status, health profile, opinion on planned homebirth delivery, quality of government healthcare services and knowledge on unassisted childbirth.

The primary outcome of this study was the opinion of antenatal mothers on unassisted childbirth. This was defined as planning to have a home childbirth or delivery of a new-born at home without the assistance from midwives, doctors, or any healthcare personnel throughout the delivery process. Respondents' opinions on unassisted childbirth were categorized into agree and disagree. Independent variables included demographic and socioeconomic status, health profile, quality of government healthcare services and knowledge on unassisted childbirth.

Health profile of the respondents includes the history of medical illness and current obstetric problems. Respondents with no known medical illness before pregnancy were categorized under 'No' whereas respondents who had history of medical illness before pregnancy were categorized under 'Yes'. Respondents with no health problems developed in current pregnancy were categorized under 'No' whereas respondents who had medical illness developed in current pregnancy were categorized under 'Yes'.

For assessing the data on quality of public healthcare services, factors such as facilities and systems available in public clinics and public hospitals were included. They were further divided into antenatal, intrapartum, and postpartum services provided by the public healthcare settings which include follow-ups, admission, delivery process, and postpartum care. Respondents were required to choose either they were satisfied or dissatisfied with the statements given pertaining to the quality of the facilities

or services. The maximum score for all the statements was 84. The quality of government healthcare services was assessed by calculating the score of the respondents for all services provided.

As for the respondents' knowledge variable, a set of statements regarding the knowledge on unassisted childbirth were required to be answered. This variable was measured based on the scores obtained by answering the questionnaire whether they agree or disagree with the statements given. The maximum score for all the statements in this section was 24. Knowledge of respondents on planned homebirth delivery was determined by calculating the overall score for all the statements.

All the collected data were analysed using SPSS statistical software package version 20.0 (SPSS, I.I.B.M. 2011). Categorical data such as demographic and socioeconomic status, health profile and opinion on unassisted childbirth were expressed in percentage. The categorical independent variables were tested using Pearson's Chi-squared test and binary logistic regression. The confidence interval was set at 95% and p-value of less than 0.05 was considered as significant level. Numerical data such as quality of government healthcare services and knowledge on unassisted childbirth were described using mean and standard deviation. The association between both the numerical independent variables and opinion on unassisted childbirth were analysed by using independent t-test.

ETHICAL ISSUES

The ethical approval for this study was obtained from Research Ethics Committee, Medical Faculty Universiti Kebangsaan Malaysia Medical Centre (UKMMC) (Ethic Code: FF-2016-268). All the questionnaires were administered after obtaining the written consent from the respondents to assure the confidentiality of the study and the respondents.

Results

In this study, a total of 229 respondents who fulfilled the criteria were included in the analysis. Socio-demographic characteristics of the respondents were summarised in Table 1. The majority of the respondents were more than 25 years old (98.7%) and among them, majority were Malay (87.3%). About three quarter of them had high educational level (76.0%) and 82.5% were working mothers. Majority of the antenatal mothers were categorized as middle monthly income and high monthly income with 42.4% and 42.8%, respectively.

Table 2 summarised the medical history of the respondents. Majority of the respondents (90.4%) were not suffering from any medical illness. Moreover, less than one third of the antenatal mothers had past obstetric problems (27.5%) whereas 23.6% of the respondents were experiencing current obstetric problems.

Table 3 summarised the respondents' opinions on unassisted childbirth characterised by demographic and socioeconomic profile. The proportion of respondents with the opinion of agreeable to unassisted childbirth was found to be only 6.6% among mothers aged more than 25 years old. Besides, majority of the respondents supporting unassisted childbirth belong to the group had high educational level (6.3%), high monthly household income (9.2%) and not working (20.0%). Bivariate analysis showed that there was a significant association between the respondents' opinion on unassisted childbirth and their ethnicities (p < 0.05). Malay respondents who agreed with unassisted childbirth were only 5% whereas the percentage of agreeing to unassisted childbirth was double in non-Malays (17.2%). Moreover, the respondents' occupational status showed significant association with the opinion on unassisted childbirth whereby 20% of the respondents who were not working have agreed with unassisted childbirth.

Factors associated with the opinion of antenatal mothers on unassisted childbirth were summarized in Table 4. The result shows that only the middle income group and non-working women were found to be the significant determinants of the opinion on unassisted childbirth in this study (p < 0.05). Middle income group has 15 times odds (95% Cl 1.29-187.94) of agreeing to the planned home birth compared to the lower and higher income. Meanwhile, non-working mothers were 19 times more likely (95% 4.90-77.34) agree to the have delivery at home compared to the working mothers.

Table 5 shows the significant relationship between opinion on unassisted childbirth and the level of satisfaction on the quality of government healthcare services as well as the level of mothers' knowledge on unassisted childbirth. Results showed that mothers who agreed with unassisted childbirth (n=15) had lower satisfaction towards the government healthcare services with a total mean score of 72.4 compared to the mothers who disagreed with unassisted childbirth (n=214) with a total mean score of 73.15. On the other hand, mothers who agreed with unassisted childbirth had also a higher knowledge level (mean score = 21.3) compared to the mothers who disagreed with unassisted childbirth (mean score = 20.87).

TABLE 1. Demographic and socioeconomic profile of respondents (N = 229)

Variable	Frequency, (n)	Percentage,(%)
Age		
≤25 years old	3	1.3
>25 years old	226	98.7
Ethnicity		
Malay	200	87.3
Non Malay	29	12.7
Husband's educational level		
High educational level	142	62.0
Low educational level	87	38.0
Respondent's educational level		
High educational level	174	76.0
Low educational level	55	24.0
Total Monthly income		
Low income	34	14.8
Middle income	97	42.4
High income	98	42.8
Husband's occupational status		
Working	229	100.0
Not working	0	0
Respondent's occupational status		
Working	189	82.5
Not working	40	17.5

TABLE 2. Medical history of respondents (N = 229)

Medical illness		
Yes	22	9.6
No	207	90.4
Current obstetric problem		
Yes	54	23.6
No	175	76.4
Past obstetric problem		
Yes	63	27.5
No	166	72.5

TABLE 3. Respondents' opinions on unassisted childbirth characterized by demographic and socioeconomic profile (values with * indicates p <0.05 and significant)

Variable	Opinion on unassisted childbirth		X^2	p value
	Agree n (%)	Disagree n (%)		
Age				
≤25 years old	0 (0.0)	3(100.0)	0.213	0.644
>25 years old	15 (6.6)	211 (93.4)		
Race				
Malay	10 (5.0)	190 (95.0)	6.200	0.013*
Non-Malay	5 (17.2)	24 (82.8)		
Husband's Educational level				
High educational level	11 (7.7)	131(92.3)	0.874	0.350
Low educational level	4 (4.6)	83 (95.4)		
Respondent's Educational level				
High educational level	11 (6.3)	163 (93.7)	0.062	0.804
Low educational level	4 (7.3)	51 (92.7)		
Monthly income				
Low income	1 (2.9)	33 (97.1)		
Middle income	5 (5.2)	92 (94.8)	2.142	0.343
High income	9 (9.2)	89 (90.8)		
Husband's Occupational status				
Working	15 (6.6)	214 (93.4)		
Not working	0 (0.0)	0 (0.0)		
Respondent's Occupational status				
Working	7 (3.7)	182 (96.3)	14.323	0.001*
Not working	8 (20.0)	32 (80.0)		
Medical illness				
Yes	0 (0.0)	22 (100.0)	1.706	0.192
No	15 (7.2)	192 (92.8)		
Current obstetric problem				
Yes	3 (5.6)	51 (94.4)	0.114	0.735
No	12 (6.9)	163 (93.1)		
Past obstetric problem				
Yes	6 (9.5)	57 (90.5)	1.255	0.263
No	9 (5.4)	157 (94.6)		

TABLE 4. Factors associated with the opinion of antenatal mothers toward unassisted childbirth (values with * indicates p <0.05 and significant)

Variables	SE	Wald Stats	p value	Odds Ratio	95%CI
Low income		5.253	0.72		
Middle income	1.271	4.667	0.031*	15.570	1.290-187.939
High income	0.683	2.091	0.148	2.685	0.704-10.244
Husband Education	0.873	0.744	0.388	0.471	0.085-2.605
Wife Education	0.896	0.451	0.502	1.825	0.315-10.575
Non-working mothers	0.704	17.794	0.001*	19.468	4.901-77.334
Current Obs history	0.731	0.016	0.899	1.097	0.262-4.597
Past Obs History	0.652	2.821	0.093	0.335	0.093-1.201

TABLE 5. Relationship between opinion on unassisted childbirth with satisfaction on the quality of government healthcare services and knowledge (values with p <0.05 is significant)

Government health care services	Total (N)	Mean	SD	t-stat	p value
Agree	15	72.4	3.641	-0.869	0.386
Disagree	214	73.15	3.202		
Knowledge on unassisted childbirth					
Agree	15	21.27	0.372	0.895	0.372
Disagree	214	20.87			

DISCUSSION

Unassisted childbirth is one of the important emerging issues and warranted further attention in the near future. The purpose of this study was to assess the antenatal mothers' opinion on unassisted childbirth and the associated factors influencing their opinions. This study has shown that only minority group of antenatal mothers had agreed on unassisted birth.

Majority of the women who supports unassisted childbirth were Malays and this is consistent with the

previous findings (Chowdhury et al. 2013; Institute for Public Health, Ministry of Health, Malaysia 2015). The percentage of Malay and non-Malay who agreed with unassisted birth was 10 and 5%, respectively. Mothers' ethnicity and occupational status were significantly associated with the opinion supporting on unassisted childbirth. Moreover, MLR showed that only middle income and non-working mothers were the significant predictors for this study. To the best of our knowledge, there were no similar study has been conducted to compare the findings of ethnicity and occupational status. However, there were studies reported on the views on childbirth options and associated socio-economic determinants such as the educational and income status (Chowdhury et al. 2013; Shrestha et al. 2012).

One of the determinants for the opinions on unassisted childbirth was found to be the middle household income group. This finding supported the previous study which found that the majority of women who had given birth in hospitals belong to both high and middle income countries (Olsen & Clausen 2012). The official healthcare system shows that the most cited cases in supporting unassisted childbirth were in Netherlands with approximately 30% of low risk pregnant women had considered unassisted childbirth at home (Olsen & Clausen 2012).

In this study, majority of the respondents with high educational level disagreed with unassisted childbirth even though it was not statistically significant. In contrast, previous study had reported that the higher maternal age and educational level of the mother and husband had have influenced on the increase in the number of birth centre usage among women (Pomeroy et al. 2014). Higher maternal educational level has also increased the frequency of antenatal check-up utilisation and was consistent with the previous studies in developing country settings. Nevertheless, a study conducted in Finland had shown that well educated women were less likely would lead to underutilization of birth centres (Chowdhury et al. 2013).

Studies in developing countries showed that richer women were much more likely to give birth in a public facility (Montagu et al. 2011). This was supported by a study in Ghana which reported that women in higher socio-economic strata had greater likelihood of giving birth in health facilities compared to their counterparts (Mrisho et al. 2007). In addition, another study has also found that the household that could afford more, preferred to use the delivery services at hospital instead of homebirth (Pomeroy et al. 2014).

Current finding in relation to the health status in this study contradicted with the previous finding which shows that 3.6% of respondents who intended for homebirth were known to have medical problems (Meaney et al. 2015). Nevertheless, there was no significant association found between childbirth option and present current obstetric problem status as well as having no-comorbidity. Only small proportion from these categories had agreed with unassisted childbirth. This finding might be due to the higher level of awareness on risks and complications associated with unassisted childbirth among the antenatal mothers, therefore remain disagreeing with planned homebirth.

In our study, the quality of the government healthcare services was not a significant factor in contributing to the opinion on unassisted childbirth. This contradicted with a study which reported that the quality of services provided could influence women's choices on selecting the delivery location (Kumbani et al. 2013). Previous study has also suggested that the women encountered with several barriers such as socio-cultural factors, perceived benefits, economic accessibility and physical accessibility during accessing a skilled attendance for a safe delivery (Kumbani et al. 2013). Additionally, it was shown that the mothers in their first birth, wealthy, living in urban areas, well-educated and aged more than 20 years would prefer a birth facility rather than at home as their priority place of delivery. Higher frequency of antenatal visits aids them in choosing the birth centre for their delivery. This result might be the direct effects from the health education and counselling provided during the antenatal visits in which would have created greater health awareness and comfort on healthcare delivery services among the pregnant mothers (Hasyimah et al. 2014; Pomeroy et al. 2014).

Looking into the satisfaction aspect, this study has found that only minority of the respondents had lower satisfaction towards the quality of government healthcare services. This group might have had poor personal experience in public healthcare settings. This includes conduct of delivery by male doctor, poor communication during labour, did not receive an epidural for painkiller and complications during intrapartum secondary to instrumental delivery. A study in Australia has reason out women's preference in choosing unassisted childbirth such that they were traumatized by the bad experience especially with the attitude and behaviours of the healthcare personnel (Keedle et al. 2013). In this study, the mean score difference between mothers who agreed and disagreed with unassisted childbirth was very minimal. In general, the respondents were satisfied with the current government healthcare services.

Finally, the relationship between opinions on unassisted childbirth and respondents' knowledge level, shows that the group supporting unassisted childbirth had higher mean score value on knowledge compared to the opposing group. Similar finding was found by another study which showed that the women who goes for homebirth had a thorough understanding and planning on unassisted childbirth (Lothian 2010). Thus, higher knowledge among the respondents in the current study could have built a higher confidence in them to further proceed with unassisted childbirth. Those mothers have better understanding towards the delivery process, risks and complications in unassisted childbirth and they were able to anticipate the possible emergency situations that may happen during the delivery process.

The findings in this study was limited due to the small sample size used following the respondents' reluctant to participate in this study. Besides the respondent's health and mood also influenced their responses to the questionnaire which could have affect the outcome of this study. Other than that, this study has also shared a similar limitation as other cross sectional design on the causality. Despite the limitation, this study is beneficial in providing a better knowledge for the mothers who opt for unassisted childbirth specifically with regards to ethnicity and occupational status in which still remains unexplored.

CONCLUSION

In conclusion, most of the respondents have disagreed with unassisted childbirth except for mothers that belongs to the middle-income group and non-working groups. Generally, quality of government healthcare services did not influence the respondents' opinion on unassisted childbirth. Meanwhile, conducting current study at the community level with a larger sample size could aid in validating the current findings in which has claimed that the opinion on unassisted childbirth were influenced by mothers' income and occupational status.

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