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Midwives' perceptions about adolescents' utilisation of public prenatal services in Bulawayo, Zimbabwe

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ABSTRACT

Objectives: to identify midwives' perceptions about adolescents' failure to utilise prenatal services or to initiate such utilisation late during their pregnancies.

Design: a quantitative descriptive and exploratory design, using questionnaires to collect data, to describe midwives' perceptions about factors influencing pregnant adolescents' non-utilisation or late utilisation of prenatal services.

Setting: 20 public health centres (comprising two hospitals and 18 primary health-care clinics) rendering prenatal services, distributed throughout the city of Bulawayo, Zimbabwe.

Participants: 52 midwives, rendering prenatal services in Bulawayo, completed questionnaires.

Measurements and findings: demographic, socio-economic, knowledge-related and service-related factors (unfriendly midwives and substandard prenatal services) influenced pregnant adolescents' late or non-utilisation of prenatal services.

Key conclusions: transport costs and charges for prenatal services were major factors influencing adolescents' late or non-utilisation of prenatal services. Adolescents needed more knowledge about the advantages of prenatal services. Effective prenatal services should be provided by friendly and welcoming midwives.

Implications for practice: pregnant adolescents need more knowledge about the advantages of prenatal services, and these should be more accessible. Charges for public prenatal services must be reduced or abandoned; subsidised or free public transport for pregnant adolescents could enhance their utilisation of prenatal services.

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Introduction and background information

In Zimbabwe, midwives are the linchpins for providing health care to women and their infants during pregnancy, childbirth and in the postpartum period. According to Zimbabwe's Ministry of Health and Child Welfare (MOHCW, 2001), goal-oriented prenatal care should aim at providing needs-based and client-focused care. The goals of this approach are specified according to pregnancy trimesters: during the first trimester risk assessment, health education and childbirth planning should be done; during the second trimester, actions should be instituted to address abnormal laboratory test results, exclude multiple pregnancies and detect pregnancy-induced hypertension; and in the third trimester, fetal growth should be checked, pregnancy-induced hypertension should be treated, presentation and lie should be

confirmed, and the childbirth plan should be reviewed accordingly (MOHCW, 2001). Effective prenatal services can reduce health risks during pregnancy, childbirth and in the postpartum period (White and Carr, 2007), enhancing the obstetric outcomes for mothers and infants.

Adolescence (age 10–19 years) is a period of physical, social and psychological development often associated with high risk behaviours resulting in health problems such as unplanned pregnancies and human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) (Mngadi et al., 2002). Adolescents might encounter higher rates of perinatal morbidity and mortality than adult mothers (Gupta and Da Costa, 1999; Ehlers, 2003). Adolescents' pregnancy-related problems include anaemia, preterm labour, prolonged or obstructed labour because of the greater possibility of cephalo-pelvic disproportion, hypertensive disorders and sexually transmitted infections (Singh and Khare, 2001; Mngadi et al., 2002). In Nepal, 97.22% of women diagnosed with eclampsia were adolescents, 80.85% of whom were pregnant for the first time (Choudhary, 2003). These findings emphasise the importance of providing effective prenatal services

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to adolescents so that signs and symptoms of eclampsia can be identified, and timely treatment instituted to decrease maternal and infant mortality and morbidity attributable to this condition. Pregnant adolescents are vulnerable to HIV/AIDS because they are sexually active and might lack the knowledge and power to protect themselves and their unborn children against HIV/AIDS. A survey conducted in Zimbabwe during 2000 indicated an HIV prevalence rate of 32% among 15–24-year-old women who attended prenatal clinics (MOHCW, 2004). In Zimbabwe, only HIV-positive pregnant women who attend prenatal clinics can be offered services to prevent the vertical transmission of HIV/AIDS from mothers to infants.

Reportedly, 49% of Zimbabwe's pregnant adolescents who attended prenatal clinics commenced doing so after 28 weeks of gestation and 28% never attended prenatal clinics (MOHCW, 2005). Bulawayo's Director of Health Services reported an overall prenatal clinic attendance coverage of 52% in 2005, but 40% of these pregnant women commenced their prenatal clinic attendance after 16 weeks of gestation. Bulawayo's statistics for 2004/2005 indicate that a total of 8030 adolescents delivered infants but 1817 (22.6%) of them never attended prenatal clinics (City of Bulawayo, 2005).

In Zimbabwe, the goal-oriented guidelines for prenatal care stipulate that pregnant women should have four to six prenatal clinic visits if they encounter no risk factors (MOHCW, 2001). This study on midwives' perceptions of adolescents' late or non-utilisation of prenatal services in Bulawayo was conducted at two government hospitals and 18 primary health-care clinics that provide prenatal services in Bulawayo.

The purpose of the study was to identify the midwives' perceptions about adolescents' late or non-utilisation of prenatal services, and also to obtain the midwives' recommendations for enhancing adolescents' utilisation of public prenatal services in Bulawayo. The questions to be answered were why adolescents utilised prenatal clinic services late or not at all during their pregnancies, and what could be done to enhance adolescents' utilisation of these services.

Methods

Research design

A quantitative descriptive and exploratory design was used to describe the midwives' perceptions about factors influencing pregnant adolescents' late or non-utilisation of prenatal services in Bulawayo, and to obtain midwives' suggestions for enhancing adolescents' utilisation of these services.

Population, sample and sampling procedure

There were 120 posts for male and female midwives at the 20 sites providing public prenatal services in Bulawayo. No sampling of the sites took place as questionnaires were distributed at all 20 sites. However, an unknown number of positions were vacant and some midwives were on leave, attending in-service education sessions or had been transferred to work temporarily in other services. The accessible population of midwives, at the time of data collection during July 2007 (Burns and Grove, 2005), was 56. They were all requested to complete questionnaires. Out of the 56 distributed questionnaires, 54 were completed and returned.

The purpose and benefits of the study were explained on the front page of each questionnaire. The willing respondents signed consent forms which they deposited in a specific container, and the anonymously completed questionnaires were deposited in

another container ensuring that any completed questionnaire could not be associated with any specific consent form. The respondents were also assured about the confidentiality of the information they would provide, and that no midwives' names and no institutions' names would be mentioned in the research report.

The research instrument and data collection

Questionnaires were delivered personally to all midwives working at the 20 health centres providing prenatal services in Bulawayo. All midwives could read and understand English as they had all completed their midwifery training in English. Questionnaires were completed anonymously and independently, minimising the chances of researcher bias (Polit and Beck, 2006). The completed questionnaires were placed in a designated sealed container in a specific office at each site, and were collected within 24 hours of dispatch during July 2007. The information letter provided the first author's contact details in case any respondent wanted to discuss or clarify issues pertaining to the questionnaire, but no respondents contacted the author. Both open- and closed-ended questions were used in order to accommodate some ideas that could have been missed in closed questions. The questionnaire comprised six sections: Section 1 enquired about midwives' ages and the extent of their experience in providing prenatal care services, Section 2 asked questions about the midwives' implementation of Zimbabwe's goal-oriented approach of providing prenatal services, Sections 3–5 addressed factors that could influence adolescents' late and/or non-utilisation of prenatal services, and the last section was an open-ended question requesting the midwives' suggestions for enhancing adolescents' utilisation of these services. The items on the questionnaire were derived from a literature review and from research reports about adolescents' late or non-utilisation of prenatal services in Zimbabwe.

Validity was enhanced by consulting three midwifery tutors, two nurse researchers and a statistician to evaluate every item for content, construct and criterion-related validity, as definitely pertaining to midwives' perceptions about adolescents' late or non-utilisation of prenatal services in Bulawayo. Every person was requested to assign a number (ranging from one to five, with one indicating irrelevance and five indicating definite relevance) to each item. Only items scoring an average of four were included in the questionnaire. Other items were deleted, or restructured and resubmitted for coding to the experts. In this way, a content-related validity index of 0.8 was assigned to every item included in the questionnaire (Burns and Grove, 2005).

The reliability of the questionnaire for midwives was enhanced through pre-testing it on five midwives working at a health centre outside Bulawayo (and who could therefore not participate in the actual study). These scores from the pre-test were compared with those obtained during the actual data collection phase. There were minimal differences between these sets of scores (Polit and Beck, 2006). No Cronbach alpha was computed.

Ethical considerations

The rights of and respect for the health institutions and midwives were observed. The research proposal was approved by the Research and Ethics Committee of the Department of Health Studies, University of South Africa. Written permission to conduct this study was granted by the Director of City Health Services of Bulawayo, heads of the participating health centres and every participating midwife him/herself. The midwives signed consent forms, after the purpose and benefits of the study had been

explained, and they had been assured that their responses would remain anonymous and confidential. The respondents were also assured that they were free to withdraw from the study at any stage without incurring any ill effects whatsoever. No remuneration was paid.

Findings

Midwives' data

The results revealed that 18 (34.6%) midwives were 46 years of age or older, 17 (32.7%) were 25–35 years old, 12 (23.1%) were 36–45 years old and five (9.6%) were 24 years of age or younger. The midwives' experience in prenatal/midwifery services ranged from zero to one year ($n = 21$; 40.4%), two to three years ($n = 13$; 25.0%), four to five years ($n = 3$; 5.8%) and six years or longer ($n = 15$; 28.8%). Thus, most midwives' experience in the prenatal clinics was limited (Table 1).

The respondents were also asked about the goal-oriented approach to determine whether quality and client-focused prenatal care was provided to adolescents. The majority ($n = 40$; 76.9%) said that they used the goal-oriented approach during prenatal services. Forty-two respondents (80.8%) said that they were familiar with this approach, whereas 10 (19.2%) were unfamiliar with it. Over half of the respondents ($n = 33$; 63.5%) reported that it was easy to use, whereas 19 (36.5%) felt that this was not the case. Only 35 (67.2%) midwives reported that they were competent in using this approach. More than half of the respondents ($n = 33$; 63.5%) had reportedly received training in using the goal-oriented approach. Most midwives ($n = 48$; 92.3%) agreed that adolescents would benefit from attending prenatal

clinics, but 36 (69.2%) indicated that adolescents did not maximise the utilisation of these services.

Factors influencing adolescents' late and/or non-utilisation of prenatal services, as perceived by midwives

Most midwives agreed that adolescents' age ($n = 47$; 90.4%), parity ($n = 44$; 84%) and marital status ($n = 41$; 78.8%) could influence adolescents' decisions to utilise prenatal services. Socio-cultural factors reportedly also influenced adolescents' decisions, according to 48 (92.2%) respondents. Almost all of the midwives ($n = 49$; 94.2%) considered financial constraints to be a factor limiting adolescents' utilisation of prenatal services. Thirty-seven respondents (71.2%) agreed that health workers' attitudes could influence adolescents' decisions, whereas fears of disclosing their pregnancies to their parents could influence adolescents' non-utilisation of prenatal services according to 47 (90.4%) midwives. These findings are similar to those reported by Chaibva (2007), indicating that adolescents in Bulawayo perceived midwives to be unfriendly and they attempted to keep their pregnancies secret until the labour process started because they feared their parents' and friends' reactions to their pregnancies.

Most midwives ($n = 45$; 86.5%) reported that the quality of prenatal services could influence adolescents' decisions to utilise prenatal services; 29 (55.8%) felt that adolescents perceived prenatal care to be beneficial because they realised that obstetric problems could be detected and addressed during the prenatal period.

The majority of the respondents agreed that adequate knowledge about prenatal services ($n = 37$; 71.2%), accessible and acceptable services ($n = 42$; 80.8%), affordable services ($n = 42$; 80.8%), needs-focused prenatal services ($n = 44$; 84.6%), prompt

Table 1
Midwives' use of the goal-oriented approach ($n = 52$).

Items relating to the goal-oriented approach	Yes		No	
	n	%	n	%
Do you use the goal-oriented-approach?	40	76.9	12	23.1
Are you familiar with the goal-oriented approach?	42	80.8	10	19.2
Is the goal-oriented approach easily implemented?	33	63.5	19	36.5
Do you feel competent to use the goal-oriented approach?	35	67.3	17	32.7
Have you received training on the goal-oriented approach?	33	63.5	19	36.5
Do adolescent mothers maximise the use of services?	16	30.8	36	69.2
Would adolescent mothers benefit from prenatal services?	48	92.3	4	7.7

Table 2
Midwives' opinions about factors influencing adolescents' utilisation of prenatal services in Bulawayo ($n = 52$).

Perceived factor	Yes, definitely		Yes		No		No, definitely not	
	n	%	n	%	n	%	n	%
High prenatal fees	14	26.9	28	53.8	10	19.2	0	0.0
Unfriendly health workers' attitudes	6	11.5	38	73.1	8	15.4	0	0.0
Poor family and support systems	7	13.5	45	86.5	0	0.0	0	0.0
Fears of HIV tests	4	7.7	40	76.9	8	15.4	0	0.0
Fears of positive HIV status	4	7.7	39	75.0	9	17.3	0	0.0
Inadequate knowledge about the benefits of prenatal care	7	13.5	40	76.9	5	9.6	0	0.0
Poverty	6	11.5	43	82.7	3	5.8	0	0.0
Low status of women in society	4	7.7	37	71.2	11	21.2	0	0.0
Peer influences	3	5.8	43	82.7	6	11.5	0	0.0
Parents' influences	1	1.9	26	50.0	25	48.1	0	0.0
Traditional birth attendants' influences	0	0.0	23	44.2	29	55.8	0	0.0

services ($n = 40$; 76.9) and perceived benefits ($n = 40$; 76.9%) would influence adolescents' decisions to utilise prenatal services in Bulawayo (Table 2).

Suggested strategies to enhance adolescents' utilisation of prenatal services in Bulawayo

Those who responded ($n = 47$) to this open-ended question recommended information, education and communication to the adolescents and to adolescents' significant others such as parents and teachers. They also advocated for free and user-friendly prenatal clinics and services, and for sufficient human resources to provide adequate services to all prenatal clients, including adolescents.

Discussion

Age of the midwives

Most midwives' ages ranged between 36 and 45 years, implying that the age differences between midwives and pregnant adolescents might be substantial, making communication difficult. Some midwives had limited experience of working in prenatal services; a situation that could be compromising the quality of care rendered to prenatal clients.

Use of the goal-oriented approach

Most midwives reportedly used the goal-oriented approach, had received training in its use and were familiar with this approach. The goal-oriented approach was recommended by the World Health Organization, and Zimbabwe has since adopted it as a strategy of providing prenatal services focused on specific goals during specific stages of the woman's pregnancy (MOHCW, 2001). Those centres or midwives who did not implement the goal-oriented approach and those who did not receive this training might have been incompetent to do so, possibly compromising the quality of prenatal care rendered to the women of Bulawayo.

The midwives agreed that the quality of prenatal services and adolescents' knowledge about prenatal care influenced adolescents' utilisation of these services, similar to findings reported by other researchers (MOHCW, 2001; Aretakis, 2004; Ikamari, 2004).

The midwives agreed that if adolescents were more knowledgeable about the benefits of prenatal services, they might make better use of these services. The midwives also concurred that certain barriers could prevent adolescents from utilising prenatal services, similar to utilisation barriers reported by other researchers (Llongo, 2004; Matua, 2004; Ziyani et al., 2004). Perceived barriers in this study included high prenatal fees, health workers' attitudes, poor social support systems, poverty, fear of human immunodeficiency virus test results and inadequate knowledge about the benefits of prenatal care. Peers, parents and traditional birth attendants also influenced adolescents' utilisation of prenatal services in Bulawayo.

Strategies to enhance adolescents' utilisation of prenatal services in Bulawayo

Adolescents' education about the benefits of prenatal services should be provided at schools, churches, hospitals and by the media. The midwives recommended affordable, or preferably free,

prenatal services, which are youth friendly. The participants also recommended that midwives should be retained in Zimbabwe by paying them decent salaries, to prevent further depletion of midwives and nurses from this country, making it more difficult to provide effective user-friendly health care, including prenatal services.

Conclusions

The midwives were much older than adolescents, potentially making effective communication between midwives and pregnant adolescents difficult. Reportedly, not all midwives rendered client-friendly services to pregnant adolescents. Some midwives did not use the goal-oriented approach, were unfamiliar with it and some had not received any training in its use, compromising the potential benefits to be derived from this approach. Factors that reportedly influenced adolescents' utilisation of prenatal services included demographics (age, parity, marital status), financial constraints making it difficult for adolescents to pay the required fees for the prenatal services and for transport, lack of knowledge about the benefits of prenatal services, accessibility and acceptability of these services.

Adolescents who are better informed about the benefits of prenatal care might be more likely to utilise these services.

Implications

The study findings revealed that certain demographic, socio-economic, and service- and knowledge-related factors influenced adolescents' decisions to use prenatal services in Bulawayo. A greater awareness of prenatal benefits might enable more pregnant adolescents to utilise these services. Inaccessible, unacceptable and unaffordable prenatal services, and the unfriendly attitudes of some health workers posed barriers to adolescents' utilisation of these services.

Continuing education programmes are necessary to strengthen midwives' knowledge and skills about using the goal-oriented approach effectively to provide client-centred prenatal services.

Recommendations

On the basis of the study findings, the following recommendations are made for policy makers, midwifery practitioners, midwifery educators, institutions and researchers:

- Review and strengthen strategies that can reach those pregnant adolescents who might be affected by bio-psychosocial and economic factors, including lack of knowledge, influencing their access to prenatal services. Outreach prenatal programmes should reach pregnant adolescents at school, and at community settings such as churches and youth centres.
- Free prenatal services should be offered, as many pregnant adolescents are unmarried and unemployed without any financial means to pay for their prenatal services.
- Review midwifery education curricula so that they incorporate content that is specific to adolescents' needs.
- Research should be conducted among adolescents who utilised these services to obtain their evaluations of the quality of prenatal services rendered to adolescents in Bulawayo.
- Adolescent mothers who delivered their infants without attending prenatal clinics should be questioned about the factors that influenced them not to utilise these services.

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References

- Aretakis, D.A., 2004. Teen pregnancy. In: Stanhope, M., Lancaster, J. (Eds.), *Community & Public Health Nursing*. CV Mosby, St. Louis, pp. 684–700.
- Burns, N., Grove, S.K., 2005. *The Practice of Nursing Research: Conduct, Critique and Utilization*. 5th edn. WB Saunders, Philadelphia, pp. 365–379, 395–400.
- Choudhary, P., 2003. Eclampsia: a hospital-based retrospective study. *Kathmandu University Medical Journal* 1, 237–241.
- City of Bulawayo, 2005. Annual Report 2004. Health Services Department, Bulawayo.
- Ehlers, V.J., 2003. Adolescent mothers' utilization of contraceptive services in South Africa. *International Nursing Review* 50, 229–241.
- Gupta, N., Da Costa, L., 1999. Adolescent fertility behaviour: trends and determinants in north eastern Brazil. *International Family Planning Perspectives* 25, 125–130.
- Ikamari, L.D.E., 2004. Maternal health care utilization in Teso District, Kenya. *African Journal of Health Sciences* 11, 21–32.
- Llongo, I., 2004. Tuberculosis health belief gaps of tuberculosis and suspected tuberculosis cases in New York. *International Journal of Clinical and Health Psychology* 4, 69–90.
- Matua, A.G., 2004. Determinants of maternal choices for place of delivery in Ayivu County, Uganda. *Africa Journal of Nursing and Midwifery* 6, 33–38.
- Ministry of Health and Child Welfare, 2001. Zimbabwe: Reproductive Health Service Delivery Guidelines. Government Printer, Harare.
- Ministry of Health and Child Welfare, 2004. Zimbabwe Millennium Development Goals Report. Government Printer, Harare.
- Ministry of Health and Child Welfare, 2005. Antenatal (ANC) and Delivery Registers 2004–2005. Health Information Department, Bulawayo.
- Mngadi, P.T., Thembi, I.T., Ransjo-Arvidson, A.B., Ahlberg, B.M., 2002. Quality of maternity care for adolescent mothers in Mbabane, Swaziland. *International Nursing Review* 49, 38–46.
- Polit, D.F., Beck, C.T., 2006. *Nursing Research; Principles and Methods*, 7th edn. JB Lippincott, Philadelphia, pp. 147–152.
- Singh, N.K., Khare, S., 2001. Outcome in adolescent pregnancy. *Journal of Obstetrics and Gynaecology of India* 51, 34–36.
- White, R.C., Carr, K.C., 2007. Strategies for utilization of maternity services in Njeru, Uganda. *African Journal of Midwifery and Women's Health* 1, 14–19.
- Ziyani, I.S., King, L.J., Ehlers, V.J., 2004. Using triangulation of research methods to investigate family planning practices in Swaziland. *Africa Journal of Nursing and Midwifery* 6, 12–17.