Original Research Article

Learning wellness: Knowledge of health information among adolescent postpartum mothers in rural communities

Abstract

Purpose

This study was conducted among postpartum mothers in selected rural communities in Ghana. The aim was to find out the knowledge of health information among adolescent postpartum mothers and their perceptions on how libraries can help in "ensuring healthy lives and promoting well-being for all at all ages".

Design/methodology/approach

A hospital-based case-control study was conducted between September 2017 and October 2017. One hundred and one (101) participants were involved in this study. They included Fifty-three (53) adolescents and Forty-eight (48) adult postpartum mothers who were receiving postnatal services at the Takrowase, Kusi and Wenchi Health Centres in the Denkyembour District of the Eastern Region, Ghana. Questionnaire containing information on the socio-demographic background of respondents and also questions relating to respondents' "knowledge on libraries", "sources of health information", and "types of health information" was used as the tool for data collection.

Findings

All respondents in the case group 53(100.00%) and majority of the control group 47(97.92%) exhibited poor knowledge of libraries with majority of them having negative perceptions on the roles libraries play in disseminating health information. The need for information on "baby-related" and "health-related" issues was high among the study population, and there was no clearly identified source of information. However, the oral medium for information dissemination was highly acknowledged by the case group 51(96.23%) and the control group 47(97.92%).

Originality/value

This is a unique study among the few attempts that have been made to investigate the roles libraries play in meeting the health information needs of people. Extension of library services to vulnerable people, particularly, adolescent postpartum mothers in rural communities would not only make them information conscious, but also, it will go a long way of "ensuring healthy lives and promoting well-being for all at all ages" – SDG3.

Key words:

Library Services; Adolescents; Postpartum Mothers; Vulnerable Persons; Health Information.

1. Introduction

Dependable health information resources is one of the most treasured resources available to society [1] and the continuous access to health information makes patients and individuals well-informed about their conditions which is on record to have helped enhanced health care and reduced healthcare delivery cost [2]. State agencies have been encouraged to ensure that young people have access to information and materials from a diversity of national and international sources, especially those aimed at the promotion of their well-being and health [3]. To this end, Nwalo and Anasi postulated that, the young adult should have the right to receive information and services necessary to protect them from reproductive health-related infections, unintended pregnancies and their associated outcomes [4].

Meeting the health information needs of adolescent postpartum mothers, particularly those in rural communities is a positive step towards achieving SDG3. Rose and colleagues used the term "emerging adulthood" to describe "adolescence" [5] and it has been explained that this group is characterised by individuals who experience unique challenges including identity exploration, participation in risky behaviours, and the exhibition of behaviours most cultures try to oppose [5,6]. It is the period when young adults begin to make health decisions on disease prevention and health promotion efforts in order to mitigate the effects of various somatic diseases [7].

It becomes a key concern when such an adolescent is a mother. Such a person needs information on breastfeeding, family planning, contraceptives, Sexually Transmitted Diseases, parenting among others [4,8,9]. Adolescents who receive current, accurate, reliable, and balanced health information are more likely to express healthier sexual attitudes and engage in healthier behaviours than adolescents receiving limited or no sexual-health information [10]. Health information can be categorised into formal

and informal [9–11]. Adolescents who receive health information from formal sources engage in fewer risky behaviours and hold more cautious attitudes about issues than adolescents who receive information from peer and popular media sources.

How people find the health information they need has been a concern for librarians for decades [12]. The Consumer and Patient Health Information Section (CAPHIS-MLA) of the American Medical Library Association observed that, the growing focus on patient-centred care and the general need for accurate general health information have brought about the need to integrate librarians fully into health delivery systems [13]. Considerable number of studies on adolescent health information have been undertaken by a number of researchers in Ghana [14–16], but none considered the role libraries could play in disseminating health information to citizens, especially, the vulnerable in society. However, it has been established by researchers in other jurisdictions that the library is a major channel through which health information can reach the vulnerable in society [4,10,12,17]. Earlier studies confirmed a dearth of information on how the vulnerable in society, like the adolescent postpartum woman, access health information in a resource-limited rural Ghana. To improve upon the efficiency and impact of health information dissemination to vulnerable societies, as well as realise goal 3 of the SDG, this study examined the knowledge of health information among adolescent postpartum mothers and their perceptions on how libraries can help in "ensuring healthy lives and promoting well-being for all at all ages".

2. Materials and Methods

2.1 Subjects

A hospital-based case-control study was conducted between September 2017 and October 2017. One hundred and one (101) participants were involved in this study. Fifty-three (53) adolescent and Forty-eight (48) adult postpartum mothers receiving postnatal services at the Takrowase, Kusi and Wenchi Health Centres in the Denkyembour District of the Eastern Region of Ghana were recruited for the study.

Selection criteria for the case group were adolescent postpartum mothers below the age of Twenty (20) [18] who were residing in Takrowase or its environs for at least one year. The control group were adult postpartum mothers who were more than Nineteen (19) years old and who had been living in Takrowase or its environs for at least one year. The study was conducted in Takrowase and its environs because the community was deprived of certain basic amenities [19]. Permission was sought from the Denkyembour District Health Directorate to engage participants and also visit the health centre. The objectives of the study were explained to participants and those who were interested and willing gave their consents to participate in the study.

2.2 Data Capturing Tool

This study used both primary and secondary data. Primary data collected from respondents captured "health information needs", "sources of health information" and "the perceived knowledge of libraries and their roles", by using a self-reported structured questionnaire. Additionally, information like age, educational background of participants and their partners and number of children were collected in order to appreciate the socio-demographic characteristics of the respondents. Secondary data was collected through a review of related literature in order to understand current and previous studies on the topic and also appreciate the gap in literature that needs to be bridged. Some databases that were consulted during this research include PubMed, ERIC, MeSH, CINHAL Complete, Popline. These databases were used because their scopes (medicine, reproductive health and related sciences and education) related to the objectives of this paper and were useful to the study. In order to retrieve more precise and refined results, the researcher combined some search terms. Some of these include: ["Health information" AND (Adolescents OR Teenagers)]; ["Health information" AND "Rural Communities"]; ("Health information" AND "Postpartum mothers") and other related terms.

2.3 Statistical Analysis

The self-reported questionnaire was made up of a four point "Likert type items" indicating the degree of agreement with a statement. The cumulative percentage of the various scores were calculated. Items or groups that scored 80% or more were ranked as "High/Positive", those within $60 \geq x < 80$ were ranked as "Acceptable/Average" and scores that were less than 60% were ranked as "Low/Poor" [20]. Continuous variables were expressed as their mean ± standard deviation, whereas categorical variables were expressed as figure and proportion. Comparisons of the general characteristics of the case group against the control group were performed using unpaired t-tests, chi-square tests, or Fisher exact tests where appropriate. A level of $P<0.05$ was considered as statistically significant for all analysis. Microsoft Excel and GraphPad Prism version 6.00 were used for statistical analysis where appropriate.

2.4 Ethical Considerations

The research work was anonymous and non-linked. Confidentiality of responses was assured. All participants read and understood the objectives of the study and consented to participate in the study. For those who could not read, research assistants helped to read and explain the objectives to them.

3. Results

Out of the 101 participants involved in this study, 53 classified as cases were adolescent postpartum mothers, with the remaining 48 who were adult postpartum mothers classified as controls. The average ages of the respondents in this study and their partners were 19.85±2.55 and 23.90±3.14 respectively. Majority of the respondents 84(83.17%) were cohabiting with their partners with a greater proportion 84(83.17%) having basic level of education. A significant proportion of the participants 69(68.32%) were not engaged in any form of employment with a substantial percentage of their partners 73(72.28%) working in the informal sector. Averagely, participants had been living in their respective villages for 15.56±5.58 years as at the time the study took place. In general, apart from "partner's employment status ($P=0.16$)" and "number of years participants have been living in

their respective towns/villages (P=0.06)", all other variables showed a significant difference between the case and control groups. (see Table 1).

Table 1: Socio-demographic characteristic of the population stratified by stages of development

Parameters	Total N=101	Cases N=53	Control N=48	*P*-value
Towns				
Kusi	39(38.61)	12(22.64)	27(56.25)	
Takrowase	40(39.60)	29(54.72)	11(22.92)	0.001
Wenchi	22(21.78)	12(22.64)	10(20.83)	
Age	19.85±2.55	17.92±2.56	22.00±2.54	< 0.0001
Partner's age	23.90±3.14	21.81±3.15	26.21±3.15	< 0.0001
Marital Status				
Co-habited	84(83.17)	53(100.00)	31(64.58)	< 0.0001
Married	17(16.83)	0(0.00)	17(35.42)	
Number of Children	1.18±0.38	1.04±0.41	1.33±0.41	0.0006
Educational Background				
None	2(1.98)	2(3.77)	0(0.00)	
Basic	84(83.17)	49(92.45)	35(72.92)	0.0023
Secondary	15(14.85)	2(3.77)	13(27.08)	
Partner's Educational Background				
None	6(5.94)	3(5.66)	3(6.25)	
Basic	55(54.46)	38(71.70)	17(35.42)	0.0023
Secondary	38(37.62)	11(20.75)	27(56.25)	
Tertiary	2(1.98)	1(1.89)	1(2.08)	
Employment Status				
None	69(68.32)	50(94.34)	19(39.58)	
Informal	26(25.74)	3(5.66)	23(47.92)	< 0.0001
Formal	6(5.94)	0(0.00)	6(12.50)	
Partner's Employment Status				
None	14(13.86)	8(15.09)	6(12.50)	
Informal	73(72.28)	41(77.36)	32(66.67)	0.155
Formal	14(13.86)	4(7.55)	10(20.83)	
Years living in this town	15.56±5.58	14.56±5.58	16.66±5.61	0.0625

Continuous data is presented as means ± standard deviation of the mean, with categorical data presented as figure with percentage in parenthesis. Continuous data were compared using unpaired t-test. Categorical data were compared with chi-square tests, or Fisher exact tests where appropriate. P is significant at <0.05.

Significant proportion of both the case and control groups exhibited poor knowledge on the availability of libraries, however, a greater proportion of the control group 21(43.75%) and 12(25.00%) displayed positive and acceptable knowledge respectively with regards to the roles libraries play in disseminating health information. (See table 2).

Table 2: Respondents' perceived knowledge of libraries

Parameters	Cases N=53	Control N=48	*P*-value
Knowledge on libraries			
Acceptable	0(0.00)	1(2.08)	0.4752
Poor	53(100.00)	47(97.92)	
Perceived roles of libraries			
Positive	8(15.09)	21(43.75)	
Acceptable	11(20.75)	12(25.00)	0.0015
Negative	34(64.15)	15(31.25)	

Data is presented as figure with percentage in parenthesis. Categorical data were compared with chi-square tests, or Fisher exact tests where appropriate. P is significant at <0.05.

Among the study population, it was observed that a significant proportion of both the case and control groups had a high need for "baby-related information" 39(73.58%) and 32(66.67%) respectively and "health-related information" 43(81.13%) and 28(58.33%) respectively. However, there was a general low need for "economic-related information" 49(92.45%) and 34(70.84%) and "social lifestyle and support information" 42(79.25%) and 37(77.08%) respectively among the case and control groups. (See table 3).

Table 3: Health information needs of respondents

Parameters	Cases N=53	Control N=48	*P*-value
Baby-related information			
High	39(73.58)	32(66.67)	
Average	4(7.55)	11(22.91)	0.0676
Low	10(18.87)	5(10.42)	

Partner-related information			
High	11(20.75)	4(8.33)	
Average	27(50.94)	23(47.92)	0.1136
Low	15(28.31)	21(43.75)	
Health-related information			
High	43(81.13)	28(58.33)	
Average	10(18.87)	18(37.50)	0.0270
Low	0(0.00)	2(4.17)	
Economic-related information			
High	0(0.00)	1(2.08)	
Average	4(7.55)	13(27.08)	0.0162
Low	49(92.45)	34(70.84)	
Social lifestyle and support information			
High	0(0.00)	0(0.00)	
Average	11(20.75)	11(22.92)	0.8139
Low	42(79.25)	37(77.08)	

Data is presented as figure with percentage in parenthesis. Categorical data were compared with chi-square tests, or Fisher exact tests where appropriate. P is significant at <0.05.

Regarding the sources of health information that is acceptable to respondents, both case and control groups displayed poor attitude towards both formal and informal sources of health information. Again, it was observed that a significant proportion of both case 51(96.23%) and control 47(97.92%) groups preferred receiving health information in oral form. (See table 4).

Table 4: Respondents' knowledge of health information Sources

Parameters	**Cases N=53**	**Control N=48**	***P*-value**
Sources			
Formal			
Acceptable	1(1.89)	2(4.17)	0.6031
Poor	52(98.11)	46(95.83)	
Informal			
Acceptable	4(7.55)	6(12.50)	0.5117
Poor	49(92.45)	42(87.50)	
Media			
Electronic			

High	0(0.00)	3(6.25)	
Acceptable	6(11.32)	17(35.42)	0.0016
Poor	47(88.68)	28(58.33)	
Print			
Acceptable	19(35.85)	26(54.17)	0.0741
Poor	34(64.15)	22(45.83)	
Oral			
Acceptable	51(96.23)	47(97.92)	1.0000
Poor	2(3.77)	1(2.08)	

Data is presented as figure with percentage in parenthesis. Categorical data were compared with chi-square tests, or Fisher exact tests where appropriate. P is significant at <0.05.

4. Discussion

The lack of awareness of information needs and the inability to recognise and adequately express information needs are serious barriers to fulfilling information needs [21]. The record of poor knowledge on libraries among the general population was the main observation in this study. However, it was observed that majority of the control group 21(43.75%) had positive views of the roles of libraries in health information dissemination (P=0.002), whereas a significant number of the case group 34(64.15%) had negative perceptions. These observations reflect the conclusions of Salman and colleagues, that "the lack of awareness of library services that are available, as well as the lack of access to many of the services that users would have liked to have access to, have a major impact on the utilisation of these services" [22]. Most rural communities in Africa do not have access to library facilities and the few existing ones are in very poor conditions, owing to the lack of financial and human resources, and the absence of library materials [23,24]. Thus, the overwhelming negative perceptions of libraries among the respondents was much expected. Moreover, with a high record of low educational level (basic education) among the case group 49(92.45%) and their partners 38(71.70%), it was expected that libraries and other literary-related institutions will not be part of their connexions. Lee has

established a positive relationship between library usage and ones' level of education [25].

A high significant difference of ($P < 0.0001$) in the employment status among the study population is an issue of concern. Thus, a positive relationship between the working class of the control group 42(87.5%) [see table 1] and their appreciation of the library's role in disseminating health information 33(68.75%) [see table 2] is established. This observation contradicts earlier studies that confirmed rather negative relationship between "the employed" and "acceptable attitude towards libraries" [26].

The study also established high demands for "baby-related information" and "health-related information" among both the case group 39(73.58%); 43(81.13%) and the control group 32(66.67%); 28(58.33%) respectively. These findings are in tandem with Lee and Grimes whose work on health information needs and seeking behaviours among mothers revealed that majority of the respondents indicated the need for information relating to the health of their babies, the kind of foods to give to their babies, vaccination schedules, among others [25,27]. Most of the respondents in the case group and even in the control group had just given birth to their firstborns during the time of the study (see table 1), hence the insatiable need for basic information on their babies and their health. The need for "partner-related information" and "social lifestyle and support information" were generally low among the study population. This may be as a result of the socio-cultural background of the respondents. Even though the study revealed a poor need for "informal sources" of information (see table 4), the proportions were higher than the need for "formal sources". Thus, these respondents depend much on their mothers and other caregivers during these periods for information relating to the subjects under review. Even though the study established a high rate of unemployment among the study population, the need for "economic-related information" was surprisingly low. The need for "economic-related information" among the case group was very low as compared to the control group. This situation may be as a

result of the level of literacy and requisite skills they need to instigate the search for economic-related avenues.

Generally, the study identified a lack of a clearly defined source of information among the study groups. However, it was realised that the control group had higher interest in informal sources of information than the case group and also than in formal sources. This observation is in tandem with the findings of earlier studies which identified informal sources as the most used by mothers [25,27–29]. Again, the low level of education and the socio-cultural background of the respondents in the present study could account for the result of the current study. Lack of awareness of information sources and the inability to recognise and adequately express information needs have been identified as gaps in meeting health information needs [21]. In terms of channel to convey health information, this study found out that almost all the respondents; case group 51(96.23%) and the control group 47(97.92%) indicated "oral" as the main acceptable medium to receive health information.

5. Conclusion

Lack of awareness of libraries and their role in disseminating health information was the general view among the study population. Again, the lack of recognition for information needs should wake librarians and other stakeholders up. Extending library services to vulnerable people, particularly, the adolescent postpartum mothers in rural communities would not only make them information conscious, but also, it will go a long way to "ensuring healthy lives and promoting well-being for all at all ages" – SDG3. These services could be in the form of organising informal information literacy sessions, where individuals would be equipped with skills to know the need for health information, to access the needed health information, to critically evaluate health information, to use health information effectively in solving specific health problems, and also to understand legal and ethical issues surrounding the use of health information. Public and community libraries could also introduce "mobile services" to such villages where health related materials could be housed in a van that will periodically visit villages to serve people.

References

1. Center for Disease Control and Prevention (CDC). Healthy schools healthy youth..! [Internet]. 2007 [Accessed 2016 Dec 23]. Available from: www.cdc.gov/healthyYouth/CSHP

2. Hibbard JH, Greene J, Overton J. Patients with lower activation associated with higher costs delivery systems should know their patients' "scores." Health Aff. 2013;32(2):216–22.

3. United Nations. Conventions on the Rights of the Child [Internet]. 1989 [Accessed 2017 Jan 5]. Available from: http://www.ohchr.org/english/law/pdf/crc.pdf

4. Nwalo KIN, Anasi SNI. Access to and use of reproductive health information among in-school adolescent girls in Lagos State, Nigeria. Heal Educ J. 2012;71(1):90–101.

5. Rose ID, Friedman DB, Spencer SM, Annang L, Lindley LL. Health information-seeking practices of African American young men who have sex with men: A qualitative study. Youth Soc [Internet]. 2013;48(3):344–65. Available from: http://apps.webofknowledge.com.libproxy.lib.unc.edu/full_record.do?product=WOS&search_mode=GeneralSearch&qid=3&SID=3AifjBM73ztupOwN9q9&page=1&doc=10

6. Arnett JJ. Emerging adulthood: What is it, and what is it good for? Child Dev Perspect. 2007;1:68–73.

7. Centers for Disease Control and Prevention (CDC). STD surveillance 2004 special focus profiles: Adolescents and young adults [Internet]. 2004 [Accessed 2017 Jan 10]. Available from: http://www.cdc.gov/std/stats/adol.htm

8. Thomas JO, Rankin YA, Tuta M, Mibuari E. Supporting greater access to pre- and post-natal information and services for women in rural Kenya. In: CHI'11 Extended Abstracts on Human Factors in Computing Systems. ACM; 2011. p. 2353–8.

9. Bajracharya A. Knowledge, attitude and practice of contraception among postpartum women attending Kathmandu Medical College Teaching Hospital. Kathmandu Univ Med J. 2015;13(4):292–7.

10. Richey J. Motivators and barriers to sexual-health information provision in high school libraries: Perspectives from district-level library coordinators and high school principals. Sch Libr Media Res [Internet]. 2012;15:1–17. Available from: http://www.scopus.com/inward/record.url?eid=2-s2.0-84866977538&partnerID=tZOtx3y1

11. Ybarra ML, Emenyonu N, Nansera D, Kiwanuka J, Bangsberg DR. Health information seeking among Mbararan adolescents: Results from the Uganda Media and You survey. Health Educ Res. 2008;23(2):249–58.

12. Lukenbill B, Immroth B. School and public youth librarians as health information gatekeepers: Research from the Lower Rio Grande Valley of Texas. Sch Libr Media Res. 2009;12:1–16.

13. CAPHIS-MLA. The librarian's role in the provision of consumer health information and patient education [Internet]. 2013 [Accessed 2017 Jan 15]. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC299415/

14. Bosompra K. Dissemination of health information among rural dwellers in Africa: A Ghanaian experience. Soc Sci Med. 1989;29(9):1133–40.

15. Glover KE, Bannerman A, Pence BW, Jones H, Miller R, Weiss E, et al. Sexual health experiences of adolescents in three Ghanaian towns. Int Fam Plan Perspect. 2003;29(1):32–40.

16. Kumi-Kyereme A, Awusabo-Asare K, Biddecom A. Adolescents sexual and reproductive health: Qualitative evidence from Ghana. New York: Guttmacher Institute; 2007.

17. Rao S. The role of libraries in eHealth service delivery in Australia. Aust Libr J. 2009;58(1):63–72.

18. Wikipedia: The Free Encyclopedia. Erikson's stages of psychosocial development [Internet]. 2017 [Accessed 2017 Dec 26]. Available from: https://en.wikipedia.org/wiki/Erikson%27s_stages_of_psychosocial_development

19. Ghana Statistical Service. 2010 population & housing census: Distric analytical report, Denkyembour. Accra: Ghana Statistical Service; 2014.

20. Al Abdullah R. On the contribution of student experience survey regarding quality management in higher education : An institutional study in Saudi Arabia. J Serv Sci Manag. 2010;3:464–9.

21. Fourie I. Promoting awareness of information needs and realising gaps in knowledge: Examples from healthcare. Cah la Doc. 2013;3:32–40.

22. Salman AA, Mugwisi T, Mostert BJ. Access to and use of public library services in Nigeria. SA Jnl Libs Info Sci. 2017;83(1):26–38.

23. Kamba MA. Access to information: The dilemma for rural community development in Africa. Atlanta: Georgia Institute of Technology; 2009.

24. Issak A, editor. Public libraries in Africa: A report and annotated bibliography. Oxford: International Network for the Availability of Scientific Publications

(INASP); 2000.

25. Lee HS. Health information needs and seeking behaviors among korean mothers of young children in the United States. Proc Assoc Inf Sci Technol. 2015;52(1):1–4.

26. Oyeronke A. Information as an economic resource: The role of public libraries in Nigeria. Chinese Librariansh an Int Electron J. 2012;34:66–75.

27. Grimes HA, Lecturer M, Forster DA, App D, Nurs S, Nurs B, et al. Sources of information used by women during pregnancy to meet their information needs. Midwifery [Internet]. Elsevier; 2014;30(1):e26–33. Available from: http://dx.doi.org/10.1016/j.midw.2013.10.007

28. Fauzi NFBM, Kadir RA. Information seeking behaviour of the adolescents with reference to sexual information. Procedia-Social Behav Sci. 2015;211:790–5.

29. Park S, Lim H, Choi H. " Gangnam mom ": A qualitative study on the information behaviors of Korean helicopter mothers. iConference 2015 Proc [Internet]. 2015; Available from: https://www.ideals.illinois.edu/handle/2142/73636