

Establishing the Knowledge of Health Information among Adolescent Postpartum Mothers in Rural Communities in the Denkyembour District, Ghana

Abstract

Purpose

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.”

Methodology

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 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 for 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%).

Conclusion

Lack of awareness of libraries and their role in disseminating health information was the general view among the study population. Extension of library services to vulnerable people, particularly, adolescent postpartum mothers in rural communities will help make them information conscious, and it will help eradicate some basic health challenges faced by these women.

Keywords:

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

36 **1. Introduction**

37 Dependable health information resources **are** one of the most treasured resources
38 available to society [1] and the continuous access to health information makes
39 patients and individuals well-informed about their conditions which is on record to
40 have helped enhanced health care and reduced healthcare delivery cost [2]. State
41 agencies have been encouraged to ensure that young people have access to
42 information and materials from a diversity of national and international sources,
43 especially those aimed at the promotion of their well-being and health [3]. To this
44 end, Nwalo and Anasi postulated **that** the young adult should have the right to
45 receive information and services necessary to protect them from reproductive
46 health-related infections, unintended pregnancies and their associated outcomes [4].
47 Meeting the health information needs of adolescent postpartum mothers,
48 particularly those in rural communities is a positive step towards achieving SDG3.
49 Rose and colleagues used the term “emerging adulthood” to describe “adolescence”
50 [5], and it has been explained that this group is characterised by individuals who
51 experience unique challenges including identity exploration, participation in risky
52 behaviours, and the exhibition of behaviours most cultures try to oppose [5,6]. It is
53 the period when young adults begin to make health decisions on disease prevention
54 and health promotion efforts **to** mitigate the effects of various somatic diseases [7].
55 It becomes a key concern when such an adolescent is a mother. Such a person needs
56 information on breastfeeding, family planning, contraceptives, Sexually Transmitted
57 Diseases, parenting among others [4,8,9]. Adolescents who receive current, accurate,
58 reliable and balanced health information are more likely to express healthier sexual
59 attitudes and engage in healthier behaviours than adolescents receiving limited or
60 no sexual-health information [10]. Health information can be categorised into formal
61 and informal [9–11]. Adolescents who receive health information from formal
62 sources engage in fewer risky behaviours and hold more cautious attitudes about

63 issues than adolescents who receive information from peer and popular media
64 sources.

65 How people find the health information they need has been a concern for librarians
66 for decades [12]. The Consumer and Patient Health Information Section (CAPHIS-
67 MLA) of the American Medical Library Association observed that the growing focus
68 on patient-centred care and the general need for accurate general health information
69 have brought about the need to integrate librarians fully into health delivery systems
70 [13]. A considerable number of studies on adolescent health information have been
71 undertaken by a number of researchers in Ghana [14–16], but none considered the
72 role libraries could play in disseminating health information to citizens, especially,
73 the vulnerable in society. However, it has been established by researchers in other
74 jurisdictions that the library is a major channel through which health information
75 can reach the vulnerable in society [4,10,12,17]. Earlier studies confirmed a dearth of
76 information on how the vulnerable in society, like the adolescent postpartum
77 woman, access health information in a resource-limited rural Ghana. To improve
78 upon the efficiency and impact of health information dissemination to vulnerable
79 societies, as well as realise goal 3 of the SDG, this study examined the knowledge of
80 health information among adolescent postpartum mothers and their perceptions on
81 how libraries can help in “ensuring healthy lives and promoting well-being for all.”

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

88 2. Materials and Methods

89 2.1 Subjects

90 This study was conducted among postpartum mothers in selected rural communities
91 in Ghana. 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 was 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 is 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 Collection 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 about age, educational background of participants and their partners and number of children were collected to appreciate the socio-demographic characteristics of the respondents. Secondary data was collected through a review of related literature to understand current and previous studies on the topic and also appreciate the gap in the literature that needs to be bridged. Some databases that were consulted during this research include PubMed, ERIC, MeSH, CINHALL 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 $60 \leq x < 80$ 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 \pm 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 analyses. 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.

150 Averagely, participants had been living in their respective villages for 15.56±5.58
 151 years as at the time the study took place. In general, apart from “partner's
 152 employment status ($P=0.16$)” and “number of years participants have been living in
 153 their respective towns/villages ($P=0.06$)”, all other variables showed a significant
 154 difference between the case and control groups. (see Table 1).

155
 156 *Table 1: Socio-demographic characteristic of the population stratified by stages of*
 157 *development*

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Parameters	Total N=101	Cases N=53	Control N=48	P-value
Towns				
Kusi	39(38.61)	12(22.64)	27(56.25)	0.001
Takrowase	40(39.60)	29(54.72)	11(22.92)	
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)	0.0023
Basic	84(83.17)	49(92.45)	35(72.92)	
Secondary	15(14.85)	2(3.77)	13(27.08)	
Partner's Educational Background				
None	6(5.94)	3(5.66)	3(6.25)	0.0023
Basic	55(54.46)	38(71.70)	17(35.42)	
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)	< 0.0001
Informal	26(25.74)	3(5.66)	23(47.92)	
Formal	6(5.94)	0(0.00)	6(12.50)	
Partner's Employment Status				
None	14(13.86)	8(15.09)	6(12.50)	0.155
Informal	73(72.28)	41(77.36)	32(66.67)	
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
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Continuous data are 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.

A 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 of 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)	0.0015
Acceptable	11(20.75)	12(25.00)	
Negative	34(64.15)	15(31.25)	

Data are 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).

181 **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)	0.0676
Average	4(7.55)	11(22.91)	
Low	10(18.87)	5(10.42)	
Partner-related information			
High	11(20.75)	4(8.33)	0.1136
Average	27(50.94)	23(47.92)	
Low	15(28.31)	21(43.75)	
Health-related information			
High	43(81.13)	28(58.33)	0.0270
Average	10(18.87)	18(37.50)	
Low	0(0.00)	2(4.17)	
Economic-related information			
High	0(0.00)	1(2.08)	0.0162
Average	4(7.55)	13(27.08)	
Low	49(92.45)	34(70.84)	
Social lifestyle and support information			
High	0(0.00)	0(0.00)	0.8139
Average	11(20.75)	11(22.92)	
Low	42(79.25)	37(77.08)	

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

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

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194 **Table 4: Respondents' knowledge of health information Sources**

Parameters	Cases N=53	Control N=48	P-value
Sources			
<i>Formal</i>			
Acceptable	1(1.89)	2(4.17)	0.6031
Poor	52(98.11)	46(95.83)	
<i>Informal</i>			
Acceptable	4(7.55)	6(12.50)	0.5117
Poor	49(92.45)	42(87.50)	
Media			
<i>Electronic</i>			
High	0(0.00)	3(6.25)	0.0016
Acceptable	6(11.32)	17(35.42)	
Poor	47(88.68)	28(58.33)	
<i>Print</i>			
Acceptable	19(35.85)	26(54.17)	0.0741
Poor	34(64.15)	22(45.83)	
<i>Oral</i>			
Acceptable	51(96.23)	47(97.92)	1.0000
Poor	2(3.77)	1(2.08)	

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

197

198 **4. Discussion**

199 The lack of awareness of information needs and the inability to recognise and
 200 adequately express information needs are serious barriers to fulfilling information
 201 needs [21]. The record of poor knowledge on libraries among the general population
 202 was the main observation in this study. However, it was observed that majority of
 203 the control group 21(43.75%) had positive views of the roles of libraries in health
 204 information dissemination ($P=0.002$), whereas a significant number of the case group
 205 34(64.15%) had negative perceptions. These observations reflect the conclusions of
 206 Salman and colleagues, that "the lack of awareness of library services that are
 207 available, as well as the lack of access to many of the services that users would have

208 liked to have access to, have a major impact on the utilisation of these services” [22].
209 Most rural communities in Africa do not have access to library facilities, and the few
210 existing ones are in very poor conditions, owing to the lack of financial and human
211 resources, and the absence of library materials [23,24]. Thus, the overwhelmingly
212 negative perception of libraries among the respondents was much expected.
213 Moreover, with a high record of the low educational level (basic education) among
214 the case group 49(92.45%) and their partners 38(71.70%), it was expected that
215 libraries and other literary-related institutions would not be part of their connexions.
216 Lee has established a positive relationship between library usage and ones’ level of
217 education [25].

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

225 The study also established high demands for “baby-related information” and
226 “health-related information” among both the case group 39(73.58%); 43(81.13%) and
227 the control group 32(66.67%); 28(58.33%) respectively. These findings are in tandem
228 with Lee and Grimes whose work on health information needs and seeking
229 behaviours among mothers revealed that majority of the respondents indicated the
230 need for information relating to the health of their babies, the kind of foods to give to
231 their babies, vaccination schedules, among others [25,27]. Most of the respondents in
232 the case group and even in the control group had just given birth to their firstborns
233 during the time of the study (see table 1), hence the insatiable need for basic
234 information on their babies and their health. The need for “partner-related
235 information” and “social lifestyle and support information” were generally low
236 among the study population. The need for such information 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 a 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]. Regarding 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, health providers, public health practitioners, and policymakers. 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” – SDG3. These services could be in the form of organising informal information literacy sessions. During these sessions, individuals would be equipped with skills to know the need for health information, to access the needed health information, to evaluate health information critically, 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. The public/community health units of the various health facilities need to do more in educating these young women on health information.

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