ORIGINAL ARTICLE

Maternal social capital, health status and wellbeing of mothers of children under five years in Ibadan, Nigeria

FLORENCE DAMILOLA DAUDA, YETUNDE OLUFISAYO JOHN-AKINOLA
Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Nigeria

Summary

Introduction. *This study investigated the influence maternal social capital has on the health and wellbeing of mothers of under-five children in a semi-urban local government area in Ibadan, Nigeria.*

Methods. *A descriptive cross-sectional study that utilised a three-stage sampling technique was adopted to select 385 respondents from 4 primary health care centres in Ibadan, Nigeria. Data collection was done using a semi-structured questionnaire to assess mothers' social capital, wellbeing and body Mass Index (BMI). Data analysis was done using*

descriptive and inferential statistics at the significant level of P < 0.05.

Results. *Benefits derived from participating in social groups such as: useful health information (p = 0.005; p = 0.000) and child care support (p = 0.003; p = 0.002) were significantly associated with wellbeing and health status of mothers respectively.*

Conclusions. *Mothers should be encouraged to engage in networks that are of healthful benefits to ensure effective knowledge sharing in sustaining promotion of health and wellbeing among mothers of under-five children.*

Introduction

Health is a concept that defines man's state of wellbeing. The World Health Organisation (WHO) defines health as "*a state of complete physical, mental, social wellbeing and not merely the absence of disease or infirmity*" [1], and later in 1986, at the Ottawa Charter in Canada, it was furthered explained that "*health is a resource for everyday life and not just an 'object for living'*". The WHO highlights a clear connection between health and wellbeing and emphasises health as a human right that necessitates both physical and social resources for sustainability.

Social capital's implications for health and socio-economic factors have made it a widely studied subject in many research work. Research has highlighted a connection between social networks, social support, as well as health, in public health research in much earlier times. There was later on an established connection between the concept of social capital and health [2]. Social capital is a means whereby people are able to access unavailable information and resources through their involvement and interactions in social networks, interpersonal relationships and other social structures. Social capital is also said to be related with better mental health among mothers and it is considered a mental health promotion strategy among women [3].

Social capital may be a mediating factor between and within communities, having a positive influence on health inequalities, which emanates from social isolation, low level of support and low self-confidence.

Strong networks, good level of support and positive relationships may have influence on individuals' sense of connectedness and belonging, confidence and self-esteem. They also have the ability to bring about change in people's or in their community, which serves as a protective factor in relation to health. Social capital as a concept can be divided into two elements; structural and cognitive elements. Characteristics of structural elements includes the tangible and easily observable aspects of social capital such as network connections, roles, rules, precedents and procedure. Cognitive social capital on the other hand includes intangible elements such as dispositions, reflexes, reliance and behavioral pattern people exhibit through learning and acting in the society [4]. According to Ivković, Ham and Mijoč [5], the subjective dimension of wellbeing can be related to individual perception of the quality of life in the society; wellbeing can be measured with indicators like income, health and education, which are the most commonly used.

Mothers are faced with a wide range of challenges which are peculiar to each and every mother. Motherhood creates new experiences that necessitates efforts directed towards a balanced life, which when not attended to can impair their health and wellbeing and consequently the health of their children. Report by UNICEF highlights poor economic status, inadequate maternal nutrition and deficient prenatal care as some of the challenges faced by mothers of under-five children in tackling nutritional challenges among small children. These challenges are characterised in high levels of disparities in health

issues faced by 40 million childbearing aged women in Nigeria [6]. Other challenges faced by mothers are mostly social capital related and they include challenges such as emotional disturbance, social isolation and risk of developing depressive illnesses especially among young mothers. These challenges can be associated with feelings of isolation, loneliness and low self-esteem [7], as a result of their inability to pull resources from social networks. Many studies have focused on mothers' social capital and child health outcomes but there is a dearth of studies in Nigeria that have focused on the corresponding health and wellbeing of the mothers.This study investigated the social capital status of mothers of under-five children in two dimensions (structural and cognitive) with indicators such as social networks, trust, togetherness, cohesiveness, participation and membership in groups among mothers of under-five, and how they relate to mothers' health and wellbeing.

Methods

A descriptive cross-sectional study design was employed to randomly select 385 consenting mothers of under-five children in four Primary Health Care (PHC) centres in Ibadan, Oyo State, Nigeria. A three-stage sampling technique was employed in selecting Mothers of under-five children from the PHCs selected in the LGA. In the first stage, the number of PHCs (11) were identified in the LGA; In the second stage, a purposive selection of 4 Primary Health Care Facilities was done based on their location in the LGA and population of mothers who attended on immunization days; In the third stage, consenting mothers were selected, through random selection, from each of the 4 health facility in the following proportions, based on population of attending mothers: 50 percent (193) of the total population was selected from PHC1, 30 (116) percent from PHC2, 15 (57) percent from PHC3 and 5 (19) percent from PHC4. The instrument employed for data collection was a semi-structured interviewer-administered questionnaire which assessed the social capital status, health status and wellbeing status of the mothers of under-five children. To measure the independent variable (maternal social capital), the Short Adapted Social Capital Assessment Tool (SASCAT) developed by Harpham et al. [2] was adopted for the study. The tool was used to measure both structural and cognitive aspects of social capital. The dependent variable (wellbeing) was measured by adapting the Warwick Edinburgh Mental Health Scale (WEMWBS) as a measure for subjective wellbeing. To further ascertain the mothers' health status, anthropometry measures of the mothers of under-five children was carried out using height and weight for BMI which served as index for mother's nutritional status.

In establishing the reliability of the instruments, a pre-test of the data collection instruments were carried out among approximately 10% of the total study sample population (40 mothers of under five children) in another representative population in Ibadan. A Cronbach Alpha

measurement and reliability co-efficient measure was done and a co-efficient of 0.649 Cronbach's Alpha was obtained.

A coding guide was developed along with the data collection tool in order to facilitate its analysis. The data collected was carefully entered into the Statistical Package for Social Science (SPSS IBM version 22) statistical software and analysed using descriptive statistics such as mean, median and mode and inferential statistics such as Chi-square and logistic regression.

Structural social capital (SSC) was measured with questions on attendance and level of participation in social groups, a 21 point scale was used with scores < 6 were categorised as low SSC, 7-13 categorised as average SSC and 14-21 categorised as high SSC. The cognitive social capital (CSC) was measured using questions on trust and togetherness with a 7 point scale with scores ≤ 3 were categorised as low CSC and 4 ≥ 7 categorised as high CSC. Overall social capital status (SCS) was measured with a 32 point scale with categorisation scores of ≥ 15 as low and 15 ≥ 32 as high social capital. Wellbeing was measured with a 64 point scale with ≤ 21 categorised as low, 22 ≥ 42 categorised as average and ≥ 43 categorised as high and BMI was categorised based on WHO Global data base for BMI. The data was analysed using descriptive and inferential statistics (multinomial regression analysis) at the significant level of $P < 0.05$.

Ethical approval (Ref. No: AD 13/479/1448) was sought and obtained from the Oyo State Ministry of Health Nigeria Research Ethics Committee before data collection. To ensure confidentiality of research participants, identifiers such as names and other information that could reveal the identity of research participants were not included in the research instruments. The nature of the study, benefits and objectives were explained to the respondents and they were assured that the information given would be treated with utmost confidentiality. Consent was obtained from respondents before commencement of data collection and they were informed about the opportunity to withdraw their consent freely at any point during the study. Confidentiality of each research participant was maximally maintained during and after the collection of their information. Information gathered from the respondents was stored in a password protected computer for analysis and copies of the research instruments were kept for maximum safety.

Results

SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Majority (60%) of the mothers were between the ages 21 to 30 year and almost all of the mothers (97.9%) were married. About half (50.4%) of the mothers had secondary level education, while 39.7% had tertiary education. Many (41.0%) were traders and artisans (31.4%) and earned between N11,000-N30,000

($50-$100) every month (53.2%) and 27% earned below that. Many (59.5%) had 1-2 children (Tab. I).

Respondents' social capital status

Structural social capital (SSC) that measured social support groups for the mothers mainly included family and friends (44.4%) and religious groups (38.4%). Others were community leaders (11.2%), government (11.2%), cooperative group (10.6%) and charity organisations (5.5%). Types of social support mothers got included financial support from family and friends (40.3%) and

Tab. I. Respondents' Socio-demographic characteristics (N=385).

Characteristics	Frequency	Percentage (%)
Age		
< 20	18	4.7
21–30	231	60
31–40	120	31.2
41–50	13	3.4
> 50	3	0.8
Marital Status		
Single	8	2.1
Married	377	97.9
Religion		
Christianity	202	52.5
Islam	181	47
Traditional	2	0.5
Ethnicity		
Yoruba	354	91.9
Igbo	18	4.7
Hausa	1	0.3
Others	12	3.1
Highest level of Education		
No formal education	10	2.6
Primary	28	7.3
Secondary	194	50.4
Tertiary	153	39.7
Occupation		
Civil servant	12	3.1
Artisan	121	31.4
Professional	18	4.7
Trader	158	41.0
Teachers	44	11.4
Farmers	7	1.8
Students	17	4.4
Cleric	1	0.3
Unemployed	7	1.8
Average income per month(N)		
0–10000	105	27.3
11–30000	205	53.2
31000 and above	75	19.5
Number of Children		
1-2	229	59.5
3-4	137	35.6
5-6	18	4.7
7-8	1	0.3

from religious leaders (29.1%). Benefits mothers derived from social support/network groups included useful health information (64.7%), childcare support (65.2%), easy access to health facility (57.7 %), invitation to social function (41.8%), access to health care finance (29.6%) and financial and material support (29.1%).

Cognitive social capital (CSC) included trust in people in their neighbourhood (41%) and community (37.4%), feeling of being part of their community (63.1%), get along well with people in their community (65.7%) and majority of the people in their community generally get along well with each other (63.9%).

The result showed that almost all mothers (99.7%) had average level of SSC. Many (59.7%) had high CSC. Overall Social capital status (SCS) result showed that majority of the mothers (86.2%) had low SCS and only 13.8% had high SCS.

Wellbeing of respondents

Majority (73.2%) of mothers were often times optimistic about the future, 74% often times felt useful and relaxed (66.5%). Many (59%) have often times felt interested in other people, dealt well with their problems (52.7%), been able to think clearly (64.4%) and felt good about themselves (67.3%). Furthermore, 66.2% have often times been felt confident, felt loved (67.5%) and felt cheerful (67.3%). Majority (72%) of the respondents were on the high level of wellbeing scale. A three point likert scale was used with rarely (1), Sometimes (2) and often times (3) with the aggregate score of 126, scores below 21 were labelled low level of wellbeing, scores 22–42 was labelled average level of wellbeing and scores 43–63 was labelled high level of wellbeing. There was no statistical relationship between mothers' social capital and wellbeing.

Body Mass Index (BMI) status of mothers (Health status)

Less than half of the mothers (46.5%) were of normal weight, many (39.1%) were over-weight, 11.8% were obese and very few 2.7% were under weight.

Relationship between benefit derived from participation in social group and health status of mothers

Findings indicated that there was a statistically significant relationship between benefits: useful health information ($X^2 = 19.496$; $p = 0.000$), childcare support ($X^2 = 15.277$; $p = 0.002$), easy access to health facilities ($X^2 = 15.171$; $p = 0.001$), satisfaction from involvement in decision making ($X^2 = 9.220$; $p = 0.048$) and health status using BMI (Tab. II).

Multinomial regression analysis on relationship between benefits derived from social groups and health status

Results of multinomial regression analysis of relationship between benefits derived from social group participation and health status using BMI showed that there was a significant association between mothers who

Tab. II. Relationship between benefits derived from social groups and health status of mothers.

		Underweight Freq. (%)	Normal weight Freq. (%)	Overweight Freq. (%)	Obese Freq. (%)	X²	P-value
Useful health information							
	Yes	4(1.8)	124(54.6)	75(33.0)	24(10.6)	19.496	0.000*
	No	5(4.4)	34(30.1)	58(51.3)	16(14.2)		
Child care support							
	Yes	4(1.8)	121(53.8)	77(34.2)	23(10.2)	15.277	0.002*
	No	5(4.3)	37(32.3)	56(48.7)	17(14.8)		
Access to health facility							
	Yes	5(2.4)	111(54.1)	73(35.6)	16(7.8)	15.171	0.001*
	No	4(3.0)	47(34.8)	60(44.4)	24(17.8)		
Health care finance							
	Yes	3(2.9)	49(47.6)	37(35.9)	14(13.6)	1.052	0.802
	No	6(2.5)	109(46.0)	96(40.5)	26(11.0)		
Financial and Material support							
	Yes	4(4.1)	43(43.9)	37(37.8)	14(14.3)	2.280	0.508
	No	5(2.1)	115(47.5)	96(40.5)	26(10.7)		
Access to loan							
	Yes	2(3.6)	32(58.2)	14(25.5)	7(12.7)	5.830	0.101
	No	7(2.5)	126(44.2)	119(41.8)	33(11.6)		
Friendship and developing a sense of belonging							
	Yes	4(4.5)	43(48.9)	27(30.7)	14(15.9)	5.851	0.110
	No	5(2.0)	115(45.6)	106(42.1)	26(10.3)		
Security							
	Yes	2(1.7)	55(46.6)	40(33.9)	21(17.8)	7.107	0.650
	No	7(3.2)	103(46.4)	93(41.9)	19(8.6)		
Decision making							
	Yes	1(1.3)	32(42.1)	27(35.5)	16(21.1)	7.557	0.048*
	No	8(3.0)	115(43.4)	114(43.0)	28(10.6)		
Involvement in developmental activities							
	Yes	3(2.1)	71(49.7)	50(35.)	19(13.3)	2.395	0.500
	No	6(3.0)	87(44.2)	83(42.1)	21(10.7)		
Invitation to Social function							
	Yes	0(0.0)	4(30.8)	6(46.2)	3(23.1)	2.607	0.391
	No	9(2.8)	154(47.1)	127(38.8)	37(11.3)		

got easy access to health facilities (p = 0.038) and those who were involved in decision making (p = 0.014) as a benefit derived from social group participation and health status using BMI.

Relationship between benefits derived from social groups and wellbeing of mothers

Result showed that useful health information (X2 = 11.119; p-value = 0.005), child care support (X² = 11.834, p-value = 0.003), security in the neighbourhood (X² = 7.579; p-value = 0.020) and invitation to social functions (X² = 7.414; p-value = 0.028) were statistically significantly related to wellbeing of mothers (Tab. III). Further multinomial regression analysis showed no statistical significance difference between benefits derived from social groups and wellbeing of mothers.

Discussion

The study findings showed that social capital status of the mothers of under-five was low and in turn was not statistically related with their health and wellbeing status. Most of the mothers participated more in their informal and religious groups than in formal groups like political groups and cooperative groups and most of them were ordinary members in the groups they belonged to and this was reflected in the sources of social support derived. The study revealed that the hospital was a good source of useful health information and child care support, and mothers utilised it as a place where they interact with other women when they visited for their children's immunization and for other purposes. The setting provided an avenue to share experiences and ideas with others mothers, to network and ask questions. Findings also showed that most of the women had

Tab. III. Relationship between benefits derived from social groups and wellbeing of mothers

	Low level Freq. (%)	Average level Freq. (%)	High level Freq. (%)	X²	*p*-value
Useful health information					
Yes	1(0.4)	54(21.7)	194(77.9)	11.119	0.005*
No	8(5.9)	31(22.8)	97(71.3)		
Child care support					
Yes	1(0.4)	60(23.9)	190(75.7)	11.834	0.003*
No	8(6.0)	25(18.7)	101(75.4)		
Easy access to health facility					
Yes	3(1.4)	45(20.3)	174(78.4)	3.456	0.191
No	6(3.7	40(24.5)	117(71.8)		
Access to health care finance					
Yes	2(1.8)	28(25.0)	84(75.0)	0.722	0.736
No	7(2.6)	57(20.9)	207(75.8)		
Financial and material support					
Yes	0(0.0)	28(25.0)	84(75.0)	4.406	0.106
No	9(3.3)	57(20.9)	207(75.8)		
Easy access to loan					
Yes	0(0.0)	18(28.1)	46(71.9)	2.701	0.225
No	9(2.8)	67(20.9)	245(76.6)		
Friendship and development of sense of belonging					
Yes	2(2.0)	31(30.4)	69(67.6)	5.409	0.057
No	7(2.5)	54(19.1)	222(78.4)		
Security					
Yes	0(0.0)	37(26.4)	103(73.6)	7.579	0.020*
No	9(3.7)	48(19.6)	188(76.7)		
Involvement in decision making					
Yes	0(0.0)	25(27.5)	66(72.5)	4.292	0.115
No	9(3.1)	60(20.4)	225(76.5)		
Satisfaction from developmental activities					
Yes	0(0.0)	17(20.2)	67(79.8)	2.562	0.310
No	9(3.0)	68(22.6)	224(74.4)		
Invitation to social function					
Yes	0(0.0)	35(21.7)	126(78.3)	7.414	0.028*
No	9(4.0)	50(22.3)	165(73.7)		
Other benefits					
Yes	0(0.0)	2(15.4)	11(84.6)	0.293	0.810
No	9(2.4)	83(22.3)	280(75.3)		

a considerably good level of wellbeing status which was significantly associated with benefits derived from participating in social groups such as useful health information, child care support, security in the neighbourhood and invitation to various social functions. Results highlighted that getting useful health information on issues relating to health and benefitting from child care support were the main benefits that were associated with the wellbeing of mothers of under-five children. Rocco and Suhrcke [8], affirms that individuals who are more involved in continuous social interactions such as with family, friends, social events involvement, meetings, partisanship in formal and informal organisations, are often more probable to have access to information on preventive and curative measures of disease than those who are not. Kawachi and Berkman [9]also describes social capital as a mechanism through which community social capital affects health by providing channels for health promotion through which there is a rapid dissemination of health-related knowledge and information in social networks. It is also a means of creating and ensuring healthy behavioural norms (e.g. regular physical exercise, healthy eating and so on) and exerting social control over harmful health behaviours (e.g. smoking and drinking).

Study findings also showed that most of the mothers received social support from their families and friends. This indicates that family and friends play a good role in helping women overcome major challenges through provision of financial resources for health care and other basic needs provision. Studies [10, 11] revealed that women who receive emotional, economic and social support from their families are well able to deal with life challenges and problems in more logical and easier

way. Family social supports for women who require extra care in dealing with difficult situations can help achieve a crisis period with less psychological burdens. Social family ties create support systems that reduce the rate of physical infirmity and also create an avenue for recuperation to an individual's normal life.

Health status was measured using Body Mass Index (BMI). This was due to the fact that prevalence of obesity has been on the increase in recent times having impacts on morbidity, quality of life and public health. This study showed a relationship between certain benefits derived from participating in social networks (useful health information, child care support, easy access to health facility and involvement in decision making) and BMI status. Rohrer et al. [12], reported that obesity is more common among women who live in low income societies and have large family sizes but do not receive support from their parents than those with large family sizes and parental supports. Social support gotten through networks of friends and family have been correlated with improved participation in networks that supports diet and physical activity interventions; and among postpartum mothers who are overweight; social support was shown to influence healthy behaviours that ensures healthy weight. Possible channels identified that could stand as a mediating factor between health and social capital include the improvement of norms of health-related behaviours such as community/group prevalent norms and values such as avoiding sugars and trans-fat take up. Others are collective efficacy, such as advocating situations and conditions that allows for exercise and healthy eating habits; and exchange of social support which could be in form of nutritional advice and support [13].

Recommendations

Health promotion and behavioural change recognises the role of communities in improving various health outcomes and thereby many health interventions are taken through communities to achieve their goal and get to the target audience. Therefore health intervention planning should take into consideration the structural and cognitive social capital strength of the community so as to ensure knowledge transfer and sustainability of interventions carried out. Health education and promotion programmes should make efforts towards strengthening social groups and networks in the community and also ensuring solidarity, reciprocity of kind gestures, togetherness and trust especially among mothers. This will facilitate easy access into the community and increased knowledge acceptability and retention.

Conclusions

Findings highlights that the level of social capital does not predict the wellbeing of the women in this study but may influence their health status using their Body Mass Index. Therefore, mothers should be encouraged to engage in meaningful and resourceful networks that will facilitate easy access to useful health information and many other benefits needed for considerable level of health and wellbeing status.

Acknowledgements

Conflict of interest statement

The authors declare no competing interest.

Authours' contributions

Both authors have contributed substantially to the conception, design, analysis, interpretation, writing and reviews of the manuscript.

References

[1] WHO, Global database on Body Mass Index - 2020. Accessed from: apps.who.int/bmi/index.jsp?introPage=intro_3.html

[2] Harpham T, Grant E, Thomas E. Measuring social capital within health surveys: key issues. HPP 2002;17,106-11. https://doi.org/10.1093/heapol/17.1.106

[3] Thuy NTM, Berry HL. Social capital and mental health among mothers in Vietnam who have children with disabilities. Glob Health Action 2013;6:18886. https://doi.org/10.3402/gha.v6i0.18886

[4] Claridge T. What is Cognitive Social Capital? 2018. https://www.socialcapitalresearch.com/cognitive-social-capital/ (Retrieved July 2019).

[5] Ivković AF, Ham M, Mijoč J. Measuring objective well-being and sustainable development management. J Knowl Manag Econom Inf Technol 2014;4:1-29.

[6] UNICEF. Situation of women and children in Nigeria - 2018. Accessed from: http://www.unicef.org/nigeria/situation-women-and-children-nigeria

[7] Mental Health Foundation, Young Mums Together, promoting young mothers - 2013. wellbeing. www.mentalhealth.org.uk

[8] Rocco L, Suhrcke M. Is social capital good for health? A European perspective (p. 16). Copenhagen: WHO Regional Office for Europe 2012.

[9] Kawachi I, Berkman LF. Social ties and mental health. J Urban Health 2001;78:458-67. https://doi.org/10.1093/jurban/78.3.458

[10] Khosravi, Z, Khaghanifard M, Khachatryan A. A Sociological Study on Women's Cultural, Social and Economic Capitals with Domestic Violence. Annual Sociology 2008. Department Yerevan State University.

[11] Coker AL, Davis KE, AriasI, Desai S, Sanderson M, Brandt HM, Smith PH. Physical and mental health effects of intimate partner violence for men and women. Am J Prev Med 2002;23:260-8. https://doi.org/10.1016/S0749-3797(02)00514-7

[12] Rohrer J.E, Rohland BM. Psychosocial risk factors for obesity among women in a family planning clinic. BMC Family Practice 2004;5:20. https://doi.org/10.1186/1471-2296-5-20

[13] Carrillo-Álvarez E, Kawachi I, Riera-Romaní J. Neighbourhood social capital and obesity: a systematic review of the literature. Obes Rev 2019;20:119-41. https://doi.org/10.1111/obr.12760