Journal of Health, Medicine and Nursing
ISSN 2422-8419 An International Peer-reviewed Journal
Vol.49, 2018

Screening for Risk Factors: Adolescent Sexual Risk Behavior as a Symptom of Disordered Family Structure and Functioning.

Dr Vivien O. Abah
Dept of Family Medicine, University of Benin Teaching Hospital. Benin City Edo State Nigeria.
vienabah@gmail.com. +2348023397354

Abstract
Background: Adolescent transition is associated with risky sexual behavior. Evidence has demonstrated the impact of family factors mediated through parental attachment on adolescents' decisions on sexual debut and practice. Health provider initiated focused intervention targeting at risk adolescents and their families is needed but measures for family factors have not been incorporated into adolescents screening instruments. This gap in literature and adolescent health packages demands attention.
Aim and Objectives: This study aims to use the Family Circle and APGAR Questionnaire to elicit the pattern of parental attachment and perceived family functioning and their relationship with sexual debut with a view to recommending them as screening instruments.
Method: Over 400 senior secondary school students randomly selected participated using self administered instruments including the Family Circle and APGAR Questionnaire. P value was set at 0.05.
Results: The Family Circle elicited the pattern of parental attachment and showed a significant relationship with sexual debut and parent adolescent communication on sexuality. The APGAR elicited the perceived family functioning among the respondents. A significant relationship was established between sexual debut and parents' educational status and parents' separation.
Conclusion: This study demonstrated the impact of disordered family structure and functioning on adolescent sexual practice mediated through parental attachment using the Family Circle and APGAR questionnaire. The utility of these instruments in eliciting parental attachment and perceived family functioning makes them vital tools proposed for screening and detection of at risk adolescents.
Key words: adolescent, parental attachment, family structure, functioning, sexual debut.

1. Introduction

The burden of adolescent sexual activity is increasing all over the world with serious social and health consequences. Given the massive increase in this demographic subset with more than 1.8 billion adolescents worldwide[1], the need for evidence based intervention has become critical. Adolescent sexual practice is important to families, societies and nations because of it's impact on burden of sexually transmitted infections including HIV/AIDS, teenage pregnancy, abortion related morbidities and mortality, interrupted education[3] and teenage motherhood with a resultant vicious cycle of maternal poverty.[2,3]

In the United States of America, it is estimated that 50% of high school students have initiated sex and up to 60% will be sexually active by the time they graduate.[4,5] In sub Saharan Africa, data show that median age at first sex is during adolescence at about 18.5 years for women and for men 16.9-19.6 years[6]. In Nigeria for both sexes it is approximately 15 +/- 2.4 yrs[7]. In Nigeria among youth, 22% of males and 18% of females are sexually active.[8] Among in school adolescents rates between 8%[9]and 28 %[10,11] have been recorded by different authors.
Risky sexual behavior is defined to include early initiation of sexual activity before age 15years, non use of protection and having multiple partners. [4,12]

Factors influencing adolescent sexual practice operate as either risk or protective factors and affect the adolescent on personal, family and community levels including social structure organizations like schools, religious, recreational and vocational organizations, neighborhood characteristics, culture and Government with its policies and programs impacting adolescent development.[13] Personal factors include gender, personality type, educational achievement, religious affiliation and socioeconomic status while family factors include structure, functioning and ecology.[9,14]

In the past decades, efforts to improve the burden of adolescent sexual practice focused on secondary preventive measures using comprehensive sex education in schools and promoting access to condom and safer sex. Less attention has been paid to primary preventive efforts aimed at strengthening protective factors that could help adolescents develop the resiliency needed to delay sexual debut. In well resourced nations, research and interventions on adolescent sexuality have gone beyond the individual level targeting families and communities unlike in sub Saharan Africa, where the focus is still on the individual, with little attention on family and community.[15,16,17,18,19] This reflects the situation in LMIC where Governments lack a sense of ownership of

responsibility for social welfare and social structural organization required to channel research and intervention to the dynamics of adolescent risk behavior.

There is a plethora of evidence that the family has major impact on the sexual practice of adolescents by impacting their ability to resist risky behavior. [5,19,20,21] Program reviewers have called for strategies strengthening the ability of the adolescent to delay initiation through improving protective factors in families, identifying adolescents in risky family settings and delivering focused intervention to them[5] Parental influence impacts adolescent sexual practice through instrumental and affective support, communication and monitoring.[13] Other mechanisms include parenting style, transmission of moral and family values, modeling of positive values and behaviors. Strong emotional bonds between parents and the adolescent facilitates development of strong motivation and sense of coherence in lif.e[17,20] Self esteem and self confidence deriving from this enables fidelity to agreed behaviors, resistance to peer pressure and self disclosure making monitoring effective. Family structure determines the availability of parental capacity for support and monitoring and modifies functioning. Family functioning determines the quality of interaction of members influencing their perception of support and connectedness to the family. Communication is the matrix that enables all interaction in the family and is also facilitated by good emotional connectedness. Communication between parents and the adolescent impacts their behavior and emotional bonding covering both general interactions and specifically on sexuality.[20,21,22]

Interventions to strengthen protective factors in families have been carried out at mass levels in high resource countries with success. Such programs like the Iowa Strengthening Families Program improved parental capacity for effective communication, appropriate limit setting and improvement of the parent adolescent relationship. Adolescents were taught goal setting, self efficacy and resistance to peer pressure.[19]

Many authors have advocated strategies to achieve focused family intervention by identifying at risk adolescents and also the capacity of health care providers to take the lead in this regard [5,13,21] Health care providers have both the opportunity and the trust of both the adolescents and their families.[21] Intervention targeting families constitutes an effort at primary prevention especially if delivered in late childhood before the children begin to experiment with risk behaviors. Repeat screening as part of routine adolescent preventive care can identify and track changes in the family and enable secondary intervention modifying risky sexual behaviors.
Adolescent health care is about risk behavior screening and prevention.[23] Prevention science targets reduction of risk factors and strengthening of protective factors[17] but most tools for adolescents screening do not incorporate items on family function or parental attachment. The mechanisms and strategies to achieve this have so far proved to be a gap in scientific literature.[21] This study aims to fill this gap by employing simple Family Medicine tools to elicit the adolescent's perception of their emotional bonding to their parents and their family's functioning. Adoption of this practice will improve outcome for adolescents at individual levels and provide the nucleus for advocacy for family based intervention and adolescent health at mass levels especially in LMIC where this is lacking.

1.1 Justification

Despite the well documented evidence of family impact on adolescent sexuality in other climes, there is a dearth of data on this in our environment. A gap in scientific literature has been identified on how the evidence on family factors and sexual practice among adolescents can be utilized to identify at risk adolescents and their families.[21] Parental attachment and family functioning measure vital parameters of the family and can serve as indices of risky family settings. This study explored the use of the Family Circle and APGAR Questionnaire to elicit family function and parental attachment and the relationship between them and sexual debut, with a view to recommending them as screening tools.

1.2 Aim and Objectives

This study aims to use the Family Circle and APGAR Questionnaire to elicit the pattern of parental attachment and perceived family functioning and their relationship with sexual debut with a view to recommending them as screening instruments.

1.3 Materials and Method

Study Design: The study was a cross sectional descriptive design.
Study Area: Secondary schools in Benin City, the capital of Edo State Nigeria. There are both private and public schools in the city. The low to middle class citizens generally attend the public schools while the private ones are attended by children from the middle to upper class homes. The secondary schools are divided into junior and senior schools of three years each.
Study population: The adolescents in senior secondary schools in Benin City. The adolescent population in Edo

state is estimated at 344, 024.[24] The prevalence of adolescent sex in Nigeria is between 8% [9]and 28% [10,11] with an average of 18%.

Selection criteria:

Inclusion: all senior secondary students within age 10-19 who consented to participate.

Exclusion: All students in senior class who were below 10years or above 19years or refused to consent.

Sampling method: Random sampling by balloting was used to select two mixed non boarding schools, one private and one public.non boarding mixed schools were chosen because there is expected to be some important contextual differences between these schools and single sex schools, boarding schools (mixed or single sex), faith based schools and secular schools. Non Boarding schools also have the additional advantage of having children who are in constant contact with their parents, the school and the society. They offer the highest likelihood of adolescents in their natural milieu.

Calculated sample size was 267. Over Four hundred students were recruited from the two schools.

Ethical consideration: Ethical approval was obtained from the Ethics and Research Committee of University of Benin Teaching Hospital. Certificate No ADM/E 22/A/VOL.VII/1349. In the schools, permission was obtained from the Principals in writing and informed consent obtained from the students.

Method of Data collection:

The study instrument was a structured self administered questionnaire which was distributed to the students after permission and consent had been obtained. The filled questionnaires were retrieved same day at break time.

Study instrument: Consisted of three sections: section A: covering sociodemographic variables including information on family structure and parent adolescent communication on sexuality.

Section B: the APGAR Questionnaire. It is a standardized validated self administered family function screening instrument developed by Smilkstein.[25] It consists of one question in each of five domains testing the candidate's perception of processes in his family. 1) Adaptation: tests the way the family harnesses resources internal and external to solve problems. Partnership: tests how the family involves members in dealing with issues. Growth: tests the family's support for members' interests in new ventures for their growth. Affection: how the family shares and expresses affection. Resolve: assesses satisfaction with the amount of time the family spends together. Response to each question is scored 0 (hardly ever), 1 (sometimes) 2 (almost always). Total score ranges from 0-10. Scores 8-10 denotes highly functional, 4-7 denotes moderately dysfunctional and 0-3 denotes severe dysfunction.

Section C: Family Circle; it is a self drawn graphic representation of an individual and his family.[26] It may include other important people in their life. It consists of a large circle representing the individual's life sphere. A small circle in the center represents the candidate. Other small circles are drawn bearing the names of those they represent. Those within the circle are important and the closeness of their circle to the center depicts the strength of emotional bond between them and the candidate. Those drawn outside the circle are not important to the candidate. Maternal and paternal attachment were represented on 4 levels.

Very close: if their circle intercepts that of the candidate.

Close: if their circle is close to the center.

Not close: if their circle is on or close to the periphery

Not important: if their circle is outside the sphere.

Summing up maternal and paternal attachment to derive parental attachment, 3 levels were defined:

Very Healthy Attachment; if the candidate is close or very close to both parents.

Healthy Attachment: if candidate is close or very close to one parent.

Poor Attachment: if candidate defines both parents as not close or not important.

Study Duration: Data collection was done over about 4weeks.

Data Management: Data was collated using the excel spread sheet and analyzed using the SPSS version 21. P value was set at 0.05. Inferential statistics was done using the chi square test and Cramer's V to test the relationship between variables.

1.4 Results:

Only three hundred and thirty six questionnaires were found adequate for analysis. Most of respondents (70.3%) were in the middle phase of adolescence with a mean age of 15.39yrs. Sex distribution was equal. Majority of the respondents were Christians (97.3%). More than 88% of their mothers and fathers had secondary education or more. Majority of them were from monogamous families (86.3%) in which they lived with both parents (72.3%). Of the 27.7% who had separated parents, cause of separation was evenly spread between divorce, work and widowhood. Most of the families (72.9%) were in the fourth stage of the family life cycle. Majority (74.4%) of the respondents did not engage in any risk behavior (Table 1).

Majority of the respondents had not initiated sexual activity. The prevalence of sexual debut among the respondents was 10.1%.The mean age at sexual debut was low at 12.35 years. Majority of the sexually active respondents were males (82.4%). Most of them ever had only one partner (64.7%). Mean number of partners was

2.68. The incidence of pregnancy among the sexually active respondents was 14.7% (Table 2).
To facilitate the test of association, the categories, none and primary in maternal and paternal educational status were merged into one as primary.
The relationship between maternal education and sexual debut was significant. X^2 = 10.064 at df=2 p value 0.007.Cramers V=0.007 (Table 3)
The relationship between paternal education and sexual debut was significant. X^2 =11.711 at df=2 p value =0.003. Cramer's V=0.003 (Table 4).
The relationship between parental separation and sexual debut was significant. X^2 = 5.107 at df=1.p value =0-024 (Table 5).
The relationship between parental separation by death and sexual debut was not significant. X^2 =0.033 at df =1. P value =0.033. Fisher's Exact test =0.063 (Table 6).
Most of the respondents had Very Healthy Attachment to their parents (53.9%). Healthy Attachment was found in 37.5% and Poor Attachment in 8.6% (Table 7).To facilitate the test of association, the categories, not close and not important in maternal and paternal attachment were merged into one as not important.
The relationship between maternal attachment and sexual debut was not significant. X^2 =3.966 at df=3 p value =0.138 (Table 8).
The relationship between paternal attachment and sexual debut was significant. X^2 = 10.223 at df=2 p =0.006. Cramer's V= 0.006 (Table 9).
The relationship between parental attachment and sexual debut was significant. X^2 = 18.591 at df =2. P value=0.000 Cramer's V= 0.000(Table 10).
Most of the respondents rated their families as highly functional (56.3%). Moderate dysfunction was found in (32.7%) and severe dysfunction in 11.0% (Table 7).
The relationship between respondent's perception of their family functioning and sexual debut was not significant. X^2 =2.851 at df=2. P value= 0.240 (Table 11).
The prevalence of parent adolescent communication (PACS) among the respondents was 46.7%.(Table 7)
The relationship between PACS and sexual debut was significant. X^2 =6.235 at df 1 p =0.013 (Table 12)
The relationship between maternal attachment and PACS was significant. X^2 =12.655. at df 2. P=0.002.Cramer's V= 0.000 (Table 13).
The relationship between paternal attachment and PACS was significant. X^2 =6.128 at df 2.p=0.047. Cramer's V=0.047 (Table 14).
The relationship between parental attachment and PACS was significant. X^2 = 9.498 at df 2.p=0.009.Cramer's V =0.009 (Table 15).
There is a significant relationship between Family Functioning and PACS. Calculated chi square=14.689 at df 2, p value= 0.001. Cramer's V =0.001 (Table 16).

1.5 Discussion

The prevalence of sexual debut in this study sample was lower than in comparable studies in the south west and north central regions in Nigeria [10,11] and sub Saharan Africa[6] and USA[4]. More males and older respondents were involved similar to the referenced studies. The mean age at debut found in this study population was young at 12.35 years within the range of 15 +/- 2.34 years found for Nigerian adolescents and similar to findings in the USA where about 6% of adolescents initiate sex before the age of 13years.[4] Although majority of them had ever had only one partner with a mean of 2.68 partners, their early initiation puts them at greater risk of multiple partners and it's consequences including depressive illness and low self esteem among the females[27,28]. The high pregnancy rate of 14.5% in this subset is higher than Nigerian national average fertility rate of 5.2%[29] and close to that found in other studies in Ibadan and Ilorin with higher prevalence of sexual debut(5.7%-17%).[10,11] This further shows the low rate of SRH knowledge among them as expected given their younger age and the low rate of sex education covering this content both in homes and schools in the study population. Teenage pregnancy is a socio medical problem worldwide but more so in developing countries where more than 20,000 births are recorded to adolescent mothers daily.[30] This impacts major consequences on maternal death rates as adolescents face major barriers in accessing SRH and maternal health care[1] Beyond societal stigma, healthcare workers constitute a barrier to access to good antenatal ,delivery or post partum care. They resort to procuring abortion from quacks often with fatal outcome. Teenage motherhood is associated with increased adverse birth outcome for mother and baby like, vesico vaginal fistula, low birth weight, congenital defects etc. Impact on education increases the likelihood of school dropout resulting in a vicious cycle of maternal poverty predisposing the offspring to adverse circumstances compelling her to replicate the mother's trajectory in life[3,18] Studies have also shown that teenage mothers have difficulty getting married and staying married.[3]
Family structure impacts family dynamics by altering the parental resources available for affective and instrumental support and monitoring.[16,31] This is demonstrated in the significant relationship established between parental separation and sexual debut in this study and supported by other studies[16,31,32]. The single parent is often

stressed with overwhelming responsibility and negative dispositions limiting parental attachment. In families where there is replacement of the absent parent, dysfunctional psycho- political negotiations involving the step parent may also negatively affect PA, family functioning and precipitate externalizing behaviors including risk taking. This was confirmed in a study showing that PA and monitoring with intact families had better indices than single parent families who had better indices than families with step parents.[19]

The relationship between Parental separation by death and sexual debut was significant by Pearson's chi square but nullified by fisher's exact test suggesting the need for further inquiry into the impact of parental death on adolescents risk behavior. Adolescent grief reaction has been shown to include externalizing behaviors which may involve sexual activity.[33] Even when the loss occurs in earlier childhood, it has been shown that grief may persist for life. A study in Kenya showed that orphans living in institutional arrangement had better sexual indices suggesting that those in family settings suffer some kind of negative environment influencing risky sexual behavior[34]

Educational attainment of the father affects family structure as it determines socioeconomic status, provision of instrumental needs, neighborhood location , access to schools and other social structures that influence adolescent behavior. The strong and significant relationship between respondent's father's educational status and sexual debut is attributed to this.[32] Maternal education, also had a strong significant relationship to sexual debut, attributable to many reasons including, the capacity of educated mothers to have better understanding of the challenges the adolescents face, greater empathy, better communication generally and specifically on sexuality and better monitoring as found in other studies.[19,32]

The positive influence of parents on adolescent sexual practice has been attributed essentially to a warm Parental Attachment(PA) in the adolescents.[19,21] This study, confirmed it using the Family Circle to show that majority of the respondents had healthy PA with a strong and significant relationship to sexual debut in keeping with literature,[19,35]. A healthy PA enables the transfer of moral values, family values, motivation and resiliency helping them to develop into positive youth.[17,20] Healthy parental attachment encourages the adolescent to maintain fidelity to agreed behavioral standards and also facilitates self disclosure in the adolescent making monitoring effective. Where PA is lacking the need for love and affection may become motivation to seek romantic relationships at an early age. Lack of instrumental support like money for basic needs may create a transactional motivation for sex.[20,36] The capacity of the family circle to detect this important parameter makes it a vital tool in screening for health provider initiated intervention to strengthen family related protective factors and reduce risk factors for adolescent sexuality. It also has the advantage of revealing in a single picture other relationships within the family which may be of positive or negative impact on the child that can be addressed.[26]

Parental attachment (PA) was defined on three levels in this study in order to make translation to clinical use for identification and follow up easier. The utility of the family circle to elicit PA is further supported because it is simple, pictorial and attractive to children and adolescents.[26]

Maternal attachment was not significantly associated with sexual debut in this study despite the finding that maternal attachment was more prevalent than paternal attachment. This is attributed to the fact that maternal nurturing is non discriminating of child personality or behavior and also supportive of findings in other studies showing that mothers underestimate their children's sexual practice.[37] The strong significant relationship found between paternal attachment and sexual debut suggests that lack of paternal attachment precipitates externalizing risky behaviors including sexual activity especially in boys similar to findings by other authors.[16,38]

Communication generally is the medium of transfer of morals and family values and specifically information on sexuality. This study established a significant relationship between PACS and sexual debut despite a low prevalence of PACS in keeping with literature. [19,22.] The enabling impact of PA on communication was shown in it's strong significant relationship with all three dimensions of attachment : paternal, maternal and parental attachment as supported by literature.[31] Poor communication often associated with poor attachment limits teaching of values with parents resorting to coercion usually with adverse outcome.[19,20] The strong significant relationship between PACS and family functioning suggests that family functioning sets the milieu that facilitates family communication generally even beyond sexuality discussions. This is one of the many factors that underscores the importance of good family functioning for adolescent development.

The test of family functioning using the APGAR questionnaire established no relationship between sexual debut and family functioning. A study by Orluwene et al. in Nigeria confirmed that family dysfunction is related to adolescent risky sexual activity but determined dysfunction using a customized researcher administered instrument to elicit specific major negative parental factors like alcoholism, controlling and deficient parents.[39]

Another hospital based study by Muyibi et al. used the APGAR Questionnaire and established a relationship between family functioning and sexual activity.[9] In that study, more than 80% of the respondents rated their families as highly functional unlike in this study where only 56% rated their families as highly functional. It is possible that teaching hospital health seekers have family characteristics that distinguishes them from the general population. The APGAR is a screening instrument and tests the respondent's subjective perception of functioning in his family which expresses his sense of connectedness to the family. A rating of dysfunction is a cry for help

indicating a need for intervention using diagnostic instruments to confirm dysfunction and apply intervention at the individual or whole family level. Dysfunctional families constitute a risky environment for adolescent development[4,19]. Routine screening with APGAR provides opportunity for early detection and intervention which may not otherwise be available to help families improve on their processes. Moderate dysfunction is often transitioning and can respond to simple interventional measures from health providers especially where the family has resiliency resources. Severe dysfunction is more complex and requires referral for specialist intervention. However the counseling and mentoring from health providers or school counselors can provide the support and mentorship the adolescent lacks at home.

1.6 Limitations

The impact of parent substitutes in separated families and extended family members living with the family was not explored.

1.7 Conclusion

This study utilized self administered instruments to demonstrate the pattern of parental attachment and perceived family functioning among adolescents using the Family Circle and APGAR questionnaire. The impact of disordered family structure and function on adolescent sexual practice mediated through parental attachment was also demonstrated. The utility of these instruments in eliciting parental attachment and perceived family functioning makes them vital tools proposed for screening and detection of at risk adolescents.

1.8 Recommendation

The Family Circle and APGAR Questionnaire should be included in adolescent screening instruments to facilitate detection and intervention for at risk adolescents.

1.9 References

1) Monica Das Gupta, Robert Engelman, Jessica Levy, Gretchen Luchsinger, Tom Merrick, James E. Rosen. The Power of 1.8 Billion. Available at www.unfpa.org>files>pub-pdf. Accessed 2/2/16

(2) Morris J.L. , Rushwan H., Adolescent sexual and reproductive health: The global challenges. International Federation of Gynecology and Obstetrics. REPRODUCTIVE HEALTH available at http://creativecommons.org/licenses/by-nc-nd/4.0/. Accessed 7/04/18

(3) Jennifer Manlove, Lisa Mincieli. Family, Individual and Relationship Factors Associated with a First Nonmarital Birth: Analyses by Gender and Race/Ethnicity.Child Trends. Available at ftp.cdc.gov>nsfg>S2.FertilityandUnions. Accessed 5/3/18

(4) Karen Schant: Substance Use and Sexual Risk Taking in Adolescence. July 2012. www.actforyouth.net>rf_substance_0712. Accessed 16/01/18

(5) Douglas K., Gina L., Sexual Risk and Protective Factors Affecting Teen Sexual Behaviour, Pregnancy, Childbearing And Sexually Transmitted Disease: Which Are Important? Which Can You Change? ETR Associates. November 26, 2007. Available at. Recap.etr.org>documents>theories accessed 20/2/6.

(6) Hindin M.J., Fatusi A. O., Adolescent and reproductive health in developing countries: An overview of trends and interventions. International perspectives on sexual and reproductive health. Vol 35.Number 2, June 2009.

(7) Doyle A.M., Mavedzenge S.N, Plummer M.L. et al.
The sexual behavior of adolescents in sub Saharan Africa: patterns and trends from national surveys. Blackwell Publishing, available online @https://researchonline.Ishtm.ac.uk>Doyl.. Accessed 18th May 2015

(8) Fatusi A.O., Blum R.W., Predictors of early sexual initiation among a nationally representative sample of Nigerian adolescents. BMC Public health 2008.8:136.doi:10.1186/1471-2458-8-136.

(9) Muyibi A.S., Ajayi I.O, Irabor A.E., et al
Relationship between adolescents family function with socio-demographic characteristics and behaviour risk factors in a primary care facility. African journal of Primary health care and Family Medicine. Vol 2, No1, 2010.

(10) Adedeji A.S., Araoye M.O., Makanjuola T.A. et al.
Teenage Pregnancy and Prevalence of Abortion among in School Adolescents in North Central Nigeria. Asian Social Science January 2011. Vol.7, No 1 :122/ISSN

(11) Morhason-Bello I.O, Oladokun A., Enakpene C.A., Fabamwo A.O., Obiesesan K.A., Ojengbede O.A. Sexual behavior of in-school adolescents in Ibadan, South- West Nigeria.
Afr J.ReprodHealth 2008;12(2):89-97)

(12) Wellings K.Collumbien M,Staymaker E.,Singh S.,Hodges Z., Patel D.,et al. Sexual Behavior in Context: A global perspective. Available at cdrwww.who.int>general>lancet_2 Accessed5/3/18

(13) Population Reference Bureau. Adolescence and the Social Determinants of Health. June, 2014. Lancet fact

sheet series. Available. Available at https://assets.prb,org>pdf14>lancet-yo...
(14) Susan M. Blake, Linda Simkin, Rebecca Ledsky et al. Effects of a parent-child communications intervention on young adolescent's risk for early onset of sexual intercourse. Family Planning Perspectives. Volume 33, Number 2, March/April 2001 :52-61
(15) Kristin M., Simran S. A Review of Risk and Protective Factors for Adolescent Sexual and Reproductive Health in Developing Countries: An Update. Available at www.jahonline.org>article>pdf accessed 5/3/18.
(16) Day R.D., Hair E., Moore K., Orthner D.K.
Marital Quality and outcomes for children and adolescents: A review of the family process literature. Office of the Assistant Secretary for Planning and Evaluation. Marital Quality and Parent adolescent Relationships 2009. Available at http//aspe,hhs.gov/hsp/08/relationship strength/LitRev/ accessed 05 02 2016
(17) Alaska division of Behavioural Health. Risk and Protective Factors for Adolescent Substance Use (and other Problem Behavior). Available at dhss.alaska.gov>programs>pdfs Accessed 5/3/18
(18) Herman J.et al. Delaware Adolescent Sexual Health State Plan. Delaware Health and Social Services.Division of Public Health. Available at dhss.delaware.gov>files>deyouthshsp
(19) Aufseeser D., Jekielek S., Brown B. The Family Environment and Adolescent Well-Being: Exposure to Positive and Negative Family Influences. Child Trends; Adolescent Health Information Center, University of California, San Francisco. Available at:nahic.ucsf.edu>FamEnvironBrief Accessed 5/3/18
(20)Kumsa D.M. Factors Affecting the Sexual Behavior of Youth and Adolescent In Jimma Town, Ethiopia. European Scientific Journal November 2015 edition vol.11, No.32 ISSN: 1857 – 7881 (Print) e - ISSN 1857-7431-79
(21) Dittus P.J., Michael S.L., Becasen J.S., Gloppen K.M., McCarthy K., Guilamo-Ramos V. Parental Monitoring and it's Associations with Adolescent Sexual Risk Behavior: A Meta-analysis. Pediatrics 2015;136;e1587. DOI: 10.1542/peds.2015-0305.
(22) Tsui-Sui A. K., Carter W.A .Family Influences on Adolescent Sexual Activity and Alcohol Use-Bentham Open. Available at https://benthamopen.com>TOFAMSJ. Accessed 26/2/18
(23) Ford C.A, Davenport A.F, Meier A., Mc Ree L. Partnerships between Parents and Health care Professionals to improve Adolescent Health. Journal of Adolescent Health.2010. Published on line March 14, 2011. Accessed 2/2/16
(24) UNICEF. At a glance: Nigeria Statistics 2012 (updated 27 Dec. 2013). Available at www.unicef.org. Accessed 2/2/16
(25) Smilkstein G. The Family in crisis and Family function (APGAR) test. In Family Medicine: Principles and Practice.Taylor RB,editor. Springer- Verlag; New York, 1978:p234-241
(26) Thrower S. The Family Circle. Wonca Europe.2004 Available at www.wonca Europe.org>content>3337
(27) Zuma K., Setswe G., ketye T., Mzolo T., Rhele T., Mbelle N. Age at Sexual debut: A determinant of multiple partnership among South African youth. Afr J Reprod Health.2010 Jun;14(2):47-54
(28) Goncalves H., Goncalves S. Bierhals I.O., Machado A.K.F., Fernandes M.P., Hirschmann R. Et al. Age of Sexual Initiation and depression in Adolescents: data from the 1993 Pelotas (Brazil) Birth Cohort. Journal of Affective Disorders Vol.221,15 October 2017,pg259-266. Available at https://doi.org/10.1016/j.jad.2017.06.003
(29) Nwokocha E., Isiugo-Abanihe I., Omololu F., Isiugo-Abanihe U.
Implementation of Family Life and HIV/AIDS Education in Nigerian Schools: A Qualitative Study on Scope, Delivery and Challenges .Afr J Reprod Health. 2015 Jun;19(2):63-78.
(30) Laura Laski. Realising the Health and Wellbeing of Adolescents.BMJ 2015;351 :h4119. 14 September 2015. Accessed 6/04/18
(31) Kesley M.,Layzer L..State of the Science and Practice of Parenting Interventions across
Childhood: literature review and synthesis: December 2012. Available at http//aspe,hhs.gov/hsp/13/state of science/rpt-stateofscience.cfm. accessed 2/2/16
(32) Nnebue C.C, Chimah U.C., Duru C.B, Ilika A.L, Lawoyin T.O. Determinants of Age at Sexual Initiation among Nigerian Adolescents: A Study of Secondary Schools Students in a Military Barracks in Nigeria. American Journal of Medical Sciences and Medicine. Vol. 4, No. 1, 2016, pp 1-7. http://pubs.sciepub.com/ajmsm/4/1/1
(33) Ashley Miller. Psychological Effects of Parental Death. June 13,2017. Available at https://www.livestrong.com>article>10.. Accessed on 25/3/18
(34) Embleton L., Nyandat J., Ayuku D., Sang M., Kamanda A., Ayaya S.,et al. Sexual Behavior among Orphaned Adolescents in Western Kenya: A comparism of Institutional and Family-Based Care Settings. Available at https://doi.org/10/j.jadohealth.2016.11.015
(35) Oluyemi J A., Yinusa M. A., Abdullateef R.A, kehinde K., Adejoke. Parental Influence on Adolescent Sexual Behaviour among Secondary School Students In Ogbomoso, Nigeria. African Journal of Social Work, 7(1), June 2017
(36) Okonta P.I. Adolescent Sexual and Reproductive health in the Niger Delta Region of Nigeria: Issues and

challenges. Rev Afr Sante'Reprod 2007 11 [1]:113-124
(37) Burgess V., Dziegielewski S.F., Green C. E. Improving comfort about sex communications between parents and their adolescents: Practice based research within a teen sexuality group. Brief Treatment and intervention 5:379-390(2005)}Oxford University Press
(38) Qamar L., Husin A. Father absence and early sexual debut: Understanding the Influence of Gender, Risk, and Protective Factors. Available at lib.dr.iastate.edu>cgi>viewcontent. Accessed 26/2/18
(39) Orluwene G.W., Ekechuwku R., Achumba B.O. Impact of Family Dysfunction on Indiscriminate Sexual Behaviour of Adolescent Students of Unity Schools In South -South Zone Nigeria.European Journal of Research and Reflection in Educational Sciences Vol.3 No.3,2015 ISSN 2056-5852. Available at www.idpublications.org

Tables

Table 1: Distribution of Demographic Variables among the Respondents.

Demographic variable	Response	Frequency	Percentage
Age :	**Range: 11-19years**		
	Mean= 15.39 years.		
	SD= +/- 1.454years		
Adolescent phase:	**Early adolescence (11-13yrs)**	**28**	**8.3**
	Middle adolescence(14-16yrs)	236	70.3
	Late adolescence(17-19Yrs)	72	21.4
Sex	**Male**	**168**	**50**
	Female	168	50
Religion	**Christianity**	**327**	**97.3**
	Islam	8	2.4
	African traditional religion.	1	0.3
Father's educational status	**None**	**14**	**4.2**
	Primary	11	3.3
	Secondary	76	22.6
	Tertiary	235	69.9
Mother's educational status	**None**	**16**	**4.8**
	Primary	22	6.5
	Secondary	101	30.1
	Tertiary	197	58.6

Distribution of demographic variables (contd)

Variable	Response	Frequency	Percentage
Family Type	**Monogamous**	**290**	**86.3**
	polygamous	46	13.7
Family cycle stage	**Stage 4**	**245**	**72.9**
	Stage 5	91	27
Living conditions	**Living with both parents**	**243**	**72.3**
	Living with separated parent	93	27.7
Parental separation type		**27**	**29.0**
	Divorce	31	33.3
	Work	35	37.7
	Death		

Table 2: Distribution of Correlates of Sexual Activity among the Sexually active Respondents.

Variable	Response	Frequency	Percentage
Sexual Debut	**Yes**	34	10.1
	No	302	89.9
Age distribution of sexually active Respondents	**Range: 13-18years** Mean:16.15years Mode:16years SD +/-1.329		
Adolescent phase		**1**	**3.0**
	Early adolescence (11-13yrs)	20	58.8
	Middle adolescence (14-16yrs)	13	38.2
Sex distribution of sexually active Respondents	Late adolescence (17-19Yrs) **Male**	**28**	**82.4**
	Female	6	17.6
Ever been pregnant			
	Yes	**5**	**14.7**
Age at first sex	No	29	85.3
No. of Partners	**Range:4-17years** Mean:12.35years Mode: 14years SD:3.845		
	Range: 1-12 Mean:2.68 Mode:1 SD:3.291		

Table 3: Relationship between Respondent's Mothers' Educational Status and Sexual Debut

Maternal Educational Status	Sexual debut (yes)	Sexual debut (No)	Total
Primary (or Less)	8 (21.1)	30 (78.9)	38 (100)
Secondary	14 (13.9)	87 (86.1)	101 (100)
Tertiary	12(6.1)	185 (93.9)	197 (100)
Total	**34(100)**	**302 (100)**	**336(100)**

Calculated chi square=10.064. at df =2. P value =0.007. Cramer's V= 0.007.Significant.

Table 4: Relationship between Respondent's Father's Educational Status and Sexual Debut

Father Educational. status	Sexual Debut (Yes)	Sexual Debut (No)	Total
Primary (or less)	7 (28)	18 (72)	25 (100)
Secondary	10 (13.2)	66(86.8)	76 (100)
Tertiary	17 (7.2)	218 (92.8)	235 (100)
Total	**34**(100)	**302** (100)	**336** (100)

Calculated chi square =11.711at df 2. P value = 0.003. Cramers 's V =0.003. Significant.

Table 5: Relationship between Parental Separation and Sexual Debut among the Respondents.

Living with both parents	Sexual Debut(Yes)	Sexual Debut (No)	Total
Yes	19 (7.8)	224 (92.2)	243 (100)
No	15 (16.1)	78 (83.9)	93 (100)
Total	**34 (100)**	**302 (100)**	**336 (100)**

Calculated chi square = 5.107 at df=1.p value =0-024. Significant.

Table 6: **Relationship between Parental separation by death and Sexual Debut among the Respondents.**

Parental Separation by Death	Sexual Debut (Yes)	Sexual debut (No)	Total
Yes	7(20)	28 (80)	35 (100)
No	27 (9)	274 (91)	301 (100)
Total	**34 (100)**	**302 (100)**	**336 (100)**

Calculated chi square.4.559 at df =1.p value =0.033.1 cell (25%) has expected count <5. Fisher's Exact test =0.063 not significant..

Table 7: Distribution of Family Factors among the Respondents

Variable	Response	Frequency	Percentage
Maternal Attachment	**Very close**	**196**	**58.3**
	Close	96	28.6
	Not close	28	8.3
	Not important	16	4.8
Paternal Attachment	**Very close**	**106**	**31.5**
	Close	88	26.2
	Not close	101	30.1
	Not important	41	12.2
Parental Attachment	**Very healthy attachment**	**181**	**53.9**
	Healthy attachment	126	37.5
	Poor Attachment	29	8.6
Family Functioning	**Highly Functional**	**189**	**56.3**
	Moderately dysfunctional	110	32.7
	Severely dysfunctional	37	11.0
Parent-Adolescent Communication On Sexuality (PACS)	**Yes**	**157**	**46.7**
	No	179	53.3

Table 8: Relationship between Respondent's Perception of Maternal Attachment and Sexual Debut

Maternal attachment	Sexual debut (yes)	Sexual Debut (No)	Total
Very close	18 (9.2)	178 (90.8)	196 (100)
Close	8 (8.3)	88 (91.7)	96 (100)
Not important	8 (18.2)	36 (81.8)	44 (100)
Total	**34 (100)**	**302 (100)**	**336 (100)**

Calculated chi square =3.966 at df=2 p value =0.138. Cramer's V=0.138

Table 9: Relationship between Respondent's perception of Paternal Attachment and Sexual Debut.

Paternal Attachment	Sexual Debut (Yes)	Sexual Debut (No)	Total
Very close	5(4.8)	101 (95.2)	106(100)
Close	6)6.8)	82 (93.2)	88(100)
Not important	23(22.8)	119 (77.2)	101(100)
Total	**34(100)**	**302(100)**	**336(100)**

Calculated chi square = 10.223 at df 2.p value =0.006. Cramer's V=0.006. Significant.

Table 10: Relationship between Respondents' Perception of Parental Attachment and Sexual Debut.

Parental Attachment	Sexual Debut (Yes)	Sexual Debut (No)	Total
Very Healthy Attachment	10 (5.5)	171 (94.5)	181 (100)
Healthy Attachment	15 (11.9)	111 (88.1)	126 (100)
Poor Attachment	9 (31)	20 (69)	29 (100)
Total	**34 (100)**	**302 (100)**	**336 (100)**

Calculated chi square= 18.591 at df=2. P value=0.000

Table 11: Relationship between Respondents' Perception of Family Functioning and Sexual Debut

Family functioning	Sexual Debut (Yes)	Sexual debut (No)	Total
Highly functional	15 (7.9)	174 (92.1)	189 (100)
Moderately dysfunctional	13 (11.8)	97 (88.2)	110(100)
Severely dysfunctional	6 (16.2)	31 (83.8)	37 (100)
Total	**34 (100)**	**302 (100)**	**336 (100)**

Calculated chi square =2.851 at df=2. P value= 0. 240. Not Significant.

Table 12: Relationship between PACS and Sexual Debut among the Respondents.

Parental sex education	Sex debut (No)	Sex debut (Yes)	Total
Yes	148 (94.3)	9 (5.7)	157 (100)
No	154 (86)	25 (14)	179 (100)
Total	**302 (100)**	**34(100)**	**336 (100)**

Calculated Chi square= 6.235 at df 1. p value= 0.013.Significant.

Table 13: Relationship between Maternal Attachment and PACS among the Respondents.

Mother Attachment	PACS (Yes)	PACS (No)	Total
Very close	105 (53.6)	91(46.4)	196(100)
Close	41(42.7)	55 (57.3)	96(100)
Not important	11 (25)	33 (75)	44(100)
Total	**157(100)**	**179(100)**	**336(100)**

Calculated chi square = 12.655 at df 2 .p value =0.002. Cramer's V=0.002. Significant.

Table 14: Relationship between Paternal Attachment and PACS among the Respondents.

Father Attachment	PACS (Yes)	PACS(No)	Total
Very close	60 (56.6)	46 (43.4)	106(100)
Close	38 (43.2)	50 (56.8)	88(100)
Not important	59(41.5)	83 (58.5)	142(100)
Total	**157(100)**	**179(100)**	**336(100)**

Calculated chi square = 6.128 at df 2. p value =0.047. Cramer's V =0.047.Significant.

Table 15: Relationship between Parental Attachment and PACS among the Respondents

Parental Attachment	PACS (Yes)	PACS (No)	Total
Very healthy Attachment.	90(49.7)	88 (50.3)	181(100)
Healthy Attachment	58 (46)	68 (54)	126(100)
Poor Attachment	6 (20.7)	23 (79.3)	29(100)
Total	**157**(100)	**179**(100)	**336**(100)

Calculated chi square = 9.498 at df 2. P value=.009. Cramer's V=0.009 Significant.

Table 16: Relationship between Perceived Family Functioning and PACS among the Respondents.

Family Functioning	PACS (Yes)	PACS (No)	Total
Highly functional	104(55.0)	85(45)	189(100)
Moderately dysfunctional	44(40)	66(66)	110(100)
Severely dysfunctional	9(24.3)	28(75.7)	37(100)
Total	**157(100)**	**179(100)**	**336(100)**

Calculated chi square=14.689 at df 2, p value= 0.001. Cramer's V =0.001. Significant.

Dr Vivien O. Abah. Became a member of the West African College of Physicians in April 2003, National Post Graduate Medical College of Nigeria in October 2003 and fellow of West African College of Physicians in October 2006.She is a Chief Consultant Family Physician and Trainer in University of Benin Teaching Hospital Benin City Edo State. She attended University of Benin, 1986-1992 (MB.BS), University of Benin, Masters Health Planning and Management (MHPM) 2002. Areas of research include, family dynamics, adolescent health, geriatric medicine and quality of health care.