ETHICAL ISSUES IN ADOLESCENTS’ SEXUAL AND REPRODUCTIVE
HEALTH RESEARCH IN NIGERIA

MORENIKE OLUWATOYIN FOLAYAN, BRIDGET HAIRE, ABIGAIL HARRISON,
MOROLAKE ODETOYINGBO, OLAWUNMI FATUSI AND BRANDON BROWN

Keywords
Africa,
research ethics,
informed consent

ABSTRACT
There is increasing interest in the need to address the ethical dilemmas related to the engagement of adolescents in sexual and reproductive health (SRH) research. Research projects, including those that address issues related to STIs and HIV, adverse pregnancy outcomes, violence, and mental health, must be designed and implemented to address the needs of adolescents.

Decisions on when an individual has adequate capacity to give consent for research most commonly use age as a surrogate rather than directly assessing capacity to understand the issues and make an informed decision on whether to participate in research or not. There is a perception that adolescents participating in research are more likely to be coerced and may therefore not fully comprehend the risk they may be taking when engaging in research.

This paper examines the various ethical issues that may impact stakeholders’ decision making when considering engaging adolescents in SRH research in Nigeria. It makes a case for lowering the age of consent for adolescents. While some experts believe it is possible to extrapolate relevant information from adult research, studies on ethical aspects of adolescents’ participation in research are still needed, especially in the field of sexual and reproductive health where there are often differences in knowledge, attitudes and practices compared to adults. The particular challenges of applying the fundamental principles of research ethics to adolescent research, especially research about sex and sexuality, will only become clear if more studies are conducted.

INTRODUCTION
Adolescents are individuals between childhood and adulthood who are in the process of reaching physical, psychological and sexual maturity. The Nigerian adolescent health policy recognises the adolescent age range as the second decade of life, 10 to 19 years in line with the definition by the World Health Organization. Adolescents represent one fifth of the world’s population but constitutes a larger proportion of the population of low and middle income countries (LMIC) compared to developed countries due to the demographic transition. Individuals aged 10 to 19 years constitute 11% of the population in high income countries, 18.1% of middle income countries, and 23% of low income countries.


Address for correspondence: Morenike Oluwatoyin Folayan, Obafemi Awolowo University, Child Dental Health, Faculty of Dentistry, Ile-Ife, Osun State 22005 Nigeria. Email: toyinukpong@gmail.com.

Conflict of interest statement: No conflicts declared

© 2014 John Wiley & Sons Ltd
The Nigerian population is young with well over 55% of the population below 29 yrs. There is therefore the need to pay particular attention to the health needs of this population. The data on age of sexual initiation and rates of sexual violence make it clear that more adolescent-specific research needs to be conducted to construct an evidence base for the planning and implementing adolescent-specific sexual and reproductive health programmes in Nigeria. Data cannot be extrapolated from older populations because adolescent experiences are specific to their societal context, shaped by factors including gender expectations and the socialisation processes at family levels.

Development of guidelines that would support and promote the conduct of ethically valid research among adolescents in Nigeria is therefore essential.

It is worth noting that adolescence is a combination of physical, psychological and social changes that manifest differently in different cultural settings. Therefore, it is crucial to consider each adolescent as a reference unit when developing, planning and implementing programmes related to their needs.

There are several justifications for conducting research on adolescents' SRH. These include the need to understand the determinants of specific patterns of sexual behavior and practices, predictors and age of onset of sexual activity, the long-term impact of sexual behavior on adolescents' physical and psychological health, and the health and psycho-social needs that results from these issues.

One rationale for conducting biomedical or socio-behavioural research is that it may lead to discovery of information that could guide the delivery of appropriate preventive and therapeutic services. Therefore, research on adolescents' reproductive health can lead to development of interventions that may maximize adolescents' health. The omission of adolescent focused research perpetuates inadequate understanding of their particular reproductive health needs.

The Nigerian constitution considers a person under 18 years a minor with limited legal capacity. This minor in most situations requires a legally authorized surrogate decision maker (parent, guardian or family member) to act on their behalf. However, The Child Rights Act provides that a child who has attained the age of 16 years has the right to give consent for scientific investigation without parental consent. In practice, adolescents aged 15 years and older are regularly engaged in national surveys on HIV prevalence.

In this paper, we will consider whether the need for more information about adolescent SRH justifies the lowering of the legal age of consent in Nigeria. In making this assessment, we will consider the level of demonstrated need for evidence-based SRH programs for younger adolescents. We discuss issues of capacity, coercion, and risk assessment in and by younger adolescents and whether extrapolation of findings from other populations is adequate.

### SEXUAL AND REPRODUCTIVE HEALTH NEEDS OF ADOLESCENTS IN NIGERIA

A large number of adolescents initiate sex early. The median age of sexual debut being 16 years for girls and 17 years for boys. Studies have shown only 10.5% of adolescents in Nigeria use contraceptives, including condoms, possibly, partly due to lack of detailed knowledge about the use of different contraceptive methods and their safety profiles.

Emerging evidence shows that the use of hormonal contraceptives may increase the risk for HIV transmission as well as increase the risk of acquisition of new HIV infection. This evidence might complicate contraceptive decision-making. Accordingly, it is important to understand how and when adolescents make contraceptive decisions, what the points of access to these contraceptive tools are, and how appropriate information on contraceptive choices related to their SRH may be made easily accessible.

There is currently little known about factors that drive choice of sexual practices and sexual behaviours in adolescents in Nigeria. Evidence shows that early sex initiation increases the prospect for multiple sex partnering. Data from Nigeria show a large proportion of adolescents age 15 to 19 years engage in high sexual risk behaviour and practices, predictors and age of onset of sexual activity, the long-term impact of sexual behavior on adolescents' physical and psychological health, and the health and psycho-social needs that results from these issues.


Ethical Considerations in Adolescent Research

Adolescents face unique intrinsic and extrinsic challenges when considering participation in research. Intrinsic ones include developmental considerations in physiology, pharmacology, and behaviour. Extrinsic considerations are those in the community, ethical, legal, and regulatory arenas and those in the design of clinical trials for adolescents to feasibly participate. Adolescence is divided into three broad developmental periods: early adolescence (11 to 14 years) which is cognitively dominated by concrete thought processes, with limited ability to comprehend potential consequences of risk behaviors; middle adolescence (15 to 17 years) which is characterized by the emergence of abstract cognitive processes, which revert to concrete thinking during stress; and late adolescence (18 to 19 years). Each of these periods is defined by unique cognitive and physical developmental attributes that are on a continuum. By mid adolescence (normally around the ages of 14 to 16), the cognitive abilities of adolescents are roughly the same as biologically mature adults. Adolescents’ behavioural code is frequently defined by their peer group with major conflict developing between the adolescent and parent as they strive for greater autonomy. Late adolescence is defined by well-developed abstract cognitive processing with the peer group being replaced by more adult type close personal relationships. It is important to understand this dynamic developmental trajectory to contextualize the variety of adherence behaviors adolescents display when it comes to their health care.

Intellectually, by mid adolescence, individuals are generally able to understand long-term risks and the benefits of research. Adolescents of the same age bracket are also frequently inclined toward risk taking, and are acutely sensitive to peer influence. These factors can affect their understanding of risks and their capacity to make consistently sound judgments about long-term benefits. This is important as research participants who consent to participate must be able to understand the long term implications of information provided about the study.

Ethical guidelines have traditionally treated adolescents as ‘vulnerable,’ meaning their capacity to give consent without duress may be easily compromised. This challenge requires a balance between recognizing the emerging autonomy of adolescents, their differential rates of development, and their potentially immature response to personal risk. Potential risk needs to be weighed against the potential benefits to be derived from their participation in research. Research involving adolescents needs to be designed to ensure that it takes into account these characteristics, including adolescents’ tendency toward altruism, and rebellion, influence of peer pressure, as well as their increased sensitivities around body image, privacy, and confidentiality.

The Need for Distinct Data on Adolescent Populations

Adolescents represent a critically important user group for SRH products as they bear a disproportionate share of sexual activity, paternal childbearing, and risk of HIV infection. This is crucial for SRH research in adolescent populations

© 2014 John Wiley & Sons Ltd

of STIs and HIV, in addition to risks of unplanned pregnancy. The claim that it is reasonable and sufficient to extrapolate safety and effectiveness data derived from those over 18 years to younger adolescents is flawed on two levels – the physical and the social. A Global Campaign for Microbicide report notes the biologic and behavioral differences between young adolescent girls and older women justify separate safety and effectiveness data on sexual and reproductive health products. The cervixes of younger female adolescents are not fully mature, making them biologically more susceptible to STIs. Adolescents’ menstrual patterns also differ from adult women, as some 80% of adolescents will have cycles without ovulation within four years after menarche. Without ovulation, adolescents lack progesterone, which may influence the vagina’s local immune responses. At the social level, younger adolescents differ from adults in significant ways that could affect how they use SRH products.

In Nigeria, despite the stipulated legal age of consent of 18 years, a large proportion of adolescents are sexually active. The 2008 national demographic health survey (NDHS) shows that 23% of women aged 15–19 years had begun childbearing, 18% have had a child and 5% are pregnant with their first child. Also, 12.4% of male and female respondents were married by 15 years, 15.3% of women and 6.2% of men had their first sex experience by 15 years, and 29.7% of female and 6.8% of male 15–19 year old respondents had had sex within the last 4 weeks of the survey. These data emphasize the need for early engagement of adolescents in sexual and reproductive health research that can help in the design of programmes that address their SRH needs. Adolescent health data is important to develop evidence-based policies and programmes that support adolescent health; to increase access to and use of health services for adolescents; and to strengthen contributions from the education, media and other sectors to improve adolescent health. There are a number of reproductive health problems that are restricted to, or occur also in, adolescents which cannot be solved with existing knowledge. As a result, there is an ethical duty of beneficence and justice to conduct appropriate research to address these problems.

One of the key ways that adolescents below the age of legal consent have gained access to SRH services is through assessment of competence – specifically, whether the young person can demonstrate an understanding of the nature and implications of the proposed treatment, including the risks and alternative courses of action. Applying a similar test in the research context would remove a major objection to enabling greater participation of minors in research – the objection that minors might not understand their range of choice and thus be more vulnerable to coercion. Applying specific and individual tests of competency, and documenting it, has a clear advantage over age-in that it recognizes the developmental and cognitive differences that exist within groups of young people who mature at different rates.

### INFORMED CONSENT

Informed consent is a fundamental requirement in research participation. It is obtained through a dialogue that respects the individuality of each prospective participant and allows ample opportunity for the prospective participant to ask questions. Every research protocol must clearly explain how the study team intends to ensure understanding and comprehension of all study information.

Informed consent must be voluntarily obtained and devoid of undue inducement and coercion. It is also described as the principle of “respect for persons” which acknowledges that individuals with capacity have the right to make autonomous decisions. While the capacity for autonomous decision-making varies considerably across cultures and stages of adolescence, it is important to consider that the involvement of parents (and guardians) in an informed consent process may jeopardize the autonomous decision-making of the adolescent, in addition to possibly compromising confidential information about the adolescent.

### Paediatric Regulations and Legislation

As noted in the introduction, the Nigerian Constitution define a minor as a person under the age of 18. This implies that people under the age of 18 years have limited legal capacity and are vulnerable to decision making that is not fully competent. They therefore need a legally authorized surrogate decision maker-usually a family member to act on their behalf. Section 64(2) of the Child Rights Act


30 Federal Ministry of Women Affairs. op cit note 7.
Ethical Considerations in Adolescent Research

however provides that an adolescent who has attained the age of 16 years has the right to give consent for scientific investigation without parental consent. The 2011 (version 7.0) National Health Research Ethics Code for Nigeria also contains provision for soliciting consent from parents or legal guardians and for obtaining assent from minors participating in research. It explicitly states in section F(c) that minors should not be excluded from research without explicit reasons for doing so. Unfortunately, the code is not explicit about age for consent and assent. However, the working principle upheld by the National Health Research Ethics Committee is that assent needs to be given by adolescents between the ages of 12 and 17 years while their parents give consent for those who are not considered mature minors. This is partially in line with the requirement of the Section 29(4b) of the constitution of the Federal Republic of Nigeria which states that ‘any woman who is married shall be deemed of full age’. Children below 12 years in Nigeria are not however, required to give assent (personal communication, Prof Clement Adebomowo, National Health Research Ethics Committee Chair-person). The above shows clearly that for Nigeria, the age for consent for participation in research is still very unclear. it also highlights the need for the development of regulation and legislation governing adolescent engagement in research in Nigeria.

Parental Consent

Parental consent along side that of the adolescent is a major concern. Within the Nigerian legal context, parental consent and assent for adolescents below the age of 16 years is needed before participation in any form of research – except for mature minors. This clause raises multiple ethical dilemmas. First of all, there is the legal dilemma of who provides parental consent. Singh et al. noted that some minors live with surrogate caregivers who are not formally appointed or legally recognised as the adolescents’ guardian. In these instances, it is practically impossible to seek parental consent or to determine who, if anyone, is the legal guardian to authorise an adolescent’s participation in a study. In Nigeria, this legal dilemma poses challenges for the conduct of research in the field. The 2008 National Demographic Health Survey showed that 9% of those under the age of 15 years were living without their biological parents. A recent analysis of a data collected on adolescent studies showed that 18.9% of adolescents aged 10–19 years reside with guardians. Research practice however limits parental consent to recognized legal guardians. The law has implications for the exclusion of adolescents participants resident with surrogate caregivers from research which could otherwise have been of benefit both to adolescent participants and the broader population. Similarly, the law does not legally identify an unmarried adolescent heading a household (a situation very well recognized and documented following the HIV epidemic in many countries in Africa) as a mature minor. This action negates the principle of justice which promotes fair selection of study participants, as participants’ exclusion should be on the basis of their ineligibility due to scientific parameters and social protection.

Secondly, is the potential to compromise an adolescent’s privacy where parental consent is sought for SRH research. For many communities in Nigeria, parents prefer to talk with their families or respected people in their community before reaching a decision about providing consent for an adolescent to participate in a sexual and reproductive health research. This is especially true when research involves more invasive procedures such as blood draws and vaginal examinations. This consultation is also likely to occur if there are no clear therapeutic benefits accruable from participation in such studies, as it is the case for most HIV prevention research. It is however plausible for ethics review committees to waive a requirement for parental permission for adolescent participation when there are compelling reasons warranting this action. Such justification for a waiver must establish a case for ethical duty of beneficence and justice for the conduct of the research on this group with evidence to show the research is appropriate for the group. In Nigeria, ethics committees may have to act based on their informed discretion as the Section F(13) of the National code provides limited guidance on this subject matter.

32 Matured minors refers to a young person who has not reached adulthood as defined by the laws but whose maturity is such that (s)he can interact on an adult level for certain purposes such as consenting to medical care and in this case, research. Such an individual is assumed to have the capacity to understand the nature and consequences of the proposed treatment and is adjudged to have the competency to understand what it takes to participate in research.
33 Federal Ministry of Health, Nigeria. op cit note 8.
34 Matured minors are defined as individuals who has not reached adulthood as defined by state law but who may be treated as an adult for certain purposes. Based on the Nigeria constitution, matured minors are married adolescents.
37 A recent national survey that evaluated the sexual and reproductive health need of adolescents living HIV in Nigeria was conducted by Positive Action for Treatment Access with funding support by Ford Foundation West Africa Office. Dissemination on study result was conducted on 14 May 2013 at Sheraton Hotel and Towers, Abuja, Nigeria.
The code states that: ‘Consent in other situations, including research involving children, persons with diminished autonomy, vulnerable populations and other extraordinary situations, including waiver of consent, are described in other guidance documents issued by NHREC’.38

Implications of Parental Consent for All Adolescent Research

Privacy and confidentiality are considered critical for adolescent enrollment in research.39 Researchers struggle to strike a balance between parental involvement and the need to protect the adolescent’s privacy and confidentiality especially with regards to sex and sexuality. This becomes complex when enrolling teenagers who are below the legal age for sexual consent. The principles of ethics require that researcher’s respect study participant’s autonomy and right to confidentiality. The assurance of data security is likely to promote adolescents’ engagement in sexual and reproductive health research. Requiring adolescents to seek parental consent for their participation in the study may nullify this obligation to assure confidentiality40 and may compromise the quality of generated data. In extraordinary circumstances, however, there may be a need to disclose information divulged by a minor during research to the ‘legal’ caregiver. For example, a 12 year old who tests HIV positive and needs to be enrolled for ARVs may need to have information disclosed to the parent in order to provide access to treatment.

Guideline 14 of the Council for the International Organisation of Medical Sciences Guidelines tries to address the potential challenges that may arise with parental consent when adolescents are enrolled in research. It states that: ‘Some studies involve investigation of adolescents’ beliefs and behaviour regarding sexuality or use of recreational drugs; other research addresses domestic violence or child abuse. For studies on these topics, ethical review committees may waive parental permission if, for example, parental knowledge of the subject matter may place the adolescents at some risk of questioning or even intimidation by their parents’ (CIOMS, 2002).41

Zuch et al. argued that strict adherence to the implementation that require active parental consent will deter

from the conduct of school based adolescent sexual and reproductive health studies for a number of reasons including introduction of significant sample bias into the data.42

The complexity of obtaining parental consent hinges on balancing the requirement of the law and compliance with ethical principles because it is required that the norms and standards (both legal and ethical) that govern adolescent research in any country must be complied with. Unfortunately, there is little clarity on how to manage confidentiality in research involving adolescents. In research where parents give consent, complex privacy issues arise. As noted, a parent may give consent for enrolment, but adolescents may expect confidentiality for some components (such as their risk behaviour). There is also tension around how to manage confidentiality when the setting has laws about disclosures that must be reported to authorities. In Nigeria, the National Health Research Ethics Code provides limited guidance on this. While it recognises the need to protect research participants’ privacy it does not explicitly address the implication of this with respect to adolescents engaged in research. The onus therefore currently rests with the researcher and the ethics committees to ensure that the study design ensures the privacy of any adolescent engaged in research within the ambit of existing legal frameworks while ensuring the scientific validity and the ethical integrity of the study conduct.

PARENTAL CONSENT: REALITY IN THE FIELD

Independent of the laws and guidelines, there are cultural and social issues that may promote and support the need for parental consent prior to adolescents’ engagement with research. These cultural and social issues may become the main consideration in the question on the morality of not obtaining parental permission prior to adolescent engagement in research. For example, enrolling adolescents without parental permission could alienate communities at the cost of losing support for the study.

In Nigeria, Open discussions about adolescents and issues that relate to them are limited and conservative. The perceptions and opinions of many policy makers, public opinion leaders and gatekeepers are sometime not supportive of discussion of sexual issues among adolescents. It is assumed that adolescents will be more promiscuous if they learn about sexuality and prevention of

HIV/AIDS. Furthermore, to date, scientific justification for adolescent enrolment in any research has not been articulated in a way that key stakeholders, like community representatives, can continuously appreciate.

Therefore, to successfully enroll and retain adolescents in research, it may be worthwhile to first of all, consult and engage the community prior to research protocol submission to the ethics committee creates the opportunity to discuss the rationale underpinning the inclusion of adolescents in the research, as well as the reasons for not making parental consent for an adolescent’s participation in a study a requirement where such is the case. Secondly, to extensively engage adolescents, youth and parents in research design and implementation. Thirdly, to inform the adolescents about the benefits and risks of research. Fourthly, the potential challenges associated with such research design must be carefully examined and discussed in such a way that makes them understandable, and can facilitate community investment in actions to address them. The inclusion of adolescent perspectives into every stage of the research development process, especially in clinical trials is essential. Scientific experts also need to clarify the differences in adolescent and adult SRH issues thereby justifying adolescents’ engagement in SRH research.

CONSIDERATIONS FOR INFORMED CONSENT BY ADOLESCENTS IN NIGERIA

In summary, the informed consent process should take into consideration the capacity of the adolescent to consent; the role of surrogate decision-makers who should be able to consent when adolescents do not have capacity; and possible restrictions on the autonomy of adolescents or their proxies to consent. Unfortunately, while the National Child Rights Act specifically specified the age limits for consenting in research, evolving evidence points to a need to lower the current age for consenting to enable younger adolescents engage in research that can inform programme development and programming apt to address their needs.

One major concern about adolescents is their ability to comprehend. As medical evidence shows, cognitive development of the adolescents is near that of the adult by 14 years such that ‘decision making and reasoning ability is as good as that seen in adulthood and involves the flaws’. It may therefore be important to advocate for changes in the law so it can permit adolescents 14 years and above with proven evidence of sufficient maturity, and with the mental capacity to understand the benefits, risks, and social and other implications of the outcome, to participate in research in general and sexual and reproductive health research specifically, without parental consent. It is now for the ethics committees to be able, each within its peculiar cultural context, to calculate the risk and-benefit for the research and adjudge that the implementation of such research would not expose the adolescent to undue risk taking cognisance of age and cultural peculiarities. In addition, sexual and reproductive health research protocols that would engage adolescents who are 14 years old should critically appraise the informed consenting process and evaluate for perceived threats to consent such as inadequate education and developmental characteristics of adolescents engaging in decision-making. It may be inappropriate to assume that all 14 year olds in Nigeria should be excluded from parental consent prior to engagement in sexual and reproductive health research. Rather, researchers may need to always develop tools and processes to impart information, assess understanding, and enhance the voluntariness of decisions to participate in SRH research conducted in adolescents particularly those that require therapeutic interventions. Researchers should ensure the adolescent demonstrates capacity for comprehension and required actions.

When ethics committees do not feel confident that the risk associated with research are acceptably low, parental consent for research participation may be required. Thus, consent norms for adolescent research participation needs to reflect the reality that research is of varying complexity and risk. For simple and low-risk research, exceptions to the norm of parental consent may be appropriate, provided that other protections are in place, including competent ethical reviews. In addition, community endorsement of research plans should be a major factor in research ethics committee consideration on whether to allow adolescents to provide autonomous consent for participation in a study. The World Health Organisation provides comprehensive guidelines on engagement of adolescent in research which could serve as a useful guide for research protocol review.

While the ethical-legal framework for consent is specified in Nigeria, its understanding and application by ethics reviewers needs to be addressed through trainings. This is underpinned by the work of the New HIV Vaccine and Microbicide Advocacy Society (NHVMAS) which has been engaged for over 5 years in building the capacity of ethics reviewers in the country on the ethics of biomedical HIV prevention research. These trainings are critical as they provide a platform for the continuous update of ethics reviewers in the country on the ethics of biomedical HIV prevention research. This is critical as it provides a platform for the continuous update of ethics reviewers in the country on the ethics of biomedical HIV prevention research.


conducted in such a way that ensures knowledge and skills acquired are applicable to other research fields.45

The most notable study about ethical involvement of adolescents in research is the HPV vaccine study which resulted in the licensing of HPV to prevent cervical and anal cancers in adolescents. This is one successful story in the conduct of ethical trials that engages adolescents on health issues of particular concern to them.46

Within the African continent, there are recognizable efforts in South Africa focused at addressing adolescent engagement in sexual and reproductive health research. The engagement of 16 year old adolescents in the Carraguard study is a step in this direction.47 The proposed engagement of adolescents in post CAPRISA 004 studies is also one effort in this direction.48 More recently, the engagement of 12–17 year old in the SASHA project which was preparing adolescents for HIV Vaccine research in South Africa.49

Locally, adolescents have long being engaged in multiple social science and epidemiological researches. The Integrated Behavioural and Biological Sentinel Surveys, the National HIV/AIDS Reproductive Health Surveys and the NDHS engaged participants aged 15 years.50 The studies capture issues relevant to sexual and reproductive health.

The authors feel that in view of the cultural sensitivity to open discussion about sex, the ethics of engagement of adolescents in sexual and reproductive health research may be an issue of debate for a while to come. A starting point may be the conduct of a workshop to resolve various dilemmas about the ethics of engaging adolescents in sexual and reproductive health studies, some of which have been highlighted in this paper. This workshop may provide the ground for starting to think through the ethics of engagement of youths in SRH research in the Nigerian environment more specifically taking cognizance of Nigeria’s peculiar, diverse and sometimes contradictory traditional, religious, legal and social systems.


48 FACTS 002 is a planned Phase II safety study to test tenovigil gel use in sexually-active young women 16 and 17 years of age. Available at: http://www.facts-consortium.co.za/ [Accessed 20 March 2014].

49 Press release: SASHA project preparing for adolescent HIV vaccine trials in South Africa completed. Available at: http://www.edctp.org/ Press_release.401+Ms.5a57424e6d0.html. [Accessed 20 March 2014].


CONCLUSION

The ethical dilemma of engaging adolescents in SRH research is intertwined with legal and regulatory issues. For example, the appropriateness of including adolescents in research when the risks are more than ‘low’ or ‘minor increase over minimal’ is a difficult and thorny ethical issue. Consideration should be given to adolescents to consent unassisted to participate in research as long as the parents or legal guardians or the community is unlikely to object to the adolescent’s participation and the study protocol justifies why adolescents should be included as participants.51

Ethical guidelines in Nigeria should consider the feasibility of engaging adolescents aged 14 years and above (rather than the current consideration of 16 years and above) in research without the need for parental consent. The peculiar challenges of applying fundamental ethical principles for adolescents engaged in research especially in cultures sensitive to open and public discussions about sex and sexuality, and how to resolve them can only be learnt from practical field experiences. Ethics is an ever-evolving field and ethical consideration of adolescents’ engagement in sexual and reproductive health research shall continue to constitute central themes in many ethical discourses for a while to come.

Biographies

Morenike Oluwatoyin Folayan is an Associate Professor in the Department of Child Dental Health, Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria.

Bridget Haire is a lecturer at the Centre for Values, Ethics and the Law in Medicine, University of Sydney and Vice President of the Australian Federation of AIDS Organisations.

Abigail Harrison is Assistant Professor (Research) in the Department of Behavioral and Social Sciences, School of Public Health, Brown University, Providence, Rhode Island, and an affiliate of the International Health Institute and Population Studies and Training Center. Her research addresses adolescents, gender, HIV/AIDS and reproductive health in sub-Saharan Africa.

Morolake Odetoyinbo is the Executive Director of Positive Action for Treatment Access, a non-governmental organization focused on addressing the needs of people living with HIV in Lagos, Nigeria.

Olawumi Fatousi is an Oral and Maxillofacial Surgeon. She is the current Dean of the Faculty of Dentistry, College of Health Sciences, Obafemi Awolowo University, Ile-Ife, Nigeria.

Brandon Brown is the Director of the Global Health Research, Education and Translation program at the University of California – Irvine.

AUTHOR QUERY FORM

Dear Author,

During the preparation of your manuscript for publication, the questions listed below have arisen. Please attend to these matters and return this form with your proof.

Many thanks for your assistance.

<table>
<thead>
<tr>
<th>Query References</th>
<th>Query</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>*AUTHOR: The page range ‘874–862’ seems to be incorrect; please check.</td>
<td></td>
</tr>
</tbody>
</table>

Note: The query which is preceded by * is added by Toppan Best-set.