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- Editorial Note
- EPHA Updates
- Research Abstracts from Journals
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- Unhygienic Circumcision ‘Increases the Risk of HIV’
- Health Consequences of Child Marriage (HIV&STDs Risk) in Africa

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Acknowledgement and Calls for Articles and Abstracts.

The producers of this digest would like to thank the US Centers for Disease Control and Prevention for funding this publication. We would also like to invite readers to send their research works and other articles for publication in the next issue. Comments and views from researchers, trainers and service providers are particularly encouraged.

The Executive Board of EPHA

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   Member
FOCUS on HIV/AIDS, STIs and TUBERCULOSIS

Quarterly P.H Digest of the Ethiopian Public Health Association (EPHA)

Volume 2  No. 10  June 2007

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• Child Marriage and Cervical Cancer

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U22/CC U 022179
**Objectives of this Digest**

- Improve knowledge, and practices of public health professionals in the areas of HIV/AIDS, STIs and TB.
- Introduce latest research findings, best practices and success stories to the general public through public health practitioners, trainers, planners and researchers.
- Motivate health workers to engage themselves in operational studies through dissemination of abstracts from studies conducted by health professionals working in health units and training institutions.

**Target Audiences:**

The target groups for the Digest are health professionals in general; and trainers in training institutions, public health practitioners at woreda health offices, in health centers and hospitals, in particular. This Digest will also be extended to non-health professionals who are interested on the subject on a demand-basis for free subscriptions.

**Strategy:**

Three to four thousand copies would be published quarterly. Distribution would follow the modalities of other EPHA publications. Regional, zonal and woreda offices, institutions of the MOH & HAPCO branch offices will also be used for distributing the Digest.

Readers of this Digest are invited to provide comments that need to be taken into account to improve the quality of the Digest. The editors of this Digest also want to thank in advance all concerned professionals who in one way or another extended their views, support and contributions to the realization of the Public Health Digest.

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**Digest Reviewer Notes**

In the present publication, the basic components (HIV/AIDS, STI and TB) of the digest are kept as usual because they have been emerged as the most interdependent and interlinked public health problems in particular and development hindrances in general. Despite Ethiopia is in the stage of a generalized epidemic, it is crucial to focus on special target groups in order to address the special needs of specific groups through tailored intervention approach. Commercial sex workers, truckers, migrant laborers, uniformed people, teachers and students, and out of school youth, orphans and other vulnerable children are identified as the key special target groups in the country. Identification of such a target group is an important step towards the fight against HIV/AIDS in a comprehensive and effective fashion. In this regard understanding sexual behaviors and the factors that drives or fuels the epidemic in such target groups is also another important step.

To alleviate such wide and multifaceted public health problems, EPHA through this digest tries to address its societal commitment by providing recent updates, practical and pertinent information to public health practitioners and professionals who are working close to the community with major emphasis on these common priority public health problems. Public health digest is a quarterly-based publication which is an important instrument to fulfill this purpose.

This publication starts with the updates of EPHA followed by the Amharic version of research abstracts from Journals and extracts. Highlights on HIV/AIDS Care and Prevention including circumcision appears to cut STDs risk, unhygienic circumcision ‘Increases the Risk of HIV’, health consequences of child marriage (HIV &STDs Risk) in Africa, child marriage and cervical cancer are also presented at the end. Glossaries and definitions given at the end of the digest provide additional knowledge to readers.
Organizational Development and Membership Affairs

EPHA has been in the process of transformation in the past one year. It is growing in terms of organizational capacity and membership showing significant increase. The revised constitution of EPHA was discussed in a panel organized for the purpose and experts supported the Board by reviewing it. The document was edited and would be printed after making consultation with legal experts. EPHA has prepared reports and submitted to Ministry of Justice (MOJ); and obtained renewal. Although there were some problems, the renewal for a year has been secured. The Financial and Purchase Procedural manuals are finalized to be used; and Personnel Manual will be finalized soon.

EPHA has established a website www.epha.org.et. Necessary information has been uploaded. Staffs of the secretariat have been trained to continuously uploading and updating information. The additional office for EPHA secretariat was rented at Dembel City Center to enhance a smooth communication and coordination of activities of the Association. Membership is increasing with about 400 new registrations in the last one year period. The Executive Board has decided and initiated promotion of lifetime membership, in which case, the number of lifetime members increased from 2 to 20. The Executive Board has also decided to provide the lifetime members with special ID cards numbered sequentially to signify order of lifetime commitment to EPHA. Special EPHA PIN is also provided to the life members. EPHA has started supporting Chapters. Two of our Chapters have become partners in an EPI project called “Social Mobilization of Vaccination”, which is jointly planned by EPHA and Canadian Public Health Association (CPHA). The restructuring of the Secretariat has worked well and the Executive Director has been managing the secretariat as indicated in the revised constitution of EPHA.

EPHA-CDC Project
• Supported and facilitated the establishment Monitoring and Evaluation (M&E) Training Program at Jimma University.
• Published and disseminated HIV/AIDS & public health messages, best practices and scientific findings through different publications.
• Facilitated updating of the ART data collection in hospitals for M&E purposes.
• Supported postgraduate students’ Theses to generate strategic information on HIV/AIDS/STI and TB:
• Organized and coordinated Health Management Information System (HMIS) training for ART data clerks/data managers.
• Legalized, strengthened and facilitated the Ethiopian Public Health Laboratory Association (EPHLA).

• Built capacity of the EPHLA, develop national lab policy and strategies
• Launched EPHLA establishment, establish the Executive Board, presentation and discussion on draft lab policy.
• Establishment of the Public Health Research Ethics Review Committee (not pre-planned activity).

Repositioning RH/FP Project

EPHA has successfully competed the development of the project to win this project. The Executive Board members, the secretariat and other EPHA members have contributed to the conceptualization and project write up.

This project is supported by the David and Lucid Packard Foundation and being implemented in the South and North Wollo Zone of the Amhara Regional State and nation wide. The Project focuses on repositioning RH/FP in Ethiopia by supporting the effective implementation of the Health Service Extension Program (HSEP), especially...
in strengthening the RH/FP and gender components, training in advocacy, establishing mechanisms for capacity building and partnerships, creating opportunity to avail evidence-based information and its utilization. The project is officially launched and implementation of initial activities has already been started.

**Other EPHA Administered Projects**

- The Behavioral Surveillance Survey on the HIV/AIDS/STIs has been successfully implemented so far and presentation of preliminary findings was done at national level. The remaining activities will be completed soon.
- The survey on National Blindness and Low Vision has been carried out successfully.
- The second round M&E training–MEASURE EVALUATION for Anglophone countries, which was coordinated and conducted in collaboration with the Department of Community Health, was successfully carried out. Other small-scale projects are also successfully carried out.

**National EPHA Involvements**

National involvements of EPHA are many and listing all these will be difficult. The following are some examples:

- EPHA is an active member of the National Review Board in HIV/AIDS Prevention and Control Office (HAPCO).
- EPHA chairs the Health Professionals’ license committee and is member of the national health professionals’ council.
- EPHA has actively involved technically and financially in response to national calls against major epidemics and natural disasters.

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<td>50.0</td>
<td>597</td>
<td>50.0</td>
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<td>የገራPhil</td>
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<td>306</td>
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<td>39.6</td>
<td>32</td>
<td>60.4</td>
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<td>114</td>
<td>51.0</td>
<td>228</td>
<td>9.5</td>
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</table>

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Page 11
...
Logistic Regression

Variables:

Dependent variable: 2,487 (61%) aged 20-29

Independent variable: (96.1%) aged 20-29

Variables:

Independent variables:

Variables:

Dependent variable:

Variables:
<table>
<thead>
<tr>
<th>Age Group</th>
<th>ICAGE</th>
<th>95% CI (Adjusted odds ratio)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-19</td>
<td>755 (30.4)</td>
<td>1.48 (1.07-2.05)</td>
</tr>
<tr>
<td>20-29</td>
<td>1,511 (60.8)</td>
<td>1.65 (1.04-2.61)</td>
</tr>
<tr>
<td>30-39</td>
<td>166 (6.7)</td>
<td>2.06 (1.28-3.33)</td>
</tr>
<tr>
<td>40-49</td>
<td>35 (1.4)</td>
<td>2.148 (86.4)</td>
</tr>
<tr>
<td>50-59</td>
<td>60 (2.4)</td>
<td>9 (0.4)</td>
</tr>
<tr>
<td>60-69</td>
<td>55 (2.2)</td>
<td>83 (3.3)</td>
</tr>
<tr>
<td>70-79</td>
<td>176 (7.1)</td>
<td>2,148 (86.4)</td>
</tr>
<tr>
<td>80+</td>
<td>36 (1.4)</td>
<td>2,487 (100)</td>
</tr>
<tr>
<td>Age Group</td>
<td>Cases</td>
<td>Crude Odds Ratio</td>
</tr>
<tr>
<td>-----------</td>
<td>-------</td>
<td>-----------------</td>
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<tr>
<td>12-15</td>
<td>720</td>
<td>1.00</td>
</tr>
<tr>
<td>16-29</td>
<td>1,413</td>
<td>1.00 (0.75, 1.35)</td>
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<tr>
<td>30-49</td>
<td>160</td>
<td>3.63 (2.39, 5.51)</td>
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(Adjusted odds ratio) 95% CI: 2.50: 1.35-4.64
confounding factors

Page 27

Early / Cross-sectional / DOTS

Page 28
Delayed

Total delay

SPSS

SPSS

Logistic Regression

Logistic Regression Model 95%: CI

Confounding Factors

Dependent)

independent variables)

(Confounding Factors)

(Independent)

(Independent variables)

\(x^2\) test

PTB+ 81.2% (PTB-) 77.6% (EPTB) 74.5% 48 (20.3%) 44.7 4.3 % 0.5 % 76.6 %

Page 29
### Table 1: Oxidative stress parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>PTB+</th>
<th>H</th>
<th>PTB-</th>
<th>EPTB</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSH/GSSG</td>
<td>0.8 (0.15)</td>
<td>0.4 (0.1)</td>
<td>0.6 (0.1)</td>
<td>0.8 (0.2)</td>
</tr>
<tr>
<td>SOD</td>
<td>17.8 (3.5)</td>
<td>35.8 (3.5)</td>
<td>79 (3.5)</td>
<td>17.8 (3.5)</td>
</tr>
<tr>
<td>GSH</td>
<td>2 (1)</td>
<td>3.6 (2)</td>
<td>3.1 (1)</td>
<td>2 (1)</td>
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<tr>
<td>MDA</td>
<td>168 (103)</td>
<td>183 (69)</td>
<td>444 (182)</td>
<td>168 (103)</td>
</tr>
</tbody>
</table>

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### Table 2: Offspring body weight at 7 weeks

<table>
<thead>
<tr>
<th>Group</th>
<th>Body weight (g)</th>
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<tbody>
<tr>
<td>Control</td>
<td>12 (1)</td>
</tr>
<tr>
<td>PTB+</td>
<td>14 (1)</td>
</tr>
<tr>
<td>H</td>
<td>PTB-</td>
</tr>
<tr>
<td>EPTB</td>
<td>22 (1)</td>
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</tbody>
</table>

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<table>
<thead>
<tr>
<th>Variables</th>
<th>h21 (EPIB)</th>
<th>h20 (PTB-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>h5.34</td>
<td>85 (90)</td>
<td>32 (13.5)</td>
</tr>
<tr>
<td>35</td>
<td>98 (120)</td>
<td>16 (7)</td>
</tr>
<tr>
<td>h1.34</td>
<td>120 (135)</td>
<td>20 (7)</td>
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<td></td>
<td>63 (90)</td>
<td>28 (14)</td>
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<td>h8.34</td>
<td>110 (120)</td>
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<td>h12.34</td>
<td>31 (120)</td>
<td>11 (7)</td>
</tr>
</tbody>
</table>


</s>
Circumcised males are less likely than their uncircumcised peers to acquire a sexually transmitted infection, the findings of a 25-year New Zealand study suggested. According to the report in the November 2007 issue of Pediatrics, circumcision may reduce the risk of acquiring and spreading such infections by up to 50%, which suggests "substantial benefits" for routine neonatal circumcision.

The current study is just one of many that have looked at this controversial topic. While most research has found that circumcision reduces the rates of HIV (the virus that causes AIDS), syphilis and genital ulcers, the results are more mixed for other STDs. The American Academy of Pediatrics has called the evidence "complex and conflicting," and therefore concludes that, at present, the evidence is insufficient to support routine neonatal circumcision.
The 356 uncircumcised boys had a 2.66-fold increased risk of sexually transmitted infection compared with the 154 circumcised boys, lead author Dr David M Fergusson and colleagues, from the Christchurch School of Medicine and Health Sciences report. Moreover, this elevated risk was largely unchanged after accounting for potential confounders, such as number of sexual partners and unprotected sex. The authors estimate that had routine neonatal circumcision been in place, the rate of sexually transmitted infections in the current cohort would have been reduced by roughly 48%. This analysis shows that the benefits of circumcision for reducing the risk of sexually transmitted infection "may be substantial," the authors conclude. "The public health issues raised by these findings clearly involve weighing the longer-term benefits of routine neonatal circumcision in terms of reducing risks of infection within the population, against the perceived costs of the procedure," they add.

Unhygienic Circumcision ‘Increases Risk of HIV

The circumcision procedure itself carries a significant risk of HIV transmission if carried out under unsafe conditions, according to a study. The research, published in the March 2007 issue of Annals of Epidemiology, adds to the debate over the use of male circumcision for the prevention of HIV infection. The authors say that unhygienic conditions and poor standards in traditional circumcision procedures expose patients to infection from blood-borne diseases. Lead researcher Devon Brewer, of the US-based Interdisciplinary Scientific Research, said that previous research into circumcision in Africa does not consider the context in which the procedure is conducted, or the risk of exposure to infected blood during the operation.

Brewer and colleagues analyzed data on virgins and sexually active adolescents and adults collected by USAID’s Demographic and Health Surveys project. "We found that circumcised virgins and adolescents in Kenya, Lesotho and Tanzania were consistently and substantially more likely to be infected with HIV than their uncircumcised counterparts," said Brewer, according to Afrol News. The paper concludes that sexually experienced male adolescents were "no more likely to be infected than adolescent virgins". The authors say this highlights how HIV may spread by means other than sex in sub-Saharan Africa. But Kevin De Cock, director of the World Health Organization's HIV/AIDS department, stressed that sexual intercourse was still the major route of HIV transmission. He told SciDev.Net that the dangers of unhygienic medical practices were already a well-known problem in Africa, adding, "If circumcision is scaled-up [to prevent HIV infection] it must be done in a safe environment, by trained people with sterilized equipment". Kasonde Bowa, a surgeon at the University of Zambia Teaching Hospital said, "It is conceivable that traditional circumcision may increase the risk of HIV transmission". But he said that risk would be small, since the percentage of male circumcisions done by traditional means is 1–3 per cent.
Jonathan Weber, professor of Communicable Diseases at Imperial College London, UK, pointed out that the data is based on self-reported virgin status, which is not validated. Another study, published in The Lancet, confirmed suggestions that circumcision significantly reduces the risk of HIV infection. According to the paper, circumcised men in a Kenyan trial had 53 per cent fewer HIV infections than uncircumcised men. A 48 per cent reduction was observed in a Ugandan trial. The trials were closed early in December 2006, so that uncircumcised participants could undergo the procedure.

A common belief is that child marriage protects girls from promiscuity and, therefore, disease; the reality is quite different. Married girls are more likely than unmarried girls to become infected with STDs, in particular HIV and human papilloma virus (HPV). In sub-Saharan Africa, girls ages 15–19 years are 2–8 times more likely than boys of the same age to become infected with HIV. The risk of acquiring HIV from a single act of unprotected vaginal intercourse is 2–3 times greater for women than men. Globally, the prevalence of HIV infections among women is highest from ages 15 to 24; the risk for men peaks 5–10 years later.

Marriage by age 20 has become a risk factor for HIV infection for young and adolescent girls, as has been shown by several studies of African populations. A study in Kenya demonstrated that married girls had a 50% higher likelihood than unmarried girls of becoming infected with HIV. This risk was even higher (59%) in Zambia. In Uganda, the HIV prevalence rate for girls 15–19 years of age was higher for married (89%) than single girls (66%); for those 15–29 years of age, HIV prevalence was 28% for married and 15% for single girls. This study noted that the age difference between the men and their wives was a significant HIV risk factor for the wives. All of these studies showed that girls were being infected by their husbands. A hypothesis relevant to this finding is that a young girl may be physiologically more prone to HIV infection because her vagina is not yet well lined with protective cells and her cervix may be more easily eroded. Risk for HIV transmission is also heightened because hymenal, vaginal, or cervical lacerations increase the transmission rate, and many of these young girls lose their virginity to HIV-infected husbands. Also, STDs such as herpes simplex virus type 2 infection, gonorrhea, or chlamydia enhance girls’ vulnerability to HIV.

Another study explored why married girls in Kenya and Zambia had a higher risk for HIV infection. This study concluded that because married girls are under intense pressure to prove their fertility, they have more unprotected intercourse. The study also found that husbands were substantially older (5–14 years) than their wives and were 30% more likely than boyfriends of single girls to be HIV infected. Because of their age alone, the husbands had already had numerous sex partners. Additionally, in these areas of Africa, polygamy is common.
One fundamental difficulty with child marriage is that girls are financially dependent on their husbands and therefore lack the power to make demands upon them. They cannot ask their husbands to get an HIV test; they cannot abstain from intercourse or demand condom use; they cannot insist that their husbands be monogamous; and ultimately, they cannot leave because they cannot repay their high dowry. In addition, returning to their parents home may not be an option because divorce is considered unacceptable and leaving their husbands may have serious implications on the social or tribal ties that were developed during the marriage.

Child Marriage and Cervical Cancer

Child marriage and polygamy play an important role in another deadly disease, cervical cancer. HPV infection has become endemic to sub-Saharan Africa (22–24). Although many African nations do not have the capacity to adequately or effectively screen for cervical cancer or HPV, the incidence of cervical cancer in Africa is estimated to be extremely high. Common risks for cervical cancer are child marriage, low socioeconomic status, poor access to health care, and husbands who had multiple sex partners. For example, in Mali, cervical cancer is the most common cancer in women, has an age-standardized incidence rate of 24.4 per 100,000, and is the second most common cause of death from cancer.

In a case-control study of 200 participants with and without cervical cancer, among whom the mean age at marriage was 15 years, HPV was detected in 97% of the cases and 40% of the controls. The risk factors identified were child marriage, high parity (>10 children), polygamous husbands (>2 wives), and poor genital hygiene (no tap water available and reuse of sanitary napkins). Another study in Morocco had similar findings, with cervical cancer risk factors identified as child marriage, high parity, long-term use of oral contraceptives, and poor genital hygiene (control participants bathed more frequently, and case-participants used homemade sanitary napkins more frequently). Other studies have also implicated hygiene as a possible factor.

References

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Glossary: Some of the meanings of words used in this Digest

1. AIDS Epidemic: A widespread occurrence of AIDS.
2. Adjusted Odds ratio: A measure of association adjusted for other variables.
3. Antiretroviral therapy: Treatment that decreases the viral load in HIV-positive individuals.
4. Attitude: A reaction or response towards something.
6. Cases: A specific instance or example.
7. Confidence Interval (CI): A range of values that likely contains the true value of a population parameter.
8. Confounding Factors: Variables that affect the relationship between independent and dependent variables.
9. Confounding Factors: Variables that affect the relationship between independent and dependent variables.
10. Commercial Sex Workers: Individuals who work for sexual services.
11. Cross-sectional descriptive study: A study that evaluates characteristics at a specific point in time.
12. Dependent Variables: Variables that are measured or calculated based on the values of other variables.
13. Diffusion Innovative Theory: A theory that explains how innovations spread through a population.
15. Independent Variables: Variables that are being tested or manipulated.
17. Elisa test: A test used to detect the presence of antibodies in a sample.
18. Error of margin: The range within which the true value is likely to fall.
19. Extra-Pulmonary TB: TB that affects organs other than the lungs.
20. Focus Group Discussion: A method of data collection that involves group discussions.
22. Non-probability Sampling: A sampling method where the selection of participants is not based on probability.
23. In-depth interview: A detailed and focused interview.
24. Logistic Regression: A statistical technique used to model the relationship between a binary outcome and one or more predictor variables.
25. Power of the study: The probability of detecting a true effect.
26. Prevalence: The proportion of a population that has a particular condition.
27. Pulmonary TB: TB that affects the lungs.
28. Quota Sampling: A sampling method where participants are selected based on quotas.
29. Qualitative study methods: Research methods that involve the analysis of qualitative data.
30. Quantitative study method: Research methods that involve the analysis of quantitative data.
31. Random:

32. Rapid test:

33. Risk:

28. Risk Behavior:

34. Sera:

35. Smear Positive/Negative:

36. Snowball Sampling:

37. Statistical significance:

38. Substance abuse:

39. Sexuality:

40. Time Location Cluster:

41. Tuberculosis: