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INFORMATION FOR AUTHORS

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Guide to Authors

MH Samorita Medical College Journal provides rapid publication (twice in a year) of articles in all areas of different subjects. The Journal welcomes the submission of manuscripts that meet the general criteria of significance and scientific excellence.

The manuscripts should be submitted addressing Editor-in-Chief.

The Journal of MH Samorita Medical College only accepts manuscripts submitted as triplicate hard copy with a soft copy.

Papers must be submitted with the understanding that they have not been published elsewhere (except in the form of an abstract or as part of a published lecture, review, or thesis) and are not currently under consideration by another journal (**International or National)** or any other publisher.

The submitting (Corresponding) author is responsible for ensuring that the submitting article has been signed by all the co-authors. It is also the authors' responsibility to ensure that the articles emanating from a particular institution are submitted with the approval of the necessary institutional requirement. Only an acknowledgment from the editorial board officially establishes the date of receipt. Further correspondence and proofs are sent to the corresponding author(s) before publication unless otherwise indicated. It is a condition for submission of a paper that the authors permit editing of the paper for readability. All enquiries concerning the publication of papers should be addressed to Editor-in-Chief (MH Samorita Med Coll J)

The cover letter

Cover letter is expected to be submitted along with manuscript. Use the cover letter to explain why the paper should be published in the Journal of MH Samorita Medical College. The cover letter should include the corresponding author's full address, telephone/ fax numbers and e-mail address.

Ethical aspects

- Ethical aspect of the study is considered very carefully at the time of assessment of the manuscript.
- Any manuscript that includes table, illustration or photograph that have been published earlier should accompany a letter of permission for re-publication from the author(s) of the publication and editor/ publisher of the Journal where it was published earlier.
- Permission of the patients and/or their families to reproduce photographs of the patients where identity is not disguised should be sent with the manuscript. Otherwise the identity would be blackened out.

Conditions for submission of manuscript

- All manuscripts are subject to peer-review.
- Manuscripts are received with the explicit understanding that they are not under simultaneous consideration by any other publication.
- Submission of a manuscript for publication implies the transfer of the copyright from the author to the publisher upon acceptance. Accepted manuscripts become the permanent property of the MH Samorita Medical College Journal (MHSMCJ) and may not be reproduced by any means in whole or in part without the written consent of the publisher.
- It is the author's responsibility to obtain permission to reproduce illustrations, tables etc. from other publications.

Article Types

Four types of manuscripts may be submitted.

Editorials: It should preferably cover a single topic of common interest.

Original Articles: These should describe new and carefully confirmed findings, and experimental procedures should be given in sufficient detail for others to verify the work and its volume should **not exceed 5000 words** or equivalent space including title, summary/abstract, main body, references, table(s) and figure(s).

Review Articles: Submissions of reviews covering topics of current interest are welcome and encouraged. Reviews should be concise and no longer than 4 to 6 printed pages (about 12 to 18 manuscript pages) and should **not exceed 5000 words**. It should be focused and must be up to date.

Case Reports: This should cover uncommon and/or interesting cases and should **not exceed 1000** words or equivalent space.

Review Process

All manuscripts are initially screened by editor and sent to selective reviewers. Reviewers are requested to return comments to editor within 3 weeks. On the basis of reviewers' comments the editorial board decides whether the articles are accepted or send for re-review the manuscripts. The MH Samorita Med Coll J editorial board tries to publish the manuscript as early as possible fulfilling all the rigorous standard journal needs.

I. Preparing a Manuscript for Submission to MH Samorita Med Coll J

Editors and reviewers spend many hours reading and working on manuscripts, and therefore appreciate receiving manuscripts that are easy to read and edit. The following information provides guidance in preparing manuscripts for the journal.

I A. Preparation of manuscript

Criteria: Information provided in the manuscript are important and likely to be of interest to an international readership.

Preparation

1. Manuscript should be written in English and typed on one side of A4 (290 x 210cm) size white paper.
2. Margin should be 5 cm for the header and 2.5 cm for the remainder.
3. Style should be that of modified Vancouver.
4. Each of the following section should begin on separate page :

- Title page
- Abstract
- Main body/Text: Introduction, Materials and Methods, Results, Discussion and conclusion (For an original article/ Systematic review)
- Acknowledgement
- References
- Tables and legends

Pages should be numbered consecutively at the upper right hand corner of each page beginning with the title page.

I A. 1. General Principles

- The text of observational and experimental articles is usually (but not necessarily) divided into the following sections: Introduction, Materials and Methods, Results, and Discussion(so-called "IMRAD" structure is a direct reflection of the process of scientific discovery.
- Long articles may need subheadings within some sections (especially Results and Discussion) to clarify their content. Other types of articles, such as case reports, reviews, and editorials, probably need to be formatted differently.
- Authors need to work closely with editors in developing or using the publication formats and should submit supplementary electronic material for peer review.
- Double-spacing all portions of the manuscript— including the title page, abstract, text, acknowledg- ments, references, individual tables, and legends— and generous margins make it possible for editors and reviewers to edit the text line by line and add comments and queries directly on the paper copy.
- If manuscripts are submitted electronically, the files should be double-spaced to facilitate printing for reviewing and editing.
- Authors should number on right upper all of the pages of the manuscript consecutively, beginning with the title page, to facilitate the editorial process.

I A. 2. Title Page

The title page should have the following information:

- The title should be brief, relevant and self explanatory. It should reflect the content of the article and should include all information that will make electronic retrieval of the article easy. Subtitles should not be used unless they are essential.
- Title should not be phrased as questions.
- The names of the authors should appear below the title that should include full names of all authors **(no initial).**

Example: Md MA Hamid **(correct form);** Hamid MA **(incorrect).**

The affiliations and full addresses of all authors should be mentioned in the title page.

- Contact information for corresponding authors: The name, mailing address, telephone and fax numbers, and e-mail address of the author responsible for correspondence about the manuscript.
- The name and address of the author to whom requests for reprints should be addressed or a Statement that reprints are not available from the authors.
- Source(s) of support in the form of grants, equipment, drugs, or all of these.

I A. 3. Abstract

Original Article: Structured abstracts are essential for original research. Structured abstract includes introduction, objective(s), materials and methods, results and conclusion. Should be limited to 250 words. The abstract should provide the introduction of the study and blinded state and should mention the study's purpose, basic procedures including selection of study subjects or laboratory animals, main findings (giving specific effect sizes and their statistical significance, if possible) and the principal conclusion. Because abstracts are the only substantive portion of the article indexed in many electronic databases, and the only portion that many readers read, it should accurately reflect the content of the article; so, authors need to be careful about that.

Review Article: is expected to contain background, objective(s), main information and conclusion in brief form. Without any subheading the content should be described in a single paragraph.

Case Study: needs to have background, case summary and conclusion. The content should be described in a single paragraph.

Do not put references in the abstract.

I A. 4. Main body

I A. 4 a) Original article

The body of the text should be divided into the following sections: i) Introduction, ii) Materials and methods, iii) Results, iii) Discussion and iv) Conclusion.

i) Introduction

Should not exceed **500 words**. This section includes background of the problem (that is, the nature of the problem and its significance). It should be very specific, identify the specific knowledge in the aspect, reasoning and what the study aim to answer. Only pertinent primary references should be provided and no data or conclusions should be included from the work to be reported. **Justificatio**n of the study and its **objective(s)** should be mentioned at the end of this section. All information given in this section must have references that to be listed in the reference section.

ii) Materials and methods

The Methods section should be written in such way that another researcher can replicate the study. The type of study (study design), study period, sampling technique, sample size, study population, data collection technique and tool as well as data handling, processing and data analysis should be briefly mentioned in this section.

ii a) Selection and Description of Participants

Describe selection of the observational or experimental participants (patients or laboratory animals, including controls) clearly, including eligibility (inclusion) and exclusion criteria and a description of the source population. Because the relevance of such variables as age and sex to the object of research is not always clear, authors should explain their use when they are included in a study report—for example, authors should explain why only participants of certain ages were included or why women were excluded etc. The guiding principle should be clarity about how and why a study was done in a particular way. When authors use such variables as race or ethnicity, they should define how they measured these variables and justify their relevance.

ii b) Technical Information

- Describe methods, apparatus (give the manufacturer's name and address in parentheses), and procedures in sufficient detail to allow others to reproduce the results.
- Cite references to established methods, including statistical methods. Provide references and brief descriptions for methods that have been published but are not well-known.

- Describe new or substantially modified methods, give the reasons for using them, and evaluate their limitations.
- Identify precisely all drugs and chemicals used, including generic name(s), dose(s), and route(s) of administration.
- For a systematic review article include a section describing the methods used for locating, selecting, extracting, and synthesizing data. These methods should also be summarized in the abstract.

ii c) Statistics

- Describe statistical methods with enough detail to enable a know- ledgeable reader with access to the original data to verify the reported results. When possible, quantify findings and present them with appropriate indicators of measurement error or uncertainty (such as confidence intervals).
- Cite references for the design of the study and statistical methods (standard for the work) when possible.
- Define statistical terms, abbreviations, and most symbols.
- Specify the computer software used.

iii) Results

Results should be described in past tense.

- Present results in logical sequence in the text, tables, figures and illustrations, giving the main or most important findings first. Maintain the sequence of results with the specific objectives selected earlier.
- Do not repeat all the data in the tables or illustrations in the text; emphasize or summarize only the most important observations.
- When data are summarized in the result section, give numeric results not only as derivatives (for example, percentages) but also as the absolute numbers from which the derivatives were calculated, and specify the statistical methods used to analyze them.
- Restrict tables and figures to those needed to explain the argument (relevant to objectives) and to assess supporting data. Use graphs as an alternative to tables with many entries; do not duplicate data in figures (graphs/ charts) and tables. **Example:** Age range of the studied respondents should be appeared **either in table or in figure**.
- Avoid nontechnical uses of technical terms in statistics, such as "random" (which implies a randomizing device), "normal," "significant," "correlations," and "sample."

iv) Discussion

The discussion must be described in **past tense.** This section should reflect the author's comments on the results.

- Emphasize the new and important aspects of the study and the conclusions that follow them in the context of the totality of the best available evidence.
- Do not repeat in detail data or other information given in the Introduction or the Results section.
- For experimental studies, it is useful to begin the discussion by briefly summarizing the main findings, then explore possible mechanisms or explanations for those findings.
- Compare and contrast the results with other relevant studies and potential argument for discrepancy and consistency should be given here.
- State the limitations of the study, and explore the implications of the findings for future research and for clinical practice.
- Link the conclusions with the goals of the study but avoid unqualified statements, not adequately supported by the data.
- In particular, avoid making statements on economic benefits and costs unless the manuscript includes the appropriate economic data and analyses.

v) Conclusion

It should be described in **present tense**. Conclusion should be the main message and the authors' impression from the results of the study. The article should be concluded briefly (**not more than 100 words**). Recommendation(s) can also be included in this section which should not exceed 30 words.

I A. 4 b) Review article

For a systematic review or meta-analysis the body of text should be divided into the following sections (Like an original article): i) Introduction, ii). Materials and methods, iii) Findings/Results, iii a) Main information about the topic, iv) Discussion and v) Conclusion. For a general review article section No. ii (Materials and methods) and iii (Findings/Results) iv) (Discussion) are not relevant. So, for a general review article section No. i). Introduction, iii a). Main Information about the Topic and v). Conclusion are required.

i) **Introduction**: should not exceed **500 words**. This section will include background of the topic. At the end of the review, why the author want to publish the topic on the article ie., the objective should be mentioned.

ii) **Material and methods**: How the review was done, what sorts of articles were searched, how they were searched, the total number of articles reviewed should be mentioned here. This section is not required for a general review article.

iii) **Results/findings**: The findings on the topic after reviewing the articles should be compiled, analysed and described here like an original research article. This section is not required for a general review article.

iii a) **Main Information about the Topic**: The main information about the topic should be described and discussed elaborately with the help of published literatures in this section but the subtitles should be relevant to the topic(Title) for a general review article. This section may not be required for a systematic review or meta-analysis.

iv) **Conclusion:** The article should be concluded briefly (**not more than 100 words**).

I A. 4 c) Case Report

The body of the text should be divided into the following sections: i) Introduction, ii) Case Report (Description of the case), iii) Discussion and iv) Conclusion.

i) **Introduction**: A brief description should be given on the topic of the case with the help of published literatures.

ii) **Case Report**

- The findings (history, clinical examination and investigations) should be described here.
- Management (if any) can also be given.

iii) **Discussion**

- The discussion should be started by briefly summarizing the main findings of the case reported, then possible explanations for those findings should be explored.
- The findings of the case should be compared with other relevant studies and potential argument for discrepancy and consistency should be given here.

iv) **Conclusion**

- The article should be concluded briefly (**not more than 100 words**).
- The main findings of the reported case should be emphasized which the readers can consider as a clue to suspect a diagnosis for a rare case in future.

I A. 5. Acknowledgement

Acknowledge advisor(s) and/or any one who helped the researcher(s)

- Technically
- Intellectually
- Financially

I A. 6. References

I A. 6 a) General Considerations related to References

- Although references to review articles can be an efficient way to guide readers to a body of literature, review articles do not always reflect original work accurately. Readers should therefore be provided with direct references to original research sources whenever possible.
- Abstracts should not be used as references. References to papers accepted but not yet published should be designated as "in press" or "forthcoming"; authors should obtain written permission to cite such papers as well as verification that they have been accepted for publication.
- Information from manuscripts submitted but not accepted should be cited in the text as "unpublished observations" with written permission from the source.
- Citing a "personal communication" should be avoided unless it provides essential information not available from a public source, in which case the name of the person and date of

communication should be cited in parentheses in the text. For scientific articles, obtain written permission and confirmation of accuracy from the source of a personal communication. Some but not all journals check the accuracy of all reference citations; thus, citation errors sometimes appear in the published version of articles. To minimize such errors, references should be verified using either an electronic bibliographic source, such as PubMed or print copies from original sources.

- Authors are responsible for checking that none of the references cite retracted articles except in the context of referring to the retraction. For articles published in journals indexed in MEDLINE, the ICMJE considers PubMed the authoritative source for information about retractions.

I A. 6 b) Reference Style and Format

➢ **Reference Style**

Author should follow **Vancouver style**.

- R**eference list** should appear at the end of the article and should be numbered consecutively in the order as they are cited in the text, which is done by **superscript** (single press of 'ctrl shift +') in numerical form **(citation number).**
- When **multiple references** are cited at a given place in the text, use a **hyphen** to join the first and last numbers that are **inclusive**. Use **commas** (without spaces) to separate **non-inclusive** numbers in a multiple citation.

  Example: 2,3,4,5,7,10,12 are abbreviated to **(2-5,7,10,12**).
- **Do not** use a hyphen if there is no citation numbers in between 2 numbers that support your statement.

  Example: 1-2 (**in correct form).** 1,2**(correct form)**
- As a general rule, citation numbers in the text should be placed **outside full stops and commas**, inside colons and semicolons (applicable for any part of the document).

  Example: Masud Alam,1 Selim Khan[2]

  Example: Over the past decades public health relevance of mental health condition 'in children and adolescents has been of growing concern'.[1-3,5,6]
- Identify references in text, tables, and legends by Arabic numerals in superscript.
- References cited only in tables or figure legends should be numbered in accordance with the sequence established by the first identification in the text of the particular table or figure.

➢ **Reference Format**

1. Citing a Book

The essential details required are (in order):

1.1 Name/s of author/s, editor/s, compiler/s or the institution responsible.

- Where there are **6 or less authors** you must list **all authors**.
- Where there are **7 or more author**s, only the **first 6 are listed** and **add "et al"** (after a **comma**).
- Put a comma and 1 space between each name. The last author must have a full-stop after their initial(s).

  Format: surname (**1 space**) initial/s (**no spaces or punctuation between initials**) (**full-stop OR if further names comma, 1 space**)

  Example: Smith AK, Jones BC, Bloggs TC, Ashe PT, Fauci AS, Wilson JD, et al.
- **When author/s is/are editor/s :**Follow the same methods used with authors but use the word **"editor"** or **"editors"** in full after the name/s. The word editor or editors must be in small letter. (**Do NOT** confuse with "ed."used for edition.)

  Example: Millares M, editor. Applied drug information: strategies for information management. Vancouver (WA): Applied Therapeutics Inc;1998.

Sponsored by institution, corporation or other organization (including PAMPHLET)

E**xample**: Australian Pharmaceutical Advisory Council. Integrated best practice model for medication management in residential aged care facilities. Canberra: Australian Government Publishing Service; 1997.

1.2. Title of publication and subtitle if any

- Italics or underlining should be avoided.
- Only the first word of the titles (and words that normally begin with a capital letter) should be started with capital letter (except proper noun).

Format: title (**full-stop, 1 space**)

Example: Harrison's principles of internal medicine.

Example: Physical pharmacy: physical chemical principles in the pharmaceutical sciences.

Example: Pharmacy in Australia: the national experience.

1.3. Edition (other than the first)

Number of edition **other than first one** should be mentioned as **2nd, 3rd,10th ed.**

Example: Blenkinsopp A, Paxton P. Symptoms in the pharmacy: a guide to the management of common illness. 3rd ed. Oxford: Blackwell Science; 1998.

1.4. Place of publication (if there is more than one place listed, use the first one)

- The place name should be written in full.
- If the place **name is not well known**, add a comma, 1 space and the state or the country for clarification. For places in the USA, add after the place names the 2 letter postal code for the state. This must be in upper case. eg. Hartford (CN): (where CN=Connecticut).

Format: place of publication (**colon, 1 space**)

Example: Hartford (CN):

Example: Texas (NSW):

Example: Kyoto (Japan):

1.5. Publisher

The publisher's name should be spelled out in full.

Format: publisher (**semi-colon, 1 space**)

Example: Australian Government Publishing Service;

Example: Raven Press;

Example: Williams & Wilkins;

1.6. Year of publication

Format: year (full-stop, add 1 space if page numbers follow).

Example: 1999.

Example: 2000. p. 12-5.

1.7. Page numbers (if applicable).

- Abbreviate the word "page" to "p.".

Note: do not repeat digits unnecessarily

Format: p (**full-stop, 1 space**) page numbers (**full-stop**).

Example: p. 122-9 (**correct**); p. 122-129 (**incorrect**).

Example: p. 1129-57 (**correct**); p. 1129-157 (**incorrect**).

Example of citing a book: Lodish H, Baltimore D, Berk A, Zipursky SL, Matsudaira P, Darnell J. Molecular cell biology. 3rd ed. New York: Scientific American; 1995.

(*Name/s. Title. Edition(other than first). Place of publication: Publisher; year of publication. p. Page no*)

2. Citing a Chapter in an Edited Book (to which a number of authors have contributed)

- Name/s of author of the chapter
- Title of chapter followed by, In:
- Editor
- Title of book
- Series title and number (if part of a series)
- Edition (if not the first edition)
- Place of publication (if there is more than one place listed, use the first named)
- Publisher
- Year of publication
- Page numbers

(*Title of Chapter. In: Editor(s). Title of book and number. Edition (other than first). Place of publication: Publisher; year of publication. p. Page no*)

Example of citing a chapter in an edited book:

Porter RJ, Meldrum BS. Antiepileptic drugs. In: Katzung BG, editor. Basic and clinical pharmacology. 6th ed. Norwalk (CN): Appleton and Lange; 1995. p. 361-80.

3. Citing a Journal Article from a Print source

The essential details required are (in order):

- **Name/s of author/s of the article.**
  See step 1 of "Citing a book" for full details.
- **Title of article.**
  See step 2 of "Citing a book" for full details.

Example: Validation of an immunoassay for measurement of plasma total homocysteine.

- **Name of journal (abbreviated).**

- Abbreviate the name of the journal according to the style used in Medline.
- A list of abbreviations can be found at: http://w**ww.ncbi.nlm.nih.gov/entrez/query.fcgi?db=journals**

  Note: No punctuation marks are used in the abbreviated journal name.

Format: journal title abbreviation (1 space)

Example: Bang J Psychiatry

- **Year of publication (month or day should be omitted).**

Format: year (**semi-colon, one space**)

Example: 1996; 12(5): 127-33.

- **Volume number (and issue/part)**

  Format: volume number (**colon, one space**)

Example: 1996; 12(5): 127-33. Or
1996; 18: 1237-8.

- **Page numbers**

Note: Do not repeat digits unnecessarily

Format: page numbers (full-stop)

Example: 5310-5.

Example of citing a journal: Russell FD, Coppell AL, Davenport AP. In vitro enzymatic processing of radiolabelled big ET-1 in human kidney as a food ingredient. Biochem Pharmacol 1998; 55(5): 697-701.

Name(s). Title. Name of the Journal Year of publication; Volume Number (Session/Issue Number): Page Number.

- **No author given in article**

  Example: Coffee drinking and cancer of the pancreas [editorial]. BMJ 1981; 283: 628.

- **Journals with parts and/or supplements**

Examples

- **Volume with supplement**

  Environ Health Perspect 1994; 102Suppl 1: 275-82.

- **Issue with supplement**

  SeminOncol 1996: 23(1 Suppl 2): 89-97.

- **Volume with part**

  Ann ClinBiochem 1995; 32(Pt 3): 303-6.

4. Citing a Journal Article from Internet and Other Electronic Sources

This includes software and internet sources such as web sites, electronic journals and databases.

The **basic form** of the citations **follow the principles listed for print sources** (see above).

In the case of sources that may be subject to alteration it is important to acknowledge the **Date The Information Was Cited.** This is particularly true for web sites that may disappear or permit changes to be made and for CD-ROMS that are updated during the year.

4.1. Citing a Journal Article from the Internet

Note: Follow the same procedure for citing print journals as for electronic journals regarding date, volume pages and journal title

Format: Author/s (full-stop after last author, 1 space) **Title of article** (full-stop, 1 space)

Abbreviated title of electronic journal (1 space) **[serial online]** (1 space) **Publication year** (1space) **month(s)** - if available (1 space) **[cited year month (abbreviated) day]** - in square brackets (semi colon, 1 space) **Volume number** (no space) **Issue number** if applicable in round brackets (colon) **Page numbers or number of screens** in square brackets (full-stop, 1 space) **Available from** (colon, 1 space) URL:**URL address underlined**

Examples:

- Morse SS. Factors in the emergence of infectious disease. Emerg Infect Dis [serial online] 1995 Jan-Mar [cited 1999 Dec 25]; 1(1):[24 screens]. Available from:URL: http://www/cdc/gov/ncidoc /EID/eid.htm
- Garfinkel PE, Lin E, Goering P. Should amenorrhoea be necessary for the diagnosis of anorexia nervosa? Br J Psych [serial online] 1996 [cited 1999 Aug 17]; 168(4):500-6. Available from: URL:http://biomed. niss.ac.uk

4.2. Citing a Journal Article from WWW site

(If the author is not documented, the title becomes the first element of the reference.)

Format: Author (full-stop after last author, 1 space) **Title** (full-stop, 1 space) **[Online]** (full stop, 1 space) **Publication Year** (1 space) **[cited year month (abbreviated) day]** (semi colon) **Number of screens in square brackets or pages** (full-stop, 1 space) **Available from** (colon, 1 space)

URL: (no space) **URL address underlined**

Note: The number of screens is not necessary. Put a semi colon and 1 space after the cited date if no pages or screen numbers are listed.

When the date is approximated, indicate that by following the date with a question mark and inserting the statement in square brackets. Eg. [2001?]

Examples: National Organization for Rare Diseases [Online]. 1999 Aug 16 [cited 1999 Aug 21]; Available from: URL:http://www.rare diseases.org/

Royal College of General Practitioners.The primary health care team.[Online]. 1998 [cited 1999 Aug 22];[10 screens]. Available from:URL: http:// ww. rcgp.org.uk/informat/publicat/rcf0021.htmZand J. The natural pharmacy: herbal medicine for depression [Online]. [1999?] [cited 2001 Aug 23];[15 screens]. Available from:

URL:http://www.healthy.net/asp/templates/Article.asp?PageType=Article&Id=920

Important Points For Reference List

- For **online material**, please cite the **URL**, together with the **date you accessed** the website
- **Online journal** articles can be cited using the Digital Object Identifier **(DOI)** number

Samples of Reference List

A list of references contains details of those works cited in the text.

The references are listed in the same numerical order as they appear in the body of the text

1. Getzen TE. Health economics: fundamentals and flow of funds. New York (NY): John Wiley & Sons; 1997.
2. Millares M, editor. Applied drug information: strategies for information management. Vancouver, WA: Applied Therapeutics, Inc.; 1998.
3. Australian Government Publishing Service. Style manual for authors, editors and printers. 5th ed. Canberra: Australian Government Publishing Service; 1994.
4. Australian Pharmaceutical Advisory Council. Integrated best practice model for medication management in residential aged care facilities. Canberra: Australian Government Publishing Service; 1997.
5. Bennett GL, Horuk R. Iodination of chemokines for use in receptor binding analysis. In: Horuk R, editor. Chemokine receptors. New York (NY): Academic Press; 1997. p. 134-48. (Methods in enzymology; vol 288).
6. Coffee drinking and cancer of the pancreas [editorial]. BMJ 1981;283:628.
7. Morse SS. Factors in the emergence of infectious disease. Emerg Infect Dis [serial online] 1995 Jan-Mar [cited 1996 Jue 5]; 1(1):[24 screens]. Available from: URL:http:// www. cdc.gov/ ncidoc/EID/eid.htm

I A. 7. Conflict of interest

All authors are requested to disclose any actual or potential conflict of interest including any financial, personal or other relationships with other people or organizations.

It is important to be consistent when you are referencing.

I A. 8. Tables and Illustrations (Figures)

I A. 8 a) Tables

- In tables, capture information concisely and display it efficiently.
- Use tables /fig that are relevant to the study.
- Try to limit the number of tables/figures.
- Type or print each table with double-spacing on a separate sheet of paper. Number tables consecutively in the order of their first citation in the text and supply a brief title for each.
- Do not use internal horizontal or vertical lines. Give each column a short or an abbreviated heading. Authors should place explanatory matter in footnotes, not in the heading. Explain all nonstandard abbreviations in footnotes, and use the following symbols, in sequence:

  *, †, ‡, §, _, ¶, **, ††, ‡‡, §§, _ _, ¶¶, etc.
- Identify statistical measures of variations, such as standard deviation and standard error of the mean.
- Be sure that each table is cited in the text. If you use data from another published or unpublished source, obtain permission and acknowledge that source fully.

I A. 8 b) Illustrations (Figures)

Figures should be either professionally drawn and photographed, or submitted as photographic-quality digital prints. In addition to requiring a version of the figures suitable for printing, (for example, JPEG / GIF).

- Review the images of such files on a computer screen before submitting them to be sure that they meet their own quality standards. For x-ray films, scans, and other diagnostic images, as well as pictures of pathology specimens or photomicrographs, send sharp, glossy, black-and-white or color photographic prints, usually 127 _ 173 mm (5 _ 7 inches).
- Letters, numbers, and symbols on figures should therefore be clear and consistent throughout, and large enough to remain legible when the figure is reduced for publication.
- Photographs of potentially identifiable people must be accompanied by written permission to use the photograph.
- Figures should be numbered consecutively according to the order in which they have been cited in the text.

- If a figure has been published previously, acknowledge the original source and submit written permission from the copyright holder to reproduce the figure. Permission is required irrespective of authorship or publisher except for documents in the public domain.
- For illustrations in colour, MH Samorita Med Coll J accept coloured illustration when it seems essential. This Journal publish illustrations in colour only if the author pays the additional cost. Authors should consult the editorial board of the journal about requirements for figures submitted in electronic formats.

I A. 8 c) Legends for Illustrations (Figures)

- Type or print the legends for illustrations using double spacing, starting on a separate page, with Arabic numerals corresponding to the illustrations.
- When symbols, arrows, numbers, or letters are used to identify parts of the illustrations, identify and explain each one clearly in the legend. Explain the internal scale and identify the method of staining in photomicrographs.

I A. 9. Units of Measurement

- Measurements of length, height, weight, and volume should be reported in metric units (meter, kilogram, or liter) or their decimal multiples.
- Authors should report laboratory information in both local and International System of Units (SI).
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I A. 10. Abbreviations and Symbols

- Use only standard abbreviations; use of nonstandard abbreviations can be confusing to readers.
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- If a paper version of the manuscript is submitted, send the required number of copies of the manuscript and figures; they are all needed for peer review and editing, as the editorial office staff cannot be expected to make the required copies.
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- Not more than 200 words for case reports and 250 words for original articles
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- **Introduction**
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- Pertinent information only
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- Study Design
- Duration and place of study
- Ethical approval
- Patient consent
- Statistical analysis and software used.
- **Results**
- Clearly present the data
- Avoid data redundancy
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- Avoid unnecessary explanation of someone else' work unless it is very relevant to the study
- Provide and discuss with the literatures to support the study with references.
- Mention about limitation of the study
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- Give your conclusion
- Any recommendation
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- Acknowledge any person or institution who have helped for the study
- **Reference**
- Abide by the Vancouver style
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Editorial

Non Communicable Diseases: An Emerging Issue-Both for Children and Adults

Afroza S

Non communicable Diseases (NCDs) are medical conditions or diseases that are nontransmissible and often enduring. [1] In the year 2008, among 57 million worldwide deaths NCDs accounted for 36 million, mainly due to cardiovascular disease, cancers, diabetes, and chronic lung diseases.[2,3] Eighty percent of NCD deaths occurred in low and middle income countries.[3]

The prevalence of NCDs is rising rapidly and is projected to cause almost three-quarters as many deaths as communicable, maternal, perinatal, and nutritional diseases by the year 2020, and to exceed those as the most common causes of death by 2030.[4] NCD deaths are projected to be increased by 15% globally between 2010 and 2020 (to 44 million deaths). [3] The greatest increases will be in the WHO regions of Africa, South-East Asia and the Eastern Mediterranean, where those will increase by over 20%.[3] The regions that are projected to have the greatest total number of NCD deaths in 2020 are South-East Asia (10.4 million deaths) and the Western Pacific (12.3 million deaths). [4]

Fifteen million deaths attributed to NCDs occur between the ages of 30 and 69 years and people from any age groups are vulnerable to the risk factors contributing to NCDs.[5] The major non-communicable diseases (NCDs) (diabetes, cardiovascular diseases, cancer, chronic respiratory diseases, and mental disorders) are often associated with older age groups, but the evidence suggests that they affect people of all ages. [6] NCDs are increasing among women and children across the reproductive, maternal, newborn and child health (RMNCH) continuum. [7] There are some NCDs that specifically affect women, adolescent girls and children. For example, breast cancer is the leading cause of cancer death among women worldwide. Out of 1.4 million new cases of breast cancer identified in 2008, about 50% were from low and middle-income countries. [7] Certain types of human papillomavirus (HPV), lead to the development of pre-cancer and cancer of the cervix. Children can develop chronic conditions such as asthma, diabetes and congenital heart abnormalities.[7,8] Each year 8 million children are born with birth defects, including heart defects. [7,9]

The rapidly growing burden of NCDs in developing countries is not only accelerated by population ageing; it is driven by the negative impact of globalization, like; unfair trade and irresponsible marketing, rapid and unplanned urbanization and increasingly sedentary lives. People in developing countries eat foods with higher levels of total energy. Increasing NCDs are also being influenced by many factors including tobacco use and availability, cost and marketing of foods high in salt, fat and sugar. A considerable proportion of global marketing targets children and adolescents as well as women in developing countries to promote tobacco smoking and consumption of 'junk' foods and alcohol.[3]

Prenatal exposure to tobacco and alcohol, prematurity and low birth weight, nutritional deficiency, and diabetes have long-term impacts on health and development, including increased risk of adult cardiovascular disease, diabetes, and other social and medical problems later in life.[10] Evidence shows that the poor may begin life with increased vulnerability to NCDs and are then exposed to additional risks throughout life. [3] Under-nutrition in utero and low birth weight are prevalent among low-income populations, which increases the subsequent risk of cardiovascular disease and diabetes.[3] There is evidence that childhood poor socioeconomic status is associated with type 2 diabetes and obesity in later life. [11] As a consequence, the poor are more likely to die prematurely from NCDs.

Prevention is always better than cure. There are ways through which the modifiable risk factors may be targeted to help prevent development of NCDs later in life.[6]

According to WHO before and during pregnancy, promoting healthy nutrition and regular physical activity can prevent hypertension and gestational

diabetes.[12,13] The health professionals should continue weight management and support physical activity of the mother throughout pregnancy, to improve the health of the mother and her baby. [13] Household members should be advised to give up tobacco use, alcohol consumption, and to eliminate air pollution within home. [6]

Exclusive breastfeeding prevents NCDs and helps ensure healthy newborn development.[12] The health system should promote breastfeeding, as well as monitoring the child's growth and the micronutrient status of both mother and newborn[12] and providing behaviour change support related to physical activity, diet or substance abuse, where necessary. [6]

Healthy behaviour initiated in childhood, as physical activity and healthy nutrition, should be maintained during adolescence.[13,14] A priority for policy should be there to develop a coordinated response to the structural and social determinants of adolescent obesity, [14]food insecurity,[14] poor access to healthy food, and exposure to unhealthy environment.[6] HPV vaccinations to adolescent girls has been shown to be cost effective in preventing cervical cancer.[15] The Health Behaviour in School Aged Children initiative[14] is a useful guide to measure NCD risk factors during adolescence. Health systems can support adults by providing universal healthcare and mental health services including screening services, brief interventions targeting NCD risk factors in primary care and access to affordable drugs for the prevention and control of NCDs.[15]

A global integrated approach is required for primary prevention of NCDs during childhood and adolescence targeting to a NCD free healthy adulthood.

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Adolescent Knowledge about their Reproductive Health Problems and Relevant Services at a Rural Setting of Bangladesh

Sumi TA[1], Alam MU[2], Ashraf R[3]

Abstract

Introduction: *Adolescent reproductive health (ARH) has been overlooked historically despite the high risks that countries face for its neglect. Some of the challenges faced by adolescents across the world include early pregnancy and parenthood, difficulties accessing contraception and safe abortion, and high rates of HIV and sexually transmitted infections.*

Objective: *To assess adolescent knowledge and perception of reproductive health care and services in Bangladesh*

Materials and Methods: *This cross sectional descriptive study was conducted among 180 young people from January to May 2017. Respondents were selected from Keraniganj upazila from Dhaka district mostly who were available in the village Malancha and age group 15-19 years and who were living in that area. Semi structured questionnaire was employed as instrument for data collection.*

Result: *In this study it was found that 29.45% (53) participants were of 18 years, then 27.78% (50) were of 19 years. 53.89% (97) were male and 46.11 %(83) were female. 61.67% (111) reported of having knowledge about reproductive health and 38.33% (69) had no knowledge about reproductive health. 32.78% (59) had knowledge about all the categories of reproductive health, 31.11%(56) had no knowledge about reproductive health , 18.33% (33) had knowledge about family planning,17.78% (32) had knowledge about safe pregnancy, and 10% (18) had knowledge about safe sex life. 56.67% (102) people had knowledge about MCH services, 41.67% (75) on family planning, 38.89% (70) on adolescent health care, 31.67% (57) on sex education, 21.1% (38) had no idea and 2.2% (4) people had knowledge on other services. The study found out that adolescents were aware about some of the common Reproductive Health problems like STDs (70%) and some issues like early marriage(90%), teenage pregnancy (80.56%) and gender inequality(53.33%) .They also mentioned. that family(9.44%) , friends (19.44%), health complex(20.56%), educational institutions(33.89%) were the source of information about RHC and RHCS . A major portion of the participants were unaware of the Reproductive Health services available in their community(32.77%) neither had they ever utilized any services. The most important reasons identified for not utilizing the services were social stigma (25%), lack of information, (33.89%) and social and cultural barriers.*

Conclusion: *Though, the country from past few years has shown some positive results and concerns, the approach should reach the targeted group and create a healthy and wealthy nation. It is suggested to make a new primary assessment and contribute to planning and implementation of "reproductive health care and its importance" under the national program.*

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Introduction:

In both the developed and developing countries, generally health is one of the most important sector that generate tremendous interest of the development planners, health professionals, policy makers and other ideological powers. The basic human rights of the citizens in a country do vary according to their social, political, economic, and religious systems. A Third World country usually prioritizes food security, health, and shelter in their development plans rather than the 'entertainment plaza'[1]. However, majority of the governments in poor countries assign much higher weight on industrial and agricultural growth, rather than health care and 'right to health services for all' remained neglected. It can be noted here that lack of funding and supply of inappropriate types of medical care effectively reduce the access of the poor to the health care facilities available in the Third World countries like Bangladesh. Adolescent groups in Bangladesh are considered as the most important segment for health care issues. Adolescent period is remarkably a sensitive period for boys and girls. This is the time when most of them commit mistakes due to curiosity and ignorance[1]. Changes in their body structure and hormonal activity surprise them unless proper knowledge on physiology is imparted to them. The adolescent population in Bangladesh constitutes around 23% of total population numbering nearly 30 million. Currently 48% of the adolescent population are female and 52% male. 20% of total population below 10 years of age plus 23% adolescents totaling 43% of total population is to determine the health and population structure of the country in the years to come. [1] Bangladesh's adolescent population (aged 15–19 years) was estimated at about 28 million in 2000. Due to the effect of population momentum—through which populations can continue to grow even as the rate of growth is declining (since ever more people are added to the base population each year)—and other effects, this age group will contribute significantly to the incremental population size of Bangladesh during the next 20 years, increasing by 21 percent to reach 35 million by 2020. Educational attainment is increasing for both boys and girls, and there has been a significant increase in the percent of boys and girls obtaining a secondary or higher education. This increased from 10.5 percent to 54.9 percent for boys, and 5.5 percent to 47.1 percent for girls between 1994 and 2000. Births to adolescents will increase from 2.2 million in 2000 to 2.9 million by 2020 . Unmet need for contraceptives has improved slightly over the past six years. It is now about 20 percent for girls aged 15– 19 years and slightly lower at 18.1 percent for girls aged 20–24 years .The main causes of mortality in young mothers are toxemia, abortion, and obstructed labor (caused by immaturity of the birth canal). In addition to its associated health consequences, early childbearing has an adverse effect on a young mother's socioeconomic status. It cuts short her education, limits her ability to earn income for the family, and can lead to marital difficulties. Adolescents appear to be poorly informed with regard to their own sexuality, physical well-being, health and bodies. Whatever knowledge they have, moreover, is incomplete and confused. Low rates of educational attainment, limited sex education activities, and inhibited attitudes toward sex contribute to his ignorance. The reproductive health needs of young women are quite different from those of young men, principally because of their young age at marriage.[2] Today, at the end of this millennium, the world is facing the largest generation of adolescents ever in history. Currently, one in every five persons on the earth is an adolescent aged 14-19 years, and 85 percent of these adolescents live in developing countries. In terms of sheer numbers, these young people have tremendous demographic significance. Because of the population momentum even if there were to be a rapid decline in age-specific fertility rates among young people, stabilization of the country's population would not occur for at least the next 10-20 years. Adolescents are not only numerous, but they have double significance as they are, at the same time, the present and the future. The behavior of this generation of adolescents is going to affect everybody's future in the next generation. In addition, they are at a stage associated with an increased likelihood of sexual activity, and thus, at an increasing risk of contracting sexually transmitted diseases (STDs), including human immuno deficiency virus/acquired immuno-deficiency syndrome (HIV/AIDS), if they practice unsafe sex. Considering the significance of adolescents, the International Conference on Population and Development (ICPD), held in Cairo, in 1994, identified adolescents as a priority target group and urged all government and non-government organizations (NGOs) to address reproductive health

(RH) needs of adolescents.[3]. The lack of adequate updated information on reproductive health care amongst the adolescent in urban and rural area signifies and justifies the importance of an awareness study.

Materials and Methods

It was a descriptive type of cross sectional study. The study was carried out at a selected village of Keraniganj upazilla , Dhaka district .Study population were adolescents aged 14-19 years. Purposive sampling was done. Sample size was 180. The number was identified on the basis of assumption. Pretested questionnaire was used for data collection which included information regards to ARHC. After introductory conversation and obtaining consent from the respondent the relevant data were collected by face to face interview using close and open ended questionnaire. Data were recorded in the questionnaires. All filled up data were verified for its consistency. The data were then compiled and tabulated manually according to key variable in master sheet. Then finally data were analyzed in computer.

Result

While describing the sociodemographic characteristics of the respondents from table-1 we can see that 29.45% (53) people were of 18 years, then 27.78% (50) were of 19 years and 23.33% (42) were below the age of 15 years, 11.11% (20) were of age 17 years and 8.33% (15) were of 16 years old. This table shows that 53.89% (97) were male and 46.11 %(83) were female. The educational qualification of the respondents reveals that 59.45 %(107) had received secondary education, 29.44% (53) had obtained primary education, 8.33%(15) had received higher secondary education and 2.78%(5) were Illiterate. Regarding occupation 42.22% (76) were students, 29.45% (53) were house wives, 12.22% (22) were service holder, 8.33% (15) were businessmen. From table-1 we are also able to see the monthly income of the respondents. 32.79% (59) had an income of 5000-10000 Tk, 23.33% (42) had an income of 10000-

Table 1. Distribution of the respondents according to their Socio-demographic characteristics (n=180)

Name of variable	Category	Number	Percentage
Age:	≤15	42	23.33%
(in year)	16	15	8.33%
	17	20	11.11%
	18	53	29.45%
	19	50	27.78%
Sex:	Male	97	53.89%
	Female	83	46.11%
Educational Qualification:	Primary	53	29.44%
	Secondary	107	59.45%
	Higher Secondary	15	8.33%
	Illiterate	05	2.78%
Occupation:	Service holder	22	12.22%
	Businessman	15	8.33%
	Student	76	42.22%
	Housewife	53	29.45%
	Unemployed	12	6.47%
	Others	02	1.11%
Monthly Income:	≤5000	24	13.33%
(in taka)	5000 – 10 000	59	32.79%
	10000 – 15000	42	23.33%
	15000 – 20000	38	21.11%
	Above 20000	17	4.44%

15000 Tk, 21.11% (38) had an income of 15000-20000 Tk, 13.33% (24) had an income of less than 5000 Tk and 4.44% (17) had an income above 20000 Tk. In Figure-1 it had been shown that 61.67%(11) of the respondents had knowledge about reproductive health and 38.33%(69) had no knowledge. From table-2 we can see that, out of 180 respondents in our study 57.23%(103) said yes and 42.43% (77) said no to the question safe pregnancy and natal care , 72.23%(130) said yes and 27.33% (50) said no to the question of Family Planning, 51.67%(93) said yes and 48.33%(87) said no to the question about Safe abortion, 56.67%(102) said yes and 43.33%(79) said no to the question about Infections of reproductive organ, 67.78%(122) said yes and 32.22% (58) said no to the question regarding STDs, 75.56% (136) said yes and 24.44%(44) said no to the question asked about Prevention of STDs , 53.33%(96) said yes and 46.67 (84) said no the question about Gender equality, 90% (162) said yes and 10% (18) said no to the question regarding Early marriage and its consequences, 80.56% (145) said yes and 19.44% (35) said no to the question asked about Early pregnancy and its consequences, 60% (108) said yes and 40% (72) said no to the question regarding Menstrual problems, 82.33% (148) said yes and 17.77% (32) said no the question about Adolescent abuse. .From table-3 and in Figure-2 it was found that 56.67% (102) people had knowledge about MCH services, 41.67% (75) on family planning, 38.89% (70) on adolescent health care, 31.67% (57) on sex education, 21.1% (38) had no idea and 2.2% (4) people had knowledge about other services. Table-4 shows, out of 180 respondents in our study majority population 38.89%(72) thought that family barriers were main obstacles to achieve Reproductive Health Care Services, 33.89%(61) had no idea about barriers to RHCS, 25%(45) thought Social and Personal Barriers were main obstacle, 19.44(35) Religious Barrier to achieve RHCS and 1.67%(3) had Other obstacle.

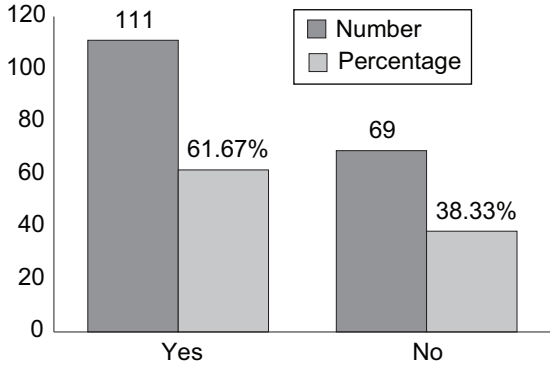

Fig. 1: *Knowledge of the respondent about reproductive health*

Table-2: Distribution of the respondents according to knowledge about each Reproductive Health problems (n=180)

Categories	Answer of respondents	Number	Percentage
Safe pregnancy and natal care	Yes	103	57.23%
	No	77	42.77%
Family planning	Yes	130	72.23%
	No	50	27.77%
Safe abortion	Yes	93	51.67%
	No	87	48.33%
Infection of Reproductive organs	Yes	102	56.67%
	No	78	43.33%
STDs	Yes	122	67.78%
	No	58	32.22%
Prevention of STDs	Yes	136	75.56%
	No	44	24.44%
Gender equality	Yes	96	53.33%
	No	84	46.67%
Early marriage and its consequences	Yes	162	90%
	No	18	10%
Early pregnancy and its consequences	Yes	145	80.56%
	No	35	19.45%
Menstrual problems	Yes	108	60%
	No	72	40%
Adolescent abuse	Yes	148	82.23%
	No	32	17.77%

Table-3 : Distribution of respondents according to their knowledge about available RHC services (n=180)

RHC Services	Numbers	Percentage
MCH services	102	56.67%
Adolescent health care	70	38.89%
Sex education	57	31.67%
Family planning	75	41.67%
Others	4	2.2%
No idea	38	21.1%

Multiple responses

Table – 4 :Distribution of respondents according to their knowledge about the barriers to Reproductive Health Care services. (n=180)

Barriers	Numbers	Percentage
Family Barriers	72	38.89%
Social Barriers	45	25%
Religious Barrier	35	19.44%
Personal Issues	45	25%
Others	3	1.67%
No Idea	61	33.89%

Multiple responses

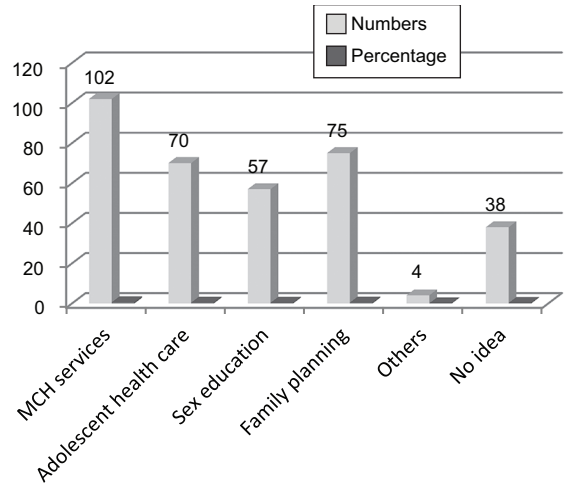

Fig. 2: *Distribution of the respondents according to knowledge about MCH, family planning, adolescent health care and sex education.*

Discussion

The current study demonstrated that majority respondents were male (53.89%) and female constituted 46.11 % of the total population . Regarding age distribution 29.45% (53) people were of 18 years, then 27.78% (50) were of 19 years and 23.33% (42) were below the age of 15 years, 11.11% (20) were of age 17 years and 8.33% (15) were of 16 years old. The educational qualification of the respondents reveals that 59.45 %(107) had received secondary education, 29.44% (53) had obtained primary education, 8.33%(15) had received higher secondary education and 2.78%(5) were illiterate. Regarding occupation 42.22% (76) were students, 29.45% (53) were house wives, 12.22% (22) were service holder, 8.33% (15) were businessmen, 6.67% (12) were unemployed and 1.11% (02) were others. In a similar study shows that, young men represented just under half (49.3%) of the total sample, and 15-year olds made up the largest sub-group and 19-year olds the smallest. Nine out of ten respondents identified themselves as being Hindu. Nearly 99 percent of all respondents were literate. Just under half of all survey participants were currently at school and between one in five to one in four respondents had left school by Grade 6. Some six percent of adolescents were married (174) and of those married young people 35.1 percent were male and 64.9 percent were female. Not all respondents answered all questions, for example, 30 people did not list their age. The most likely explanation is these are respondents who self-completed the questionnaire in school and handed it afterwards to the researchers. Therefore they are likely within the age range, and a reason for leaving them in the study. The out-of-school questionnaires were much more likely to be completed one-to-one, or even by the researcher for those with poor language skills, and hence less likely to miss out basic information on age.[4] Now coming to the main issue, in our current study among 180 respondents as many as 61.67% (111) reported of having knowledge about reproductive health and 38.33% (69) having no knowledge about reproductive health. 32.78% (59) had knowledge about all the categories of reproductive health, 31.11% (56) had no knowledge about reproductive health , 18.89% (34) had knowledge about MCH service, 18.33% (33) had knowledge about family planning,17.78% (32) had knowledge about safe pregnancy, and 10% (18)had knowledge about safe sex life. , 36.11%(65) had no idea about the source of knowledge about reproductive health, 33.89%(61) knew about reproductive health through educational institution,

20.56%(37) knew about reproductive health through health complex, 19.44%(35) knew about reproductive health by means of friends, 9.44%(17) knew about reproductive health through their family and none of the respondents had other sources of knowledge regarding our topic. In our study according to their knowledge about STD prevention 29.45% (53) knew all the given options, 27.78% (50) had no idea, 22.23% (40) on use of barrier, 19.45% (35) on sex education, 15.56% (28) on safe partner, 13.34% (24) on religion binding. Another finding is only 78.33% (141) said yes and 21.67% (39) said no for an open discussion with parents about reproductive health (RH) problems. In a study on ARH in Nepal the findings are almost similar that most of the adolescents participated in this study were familiar with RH and some of its components like STDs, family planning, abortion etc. Majority of them were unknown about the services that were available for them in the government health facilities. The adolescents find it easy sharing with their peer group rather than sharing with elderly. However, some female respondents shared that they were most likely to talk to their mother about menstrual cycle and complications that come along with it. Almost all the respondents shared that they never talk to their parents about HIV/AIDS, STIs and other sexual disease. Most of the study participants mentioned that teenage pregnancy is one of the major problems of sexual and reproductive health among adolescents. Early marriage and lack of proper knowledge leads to teenage pregnancy in households in rural communities of Kapilvastu and Arghakhanchi and also in Nepal as a whole. The school dropout is high among girls of rural communities and chances of getting married at young age are also high which leads to teenage pregnancy. Most of the participants have rarely visited the government health post or primary health center, even if they have visited that is for other general checkup but not for something relating to sexual health. Some participants reported that they visit to the hospital in cities if something serious happens.[5] The present study found that out of 180 respondents only 67.22% (121) had knowledge about RHC from educational institution and 32.77% (59) had no idea about RHC. 56.67% (102) people had knowledge about MCH services, 41.67% (75) on family planning, 38.89% (70) on adolescent health care, 31.67% (57) on sex education, 21.1% (38) had no idea and 2.2% (4) people had knowledge on other services. 47.22% (85) people thought that they got these services from MCH service center , 36.11% (65) from educational institute, 30.56% (55) from community clinic, 15.56% (28) from health workers, 16.11% (29) had no idea and 2.22% (4) from other services. In a similar study in Nepal they said that they know some married adolescents from their community who have visited health center for family planning services. Similar finding was derived in the study conducted in Sri Lanka where respondents were totally unaware about the youth health services provided through public health system. Lower ASRH service utilization rate in different parts of Nepal had also been noted in prior studies as well. According to health workers, normally married adolescents and sometime male adolescents visit health center for ASRH services, mostly for family planning services. Comparatively male adolescents were more likely to seek ASRH services than female. Conversely, in current study participants reported mostly married female adolescents from their community visit health center. However they agreed that family planning services are the most commonly used SRH services.[5] Other study in India found that although youth constitute a large proportion of the population, and although there are many national programs that aim to address the needs of the young, youth are, for the most part, unprepared to meet the needs of a globalizing world. Of concern is the compromised sexual and reproductive health situation of young people. Early and unsafe entry into sexual life and childbearing, exposure to the risk of unwanted pregnancy and infection, unmet need for contraception, unwanted and sometimes coercive sexual activity, and adverse reproductive health outcomes characterized the life of too many youth in India. Progress has been uneven, and gender gaps persist, with young women more likely than young men to experience adverse sexual and reproductive outcomes.[6]

Conclusion

This study has highlighted that although adolescents constitute a significant proportion of the Bangladeshi population, and although there are many national programs that aim to address the needs of the adolescents , they are, for the most part, unprepared to meet the needs of a globalizing world. Of concern is the compromised reproductive health situation of adolescent people. Early marriage, lack of knowledge

about reproductive health and unsafe entry into sexual life and childbearing, exposure to the risk of unwanted pregnancy and infection, unmet need for contraception, adverse social and cultural values and adverse reproductive health outcomes characterize the life of too many youth in Bangladesh.

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Death Review of Road Traffic Accidents at a Tertiary Level Medical College Hospital of Bangladesh

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Abstract

Introduction: *The huge number of injury and death due to road traffic accident (RTA) reveals the story of global crisis of road safety. About 1.25 million people die each year as a result of road traffic accident around the world. There has been an alarming rise in road traffic accidents in Bangladesh over the past few years and has become a national problem. Everyday around 8 persons die in road traffic accidents. Pedestrians are the most common victims of RTAs.*

Objective: *The main objective of this study was to overview the nature of the affected victims and pattern of injury in fatal road traffic accidents.*

Materials & Methods: *This was a cross sectional study. The data were collected from Department of Forensic Medicine of Rangpur Medical College from January, 2017 to December, 2018 during the period of autopsies the dead bodies who came with injuries due to accidents. A total 89 cases of death due to road traffic accidents were included in this study.*

Results: *Among 89 victims, 65 (73%) were male and 24 (27%) female. The commonest age group involved in accidents were 21-30 years (43.8%). Middle class groups of the victims were higher (49%) than others. Regarding the types of victims, pedestrians were the highest in number (52.8%). Among the cases 100% victims had multiple abrasions and bruises, lacerations were present in 78 (88%) victims and head injury in 51 (57%) victims.*

Conclusion: *Middle aged male, pedestrians are the main victims of Road Traffic Accidents. Quite high number of cases are the victims of instantly fatal head injuries. Further study is required to find out the risk factor for its prevention.*

Key words: *Road Traffic Accidents (RTA), Deaths.*

(MH Samorita Med Coll J 2019; 2(2): 52-55)

Introduction

Road traffic accident (RTA) causes largest number of injuries and fatalities worldwide by killing around 1.2 million people each year and injuring 50 million[1]. WHO studies show that road traffic accidents account for 2.5% of the total deaths. With the continuation of present trends, road traffic injuries are predicted to be the third leading contributor to the global burden of diseases, just behind clinical depression and heart disease by 2020[2]. Due to heavy casualties of human life on roads, in every country each year, extensive investigative research works have been done and are still in progress, on the possible preventive aspects. But, in practice the investigation of individual cases is far from satisfactory, rather often it is just perfunctory in nature and it is more so in countries like ours[3].

There has been an alarming rise in road traffic accidents in Bangladesh over the past few years and has become a national problem. Everyday around eight persons die in road traffic accidents.[4]

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World bank estimates, road traffic injuries cost 1-2% of the gross national product (GNP) of developing countries[5]. In developing countries pedestrians, passengers and cyclists comprise 90% cases of Road traffic injuries[6].

The rapid growth in population, motorization, urbanization; reckless driving, speeding, and lack of investment in road safety are some of the important causes of road traffic accident in Bangladesh. Though the Government and other non-government organizations have taken some precautionary measures, but the current road accidents and injury statistics revealed a deteriorating situation in Bangladesh

Materials and Methods:

This was a cross-sectional study including (all inclusive) 89 patients was carried out at Rangpur Medical College from January, 2017 to December, 2018 during autopsy. Various data were collected using a predesigned questionnaire including age group, sex, and socioeconomic status of victims, types of victims and pattern of injuries during accidents. An observational study design were used for population based surveys of 89 dead bodies to assess the prevalence of RTA during autopsy of RTA victims. Here the socioeconomic status of the victim has been classified according to their month end income.

Result

A total 89 RTA cases were autopsied in 2 years period, at the mortuary of Rangpur Medical College. Among 89 studied cases, 65 (73%) were male and 24 (27%) female (Figure 1).

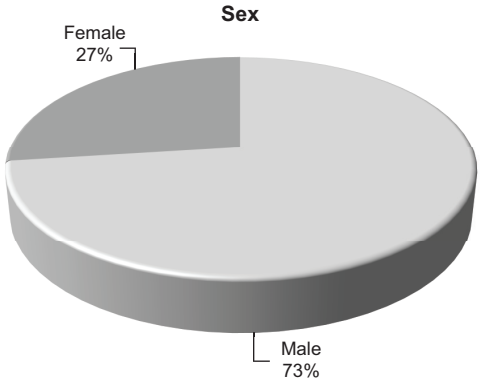

Fig. 1: *Sex distribution of studied RTA victim*

Table-1. Distribution of age among studied RTA victims (n=89)

Age of Victims	Number of Victims	Percentage
0 - 10 years	1	1.1%
11 - 20 years	14	15.8%
21 - 30 years	39	43.8%
31 - 40 years	16	17.9%
41 - 50 years	11	12.4%
51 - 60 years	5	5.6%
61 - 70 years	3	3.4%
Total	89	100%

Table-1 Shows the commonest age group involved in accidents were 21-30 years 39 (43.8%).

Table-2. Socio-economic status of studied victims due to RTA (n = 89)

Socio-economic status	Number of Victims	Percentage
Lower	31	35%
Middle	44	49%
Higher	14	16%
Total	89	100%

Table-2 Shows highest percentage of deaths due to RTA were in middle class groups (49%).

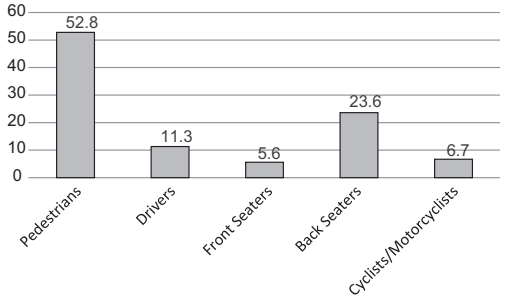

Fig. 2: *Distribution of type of studied Victims of RTA (n=89)*

Fig. 2 shows that highest percentage of deaths due to RTA were pedestrians (52.8%).

Table-3. Distribution of Pattern of injuries of studied victims of RTA (n = 89)

Pattern of injuries	Frequency	Percentage
Multiple Abrasions	89	100
Multiple Bruises	89	100
Lacerations	78	88
Fracture of Long Bones	28	31
Head Injuries	51	57
Chest Injuries	8	9
Intraabdominal Injuries	6	7
Pelvic Fractures	4	4

Some victims had multiple type of injuries (Multiple response)

Table 3 shows that all the victims (100%) had multiple abrasions and bruises

Discussion

Road traffic accident has now become a great social concern in Bangladesh and the situation is deteriorating. It has now been recognized as one of the significant diseases of industrialized societies and are an increasing public health economic issue in developing countries. According to world report on traffic injury prevention- 2004, road traffic accidents was ranked as the 6th place (was the 9th in 1990) of a major cause of death worldwide, will rise to become the 3rd leading cause of DALYs (Disability Adjusted Life Years); the 2nd leading cause of DALYs lost for low and middle income countries[7]. Accident rates in developing countries are often 10-70 times higher than that in developed countries. Though the traffic accident situation is slowly improved in the industrialized societies (e.g. Australia, USA, UK etc.), most developing countries face a worsening situation[8].

The study results show that majority of the deceased were male (73%). It is due to greater male exposure on urban streets and similar higher incidence of traffic accidents among males has been found by many other researches [9-15]. The maximum (43.8%) victims were within the age of 21-30 years as they had to face RTAs for their daily works such as school, college, office, business and other activities which is similar to the results of Rahman et al[9]. The findings coincide with earlier studies which showed road traffic injuries in developing countries affect the productive (working) age group (15-44 years) and children[10-15].

The study also showed that the pedestrians are the most common victims (52.8%) in our country whereas in India 53 mega cities including Delhi accounted for 16.1% of the death of pedestrians[16] and in accordance of pedestrian Traffic Fatalities by State 2019 Preliminary Data in recent years the number of pedestrians' fatalities in the United States has grown sharply. During the 10 year period from 2009 to 2018 the number of pedestrians fatalities increased by 53% (from 4,108 death in 2009 to 6,283 deaths in 2018). These may be due to lack of knowledge of traffic rules, visual defect of victims and poor road condition, wrong signaling and reckless driving by driver.

Considering the injury pattern, 100% victims of this study had multiple abrasions and bruises all over their body. Lacerations were present in (78, 88%) cases followed by head injury (51, 57%), fracture of long bone (28, 31%), chest injury (8, 9%) and intra-abdominal injury (6, 7%). These are the common patterns of injury found in RTA victims.

Hit and run indicates the drivers don't care about traffic rules or punishments and they drive vehicles at over speed than permissible limit. The law enforcing agencies are also somehow reluctant to take the culprits into books. Maximum people fall on ground due to faulty roads and potholes, open manhole cover, which shows lack of maintenance of footpaths.[17] In absence of walkway people come on main roads and fell victim of RTAs. Absence of foot over bridge at required places, use of mobile phone and remaining inattentive while walking through roads, face to face collision with motor bikes on footpath are also very common cause of RTAs now a days in Dhaka city. Bikers use footpath to short cut their way, during heavy traffic jam, which is a new emerging problem in Dhaka city now a days.[18]

Asian Development Bank conducted study concluded that speeding of vehicles dramatically increases crash risk and crash severity. It has been shown that an increase of 1 kph in mean traffic speed results in a 3% increase in the incidence of injury crashes and a 4-5% increase in fatal crashes.[19] According to European transport society, failure to use seatbelts dramatically increases crash severity. Seatbelt use reduces crash death risk by 40-65%, moderate and severe injuries by 43-65% and all injuries by 40-50%. The study carried out by Servadei F showed similar relevant findings and recommended that Bicycle helmet use reduces head injury risk from 63-88%.[20]

Conclusion

Community clinic can be installed beside road to reduce the casualty of victims. More scientific research on road traffic injury are needed in future.

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Knowledge and Practices Pattern Towards Good Glycaemic Control among Patient with Diabetes in a Tertiary Care Hospital

Akter N

Abstract

Introduction: *Type 2 diabetes mellitus (T2DM) has become a global epidemic with significant disability and premature death. The primary aim of management of DM is to delay the macro and microvascular complications by achieving optimal glycaemic control. Health literacy is an integral part of the diabetes management.*

Objective: *This study was conducted to evaluate knowledge and practices pattern towards good glycaemic control among patient with diabetes in a tertiary care hospital.*

Materials & Methods: *This cross-sectional study was carried out among 624 type 2 diabetes patients attending the outpatient department of MARKS medical college & hospital in Dhaka, Bangladesh during the period of April 2018 to March 2019. Questionnaire was used in this study to collect data on participants' knowledge and practice pattern related to good glycaemic control. The first part of the questionnaire covered the respondent's demographic and clinical information. The Statistical Package for Social Sciences version 16 was used to analyze the data in this study.*

Results: *Out of 624 of total participants, 65.4% were female. The mean (±SD) age was 47.17 ±9.26 years. 18.3 % had studied up to graduate level and around 11% had no education. Most of the female (48.4 %) were housewife and most of the male (16.5%) were service holder. Most of the study population (72.0%) was from urban area. Around 70 % of study subjects got health education on diabetes. The most (32.2%) common source of the health education on diabetes was hospital based diabetes center. A good percentage of subjects had knowledge about optimal target of fasting blood glucose (67.9%), post prandial glucose (54.2%), and symptoms of hypoglycemia (52.4%). But only 29.0% had knowledge about optimal HbA1C and 39.8% had knowledge about complication of diabetes. Only 26.1% had their own glucometer. Among the participants 37.7% of the subjects checked their blood sugar regularly. A large majority (79.6%) did follow the diet chart and do regular exercise (69.7%). More than 80% of the subjects took anti-diabetic medication regularly. There was significant association between knowledge and practicing pattern towards good glycaemic control and having diabetes education among subjects.*

Conclusion: *This study shows that the levels of knowledge and practicing pattern are significantly better, with the majority (70.4%) having education about diabetes. Even though, there is still some room for improvement.*

Key words: *Good Glycaemic Control, Knowledge, Practices Pattern, Type 2 Diabetes*

(MH Samorita Med Coll J 2019; 2(2): 56-63)

Introduction

Diabetes is a common chronic illness in almost all countries [1]. Throughout the last twenty years, the incidence of diabetes has been raised intensively in many parts of the world [2]. It is estimated that there are nearly 352 million diabetes patients globally [3]. In Asia, the rise in prevalence of type 2 diabetes (T2DM) is even more distressing with increased occurrence among young adults [3]. Among Asian regions, South Asia is developing as the epicenter of this escalating epidemic, reflecting rapid transitions in demography, unhealthy diet and lifestyle patterns [4]. People living in the South East Asia are also at higher risk for developing DM at relatively younger

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age and at a lower body mass index than other ethnic groups [5]. As a result, there has been a dramatic rise in the number of patients with DM in South East Asia including Bangladesh, which in turn places urgent demands on health care systems in these countries, most of which are ill-prepared for such demands. The International Diabetes Federation (IDF) estimated[3] 8.4 million people with diabetes in Bangladesh and 4.7 million people with undetected diabetes. This number is estimated to double by 2045[3].

Lifestyle and environmental factors are the main causes of the extreme increase in the incidence of type 2 diabetes [6]. This rapidly-rising prevalence among developing countries is recognized to be the effects of urbanization [7, 8]. Problems associated with DM can be minimized by early diagnosis and proper management [9]. The primary aim of management of DM is to delay the macro and microvascular complications by achieving optimal glycaemic control [9]. This involves lifestyle modification, including regular exercise, healthy diet and weight loss, and drug therapy. Therefore, health literacy is an integral part of the diabetes management. Patients with good knowledge on diabetes and its complications seek proper treatment and care, and take charge of their health [10]. There is strong evidence that individuals who are educated and diligent with their diabetes self-care achieve better and durable diabetic control [11, 12].

Knowledge plays a vital role in any future disease development and its early prevention and detection. Positive knowledge, attitude and practice are important for DM patients. In Bangladesh there have been few clinical based studies on knowledge about diabetes among non diabetic and diabetic patients [13, 14]. There is a need to investigate more about knowledge levels and practices pattern towards diabetes among participants living with diabetes to aid in future development of programs and techniques for effective health education. This study was conducted to evaluate knowledge and practices pattern towards good glycaemic control among patient with diabetes in a tertiary care hospital in Bangladesh.

Materials and Methods

This cross-sectional study was carried out among 624 type 2 diabetes patients attending the outpatient department of MARKS medical college & hospital in Dhaka, Bangladesh during the period of April 2018 to March 2019. Subjects were selected from type 2 diabetes patients and diagnosed with diabetes more than one year. Upon screening, patients were given an information sheet which explained the purpose of the study, participation was voluntary and they were able to refuse participation in or withdraw from the study. Only the patients who met the inclusion criteria and signed consent form were recruited to participate in this study. Questionnaire used in this study to collect data on participants' knowledge and practices pattern related to good glycaemic control. Face validity of the questionnaire was ensured independently by two experts dealing with diabetic patients. The first part of the questionnaire covered the respondent's demographic and clinical information which included: age, sex, residence, education, occupation, history of hypertension, smoking history, and biochemical parameter of glycaemic status.

Anthropometric measurements of height and weight were measured by a reliable height scale and weighing scale, respectively[15]. BMI (weight in kilograms/square of height in meters (kg/m^2) was calculated. BMI: weight in kilograms/square of height in meters (kg/m^2) was categorized as underweight ($\leq$18.5 kg/m^2), normal (BMI: 18.5 - 25 kg/m^2), overweight (BMI: 25 – <30 kg/m^2) and obese (BMI: $\geq$30 - <40 kg/m^2), morbid obese (BMI: $\geq$40 kg/m^2)[16]. Hypertension was defined as a systolic blood pressure $\geq$140 mmHg and/or dias-tolic blood pressure $\geq$ 90 mmHg, or in case of use of anti-hypertensive medications[17]. Blood pressure was measured by a manual sphygmomanometer in standard conditions (measured 2 times after a 5-min rest between each measurement). WC was measured in a horizontal plane, midway between the inferior margin of the ribs and the superior border of the iliac crest using a reliable measuring inch tape[18]. Glycaemic parameters (Fasting Blood Glucose, Post Prandial Blood Glucose and HbA1C) were collected from most recent clinical records.

Knowledge towards good glycaemic control was measured using five main questions [optimal target of fasting blood glucose (FBG), post prandial blood glucose (PPBG) and HbA1C; knowledge about symptoms of hypoglycemia and complication of diabetes]. And good practicing pattern was

measured using five questions (Own glucometer, self monitoring of blood glucose, regular exercise, follow dietary plan and regular intake of medication). Responses to above questions were assessed with categorical responses "Yes" or "No".

Statistical analysis

Data were analyzed with Statistical Package for Social Science (SPSS) software version 16. The means and standard deviations were used to describe continuous data. For categorical data, frequencies and percentages were estimated. Among the basic characteristics of the study subjects, the continuous variables were compared with each other using the ANOVA test. Categorical variables were compared with each other using the chi-square test. P value <0.05 was considered as significant.

Results

Baseline Characteristics

Out of 624 of total participants, 65.4% (408) were female and 34.6 % (216) were male. The mean (±SD) age of the study subjects was 47.17 ± 9.26 years (male vs. female: 49.19 ± 9.55 vs. 45.73 ± 8.77); [p< 0.001] (Table 1).

The mean height (meter) and weight (kg) were higher in male subjects than female; [p<0.001]. Average BMI (kg/m^2) was 25.12 ± 3.56 in male subjects and 26.53 ± 3.90 (Mean ±SD) in female subjects; [p<0.001]. And average Waist Circumference (Mean ±SD) was 86.87 ± 5.56 in male and 86.87 ± 6.90 (cm) in female subjects; [p=0.99] (Table 2). According to BMI categories, most of the subjects (39.1%) were obese; [p=0.009] (Figure 1).

Most of the participants (72.0%) were from urban area; [p=0.29]. 18.3% of the patients had studied up to graduate level and around 11% had no institutional education; [p<0.001]. Most of the female (48.4 %) were housewife whereas most of the male (16.5%) were service holder; [p<0.001]. A total 8.0% of the subjects were smoker; [p<0.001]. 36.2% of them were hypertensive (male vs. female: 12.0% vs. 24.2%); [p=0.57]. The average duration of diabetes was 4.67 ± 3.75 (±SD) years; [p=0.30] (Table 1).

Table 1. Socio-demographic and baseline characteristics of the study participants (n = 624)

Variables		Male(N=216)	Female (N=408)	Total (N=624)	p value
Age	(Mean ±SD)	49.90 ± 9.55	45.73 ± 8.77	47.17 ± 9.26	<0.001
Sex	N (%)	216 (34.6)	408 (65.4)	624 (100.0)	
Level of Education[N (%)]	Illiterate	16 (2.6)	52 (8.3)	68 (10.9)	<0.001
	Primary	46 (7.4)	186 (29.8)	232 (37.2)	
	Secondary	77 (12.3)	133 (21.3)	210 (33.7)	
	Graduate	77 (12.3)	37 (5.9)	114 (18.3)	
Employment Status[N (%)]	Housewife	0 (0.0)	302 (48.4)	302 (48.4)	<0.001
	Service Holder	103 (16.5)	62 (9.9)	165 (26.4)	
	Businessman	76 (12.2)	0 (0.0)	76 (12.2)	
	Others (Retired, Student Etc.)	37 (5.9)	44 (7.1)	81 (13.0)	
Residence[N (%)]	Urban	161 (25.8)	288 (46.2)	449 (72.0)	0.296
	Rural	55 (8.8)	120 (19.2)	175 (28.0)	
H/O HTN	N (%)	75 (12.0)	151(24.2)	226 (36.2)	0.572
Duration of DM	(Mean ±SD)	4.46 ± 3.80	4.78 ± 3.73	4.67 ± 3.75	0.306
Smoker	N (%)	45 (7.2)	5(0.8)	50 (8.0)	<0.001

HTN: Hypertension; DM: Diabetes Mellitus, P value <0.05 is significant.

Table 2. Anthropometric characteristics of the study subjects (n= 624)

Variables	Male(Mean ± SD)	Female(Mean ± SD)	Total(Mean ± SD)	p value
Height (meter)	1.62 ± 0.07	152.87 ± 0.07	1.56 ± 0.08	<0.001
Weight (kg)	65.95 ± 1.02	62.0 ± 9.39	63.37 ± 9.88	<0.001
BMI (kg/ m^2)	25.12 ± 3.56	26.53 ± 3.90	26.05 ± 3.84	<0.001
WC (cm)	86.87 ± 5.56	86.87 ± 6.90	86.87 ± 6.46	0.990

BMI: Body Mass Index; WC: Waist Circumference. P value <0.05 is significant.

Clinical and Biochemical Parameter

The Mean (±SD) Blood Pressure of the study subjects were SBP: 123.38 ± 16.10 vs. 124.24 ± 56.03(mm of Hg); [p=0.82] and DBP: 81.65 ± 7.46 vs. 80.79 ± 8.34(mm of Hg); [p=0.25] in male and female subjects respectively.

Average (±SD) fasting blood sugar was 8.79 ± 5.40 (±SD) and post prandial blood sugar (mmol/L) was 12.72 ± 4.58(mmol/L). There was no significant difference of mean HbA1C in between male and female subjects (male vs. female: 7.70 ± 0.99 vs. 7.62 ± 0.93); [p=0.35] (Table 3).

Knowledge Assessment

Knowledge towards good glycaemic control was measured using five main questions. Three were related to optimal target of good glycaemic control i.e. fasting blood glucose, post prandial blood glucose and HbA1C. Rest of the twos was knowledge about symptoms of hypoglycemia and complication of diabetes. Around 70 % of study subjects got health education on diabetes (male vs. female: 26.9 % vs. 43.4 %); [p=0.003]. Most (32.2%) common source of the health education on diabetes was hospital based diabetes center; [p=0.02] (Figure 2).

A good percentage of subjects had knowledge about optimal target of fasting blood glucose (67.9%), post prandial glucose (54.2%), and symptoms of hypoglycemia (52.4%). But only 29.0% had knowledge about optimal HbA1C and 39.8% had knowledge about complication of diabetes (Table 4).

Practices Assessment

Good practicing pattern was measured using questions on having glucometer, self monitoring of blood glucose, regular exercise, follow dietary plan and regular intake of medication. 37.7% of the subjects checked their blood sugar level regularly; [p=0.007]. Only 26.1% have their own glucometer; [p=0.14]. A large majority (79.6%) does follow the diet chart and do regular physical exercise (69.7%); [p=0.01]. More than 80% take anti-diabetic medication regularly (male vs. female: 28.2% vs. 54.3%); [p=0.61] (Table 5).

There was significant association between knowledge and practicing pattern towards good glycaemic control and having diabetes education among subjects [p<0.05]; (Table 6 & 7).

Table 3. Clinical and Biochemical Parameters of the Subjects (n=624)

Variables	Male(Mean ± SD)	Female(Mean ± SD)	Total(Mean ± SD)	p value
SBP (mm of Hg)	123.38 ± 16.10	124.24 ± 56.03	123.94 ± 46.20	0.825
DBP(mm of Hg)	81.65 ± 7.46	80.79 ± 8.34	81.09 ± 8.05	0.254
FBG (mmol/L)	8.49 ± 2.50	8.95 ± 6.42	8.79 ± 5.40	0.309
PPBG (mmol/L)	12.59 ± 3.66	12.79 ± 5.00	12.72 ± 4.58	0.603
HbA1C (%)	7.70 ± 0.99	7.62 ± 0.93	7.65 ± 0.95	0.351

SBP: Systolic Blood Pressure; DBP: Diastolic Blood Pressure; FBS: Fasting Blood glucose; PPBG: Post Prandial Blood Glucose; P value <0.05 is significant.

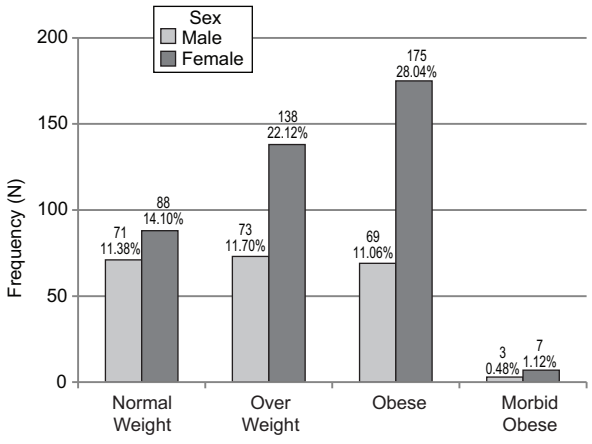

Fig. 1: *Distribution of the subjects according to different categories of BMI (n=624)*
BMI: Body Mass Index

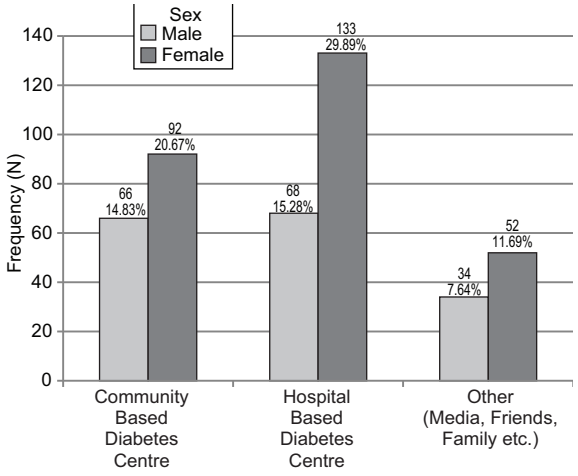

Fig. 2: *Different sources of education about diabetes among subjects (n=624)*

Table 4. Participant's knowledge regarding good glycaemic control (n=624)

Knowledge about	Male		Female		p value
	Yes N (%)	No N (%)	Yes N (%)	No N (%)	
Target FBG	159 (25.5)	57 (9.1)	265 (42.5)	143 (22.9)	0.027
Target PPBG	132 (21.2)	84 (13.5)	206 (33.0)	202 (32.4)	0.011
Symptoms of Hypoglycemia	118 (18.9)	98 (15.7)	209 (33.5)	199 (31.9)	0.418
Target HbA1C	74 (11.9)	142 (22.8)	107 (17.1)	301 (48.2)	0.036
Complication of DM	89 (14.3)	127 (20.4)	159 (43.4)	249 (22.0)	0.014

FBS: Fasting Blood glucose; PPBG: Post Prandial Blood Glucose; DM: diabetes Mellitus; Pearson chi-square test was done; P value <0.05 is significant.

Table 5. Participant's practices pattern to achieve good glycaemic control (n=624)

Practices Pattern	Male		Female		p value
	Yes [N (%)]	No [N (%)]	Yes [N (%)]	No [N (%)]	
Education about Diabetes	168 (26.9)	48 (7.7)	271 (43.4)	137 (22.0)	0.003
Own Glucometer	64 (10.3)	152 (24.4)	99 (15.9)	303 (49.5)	0.147
SMBG	97 (15.5)	116 (19.1)	138 (22.1)	270 (43.3)	0.007
Follow Diet Chart	184 (29.5)	32 (5.1)	313 (50.2)	95 (15.2)	0.012
Do regular Exercise	164 (26.3)	52 (8.3)	271(43.4)	137 (22.0)	0.014
Take regularanti-diabetic medication	176 (28.2)	40 (6.4)	339 (54.3)	69 (11.1)	0.615

SMBG: Self Monitoring of Blood Glucose; Pearson chi-square test was done; P value <0.05 is significant.

Table 6. Association between knowledge regarding good glycaemic control and having education on diabetes (n=624)

Knowledgeabout		Education on Diabetes		p value
		Yes [N (%)]	No [N (%)]	
Target FBG	Yes	382 (61.2)	42 (6.7)	<0.001
	No	57 (9.1)	143 (22.9)	
Target PPBG	Yes	321 (51.4)	17 (2.7)	<0.001
	No	118 (18.9)	168 (26.9)	
Target HbA1C	Yes	179 (28.7)	2 (0.3)	<0.001
	No	260 (41.7)	183 (29.3)	
Symptoms of Hypoglycemia	Yes	309 (49.5)	18 (2.9)	<0.001
	No	130 (20.8)	167 (26.8)	
Complication of DM	Yes	189 (30.3)	59 (9.5)	0.009
	No	250 (40.1)	126 (20.2)	

FBS: Fasting Blood glucose; PPBG: Post Prandial Blood Glucose; DM: diabetes Mellitus; Pearson chi-square test was done; P value <0.05 is significant.

Table 7. Association between practices pattern and having education on diabetes among subjects (n=624).

Practices Pattern		Education on Diabetes		p value
		Yes [N (%)]	No [N (%)]	
Own Glucometer	Yes	156 (25.0)	7 (1.1)	<0.001
	No	263 (45.4)	178 (28.5)	
SMBG	Yes	228 (36.5)	7 (1.1)	<0.001
	No	211 (33.8)	178 (28.5)	
Follow diet chart	Yes	413 (66.2)	84 (13.5)	<0.001
	No	26 (4.2)	101 (16.2)	
Do regular exercise	Yes	366 (58.7)	69 (11.1)	<0.001
	No	73 (11.7)	116 (18.6)	
Take regularanti-diabetic medication	Yes	376 (60.3)	139 (22.3)	0.002
	No	63 (10.1)	46 (7.4)	

SMBG: Self Monitoring of Blood Glucose; Pearson chi-square test was done; P value <0.05 is significant.

Discussion

This cross-sectional study has been done to evaluate knowledge and practices pattern regarding diabetes among Bangladeshi type 2 diabetic patients in a tertiary care hospital. Poor knowledge regarding diabetes has been reported in several studies from the developing countries [19-20].While, another study in England as a developed country, also stated poor knowledge of diabetes among ethnic groups [21]. Unlike most studies from developing countries which reported poor knowledge of diabetes among general public[22], this study shows that a good percentage of subjects had knowledge about optimal good glycaemic target of fasting and post prandial blood sugar. But a poor percentage (29.0%) had knowledge about optimal HbA1C.

Knowledge is an essential requirement for better compliance with medical therapy [23]. Lack of knowledge of diabetes care among patients can have adverse effects on their capabilities to control diabetes. It is also well established that patient contributions are very important for better management of diabetes [24]. Throughout knowledge assessment, we recognized that most patients didn't know about diabetes and its consequences .The differences in the results of studies may be due to the differences in educational level of the diabetic patients and accessibility of information and diabetes education.

It has been reported in a study from Pakistan that appropriate educational program can have effect on the attitude of the people about diabetes [25]. Practices pattern regarding dietary modification and regular physical activity was acceptable in the majority in this study. But over 60% study population did not check blood sugar in frequent basis as because majority (73.9%) do not have glucometer; this low frequency of blood sugar self-monitoring may have effect on blood sugar control. This survey also discovered that most of the diabetic patients (82.5%) take regular anti-diabetic medication to control their diabetes.

Another study showed that diabetes education can improve glycemic control and quality of life of diabetic patients [26]. In this study, around 70 % of study subjects got health education on diabetes. The most common source of health education was hospital based diabetes center. There was significant association between knowledge and practicing pattern towards good glycaemic control and having diabetes education among subjects.

Conclusion

This study exhibits that the levels of knowledge and practicing pattern are significantly better in some extent, as majority of the subjects have education about diabetes. Even though, there is still some room

for improvement as thirty percent do not do regular exercise, more than sixty percent did not check blood sugar and one fifth of study participants do not take regular anti diabetic medication. Therefore, this study can be used as a baseline for the national diabetes awareness campaigns and modify the approach towards education on diabetes giving more emphasis on attitude change.

Limitations of the study

This was a single center study. Participants for this study were recruited from the outpatient department of medicine in a tertiary care hospital during working hour except holiday. Therefore, the results may not be truly representative of general public.

Declaration of conflicting interests

There are no organizations or communities with conflict of interest or coveting interests related to the study.

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Review Article

Late Preterm Babies: Their Morbidities and Outcome

Khan S[1], Chharra S[2]

Abstract

An expert panel has suggested that the "late preterm" infants who are born between 34 (0/7) through 36 (6/7) weeks of gestation are immature and need close monitoring, evaluation, and follow-up. There is now growing evidence that late-preterm infants are at higher risk for postnatal complications when compared to term infants, such as transient tachypnea of newborn (TTN), respiratory distress syndrome (RDS), persistent pulmonary hypertension (PPHN), respiratory failure, temperature instability, jaundice, feeding difficulties and prolonged neonatal intensive care unit (NICU) stay. They also have increased mortality and long-term neurodevelopmental consequences secondary to their prematurity. The purpose of this article is to review the definition of infants born at late preterm and to describe their higher risk of morbidity and mortality than term infants due to their physiological and metabolic immaturity. The article also generates knowledge and awareness about the risks associated late preterm babies which will help clinicians to manage their complications and anticipate the needs of such children during infancy and childhood.

Search strategy

We searched for reviews, original articles, special articles, guidelines and workshop related to late preterm newborns and their outcome; those published in different journals until 2015, e.g. Pediatrics, Jama, Clinics in perinatology, Seminars in perinatology, The Journal of Maternal-Fetal & Neonatal Medicine etc. After going through all, we only selected those which were more recent and evidence-based studies to prepare the manuscript

Key words: late preterm, near-term, risk factors, morbidity, outcome, readmission.

(MH Samorita Med Coll J 2019; 2(2): 64-69)

Introduction

Late preterm neonates, defined as babies born at 34 (0/7)to 36 (6/7) weeks of gestational age are frequently considered as functionally mature; therefore, little attention is given towards them.[1] Recent evidence is emerging that late preterm infants make up a majority of preterm births as a result of routine surveillance and medical interventions during pregnancy period.[2,3] Pregnancies considered to be at risk of stillbirth, including those with intrauterine growth restriction, fetal anomalies, and intrapartum asphyxia are often identified earlier to be delivered at 34 to36 weeks of gestation.[3] These neonates have been called near-term in the past and were expected by obstetricians and pediatricians to have outcomes similar to term neonates. On the contrary, they are more prone to various morbidities in comparison to term neonates such as; respiratory distress, temperature instability, hypoglycemia, kernicterus, apnea, seizures, and feeding problems in early neonatal period as well as long-term developmental consequences.[1,2,4] They even have higher rates of mortality than term infants.[1,4] Their problems are related to their prematurity and delayed transition; therefore, they are premature physiologically, anatomically, and metabolically.[4] However, the magnitude of these morbidities and their public health impact have not been well studied.

The National Institute of Child Health and Human Development of the National Institutes of Health invited a multidisciplinary team of experts to convey

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a workshop in July 2005 concerning the late preterm babies titled "Optimizing Care and Outcome of the Near-Term Pregnancy and the Near-Term Newborn Infant". The participants discussed the definition terminology, epidemiology, etiology, biology of maturation, clinical care, surveillance and public health aspects of late-preterm infants. The workshop conducted by experts suggested to consider designating preterm infants born between the gestational ages of 34 weeks and 0/7days through 36 weeks and 6/7 days (239th–259th day) as "late preterm" and discontinue the use of the phrase "near term."[1] They also noted that physicians, nurses, and other health care personnel should acknowledge even apparently healthy late-preterm infants are to be considered physiologically immature and should be diligently evaluated, monitored and followed.[1] Prior to this workshop, these neonates were frequently described as "near term" and thought to have similar outcome as term neonates. "Near term" also implied that these infants were physiologically mature near enough to term infants and could be managed similarly.[5] However, the panel underscored the value of a uniform definition and suggested additional research on this topic.

Epidemiology:

The worldwide estimation of preterm birth is about 15 million each year where the majority of them (60%) are born in south Asia and sub-Saharan Africa.[6] Preterm infants comprise 12.8% of all live births worldwide, out of which 75% are late preterm.[6] Emerging data suggests that late preterm births are becoming increasingly common throughout the world. Between 1990 and 2005, the percentage of all United States live births designated as late preterm increased 25% which make up the fastest-growing proportion of the preterm births in high income countries.[7] Correspondingly, Davidoff et al[2] described the trends in preterm births in the United States from 1992 and 2002 and found that two thirds of the decade's increase in preterm births were caused by an increase in the rate of late preterm births.

Although there have been numerous studies that described the trends in preterm births in Bangladesh, there were no large-scale prospective studies that explored the etiology of late-preterm births or assessed their impact on the health care system. In a rural population of Bangladesh it was estimated that majority of preterm births (69.6%) were born between 34 and 36 weeks of gestation which was 13.5% of all live births.[8] In another large cohort study it was found that more than half of all preterm births (55.1%) were late preterm.[9] Additional research is essential to describe the epidemiology of late preterm births indifferent ethnic and sociodemographic subgroups.

Etiology:

There are multiple factors that have contributed to raised late preterm births in recent times. Changes in maternal demographics, advanced maternal age, multiple gestation, and pre-existing conditions such as, obesity, diabetes, or hypertension also play a key role in the increase in late preterm births.[10,11] Factors such as, placentation problems, antenatal hemorrhage, preterm labor, pre-eclampsia and premature rupture of membranes may prompt a delivery and therefore be categorized as a late preterm births.[11] Several fetal issues also contribute to late preterm birth, including fetal growth restriction, fetal anomalies and amniotic fluid abnormalities (oligohydramnios or polyhydramnios).[12] Because of the risk for stillbirth at later gestational ages in these conditions, delivery is often induced at 36 to 37 weeks' of gestation.

Researchers described several reasons for this growing trend of late preterm births, including increases in inductions of labor, cesarean sections, multiple pregnancies, assisted reproductive technology and obstetric intervention.[10] Induction of labor has increased more than double since 1990 (from 9.5% to 22.5%) with a significant raise in late preterm births.[13] It is estimated that 38% of twin births are delivered at late preterm as they have higher obstetric-related complications such as gestational diabetes, preeclampsia, hemorrhage and fetal growth problems.[15,14] Furthermore, there is also an increasing demand for cesarean sections at maternal request, encouraged by the perceived safety of surgical procedures, desire for smaller families, and the fear of complications and risks associated with vaginal birth.[16]

Morbidities associated with late preterm births:

Immature physiological function, undeveloped anatomical structures and biochemical deficiencies in late preterm infants predispose to both short and

long-term complications like, respiratory distress, apnea, hypothermia, hypoglycemia, hyperbilirubinemia, poor feeding, developmental and behavioral difficulties and poor social outcomes.[1,17] In addition to prematurity, maternal diabetes and genetic factors also affect lung development at birth. Several studies have consistently shown that late preterm infants are at higher risk for respiratory morbidities like; TTN (transient tachypnea of newborn), RDS (respiratory distress syndrome), PPHN (persistent pulmonary hypertension) and respiratory failure than term infants.[18-20]

Metabolic function:

Late preterm infants are twice as likely as term infants to have significantly elevated bilirubin values.[17] Nearly 25% late preterm infants require phototherapy for jaundice due to delayed maturation and lower concentrations of uridine-diphosphate-glucoronyl-transferase that is required for conjugation of bilirubin. [21,22] Slow or impaired gastrointestinal motility in infants with poor feeding skills may disrupt the enterohepatic circulation of bilirubin which also contributes to hyperbilirubinaemia.[22] Therefore, they are at high risk for developing elevated serum bilirubin level which can generate kernicterus.[21,22].

Late preterm infants have immature hepatic enzymes for gluconeogenesis and glycogenolysis; they also have decreased hepatic glycogen stores which normally accumulate in the third trimester. Moreover, their hormonal regulation and insulin secretion by pancreatic β cells is immature resulting in unregulated insulin secretion during hypoglycemia.[1] These conditions along with cold stress, sepsis or feeding difficulty puts them at increased risk for hypoglycemia.[23] In a study, hypoglycemia (blood glucose <40 mg/dl) was found three times more common in late preterm infants than term infants. Among them 27% of late preterm babies required intravenous fluids whereas only 5% of term babies received intravenous infusion.[19] Considering their status, late preterm infants should be managed differently from term infants

Infants born at term can generate heat by breaking down brown adipose tissue with the help of hormones, which peak at term gestation.[24] Late preterm infants have decreased brown adipose tissue stores and the hormones necessary for their breakdown to generate heat; they are also at risk for heat loss because of increased body surface area to body weight ratio.[24,25] Thermoregulation in infants born at late preterm is compromised by immature hypothalamic function, larger body surface area to weight ratio, low storage amount of fat and low concentrations of hormones (such as norepinephrine, prolactin, triiodothyronine and cortisol) responsible for brown fat metabolism.[17,26] Studies have shown that late preterm infants were more likely to present with temperature instability than term babies leading to poor respiratory transition and exacerbation of hypoglycemia demanding hospital admission.[19,20]

Respiratory function:

Prematurity by itself is responsible for significant morbidity, but when coupled with cesarean section where there is absence of labor, it can exaggerate the incidence of respiratory distress. Late preterm infants who are born during the transition from the terminal sac period to the alveolar period of lung development, have functional deficiency in surfactant and management of lung water.[17,27] Moreover, the cardiopulmonary transition that is necessary immediately after birth for postnatal adaptation may be delayed in late preterm infants, which is reflected in higher rates of retained fetal lung liquid syndrome and respiratory distress syndrome than in term counterparts.[27]

Studies have shown that the epithelium sodium channels (ENaC) plays an important role in the transepithelial movement of fetal lung fluid.[27,28] The peak expression of the ENaC channels occurs at term gestation; late preterm infants are therefore born with lower expression of ENaC, which reduces their ability to clear lung fluid after birth. Disruption or delay in this process results in transient pulmonary edema that characterizes TTN.[28] Furthermore, infants born before labor starts do not benefit from the adrenergic and steroid hormones released during labor, thus they lack in sufficient surfactant production and release. As a result, RDS may be seen in late preterm infants delivered by caesarian section.[17,18] RDS and TTN in the late preterm infants can often prolong their hospital stay requiring the use of mechanical ventilation, but of even greater concern are the small number of these infants who develop PPHN and severe hypoxic respiratory failure requiring ECMO.[29]

Developmental immaturity of central respiratory drive is suspected to contribute to apnea in late preterm infants. The incidence of apnea in late preterm infants is 4% to 7%, which is significantly greater than term infants.[17] Predisposition to apnea occurs because of an increased susceptibility to hypoxic respiratory depression, diminished central chemo-sensitivity to carbon dioxide, increased sensitivity to respiratory depression with laryngeal stimulation, immature pulmonary irritant receptors, and decreased upper airway dilator muscletone.[17,19]

Gastrointestinal function:

Late-preterm infants adapt quickly to enteral feedings, including the digestion and absorption of lactose, proteins, and lipids.[30,31] However, their feeding behavior and gastro-intestinal function remain immature. Poor co-ordination of the suck-swallow-breathe sequence, gastrointestinal dysmotility and decreased motor tone often results in feeding difficulty in these newborns leading to prolong hospital stay.[17,19] Furthermore, a delay in successful breastfeeding and difficulty in coordination between suck and swallow may result in poor weight gain, dehydration and exacerbation of physiological jaundice during early neonatal period.[32]

Brain and developmental function:

In late preterm babies the weight of the brain is only 60% than the term 40-week gestation brain.[33] Their undeveloped brain surface shows significantly fewer gyri and sulci; their myelination and interneuron connectivity remain incomplete as well.[33,34] During the final 4 weeks of gestation, dramatic growth is seen in the gyri, sulci, synapses, dendrites, axons, oligodendrocytes, astrocytes, and microglia.[35] Any interruption or insult during this stage of development can lead to poor long-term outcomes.[33]

Development is a continuous process that progresses throughout the fetal and childhood life. Few studies have evaluated the long-term neurodevelopmental status of late preterm infants that described significantly more developmental, behavioral, educational and social disabilities than healthy term infants.[36-38] Children born at late preterm were also found to have higher rates of medical morbidities later in life such as; cerebral palsy, intellectual disability, blindness or decreased vision, hearing loss, epilepsy, schizophrenia, attention deficit hyperactivity disorder, and disorders of psychological development, behavior, and emotion than those born at term.[38-40] These studies show that late preterm birth has a significant impact on the growing brain, but further prospective studies are needed.

Outcome of late preterm births:

Late preterm infants are susceptible to experience illness because of their relative physiological immaturity. Even in high-income countries with strong health care systems, morbidity and mortality of late-preterm babies are high. A study by Shapiro-Mendoza *etal*.[41] showed late preterm infants were 20, 10, and 5 times more likely to experience morbidity than term babies at 34, 35, and 36 weeks respectively. Several studies have demonstrated that most of them required admission in NICU or hospitalized for observation following delivery.[19,32] Neonatal morbidities that necessitates the use of mechanical ventilation include respiratory distress, retained fetal lung liquid syndrome, intraventricular hemorrhage (grade 1 or 2), bacterial sepsis and apnea; among other morbidities hypoglycemia, temperature instability, hyperbilirubinemia and feeding problems are common.[19,32,42,43] Although jaundice and infection were responsible for hospital readmission of late preterm babies in most studies; McLaurin[42] found that respiratory syncytial virus bronchiolitis, esophageal reflux and unspecified bronchiolitis during neonatal period were also common.

Young and colleagues[44] have shown in a large population-based study, that mortality and the relative risk of death increases with each decreasing week of gestational age. Data from the US and Canadian cohort studies[45,46] showed more than fivefold increase in neonatal mortality in late preterm infants when compared with term infants and described the relative risks of early neonatal deaths as 5.2 (95% CI 4.8–5.6) and 7.9 (95% CI 6.7–9.2), respectively. The studies also found that late preterm babies contributed to 6.3 and 9.0% of early neonatal deaths (in the first 7 days) and 13.1 and 15.9% to neonatal deaths (in the first 28 days). Similarly, a study by Tomashek and colleagues[47] revealed three times higher rate of infant mortality among late preterm infants compared with term infants especially in the first week after birth attributed to pregnancy related complications and birth defects.

The causes of death beyond neonatal period reported for these infants included sudden infant death syndrome, congenital malformations and unintentional injuries.

A couple of studies from the rural population of Bangladesh showed about 40% of death in preterm neonates occurred in late preterm babies due to the higher incidence of birth between 34 and 36 weeks of gestation than very or moderately preterm births.[8,9] Most of the deaths in this age group were caused due to the same reasons for that of term babies (infection and perinatal asphyxia). Similar results were found in studies on gestation-specific neonatal mortality from low-income countries.[48,49] The Regional Estimates for Southeast Asia, estimated that preterm birth complications attributed to 36.5% of total neonatal deaths in 2010.[50] Because of their high incidence of birth, late preterm newborns have a significant contribution to high mortality burden among preterm babies. Even small reductions in neonatal mortality in this group could have significant impact on decreasing the number of overall preterm deaths.

Conclusion

A large number of babies are born between 34-36 weeks of gestational age. Considering the recently described complications and outcomes of late preterm neonates the pediatricians need to recognize that such infants are physiologically immature even when they appear clinically stable. The risks associated with late preterm birth suggest the need for strategies to manage complications during hospitalization. They need to be diligently evaluated, monitored and followed up and there should be awareness among obstetricians to extend late preterm pregnancies as far as possible to avoid non-emergency interventions.

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Case Report

Uncommon Presentation of Cystic Fibrosis in a Child: A Case Report

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Abstract:

Introduction: *Cystic fibrosis is an autosomal recessive disease caused by mutations of CFTR gene located on the long arm of chromosome 7. There is great heterogeneity in the clinical manifestation of the disease. Some patients may have all the classical manifestations from infancy while others have much milder or even atypical disease manifestations.* ***Case Report:*** *A boy of seven years presented with altered bowel habit and recurrent abdominal pain for 4 years. He also complained of not growing well and poor appetite for same duration. Other than stunting (According to WHO Classification) and mild ascites, all examinations revealed normal findings. Initially he was under evaluation for abdominal Tuberculosis but later on sweat chloride test was done in suspicion of Cystic fibrosis which was positive.* ***Conclusion:*** *The burden of cystic fibrosis in Bangladesh is not known. It is possible that many cases with mild to moderate clinical features are misdiagnosed. Due to various form of presentation sweat chloride test should be considered even in patients with symptoms suggestive of abdominal tuberculosis so that diagnosis of cystic fibrosis is not missed.*

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Introduction

Cystic fibrosis (CF) is a life limiting chronic progressive genetic disease which presents with protein and fat malabsorption, chronic respiratory infection or liver disease. It was first described by Anderson in 1938 and was considered as lethal disease of infancy.[1] In 1989, the discovery of the Cystic fibrosis transmembrane conductance regulator (CFTR) gene demonstrated the basic defect to be in a cAMP-regulated chloride channel which affects the secretory and absorptive capability of the epithelium.[2,3] Since then, more than 1500 variation in mutations of CFTR gene have been identified. CFTR is expressed in many epithelial cells, including sweat duct, airway, pancreatic duct, intestine, biliary tree, and vas deferens, which can give rise to elevated sweat chloride concentration, bronchiectasis, pancreatic insufficiency, intestinal obstruction, biliary cirrhosis, and congenital bilateral absence of the vas deferens.[4] It is very important to distinguish disease pattern in individual patient to diagnose CF at proper time and initiate treatment for a better outcome.

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Case Report

Fahad a 7-year-old student of class 1 was admitted to the Paediatric Ward of MHSHMC on 27th January 2019 with the complaints of recurrent attack of abdominal pain, altered bowel habit and not growing well for 4 years. During admission he had history of diarrhea associated with vomiting and low-grade fever for 7 days and suffered from severe abdominal pain around the umbilicus for last 4 days, which was, colicky in nature for last 4 days. He also had history of weight loss and poor appetite during this period. He had no history of distention of abdomen or passage of blood in stool. He also did not have any history of cough or difficult breathing or contact with TB patient. His bladder habit was normal. He suffered from viral hepatitis 6 months back and acute

gastroenteritis at the age of 6 months. He required hospitalization during both of his illnesses. He was delivered at term by NVD at home, he cried immediately after birth and passed meconium soon after birth. Developmentally he was age appropriate and he was immunized as per EPI schedule. He was on regular family diet. He is the second issue of non-consanguineous parents and belongs to lower middle-class family. There was no significant family history. On examination he was ill looking, moderately pale with no dehydration and BCG mark absent. On anthropometry his Weight was 15.4 kg, Height was 111 cm, indicating that he was severely underweight (Weight for age Z score -3.8 SD), moderately stunted (Height for age Z score -2.2 SD) and severely wasted (Weight for height Z score -3.6 SD). His BMI was 12.5 kg/m^2(-3SD). His pulse was 100/min, respiratory rate 22 breath/min, temperature 99.6^{0}F and his blood pressure was 90/60 mm Hg. Abdominal examination revealed mild tenderness over epigastric and left lumber region, positive shifting dullness, absent fluid trill, absent organomegaly and normal bowel sound. Other systemic examinations revealed no abnormal finding. He was provisionally diagnosed as a case of Abdominal Tuberculosis with Failure to Thrive (FTT). Investigation showed Hb-12.2 gm/dl, ESR-15 mm, Total WBC- 11,000/cu mm, Neutrophil-43%, Lymphocyte- 46%, Monocyte- 7%, Eosinophil- 4%. Comment on PBF-mild dimorphic anemia with thrombocytosis. Stool R/M/E-showed Hookworm ova (+) and MT was negative (2mm). On Plain X ray abdomen colon was found loaded with gas and fecal matter. Barium follow-through X-ray revealed filling defect in small and large bowel loops. On suspicion of cystic fibrosis Sweat Chloride Test was sent and the result was Positive for CF, 80 mmol/L (Normal <60mmol/L). Among other tests, Ultrasonography of whole abdomen revealed normal study, Blood and

Fig. 1: *Fahad before treatment (a) and after treatment (b)*

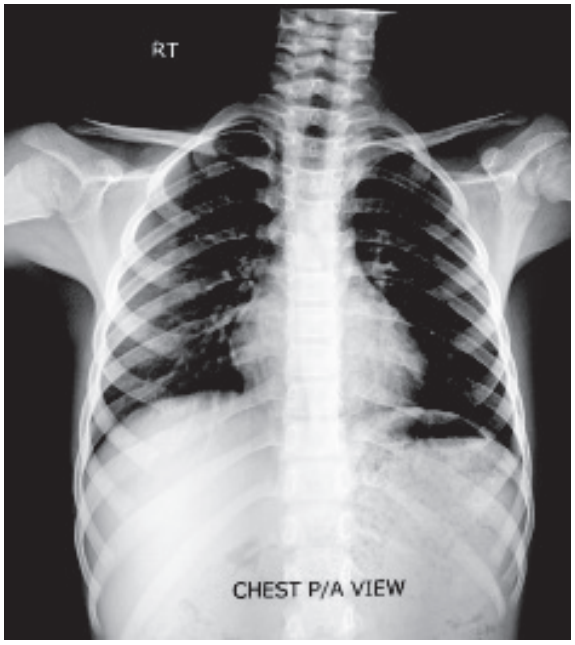

Fig.2: *Chest X-ray showing normal finding*

Fig. 3: *Plain X-ray abdomen showing gas and fecal matter*

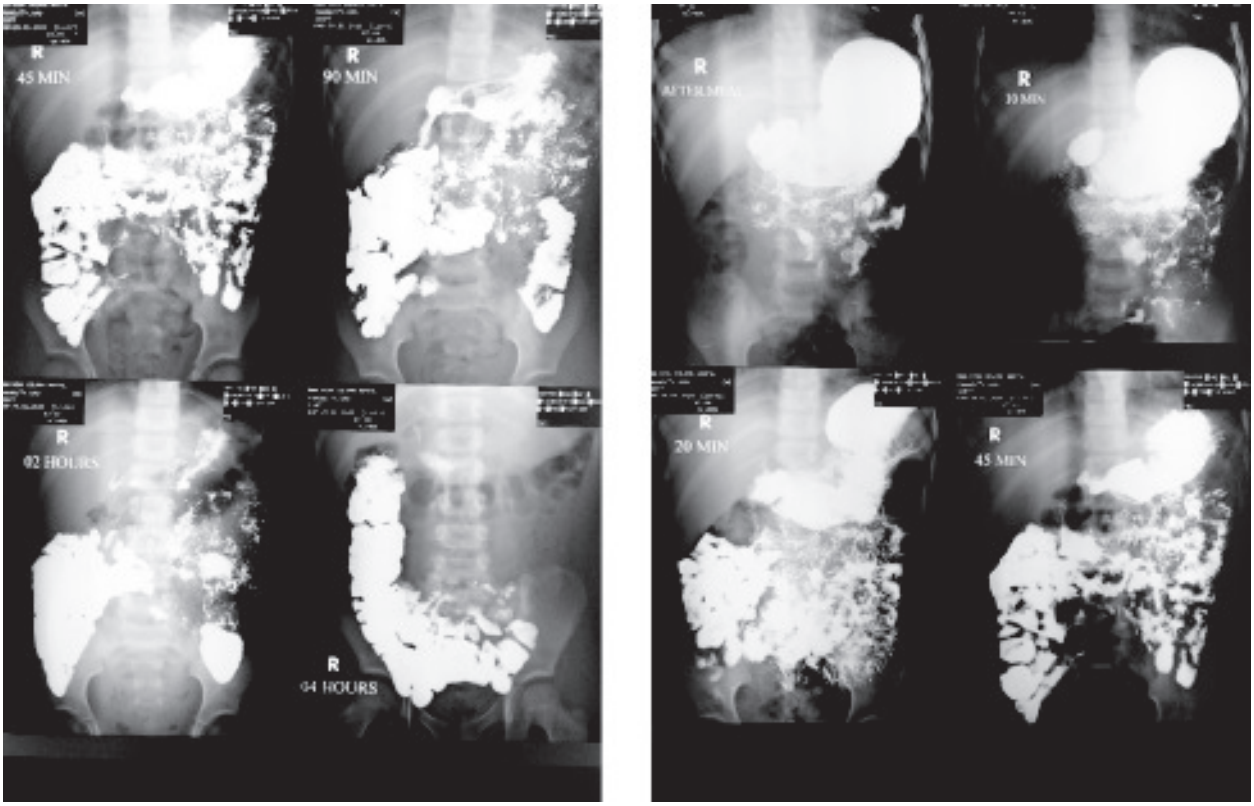

Fig. 4: *Barium follow-through X-ray showing filling defect in small and large bowel loops*

Stool C/S showed no growth. Finally, he was diagnosed as a case of Cystic Fibrosis with Helminthiasis with Failure to Thrive (FTT) and treatment was initiated with digestive enzyme supplements (Pancreatin). Other treatments included Paracetamol, Anti-spasmodic, Mebendazole, Multivitamins and Folic acid. He showed clinical improvement and was discharged after 7 days of admission with advice for regular follow up and genetic counselling. After the first month of treatment, Fahad experienced improved appetite and general wellbeing. He did not have abdominal pain and his bowel habit was regular and normal. At 3 months follow up he weighed 17 kg and was 114.5 cm in stature (Weight for height Z score -2.7 SD) which shows improvement in growth than before. Routine investigations revealed normal findings and repeat Sweat Chloride test was-63mmol/L.

Discussion

Cystic fibrosis (CF) is the most common genetic disease affecting Caucasians with an incidence of 1 in 2500 with carrier frequency of 1 in 25 which is uncommon among Asians (1 in 31,000 live births) and African Americans (1 in 15,000 live births).[5] CF is far more common in Bangladesh than it was previously believed with a presumed incidence of 1 in 30,000.[6,7] There have been more than 100 confirmed cases in the past 20 years which shows the mean age of diagnosis at 7.5 years.[6] As delayed diagnosis is more common in our country most children are severely malnourished at presentation. Similarly, this reported patient has delayed presentation at 7 years of age and was severely wasted and moderately stunted at diagnosis which is consistent with other studies. [6,7] Around 85% of patients with CF presents with features of exocrine pancreatic insufficiency such as steatorrhea, features of fat-soluble vitamin deficiency and poor nutrition which is consistent with the present case. [8] Patients with enough pancreatic enzyme may present at an older age and have milder lung disease with normal or borderline sweat electrolyte values, some may develop severe progressive liver disease which consists of obstructive biliary cirrhosis, portal hypertension and cholelithiasis.[8,9] The pulmonary consequences such as bronchiectasis, massive hemoptysis, emphysema or bronchial cyst, are the most serious complications of CF, which are not present in the reported case. Inspissated bowel

secretions is responsible for meconium ileus in newborns with CF followed by recurrent constipation and distal intestinal obstruction syndrome in older patients.[10] The reported patient also complained of recurrent constipation with some features of distal intestinal obstruction caused by impacted fecal matter.

The CF Foundation Consensus statement proposed a diagnostic criterion which includes the presence of one or more characteristic clinical features or a history of CF in a sibling or a positive newborn screening test (NBS) and laboratory evidence of CFTR dysfunction evidenced by elevated sweat chloride concentrations or identification of two CFTR mutations.[4] The currently accepted reference ranges in Sweat chloride level for the diagnosis of CF in children are chloride <39 mmol/L negative/normal; 40-59 mmol/L borderline (could be CF); and >60 mmol/L positive for CF. A second positive test is required to confirm the diagnosis.[11,12] In the mid-sixties Matthews and coworkers[13] established three pillars of treatment for CF: nutritional repletion, relief of airway obstruction, and antibiotic therapy of the lung infection. Although there are changes in treatment approach the strategy still remains the same. Treatment with enteric coated pancreatic enzyme supplements along with fat soluble vitamins A, D, E and K may prevent malnutrition to some extent in these patients.[14,15] Though there is no cure for CF, the survival rate has dramatically improved over the last two decades owing to newer therapies.

In the present case, the boy developed abdominal symptoms and growth failure for 4 years consistent with pancreatic insufficiency but could not be diagnosed yet. On the other hand, he had no respiratory complaints which are commonly seen in patients with CF. His sweat chloride tests were positive on two successive tests, which confirmed his diagnosis though CFTR mutation could not be identified. Furthermore, the reported case responded after the Pancreatin therapy and showed clinical improvement during follow up visits. Even without typical symptoms and signs, cystic fibrosis should be suspected if the milder symptoms are persistent or recurrent following conventional therapy for those.

Conclusion

Cystic fibrosis is mainly a clinical diagnosis where genetic testing is not always required. There are children who do not present with the full spectrum of clinical features or has single organ involvement and are frequently misdiagnosed. Patients with milder symptoms or atypical disease should always be ruled out for CF as they have excellent prognosis for survival if treated accordingly.

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Abstract From Current Literatures

(MH Samorita Med Coll J 2019; 2(2): 74-77)

FREQUENCY OF DENGUE INFECTION IN FEBRILE PATIENTS ATTENDED DHAKA MEDICAL COLLEGE HOSPITAL DURING JANUARY TO DECEMBER, 2018

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Keywords: Dengue Fever, Dengue NS1 antigen

Introduction: Dengue is a major public health concern in our country. The alarming thing is that the seasonal trend of dengue infection is changing with time in Bangladesh due to climate change and unplanned urbanization. Our study was conducted to determine the frequency of dengue virus infection among the febrile patients in 2018 at Dhaka Medical College Hospital (DMCH) and to observe the seasonal trend.

Materials and Methods: The study was carried out on 899 febrile patients attended in DMCH from January to December, 2018. Whole blood samples were collected and sera were tested for dengue NS1 antigen and anti-dengue IgM antibodies using commercial test kits (NS1 by OMC Healthcare (Pvt.) Ltd & IgM antibody by Omega Diagnostics Ltd.), respectively. All negative dengue cases were tested for anti Chikungunya antibody to exclude chikungunya.

Results: Of the total 899 febrile patients, 350(38.93%) were positive for Dengue infection. Out of them 264(75.43%) were positive for NS1, 82 (23.43%) were positive for IgM and 4 (1.14%) were positive for dengue NS1antigen + anti dengue IgM antibody. More than 50% patients belonged to age group 15-29 years. Males were predominant. More than 60% cases were detected in the post monsoon season.

Conclusion: Highest dengue cases were detected in this year in comparison to the previous year's probably due to re-emergence of DEN-3 serotype. Due to pattern of climate change, seasonal trend of dengue infection was not maintained. Moreover, unplanned urbanization and poor solid waste management have worsened the situation more.

EPIDEMIOLOGY OF TYPHOID AND PARATYPHOID: IMPLICATIONS FOR VACCINE POLICY

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Background: Typhoid and paratyphoid remain the most common bloodstream infections in many resource-poor settings. The World Health Organization recommends typhoid conjugate vaccines for country-specific introduction, but questions regarding typhoid and paratyphoid epidemiology persist, especially regarding their severity in young children.

Methods: We conducted enteric fever surveillance in Bangladesh from 2004 through 2016 in the inpatient departments of 2 pediatric hospitals and the outpatient departments of 1 pediatric hospital and 1 private consultation clinic. Blood cultures were conducted at the discretion of the treating physicians; cases of culture-confirmed typhoid/paratyphoid were included. Hospitalizations and durations of hospitalizations were used as proxies for severity in children <12 years old.

Results: We identified 7072 typhoid and 1810 paratyphoid culture-confirmed cases. There was no increasing trend in the proportion of paratyphoid over the 13 years. The median age in the typhoid cases was 60 months, and 15% of the cases occurred in children <24 months old. The median age of the paratyphoid cases was significantly higher, at 90 months (P < .001); 9.4% were in children <24 months

old. The proportion of children (<12 years old) hospitalized with typhoid and paratyphoid (32% and 21%, respectively) decreased with age; there was no significant difference in durations of hospitalizations between age groups. However, children with typhoid were hospitalized for longer than those with paratyphoid.

Conclusions: Typhoid and paratyphoid fever are common in Dhaka, including among children under 2 years old, who have equivalent disease severity as older children. Early immunization with typhoid conjugate vaccines could avert substantial morbidity, but broader efforts are required to reduce the paratyphoid burden.

Keywords: typhoid, paratyphoid, severity, vaccine policy, epidemiology

TRENDS AND FUTURE OF MATERNAL AND CHILD HEALTH IN BANGLADESH

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Background: Maternal and child health is one of the most important issues in a developing country like Bangladesh. This study evaluates the trends in maternal and child health indicators of Bangladesh.

Methods: The secondary data used in this study was extracted from the World Bank Dataset. The selected indicators were maternal mortality ratio (MMR), under-five children mortality and neonatal mortality rate, and prevalence of stunting and wasting of under-five children. Trend analysis technique and ARIMA forecasting models were used in this study to find currents trend and predict the future of selected indicators.

Results: This study revealed clear evidence that neonatal, under-five child and maternal mortality in Bangladesh had been gradually decreasing during the last two and half decades. The decreasing rate of these indicators suggests that it should be possible to achieve the national target of sustainable development goals (SDGs) of Bangladesh by 2021. While, it was observed that the prevalence of underweight, stunting and wasting among under-five children was still high, these indicators have been slowly decreasing over time. The decreasing rate of these indicators displayed that without guided measures, the Bangladesh government would not be able to achieve the target goal of child malnutrition by 2021 under SDG-2.2.

Conclusion: It is recommended that the government, as well as non-government health organizations (NGOs), and other policy makers should provide programs that are effective so that the national target goals can be achieved by the year 2030. Consequently, our findings should assist in the achievement of the national goals in Bangladesh regarding these health issues.

REPRODUCTIVE HEALTH COMMUNICATION BETWEEN MOTHER AND ADOLESCENT DAUGHTER IN BANGLADESH: A CROSS-SECTIONAL STUDY

Muhammad Zakaria, Junfang Xu, Farzana Karim & Feng Cheng

Reproductive Health ***volume 16****, Article number: 114 (2019*

Background: Parent-adolescent reproductive health (RH) communication is one of the potential sources of information for adolescents on the topic. Given that female adolescents in Bangladesh are faced with increasing RH-related risks, it is important to understand how parents communicate about RH to their adolescents from the adolescents' perspectives. Therefore, the aim of this study is to explore the status of mother-adolescent daughter communication on reproductive health in Bangladesh.

Methods: A cross-sectional study targeting female students was conducted in five high schools in Chittagong based on a self-administered questionnaire survey. A description method was used to describe the characteristics of mother-adolescent daughters' communication on RH including the frequency, type and the quantity of topics. Bivariate and multivariate logistic regression analyses were performed to explore the factors influencing mother-adolescent daughter communication.

Results: In the study, 1174 female students aged from 13 to 19 years old were included. The main source of knowledge on RH was from their mother (62%), and the mother was the person who

communicated first on RH with adolescent students. The topics of mother-daughter communication were mainly focused on menstruation issues (>80%). Multivariate logistic regressions showed that Hindu students, students with good RH knowledge, adolescents' mothers having good RH knowledge, mothers with high media use, good mother-daughter relationship, daughters' regular general communication with mothers, and students' perceiving comfort in RH communication with their mothers were reported as significant predictors for a good RH communication status. On the contrary, students having family members numbering more than four, whose primary source of reproductive health information was friends/classmates as well as media were less likely to have better RH communication with mothers.

Conclusions: The overall communication on reproductive health between adolescent daughters and their mothers was not good. This study suggests for conducting qualitative research investigating the socio-cultural context within which the RH communications happen. and how to address the obstacles that might hinder this communication.

EXPLORING THE SYSTEM CAPACITY TO MEET OCCUPATIONAL HEALTH AND SAFETY NEEDS: THE CASE OF THE READY-MADE GARMENT INDUSTRY IN BANGLADESH

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BMC Health Services Research ***volume 19****, Article number: 435 (2019)*

Background: Since the 2013 Rana Plaza incident in Bangladesh, the government of Bangladesh has been under pressure to improve health and safety conditions for workers in the ready-made garment industry. Its efforts have focused heavily on structural safety of the buildings but have largely ignored broader occupational health system issues. This qualitative study explores contextual factors and system challenges that create barriers for ensuring a healthy and safe workplace in the ready-made garment industry in Bangladesh.

Methods: Data were collected through key informant interviews (*n* =14) with government officials fromthe Department of Inspection for Factories and Establishments (DIFE), factory employers, factory doctors and representatives from the Bangladesh Garment Manufacturers and Exporters Association (BGMEA). A thematic analysis was conducted using Atlas-ti v 5.2.

Results: A thematic analysis suggests that the capacity of the DIFE to provide adequate occupational health services remains a problem. There is a shortage of both appropriately trained staff and equipment to monitor occupational health and safety in factories and to gather useful data for evidence-based decision-making. Another barrier to effective occupational health and safety of workers is the lack of cooperation by employers in recording data on workers' health and safety problems. Finally, government officials have limited resources and power to enforce compliance with regulations. Such deficiencies threaten the health and safety of this important, largely female, working population.

Conclusion: This case example focused on the valuable ready-made garment industry sector of Bangladesh's economy. It identifies the critical need for occupational health system strengthening. Specifically system capacity needs to be improved by both increasing human resources for in-factory hazards and health monitoring, regulatory inspection, enforcement, and improved training of government officials around monitoring and reporting.

EXERCISE INTERVENTION IN THE MANAGEMENT OF URINARY INCONTINENCE IN OLDER WOMEN IN VILLAGES IN BANGLADESH: A CLUSTER RANDOMISED TRIAL

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Show all authors

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Background: Group exercise-based programmes for urinary incontinence appear to be promising low-cost interventions for women in developing countries, but no evidence exists to support whether they could be implemented or effective in such populations. We aimed to evaluate whether a group intervention that comprised pelvic floor muscle training, mobility exercises, and bladder education

would be more effective than education alone, and report changes between villages (ie, clusters) rather than between individual participants.

Methods: In this cluster randomised trial, we recruited women from 16 pairs of villages in Bangladesh, with each pair comprising similar villages from the same sub-district. Women aged 60–75 years were interviewed to establish eligibility. Women were eligible if they had current urinary incontinence, and were excluded if they had a third degree or higher uterine prolapse, if they were unable to walk or stand without help, or if they had insufficient intellectual capacity to understand questions and follow instructions. The villages were randomly assigned within each pair to either exercise plus education or education-only intervention by use of a random number generator from a fixed seed. Women were excluded after consenting if they lived too far from the centre of the village. The exercise intervention was a physiotherapist-led group exercise class that was held twice weekly for 12 weeks, with home exercises between classes and to 24 weeks. Both groups received bladder-health education. Participants were followed up for 24 weeks. A 3-day continence record was collected at recruitment and every 4 weeks up until 24 weeks. This record involved the participant tying a knot in ribbons worn under the clothing each time they had an episode of urinary leakage. The primary outcome was change in number of knots (recorded leakage episodes) from recruitment to 24 weeks. Safety was assessed in all participants in the exercise intervention group. The trial is registered at ClinicalTrials.gov, number NCT02453100.

Findings: Between Aug 22, 2015, and July 2, 2018, of 3577 women aged 60–75 years identified, 1003 were eligible, of whom 625 consented to participate (n=335 exercise plus education villages, and n=290 in education-only villages). Of these consenting women, 46 were excluded (n=37 exercise plus education, n=9 education only) because they lived too far from the centre of the village. At week 24, 283 (95%) of 298 in the exercise plus education group and 274 (98%) of 281 in the education-only group completed a 3-day continence record. The estimate of change in number of leakage episodes between baseline and 24 weeks was "7·7 (95% CI "10·6 to "4·8) at the village level in an unadjusted model, and "6·64 (–7·95 to "5·33) in a random-effects model accounting for cluster randomisation. No adverse events were reported.

Interpretation: A structured group-exercise intervention has the potential to manage urinary incontinence in older women in communities largely outside the reach of pharmaceutical or surgical interventions.

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(MH Samorita Med Coll J 2019; 2(2): 78)

CME Presentations
(January- June 2019)

No.	Date	Department	Presenter	Topic
1.	10.01.2019	Psychiatry	Dr. Enayet Karim Professor & Head	Post- traumatic stress disorder
2.	24.01.2019	Anesthesiology	Dr.Md.Mahmud Hussain Asst. Professor	Peri-operative fluid management
3.	14.02.2019	Orthopedics	Dr. Shah Md. Samsul Hoque Asst. Professor	Evaluation and management of low back pain
4.	28.02.2019	Pathology	Dr. Mahtab Uddin Ahmed Associate Professor	Steps of tissue processing in histopathology laboratory
5.	14.03.2019	Anatomy	Dr.Farzana Akhoond Assistant Professor	Cell junctions
6.	28.03.2019	Forensic Medicine	3rd year MBBS Students	Management of poisoning cases
7.	11.04.2019	Microbiology	Dr Rokshana Akhter Asst. Professor	Nipah virus infection: A fatal re-emerging disease
8.	25.04.2019	Surgery	Dr.Ruksana Parvin Associate Professor	Minimally invasive surgery
9.	09.05.2019	Biochemistry	Dr. Md Tawfiqur Rahmaan Lecturer	Biochemical aspect of thyroid functions test
10.	23.05.2019	Physiology	1st year MBBS Students	Blood group and blood transfusion
11.	13.06.2019	Medicine	Dr. Jhumur Ghosh Assistant Professor	Fatty liver disease and peptic ulcer diseases
12.	27.06.2019	Gynecology	Dr.(Brig.Gen. Rtd) Hasina Sultana Professor & Head	Update of polycystic ovarian syndrome

Following student obtained honours in respective subject against her name

Name	Course	Type of Exam	Year of Exam	Exam. Roll No.	Subject
Umme Salma	MBBS	3rd professional	May, 2019	3079	Pharmacology