

BLOCK 1	GENDER BIAS	5
Unit 1	Bias in Medical Research and Education	7
Unit 2	Discriminatory practices in modern medicine and Nutrition	18
Unit 3	Health care and Non-Normative sexual identities	30
BLOCK 2	GENDER, HEALTH AND ILLNESS	41
Unit 4	Women Specific Illnesses	43
Unit 5	Immunisation & Vaccines	54
Unit 6	Sexually Transmitted Infections (STIs)	69
BLOCK 3	ISSUES IN REPRODUCTIVE HEALTH	83
Unit 7	Health issues in Adolescence	85
Unit 8	Assisted Reproductive Technology & Surrogacy	100
Unit 9	Menarche and Menopause	114
BLOCK 4	PERSPECTIVES ON MENTAL HEALTH	127
Unit 10	Mental Health and Gender Issues	129
Unit 11	History of Gender Specific Mental Health Disorders	143
Unit 12	Exclusion, Marginalization and Mental Health	157
BLOCK 5	GENDER AND DISABILITY	169
Unit 13	Introduction to Abilism and Disabilism	171
Unit 14	Disability and Sexuality	181
Unit 15	Disabled Body and Reproductive Processes	192

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PROGRAMME LEARNING OUTCOMES

In this programme, learners are expected to gain basic understanding about the dynamics and interrelations between gender and science enabling them to contextualize the discourse of science with a gender lens. All the three courses would examine the relevance of gender concepts in order to demystify scientific rationality. The programme aims at understanding the basic principles, dynamics, processes, problems, and issues of gender and science as an area of study.

Specific Learning Outcomes of the Programme include the following:

- Sensitizing learners about the need of providing a gendered understanding of science;
- Familiarizing the learners with basic understanding to critically analyse the interface between gender and science;
- Identifying innovative practices, policies and programmes for promoting gender-inclusive science in the field of study; and
- Enabling learners to find useful career prospects in the field of gender, science, technology and society.

COURSE INTRODUCTION

The course BGS - 004: Gendered Perspectives on Health is the last course of the Certificate Programme in Gender and Science. It comprises of six blocks covering themes such as: gender bias in medicine, nutrition and bio-medical texts, immunization and vaccines, reproductive technologies, women's reproductive health, non-normative identities and access to health care facilities, and gender, disability and mental health issues. This course has covered a wide spectrum of topics in the area of gender and health. The course is informative in nature and will enable the learners to know some of the basic concepts in an interdisciplinary area like gender and health.

Block 1

In the first unit of this course, you will be introduced to the culture, content and practice of medical science from a gender perspective. It will introduce you to the domain of medicine which has existing gender biases since the very beginning of modern medicine. In the second Unit, you will discuss the discriminatory practices that persist in modern medicine and nutrition. The third Unit discusses the concept of non-normative sexual identity in relation to health care services. It defines what is understood as non-normative sexual identities and introduces different categories which explain non-normative sexual identities.

Block 2

The Unit 4 will provide an overview of life cycle of women and related diseases and its impact on women's health. It further outlines the socio-economic and gender inequalities and their impact on the health of women. Unit 5 will focus on the significance of immunization and vaccines in relation

to transmission of disease. In this Unit, you will learn about the adverse events following immunization; the national immunization programme; and the importance of safe injection and bio-medical waste management system. In the last unit of this block, you will learn about the meaning of sexually transmitted diseases (STI); its epidemiology and signs and symptoms; concept of syndromic case management; occurrence of STI among special and vulnerable groups and the management of sexual violence.

Block 3

This block on Reproductive Health comprises of three units on themes related to adolescent health, reproductive technologies and menarche and menopause. In the first Unit, we will learn about concepts related to adolescent health, health issues in adolescent and gender difference, meeting health needs of adolescents and investment in development of adolescent health. The next Unit, you will learn about normal conception, infertility and its causes, Assisted Reproductive Technologies (ART); surrogacy and Indian Law with the help of a few case studies. The last Unit of this block defines menarche and menopause as different stages of the menstrual cycle in females and its impact on women's health.

Block 4

The Unit 10 attempts to bring about an understanding of the diverse concepts of mental health in a comprehensive manner. It aims to discuss the socio-cultural determinants of mental health with specific reference to gender as a critical determinant. Unit 11 maps out the gender differences that exist in mental health disorder with specific reference to prevalence, symptomatology, risk factors and influencing factors. The last Unit of this block discusses mental health issues from a gender perspective. It critically analyses the factors responsible for marginalising women's experiences while discussing mental health issues.

Block 5

In the first Unit of this block, we will introduce you to various concepts, perspectives, models and the social attitudes towards understanding ableism and disablism in relation to gender. The Unit begins with a discussion on the notions of ableism and disablism. The second Unit will reflect on the experience of disability in relation to gender, sexuality and society. This Unit will help you to understand the inter-section of disability and gender as an axis of social discrimination. The last Unit of this course is on Disabled Body and Reproductive Processes. In this Unit, you will learn about the "notion of devaluation of the disabled identity" and the lack of attention paid to the issues of reproductive processes, sexuality and family life in the disability discourse. The Unit will analyse the widely erro and held notion of disabled persons as asexual and disabled women as unfit mothers the empirical research works was conducted by disability scholars.



BLOCK 1
GENDER BIAS

UJiGNOU
THE PEOPLE'S
UNIVERSITY

UNIT 1 BIAS IN MEDICAL RESEARCH AND EDUCATION

Structure

- 1.0 Introduction
- 1.1 Learning Outcomes
- 1.2 Gender Bias in Medical Research
 - 1.2.1 Biased Clinical Trials
 - 1.2.2 Objectifying Through Surgery
 - 1.2.3 Contraceptive Research
- 1.3 Bias in Medical Education
- 1.4 Sex Education
- 1.5 Let us Sum up
- 1.6 Unit End Questions
- 1.7 References
- 1.8 Suggested Readings

1.0 INTRODUCTION

Let me begin this Unit by describing a small incident happened recently when I took my father to see a dentist. The dentist was a woman and when the treatment started my father felt uncomfortable and asked me to request the dentist's husband (who is also a dentist) to carry on the minor dental surgery. When I asked the reason he confided in my mother tongue that can a woman perform surgery and can we depend on her? I want to emphasize here that my father is a modern educated person and often updated his knowledge about many contemporary things and events in the world. But the cause of his stereotypical view about women represents a general stereotype which most of us held. We think that the hard science is for men only and medical procedure like surgery is a natural domain of men.

In this Unit you will be introduced to the culture, content and practice of medical science from a gender perspective. More precisely you will be exposed to a domain of medicine which has been traditionally suffering from gender bias since the very beginning of modern medicine. We have barely heard of any names of women pioneers in medical research and education. The contemporary picture is grim too. A 2019 Lancet study claims that women are disadvantaged in science, medicine and global health due to persisting gender bias in many forms. Many dimensions such as laboratory work, clinical research, publishing, and academic leadership are discussed in this Unit to present a broad idea about various sources of gender bias. The content, culture and pedagogy of medical education have also been discussed to examine issues such as objectification of body, sex-education, contraceptive research etc.

1.1 LEARNING OUTCOMES

After studying this Unit, you would be able to:

- Know the sources of gender bias in medical research and education;
- Explain the factors responsible for gender bias in various components of medical research such as clinical trials and contraceptive research;
- Analyse “objectification” as a major factor in creating gender bias in medicine; and
- Identify cases and explain the sources of gender bias in medical education.

1.2 GENDER BIAS IN MEDICAL RESEARCH

Medical research and higher education are dominantly a male domain. Due to various gendered assumption about knowledge acquisition and social practices women found it relatively inconvenient to pursue a career in medical research and higher education. Today most medical scientists and practitioners that students learn about during their training are males.

Research or knowledge production is generally seen as a value-neutral domain but contrary to our belief the history of modern science is marked with very deep-rooted gender bias. Gender bias can be understood as prejudiced action or thoughts based on the gender-based perception that women are not equal to men in rights and dignity¹. The representation of women in research is very discouraging. As UNESCO, 2019 report says that around 30% of all researchers in the world are women. More and more women are seen enrolled at graduate level in universities but a small fraction of them join research at PhD level. Making research a full-time career is possible for just a meager 30%². The bias against women is not just a matter of number but there are certain systemic biases against participation of women in various components of scientific research. There is systemic bias against women in the medical research too. The foremost issue which often comes to our mind is that medical research is based on a body which is predominantly male. Most research in laboratory as well as clinical trials is conducted with male bodies, either human beings or animals.

1.2.1 Bias in Clinical Trials

Today most clinical trials are being conducted on male bodies. Female body is considered only in the field of female reproductive research. There is a general perception that except reproductive functions, most other physiological functions are similar among men and women. Many studies (Rosser, 1994; Bird and Reiker 1999) have challenged this assumption and have argued that clinical research conducted on male bodies may not be suitable for application to female bodies. The oversimplified notion of human body not only ignores many crucial nuances of women’s body but also fails

¹ Definition by The European Institute of Gender Equality. Url: <https://eige.europa.eu/taxonomy/term/1155>

² <http://uis.unesco.org/sites/default/files/documents/fs55-women-in-science-2019-en.pdf>

to reveal the degree of similarity between men and women with respect to health and illness. This misplaced notion of body leads to the fact that today very less number of women participate in clinical trials. To conduct clinical trials in an easier way, to minimize expenditure, and to bypass the complexities associated with menstruation the funding agencies, research and development organizations and the scientific community often base their research on the above notion of body. Thus very poor participation of women in clinical trials is common in medical research today. Exclusion of women from clinical studies has severe repercussions, such as exposing them to ineffective drugs with unknown side effects.

The very process of recruiting women into clinical trials faces procedural, social and physiological challenges. Researchers and pharmaceutical companies often take an easier way by bypassing women due to the complexities linked to menstruation and try to oversimplify the entire process of medical research. This gender bias in recruiting participants (Soderstrom, 2001) in clinical trials is a major problem in assessing the efficacy of drugs today. Women may differ in efficacy and side effects of drugs trials but exclusion or low participation of women in clinical trials lead to inadequate assessment of safety and efficacy of drugs.

The above gender bias is rooted in perceived similarities between men and women in physiology and disease experience. However there are gender biases due to perceived differences between men and women which are not real. The most obvious example is the medical research based on perceived difference due to objectification of women as bodies or objects for satisfaction of sexual desire. A significant amount of research today is meant to enhance women's body as an object thereby strengthening the gender bias already existing in the domain of medical research.

1.2.2 Objectifying Through Surgery

Medical science considers human beings as bodies largely denying the subjective feelings and experiences. This is how subjectivity is minimized and rendered irrelevant in our striving for scientific and objective research. Objectification of women feeds as well as is fed by this conception of human beings in medical research. Objectification normalises human body (Foucault, 1978) and converts it into a machine. The motivation for objectivity through objectification is intricately linked to gender bias in medical research. To "look at the world objectively is to objectify it" (MacKinnon, 1987). Denying subjective feelings and experiences feed in to already existing gender bias in our society by strengthening the practice of identifying women with their bodies. Women in our society are identified and associated with their bodies and looks more than are men (Bartky, 1990; Bordo, 1993).

Objectification serves to highlight the difference in sex features of male and female body. Termed as self-objectification by many scholars this is based on the various ways in which human beings achieve a sense about themselves as sexual beings overpowering the identity as human being. They see themselves as sexual subjects, and as sexual objects by others. This thrust

towards objectification strengthens gender bias. Objectification occurs when a woman's body, body parts, or sexual functions are isolated from her whole and complex being and treated as objects simply to be looked at, coveted, or touched (Fredrikson and Roberts, 1997). Objectification of body tends to encourage those types of research which helps in presenting women's body as something to be consumed or used. Research on skin colour enhancement, nose repair, breast enhancement, labia repair etc. exemplify such research which both represents as well as encourages gender bias in medical research.

Medical Science has responded well to the pressure women feel to correct and enhance their bodies as well as appearance. Objectification by others as well as self-objectification propels medical research towards new innovative research and products. The pressure to succumb to the ideal "feminine body" leads towards research aiming to keep women's body of a certain size and shape. This "tyranny of slenderness" (Bartky, 1990) has led to large amount of funding in the medical research surrounding slimming techniques, dieting, exercises, and cosmetics. Plastic surgery involving rhinoplasty, liposuction, breast enhancement, etc is a major thrust in medical research today. A study on aesthetics plastic surgery conducted in the US reveals that there has been over 15.5 million cosmetic procedures performed in 2016 representing a 124% increase since the year 2000 (ASPS, 2016). Another study conducted in 2019 by International Society for Aesthetics Plastic Surgery reveals that the top five surgical procedures performed worldwide are breast augmentation, liposuction, eyelid surgery, abdominoplasty, and rhinoplasty. A whopping 86.5% of all surgical procedures were performed on women (ISAPS, 2019).

1.2.3 Contraceptive Research

Another very prominent domain of medical research which reflects as well as strengthens gender bias is contraceptive research. A mere glance at the reports published at the international level on contraceptive research can through ample light on the deep-seated gender bias in the issue of contraception in our society. The whole issue of contraception is considered as women's responsibility as reflected from the sentences used in many such reports.

Box 1.1: Trends in Contraceptive Use Worldwide 2015, UN Report

In 2015, 19 per cent of married or in-union women relied on female sterilization and 14 per cent used the IUD. Short-term methods are less common: 9 per cent of women used the pill in 2015, 8 per cent relied on male condoms and 5 per cent used injectables. Only 6 per cent of married or in-union women worldwide used rhythm or withdrawal.

Nowhere in the above sentence can we find "men", "men's role", "used by men" or "men's responsibility" etc. This is just one representative sentence. Sentences and phrases like this indicate the inherent gender bias in the research establishment worldwide.

Responsibilities and risks associated with sex have been largely borne by women in most human societies. Since the beginning of research and development on contraceptives most products and procedures are directed towards women. Contraceptive methods like oral hormonal pills, intra-uterine devices (IUD), sterilization, injectables, have received more funding than male-dependent contraceptives. A 2019 UN study reveals that female sterilization is the most common contraceptive used worldwide. An estimated 24% of all contraceptive users go for female sterilization method, 17% depend on intra-uterine devices, 16% use oral hormonal pills and 8% go for injectable contraceptives. All of these are female-dependent contraceptives. At the same time the male-dependent contraceptive methods such as male sterilization method account for only 2%, male condom uses is 21%, withdrawal 5%, and rhythm account for only 3% of all contraceptive users (UN,2019). This gives a clear picture of the existing gender bias in use of contraceptives.

The above statistics also indicates biasness at a deeper level. Most of the research and development on contraceptives focus on female-dependent methods in spite of evidences in support of feasibility of developing various male contraceptives. Male oral pills have been developed a decade after the female pill was developed. But it has not been taken up by pharmaceutical companies due to factors ranging from side effects to socio-cultural factors. There are side effects such as mood swing, lower sex-drive and weight gain in female pill users, but the similar side effects are considered risky for the healthy and active young men.

The funding organizations and pharmaceutical industries lack interest in encouraging male contraceptive research for several reasons. The foremost factor is lack of funding. The male contraceptive research is least funded and there is a gender bias in funding. There is a perception that the pharmaceutical companies may lose the already built consumer base of female contraceptives if they engage in promoting male contraceptives (Roth et al 2015). Moreover, there is gender bias in contraceptive research on assessment of the side effects by both genders. During the clinical trials of oral hormonal pills the side effects reported by young men are taken seriously and most often the male contraceptive research and development are stalled on the basis of these reported side effects. However, the similar side effects reported by women in the clinical trials of female contraceptive pills are sidelined and are underestimated (Kammen and Oudshoorn, 2002). Thus the voice of the participants is differentially responded according to their gender.

Whereas the perspectives of male contraceptive users have been emphasised and negotiated by authoritative spokespersons within the medical establishment, the incorporation of the interests and needs of female contraceptive users depended on women's health advocates (ibid).

There are many reported cases where successful trials for male contraceptives have been abruptly stalled or closed. The side effects experienced by men in the clinical trials have been cited as the reason.

Check Your Progress Exercise I

Note: I. Use this space given below to answer the question.

II. Compare your answer with the Course material of this Unit.

1. Define gender bias.

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2. Identify gender biases in contraceptive research.

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1.3 BIAS IN MEDICAL EDUCATION

There has been strong gender bias in the domain of medical education too. Though there is a growing trend of enrollment of female students in medical schools and colleges worldwide the incidences of gender discrimination and harassment is at higher rate than faced by female students enrolled in non-medical degrees (Brown, 2020 et al; Witte et al, 2006). Moreover, there is discouraging underrepresentation of women in faculty and leadership positions in medical colleges. More than the issue of numerical representation it is in the pedagogy of medical education that reflects as well as covertly encourages patriarchal mindset.

The most obvious source of gender bias in medical education is the normalization of male body as human body. Medical textbooks are still based on the male body as the norm and female as the exception. Teaching and clinical examination still consider male body as the norm as is evident from the classroom and practical training given to medical students. In the training the students are taught how to conduct clinical examination on the entire body, head, neck, abdomen, limbs etc. except breast and pelvis. The ignoring of these parts confirms to the male body norm in medical education. Textbook and curricula analysis reveals other sources of gender stereotypes too (Alexanderson et al, 1998).

Even the language used in medical education and the related environment has a strong role in upholding masculine attitude and there is a need to examine this covert practice of gender bias (Bleakley, 2013). Use of terminology in medical textbooks and teaching often reveals the underlying gender stereotypes. Choice of terms to depict similar medical conditions in men and women reflect the general biased attitude towards women in our society. The

following paragraph is an example of discriminatory naming which reflects as well as contributes to gender biasness.

A possible cause of infertility in both men and women is the presence of antibodies; however, the terms that have been selected by experts to describe this condition in men and women differ tremendously. In some men, the immune system effectively destroys the sperm as soon as they are produced. This condition is typically described using terms such as autoimmunity or sperm antibodies. It is also possible for a woman to develop antibodies against her partner's sperm in her cervical mucus. However, the term chosen to describe this condition makes no mention of antibodies or of the immune system; rather, the woman's cervical mucus is described as being hostile. (Bowker, 2001).

Gender is an essential determinant of health and illness. Women experience disease differently due to their social, economic and political status in the family as well as the society. However, the significance of gender is hardly recognized in the medical curricula. Medical education depends upon biomedical conception of human being. The reductionist conception of diseases and treatment limit medical knowledge only to human biology (Hoffman, 2000). The possible linkages of biology with social, economic and political factors are ignored in medical education. The biologically determined category of male and female determines the entire discourse of medical education thereby ignoring 'gender' as such (Krieger and Fee, 1994). This has very detrimental effect on women's health in general.

Patriarchy percolates into medical education when we categorise medical knowledge into various branches in a stereotypical way. 'Women's health means reproductive health' is a stereotypical description. Likewise, the branch of reproductive health need not include only female reproductive concerns. This kind of stereotypical categorization strengthens the tendency to identify womanhood with motherhood. Limiting women's health to the domain of reproduction and pregnancy strengthens the social construction of women as mothers and wives (Davis 1988; Nicolette and Jacobs 2000; Searle 1998).

Another crucial source of gender bias in medical education is the limited coverage or over-emphasis on certain disorders under certain branches of medicine. For example, over-emphasis of female reproductive concerns in the branch of reproductive health ignores certain relevant male reproductive issues. This leads to a dangerous gap in evidence-based knowledge on men's reproductive health problems. For instance, *there is lacking knowledge of psychosocial aspects of prostate cancer. Contrary to the research of breast cancer and female gender identity, there is little research into the effect of prostate cancer on male gender identity* (Verdonk et al; 2009).

1.4 SEX EDUCATION

Sex education is required for proper growth and development of individuals. All cultures have some way or other to provide sex education to their children. Most societies have either the family or the peer groups who

manages to deliver sex education. Tribal societies have institutionalized age-groups which shoulder this responsibility. However, these forms of traditional sex education seem inadequate and incomplete in many aspects. The ongoing fast techno-social changes which necessitate rethinking of the mores, norms and values attached to sexual behavior have to be incorporated in sex education today.

Sex education refers to “an age-appropriate, culturally relevant approach to teaching about sex and relationships by providing scientifically accurate, realistic, non-judgmental information” (UNESCO, 2009). Thus, it is not limited to teaching of only the sex- physiology and family planning procedures, but it is a holistic orientation to a healthy and fulfilling relationship. Changing gender roles warrants corresponding changes in fulfilling the risk and responsibilities associated with sex and reproduction. Thus, gender needs to be a crucial component in sex education.

Formal sex education is nearly absent in most countries today. Talking about sex is a taboo in most Asian countries. The available sex education programmes rarely adhere to the gender aspect of sexual behavior and relationships. Most often the pedagogy of sex education consciously or unconsciously encourages the stereotypical gender roles that discriminate against female youth. Sex educators attempt to avoid using gendered terms while educating but many of them operate in paternalistic framework dominant in our society (Myerson, 1986). Moreover, the educators often expect the female students not to be overt in asking questions or doubts related to sex and sexuality. Even today the sex educators expect that the girl students will be more responsible in safeguarding the morality than the boys. Even the text and material used in sex education are far from gender sensitive. For example, the way menstruation is taught creates a sense of embarrassment and disgust among both male and female students.

Check Your Progress Exercise II

Note: I. Use this space given below to answer the question.

II. Compare your answer with the Course material of this Unit.

1. Carry out a gender audit of any chosen medical textbook and identify the nature gender bias in textbooks.

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2. Define sex education.

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1.5 LET US SUM UP

Gender bias is persistent in medical research and education. Gender is an essential determinant in human health and illness but, unfortunately, it is ignored in medicine. There are various sources of gender bias in medical research and education. The most striking of these is the lack of recognition of gender in the biomedical discourses which is often called as gender blindness. The other sources of gender bias happen when the difference between the sexes is overemphasized where there is none. The third category of gender bias happens when the difference between the sexes is overlooked in disease prognosis, treatment and experience of illness. These sources have been discussed by examining various issues such as clinical trials, objectification and contraceptive research. Moreover, the important issues in medical education have been discussed in this unit to highlight sources of gender bias in medical curricula, clinical training, and sex education. The underrepresentation of women in academic leadership is highlighted to reveal the underlying sources of gender bias in medicine.

1.6 UNIT END QUESTIONS

1. Define gender bias. Examine its sources in medicine.
2. What are the implications of gender bias in Clinical trials?
3. What is objectification and how is it related to gender bias in medicine?
4. Why male contraceptives are still uncommon today?
5. Sex education needs to examine the gender bias in its pedagogy to be able to realize its goal. Comment

1.7 REFERENCES

Alexanderson, K., Wingren, G., & Rosdahl, I. (1998). Gender analyses of medical textbooks on dermatology, epidemiology, occupational medicine and public health. *Education for Health*, 11, 151–163.

American Society of Plastic Surgeons (2016). Plastic surgery statistic report. Retrieved from <https://www.plasticsurgery.org/documents/News/Statistics/2016/plastic-surgery-statistics-full-report-2016.pdf>.

Bird, C. E., & Rieker, P. P. (1999). Gender matters: An integrated model for understanding men's and women's health. *Social Science and Medicine*, 48, 745–755.

Brown MEL, Hunt GEG, Hughes F, et al., (2020) 'Too male, too pale, too stale': a qualitative exploration of student experiences of gender bias within medical education. *BMJ Open*; 10: e039092. doi:10.1136/bmjopen-2020-039092.

Bordo, Susan., (1993), *Unbearable Weight*, Berkeley, CA: University of California Press.

- Bartky, Sandra-Lee, (1990), *Femininity and Domination: Studies in the Phenomenology of Oppression*, New York: Routledge.
- Bowker, L. (2001). Terminology and gender sensitivity: A corpus-based study on the LSP of infertility. *Language in Society*, 30, 589–610
- Bleakley A. (2013), Gender matters in medical education. *Medical Education*; 47: 59–70.
- Davis, K. (1988). Power under the microscope. Toward a grounded theory of gender relations in medical encounters. *Dissertation*, Free University Amsterdam.
- Fredrickson, B. L., & Roberts, T. (1997). Objectification theory: Towards understanding women's lived experience and mental health risks. *Psychology of Women Quarterly*, 21, 173–206.
- Foucault, M. (1978). *The history of sexuality: An introduction*. New York: Vintage Books.
- Hoffman, E. (2000). Women's health and complexity science. *Academic Medicine*, 75, 1102–1106.
- ISAPS international survey on aesthetic/cosmetic procedures performed in 2019. *International Society of Aesthetic Plastic Surgery*. Retrieved from <https://www.isaps.org/wp-content/uploads/2020/12/Global-Survey-2019.pdf>
- Kammen, J V and Nelly Oudshoorn. (2002), Gender and risk assessment in contraceptive technologies; *Sociology of Health & Illness*; Vol. 24 No. 4; ISSN 0141–9889, pp. 436– 461.
- Krieger N & Fee E. (1994), Man-made medicine and women's health: the biopolitics of sex/gender and race/ethnicity. In. Fee E & Krieger N (eds). *Women's Health, Politics, And Power: Essays on Sex/Gender, Medicine, And Public Health*. New York: Baywood Publishing.
- MacKinnon, Catharine, (1987), *Feminism Unmodified*, Cambridge, Massachusetts, and London, England: Harvard University Press.
- Myerson, Marilyn. (1992). Sex equity and sexuality in college-level sex education. In S. Klein (Ed.), *Sex equity and sexuality in education*; Albany: State University of New York Press. pp. 149-167.
- Myerson, M., (1986), The Politics of Sexual Knowledge: Feminism and Sexology. *Frontiers: A Journal of Women Studies*, Vol. 9, No. 1., pp. 66-71; University of Nebraska Press Stable URL: <https://www.jstor.org/stable/3346134>
- Nicolette, J., & Jacobs, M. B. (2000). Integration of women's health into an internal medicine core curriculum for medical students. *Academic Medicine*, 75, 1061–1062.
- Phillips, S. P. (2005). Defining and measuring gender: A social determinant of health whose time has come. *International Journal for Equity in Health*, 4, 11. Retrieved August 16, 2005, from <http://www.equityhealthj.com/content/4/1/11>.

Phillips, S. P., & Ferguson, K. E. (1999). Do student's attitudes toward women change during medical school? *Canadian Medical Association Journal*, 160, 357–361

Phillips SP., (2002), Evaluating women's health and gender. *Am. J. Obstet. Gynecol.* 187, S22–S24 (2002).

Rogers, N., & Henrich, J. B. (2003). Teaching women's health into the 21st Century. *Women & Health*, 37, 11–21.

Rosser, S. V. (1994). *Women's health—Missing from U.S. medicine*. Bloomington/Indianapolis: Indiana University Press.

Roth, M. Y., Page, S. T., & Bremner, W. J. (2016). Male hormonal contraception: looking back and moving forward. *Andrology*, 4(1), 4–12. <https://doi.org/10.1111/andr.12110>

Ruiz, M. T., & Verbrugge, L. M. (1997). A two-way view of gender bias in medicine. *Journal of Epidemiology and Community Health*, 51, 106–109.

Soderstrom M. Why researchers excluded women from their trial populations. *Lakartidningen* 2001;98: 1524-8

United Nations, Department of Economic and Social Affairs, Population Division (2015). *Trends in Contraceptive Use Worldwide*, (ST/ESA/SER.A/349).

United Nations, Department of Economic and Social Affairs, Population Division (2019). *Contraceptive Use by Method, Data Booklet* (ST/ESA/SER.A/435).

Verdonk P, Mans L, Lagro-Janssen TL (2005); Integrating gender into a basic medical curriculum. *Medical Education*., 39, 118–1125. 54.

Verdonk P, Yvonne W. M. Benschop, Hanneke C. J. M. de Haes Toine L. M. Lagro-Janssen (2009); From gender bias to gender awareness in medical education. *Advance in Health Science Education*; 14:135–152 DOI 10.1007/s10459-008-9100-z

Witte FM, Stratton TD, Nora LM. (2006); Stories from the field: students' descriptions of gender discrimination and sexual harassment during medical school. *Academic Med*; 81:648–54.

1.8 SUGGESTED READING

Foucault, M. (1978). *The history of sexuality: An introduction*. New York: Vintage Books.

End Notes

Definition by The European Institute of Gender Equality. Url: <https://eige.europa.eu/taxonomy/term/1155>

¹ <http://uis.unesco.org/sites/default/files/documents/fs55-women-in-science-2019-en.pdf>

UNIT 2 DISCRIMINATORY PRACTICES IN MODERN MEDICINE AND NUTRITION

Structure

- 2.0 Introduction
- 2.1 Learning Outcomes
- 2.2 Health, Disease and Gender
- 2.3 Nutrition and Gender
- 2.4 Let Us Sum Up
- 2.5 Unit End Questions
- 2.6 References
- 2.7 Suggested Readings

2.0 INTRODUCTION

In the previous Unit, you have read about the bias in medical research and education. In this Unit we will discuss the discriminatory practices in modern medicine and nutrition. Modern medicine is one of the systems of medicine that is based on evidence. It means, all practices of modern medicine can be demonstrated scientifically. It is an improvement over the earlier concepts, such as that of the ‘germ theory’ of disease that believed that there is a one-on-one relationship between the causal agent and disease. However, it is now recognized that a disease is rarely caused by a single agent alone, but rather depends upon a number of factors which contribute to its occurrence. Therefore, modern medicine has moved away from the strict adherence to the germ theory of disease. It is well known that not everyone exposed to tuberculosis bacteria develops tuberculosis disease. There are other factors related to the host and the environment which are equally important in determining whether or not a particular disease will occur in the exposed host. This concept of disease causation synthesizes the basic factors of agent, host, and environment.

But first we need to understand the meaning of health to comprehend the concept of modern medicine. As per the definition by World Health Organization (WHO), “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” This definition by WHO helps us to understand that health is not only the complete state of physical well-being, but also the complete state of mental and social well-being of an individual. We can also say that health is multidimensional as WHO further describes health as a cumulative of many different attributes, such as emotional, spiritual, vocational and political dimensions of a person that play a major role in determining his/her state of health.

2.1 LEARNING OUTCOMES

After studying this Unit, you would be able to:

- Explain the determinants of health and role of gender associated with health;
- Distinguish the difference of disease prevalence in different gender; and
- Explain the difference of nutritional status of different genders.

2.2 HEALTH, DISEASE AND GENDER

Multiple determinants influence health of an individual. Some of the important determinants of health are social, biological, socio-cultural, environmental, socio-economic, health policy, and Many diseases like chromosomal anomalies, errors of metabolism, and mental disorder are guided by biological determinants.

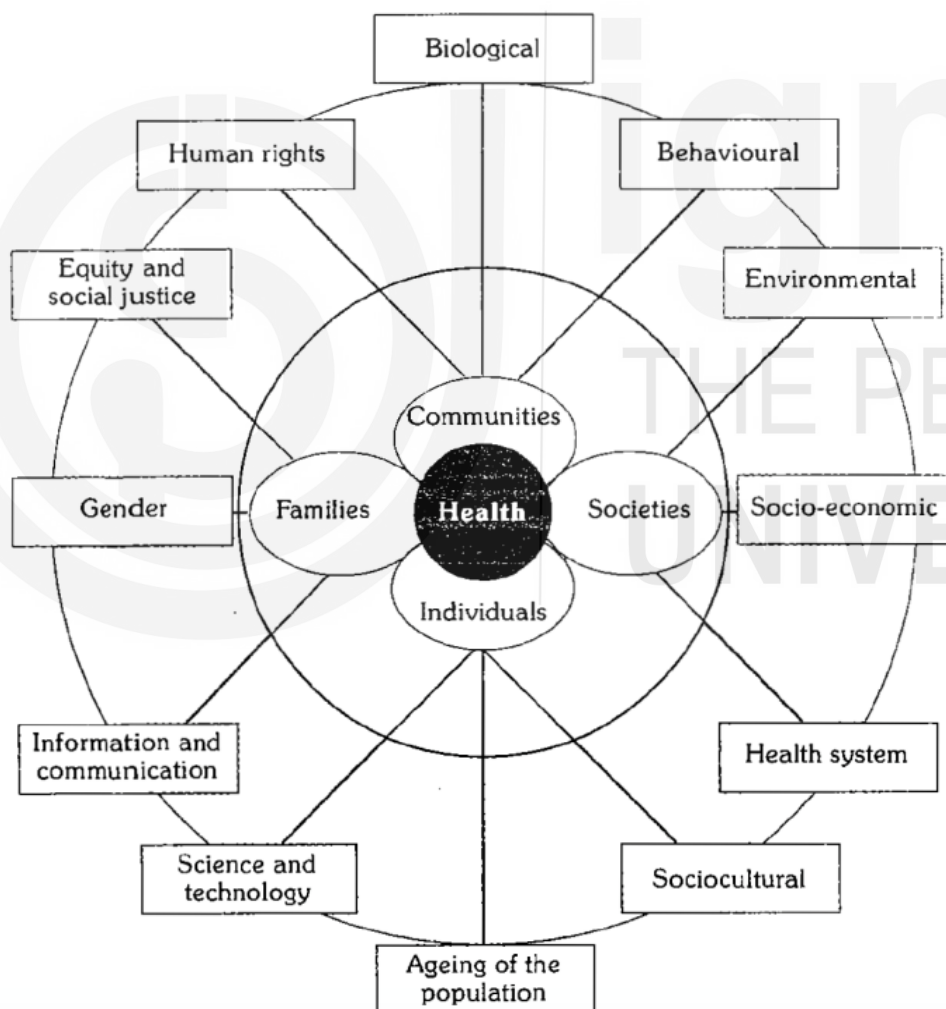


Fig: Determinants of Health

You may already know that men on average are more prone to heart attacks than women. Social values, attitude, cultural, behavioral pattern and lifelong habits act as direct or indirect determinants of health and diseases, for example, consumption of tobacco, alcohol and influence different types of

diseases in human life. Environmental factors, like water pollution (diarrhea), air pollution (respiratory diseases), and radiation (cancer) also act as causative agents for different types of diseases. Socio-economic conditions determine education, earning capacity and soon which influence nutritional status and lifestyle of an individual. Health policy of any state or country will determine the support mechanism of the government in the health care services. For example, government spends only 15% of the health cost and rest 85% is borne by an individual as out of pocket expenditure. In an unequal society, mainly in terms of gender, the differences of treatment and health care can be studied more meaningfully.

It is estimated that every year about 55 million Indians land up in poverty due to their healthcare expenses, about 38 million of whom lose all their savings and other income on purchasing medicines alone.

Check Your Progress Exercises I

Note: I. Use this space given below to answer the question.

II. Compare your answer with the Course material of this Unit.

1. What are the determinants of health?

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2. Choose any two determinants and explain how these two determinants influence health of an individual.

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2.2.1 Diseases and Gender

There are multiple factors that influence the health of an individual. In the same way, there are multiple factors that influence a particular demography and gender. Here, we shall discuss different diseases that attack us at different phases of life.

You must be well aware that lots of girls are eliminated at the conception phase in the society. In Indian communities, there is a lot of societal pressure to have a male child which means that many female fetuses are aborted, and girls are not allowed to be born. As a result, the sex ratio of male to female population in India is skewed. In the Population Census of India 2011, it was revealed that the sex ratio in India is 940 females per 1000 of males. Few states/UT like Haryana (879/1000), Delhi (868/1000), and Chandigarh

(818/1000) were found to have a very poor sex ratio. In these places, families were using modern medical techniques to determine sex selection where the female fetus is aborted, and the male fetus is allowed to develop. Many communities view a girl child as a burden as they will require to shell out a lot of money at the time of her wedding. However, this practice of sex selection has a lot of social and cultural impact, on our society.

Sex hormones are increasingly recognized as regulators of lung development of fetus. Respiratory Distress Syndrome (RDS) is the leading cause of morbidity in preterm neonates and occurs with a higher incidence in males. The mechanisms underlying the effects of androgens on lung development and the occurrence of RDS are only partially understood, and positive roles of estrogens on surfactant production and alveologenesi are relevant to our understanding of pulmonary diseases.

Infant mortality rate as per Sample Registration System in India in 2017 was 23 deaths/1,000 live births. However, the death rate of male infant is 22 deaths/1,000 live births and female infant is 25 deaths/1,000 live births. Biologically, male infant have naturally weaker immune system. Exposure is similar for male and female infants.

You may be surprised to know that the Nutrition Impact Model Study, a systematic analysis of 257 population-representative data sources from 107 countries, estimated the global prevalence of anemia in pregnancy as 43% in 1995 and 38% in 2011 with the range varying from 17% in developed and 56.4% in developing countries. Etiology of anemia was attributed to iron deficiency in 50% of cases in this study. Twenty years later, the prevalence of anemia still continues to be 53% in non-pregnant women and 50% in pregnant women as per population-based surveys of 2016 in our country. As per the Global Nutrition Report 2016, India ranked at 170th in terms of anemia prevalence in women.

Pregnancy costs an approximate 630 mg of extra iron to the mother. In the hierarchy of iron usage the fetus takes the priority, followed by maternal hematocrit while the maternal iron stores are poor and are often depleted during the course of pregnancy. The mother indeed requires iron stores for lactation and future pregnancies. To prevent a negative iron balance during pregnancy a mother requires at least 300 mg of iron stores at the time of start of pregnancy if she consumes a diet rich in bioavailable iron and would require obligatory supplementation if she consumes a suboptimal diet. Majority of iron transfer to the fetus occurs during the second and third trimester. The average daily requirement of iron has been calculated as 0.8 mg/d in the first trimester and increases to 7.5 mg/day in the third trimester. The average daily absorption from a western diet is 1–5 mg/day and average daily absorption from Indian diet varies from 0.8 mg/d to 4.5 mg/d depending on the type of staple used.

In some societies there are mobility differences (boys spend more time outside the home), which may account for difference in incidence and mortality for some diseases. However, it was observed that boys are more often and/or more quickly taken for treatment outside the home as compared

to the girl child. For example, mortality due to measles and whooping cough is greater in females. Morbidity and disability may have different consequences for girls and boys. It is very unfortunate that the girl-to-boy ratio of immunization coverage is 0.95, demonstrating that 5% fewer girls than boys are fully immunized at the national level.

In case of adults, as you are aware that the male and female have different occupational exposures due to their profession and other factors. In general, females have greater exposure in homes while male are having greater exposure outside. Females are exposed to care-taking roles within the family and in care-giving occupations. Diseases related to the female reproductive organs like breast, uterus, ovary, cervix are exclusively observed only in female. Few diseases, like heart attack are more prevalent in males.

One woman dies of cervical cancer every 8 minutes in India. Cervical cancer is the second most common cancer in India in women accounting for 22.86% of all cancer cases in women and 12% of all cancer cases in both men and women. Rural women are at higher risk of developing cervical cancer as compared to their urban counterparts

Oral cancer is the most common cancer in India amongst men (16.1 % of all cancers). Oral cancer is the second most common cancer in India amongst women (10.4 % of all cancers). Around 80-90% of oral cancers are directly attributable to tobacco use. The incident rate for oral cancer among females is significantly higher than males.

The incidences of breast cancer in India begin to rise in the early thirties and peaks at ages 50 to 64 years. Overall, 1 in 28 women is likely to develop breast cancer during her lifetime. In urban areas, 1 in 22 women is likely to develop breast cancer during her lifetime as compared to rural areas where 1 in 60 women develops breast cancer in her lifetime. Risk of dying from cancer before the age of 75 years is 7.34% in males and 6.28% in females. Cancers of oral cavity and lungs account for over 25% of cancer deaths in males and cancer of breast and oral cavity account for 25% cancers in females.

Urinary tract infection (UTI) is a contagion among men and women, but the incidence is found high among women due to their biological conditions. About 40% women and 12% of men suffer from UTI infection at least once in their lifetime. The prevalence of UTI (including both asymptomatic bacteriuria and symptomatic infection) in pregnant women in India is reported to range from 3% to 24%. One of the reasons for this high incidence of UTI in females may be due to the lack of social infrastructure. Most of the women are self-trained onto holding their urine for a long time since there is no toilet facility available nearby. You just think and identify, how many public toilets for women are available within one, two or five-kilometer radius of her location.

Both males and females have poorer immune systems in old age. There are more females than males in this age group. Males die younger. Very little information is available on sex and gender differences and infectious diseases

in this age group.

Osteoporosis is also one of the diseases which effect both males and females, but it is more rampant among the latter. Osteoporosis is defined as a progressive, systemic, skeletal disease characterized by low bone mass and microarchitectural deterioration of bone tissues with a consequent increase in bone fragility and susceptibility to fracture. Studies have shown that bone loss starts from the age of 30–40 years in both men and women. In women, it has been postulated that menopause is followed by an immediate decrease in bone mass and density within a year. This increased rate of bone loss reaches equilibrium approximately 10 years after menopause and then merges into a continuous age-related loss. While women experience marked increase in bone loss during perimenopause and post menopause, in men, a small longitudinal bone loss is observed throughout life. Unfortunately, osteoporosis causes more than 8.9 million fractures annually, resulting in an osteoporotic fracture every 3 seconds. Osteoporosis is estimated to affect 200 million women worldwide - approximately one-tenth of women aged 60, one-fifth of women aged 70, two-fifths of women aged 80 and two-thirds of women aged 90. Worldwide, 1 in 3 women over age 50 will experience osteoporotic fractures, as will 1 in 5 men aged over 50. 80%, 75%, 70% and 58% of forearm, humerus, hip and spine fractures, respectively, occur in women. Overall, 61% of osteoporotic fractures occur in women, with a female-to-male ratio of 1.6. Among the 1.9 billion Women of Reproductive Age group (15-49 years) worldwide in 2019, 1.1 billion have a need for family planning; of these, 842 million are using contraceptive methods, and 270 million have an unmet need for contraception. Only one contraceptive method, condoms, can prevent both a pregnancy and the transmission of sexually transmitted infections, including HIV. Modern contraceptive prevalence among married women of reproductive age (MWRA) increased worldwide between 2000 and 2019 by 2.1 percentage points from 55.0% to 57.1%.

Methods of contraception include oral contraceptive pills, implants, injectables, patches, vaginal rings, Intra Uterine Devices, condoms, male and female sterilization, lactational amenorrhea methods, withdrawal and fertility awareness-based methods. If you see carefully, almost all contraceptive methods are targeted towards females. There is a huge difference in the amount of research as well as investment involved in male and female contraceptives methods.

A majority i.e., more than 50% of the abortions which are unwanted were performed in the private health sector and 20 percent were performed in the public health sector. More than one-quarter (26%) of the abortions were reportedly performed by the woman herself at home. Nineteen percent of women reporting an abortion said that they had complications from the abortion. Many infections due to unsafe procedures are also affecting the health of women in our society.

Women specific illnesses will be taught in more details in the subsequent blocks of this course.

Check Your Progress Exercise II

Note: I. Use this space given below to answer the question.

II. Compare your answer with the Course material of this Unit.

1. Describe the social reasons for sex selective abortions in our country.

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2. What does Nutritional Impact Model Study indicate about women’s and men’s health?

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2.3 NUTRITION AND GENDER

Nutrition may be defined as the science of food and its relationship to health. The nutrient or food factor is mandatory to live a healthy life. The diet of a person needs to contain a variety of foods in such quantities and proportions that they fulfill the requirements of energy, amino acids, vitamins, minerals, fats, carbohydrate and other nutrients in the person. This is necessary to adequately maintain health, vitality and general well-being and to also create a small provision for extra nutrients to withstand short duration of leanness. Energy requirements of Indians at different ages and genders are listed below:

Table 2.1 Energy requirements of Indian at different ages and gender (2010)

Age Group	Category	Body Weight (kg)	Requirement	
			Kcal/day	Kcal/kg/day
Men	Sedentary Work	60	2320	39
	Moderate Work	60	2730	46
	Heavy Work	60	3490	58
Women	Sedentary Work	55	1900	35
	Moderate Work	55	2230	41

	Heavy Work	55	2850	52
	Pregnant Women		+350	
	Lactation (0-6 months)		+600	
	Lactation (6-12 months)		+520	
Infants	0 – 6 Months	5.4	92 kcal/kg/day	92
	6 –12 Months	8.4	80 kcal/kg/day	80
Children	1 – 3 Year	12.9	1060	82
	4 – 6 Years	18	1350	75
	7 – 9 Years	25.1	1690	67
Boys	10 – 12 Years	34.3	2190	64
Girls	10 – 12 Years	35.0	2010	57
Boys	13 – 15 Years	47.6	2750	58
Girls	13 – 15 Years	46.6	2330	50
Boys	16 – 17 Years	55.4	3020	55
Girls	16 – 17 Years	52.1	2440	47

Source: ICMR (2010), Nutrient Requirement and Recommended Dietary Allowances for Indians, A Report of the Expert Group of the ICMR.

In the above table, you can observe that the nutritional requirements of males and females are different during all stages of life. Other than that, females also require extra nutrition during pregnancy and lactational phase, which is often ignored in our society.

Like health, nutrition is also multidimensional and lots of determinants affect the nutritional status of an individual and society. The environment, family income, availability of types of food, culture, traditions, etc. influence nutritional status of any individual as well as society. In this context, you need to understand that malnutrition means the balance of food intake is not appropriate. The intake may be less than the requirement or more. However, the less intake of food is not always due to shortage of available food. There are lots of other social factors influencing it.

You are already aware about the status of nutritional anemia of pregnant mothers in India. It is a very simple fact that an undernourished mother will deliver an under nourished baby. For your information, I would like to state that a baby born of less than 2500 grams is defined as low-birth-weight baby. It is very sad that about 28 percent of babies born in India are low birth weight as compared to 4 percent in some developed countries. Although we don't know all causes of low birth weight, maternal malnutrition and anaemia appear to be significant risk factors in its occurrence.

Protein Energy Malnutrition (PEM) is a major public health problem in India. This affects the child at the most crucial period of the time of development, which can lead to permanent impairment in later life. PEM is measured in terms of underweight (low weight for age), stunting (low height for age) and wasting (low weight for height). The prevalence of stunting among under five is 48% and wasting is 19.8% and with an underweight prevalence of 42.5%, it is the highest in the world. Undernutrition predisposes the child to infection and complements its effect in contributing to child mortality. The determinants of PEM are broadly classified under four distinct categories: Environmental factors including the physical and social environment, behavioral factors, health-care service related and biological factors. The socio-cultural factors play an important role wherein, it affects the attitude of the care giver in feeding and care practices. Faulty feeding practices in addition to poor nutritional status of the mother further worsens the situation. The vicious cycle of poor nutritional status of the mother leading to low-birth-weight child further exposes the child to susceptibility to infections which aggravates the situation. Under-nutrition makes the child susceptible to infection and complements its effect in contributing to child mortality. This accounts for 22% of the burden of disease in India and adversely affects the economic growth of the country with an estimated adult productivity loss of 1.4% of gross domestic product (GDP).

National Family Health Survey II (NFHS II) has reported an underweight prevalence of 48.9% among girls compared with boys (45.5%). Even the proportion of severe underweight prevalence was higher for girls (18.9%) than boys (16.9%). Similar findings were noticed in West Bengal where undernutrition among girls (54.8%) exceeded those of boys (46.8%) and the difference was higher for moderate and severe forms. However, these differences are not merely biological but the care and feeding practices makes up for the difference. Timely feeding and continuation of breast feeding was seen more among boys than girls. The median duration of breast feeding was two months longer for boys than girls. Early weaning of the girl child was done to increase chances of having a boy in the next pregnancy. Therefore, the gender inequality of male preference over female among the care givers is responsible for the difference in prevalence of undernutrition.

Interestingly, it has been observed that undernutrition among children decreases when the literacy status of the mother is improved. In other words, a more educated mother is likely to birth and sustain a healthier baby. Children of illiterate women were twice as likely to show signs of underweight and stunting as those who had at least completed high school. Children whose mothers were illiterate showed three times higher prevalence of wasting than literate mothers. Increasing literacy status of a mother has a positive effect in reducing undernutrition since she is the first contact of care for the child and a more informed and literate mother is in a better position to take care of her child. Let us read a case study on the importance of nutrition on women's health and wellbeing.

Box 2.1: Women Health and Nutrition Entrepreneurs

Case Study 1: Impact of Women Health and Nutrition Entrepreneurs and Mobilisers on Health and Nutrition of Rural Children and Mother's Knowledge and Health Related Practices.

An intervention-based experiment was carried out in 5 villages (not covered under the ICDS Programme) of Andhra Pradesh in the year 1998. Under this study, the Dongoria Charitable Trust (DCT) trained one local woman from each village as Health Entrepreneurs and Mobilisers. They also trained one local dais (traditional birth attendants) on best practices related to maternal and child health. The Health Entrepreneurs and Mobilisers advised the community, in particular the women on various matters pertaining to health care, nutrition and family planning. After 3 years of conducting this study in 5 villages, the following outcomes were achieved:

- Significant improvement in mother's knowledge of nutritional practices about maternal diet and child feeding.
- Mothers reported increasing their food intake during pregnancy.
- Food taboos associated with pregnancy also substantially brought down.
- Increase in institutional delivery.
- Increase in immunization coverage.
- Reduction in peri-natal and neo-natal mortality; and
- Reduction in the occurrence of vitamin A deficiencies among preschool children.

Source: Bamji et.al, Women Health and Nutrition Entrepreneurs, Working Paper

After Protein Energy Malnutrition we should talk about over nutrition. Obesity and overweight have become a global epidemic now. Overweight and obesity are the fifth leading causes of deaths, resulting in around 2.8 million deaths of adults globally every year. In addition, 44% of the diabetes burden, 23% of the ischemic heart disease, and between 7% and 41% of certain cancer burdens are attributable to overweight or obesity. India has more than 30 million obese people, and the number is increasing alarmingly. The problem is more acute among women than men. In urban India, more than 23% of women are either overweight or obese, which is higher than the prevalence among men (20%). Thus, the country is burdened with two different nutrition-related health problems. It has to grapple with the problem of undernutrition and anemia on one hand and overweight or obesity on the other. The prevalence of overweight and obesity among children and adolescents aged 5–19 has risen dramatically from just 4% in 1975 to just over 18% in 2016. The rise has occurred similarly among both boys and girls.

Check Your Progress Exercise II

Note: I. Use this space given below to answer the question.

II. Compare your answer with the Course material of this Unit.

1. Why nutritional status of an adult women is more important than men?

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2. What is understood as Protein Energy Nutrition?

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2.4 LET US SUM UP

Our society is not only governed by the written rules, but there are also many unwritten rules that guide us in our day-to-day activities. Unfortunately, most of the written rules as well as unwritten rules are dictated by the male section of the society. This may be the main reason for the status of women. Whereas women have come a long way in the past few decades in terms of improving access to education and career opportunities, there is still a lot of scope for further improvement. As we have discussed, women’s access to healthcare and policy-making positions is still low compared to men. To bring in equality between men and women so that they are able to stand shoulder to shoulder on an equal platform, it is imperative that there is an increase in the number of women in key positions so they can determine policies conducive to their empowerment. In addition, all sections will have to come together to jointly work towards bringing gender equilibrium in all aspects of our society. At the end, I have a simple question for you as a student, will you work towards bringing gender equilibrium in our society? This balance is crucial for one’s society to function firmly and with a sense of gender justice.

2.5 UNIT END QUESTIONS

1. How do health, disease and gender related with each other? Explain.
2. Identify the factors which affect the nutritional status of individuals in the society.
3. How does gender play an important role in mapping the nutritional status of a particular society? Discuss.
4. Write a critical essay on gender, disease and nutrition.

2.6 REFERENCES

Bhutia DT (2014). Protein energy malnutrition in India: the plight of our under five children, *J Family Med Prim Care*. 3(1):63-67. doi:10.4103/2249-4863.130279.

Daniel J Corsi, Diego G Bassani, Rajesh Kumar, Shally Awasthi, Raju Jotkar, Navkiran Kaur, Prabhat Jha, (2009); Gender inequity and age-

appropriate immunization coverage in India from 1992 to 2006; *BMC International Health and Human Rights*, 9 (Suppl 1): S3 doi:10.1186/1472-698X-9-S1-S3.

Haddad L, Hawkes C, Udomkesmalee E, et al. (2016); *Global Nutrition Report; From Promise to Impact: Ending Malnutrition by 2030*. Washington: International Food Policy Research Institute.

Malhotra P, Kumari S, Kumar R, Varma S; (2004). Prevalence of anemia in adult rural population of north India; *Journal of Assoc Physicians India*. 2004 Jan; 52():18-20.

Ministry of Health and Family Welfare (2015–2016) Govt. of India, National Family Health Survey (NFHS-4), *State Fact Sheet*. Mumbai: International Institute for Population Sciences.

Nidhi S. Kadam, Shashi A. Chiplonkar, [...], and Vaman V. Khadilkar; (2018), Prevalence of Osteoporosis in Apparently Healthy Adults above 40 Years of Age in Pune City, India; *Indian J Endocrinol Metabolism*. 2018;22(1):67-73. Doi: 10.4103/ijem.IJEM_438_17.

Stevens GA, Finucane MM, De-Regil LM, Paciorek CJ, Flaxman SR, Branca F, Peña-Rosas JP, Bhutta ZA, Ezzati M, (2013). Nutrition Impact Model Study Group (Anaemia); *Lancet Glob Health*. Jul; 1(1):e16-25.

<https://www.who.int/csr/resources/publications/SexGenderInfectDis.pdf>

https://censusindia.gov.in/vital_statistics/SRS_Bulletins/SRS_Bulletin-Rate-2017-_May_2019.pdf

<http://cancerindia.org.in/cancer-statistics/>.

<https://yourstory.com/herstory/2019/10/credit-suisse-report-gender-3000-women-management-boards-india#:~:text=The%20Credit%20Suisse%20Research%20Institute,doubled%20in%20the%20last%20decade.>

<https://www.unwomen.org/en/what-we-do/leadership-and-political-participation/facts-and-figures>

<http://uis.unesco.org/en/topic/women-science#:~:text=According%20to%20UIS%20data%2C%20less,as%20their%20fields%20of%20research.>

2.7 SUGGESTED READING

Malhotra P, Kumari S, Kumar R, Varma S; (2004). Prevalence of anemia in adult rural population of north India; *Journal of Assoc Physicians India*. 2004 Jan; 52():18-20.

UNIT 3 HEALTH CARE AND NON-NORMATIVE SEXUAL IDENTITIES

Structure

- 3.0 Introduction
- 3.1 Learning Outcomes
- 3.2 Concepts of Non-Normative Sexual Identities
 - 3.2.1 The Normative: Tracing the Conceptual Formulations
 - 3.2.2 Origin of the term 'queer'
- 3.3 Non-normative Gender and Health Care: Rights and Issues
- 3.4 Case Studies
- 3.5 Let Us Sum Up
- 3.6 Unit End Questions
- 3.7 References
- 3.8 Suggested Reading

3.0 INTRODUCTION

This Unit discusses the concept of non-normative sexual identity in relation to health care services. It defines what is understood as non-normative sexual identities and introduces different categories which explain non-normative sexual identities. As the title of the unit suggests, we will try to deconstruct and contest the medicalized notion of heterosexuality which is normalized and accepted in the society. Further, this unit will help you to examine certain kind of gender biases that exist in the practice of culture of health care systems.

3.1 LEARNING OUTCOMES

After studying this Unit, you would be able to:

- Understand the various concepts related to non-normative sexuality and health;
- Discuss the challenges faced by the non-normative population in relation to health; and
- Engage in the rights of non-normative population and their health access.

3.2 CONCEPTS OF NON-NORMATIVE SEXUAL IDENTITIES

The sexual identities are primarily assigned on the basic differences of anatomy between male and female sex organs. This creates confusion for lot of other gender categories who do not fit into the binary or assigned sex/gender at birth. The social and political structure reproduce masculine and feminine behavior in accordance to their structures and it becomes

aligned with normative gender roles and heterosexuality (Butler, 2006). The study of sexuality with LGBTQIA as an umbrella term is a recent phenomenon and its manifestations are still regarded as taboos and stigmatized category as it challenges the hegemonic norms of the society. There is a movement of convergence and emergence of non-normative sexual identities to challenge the dominant language and culture of the binary classification. According to **A. Fausto Sterling** in the article, ***the Five Sexes. Why Male and Female are not enough* (1993)**, the medical model that has the assumptions that there are only two sexes and heterosexuality alone is normal is a contested agenda; one true model of psychological health has gone unexamined.

3.2.1 The Normative: Tracing the Conceptual Formulations

This sub-section is adapted from Unit 4: Feminism and Non-Normative Relationships of the course MWG 001: Theories of Women's and Gender Studies. In order to understand the categories that define the non-normative, we will first look at issues of sexuality while trying to understand non-normative sexuality and its relation to feminism.

Homosexuality

It is interesting to note that the term 'heterosexual' comes into being only after the term 'homosexual', when 19th century sexologists began to construct theories that explored 'normal' and 'abnormal' sexualities. **Richard von Krafft-Ebing** in his ***Psychopathia Sexualis: A Medico-Forensic Study* (1886)** pathologized homosexuality in his work, seeing it and other 'perversions' like it as a sign of individual illness of a larger depraved society. It was in the 1892 translation of Krafft-Ebing's work that the term 'homosexuality' came into general usage. Sexuality, as seen by these sexologists was constructed in terms of the binaries of heterosexuality and homosexuality, where one was seen as inherently positive, normal and desirable; while the other, homosexuality, was only defined in terms of negativity. Discussing the emergence of the category of homosexuality, Michel Foucault in his book, *The History of Sexuality* says:

Homosexuality appeared as one of the forms of sexuality when it was transposed from the practice of sodomy onto a kind of interior androgyny, a hermaphroditism of the soul. The sodomite had been a temporary aberration; the homosexual was now a species. (Foucault, 1976, p.43)

For Foucault, the sexual classification of individuals is the result of the development of a regime of power. According to Foucault, power structures operate through classification and categorization. The sexual classification of individuals, become possible by relying on the medicalization of the sexually peculiar. This implies that those who are seen as sexually normative are treated as a separate category from those who are seen as sexually peculiar. These sexual categories, especially those of 'homosexual' and 'heterosexual', also became new and empowering ways for individuals to identify themselves. It made possible what Foucault calls, "a 'reverse' discourse", wherein, "homosexuality began to speak on its own behalf, to demand that its

legitimacy or ‘naturalness’ be acknowledged, often in the same vocabulary, using the same categories by which it was medically disqualified” (Foucault, 1976, p.101).

Emergence of Lesbian and Gay Communities

Forging the links between the emergence of a specifically homosexual identity in the latter part of the 19th century with the new patterns of social organization that were being formed at the time, **John D’ Emilio** in his path breaking essay, “**Capitalism and Gay Identity**”, explores the ways in which capitalism facilitated the articulation of such an identity. According to him, the reorganization of the family structure, propelled by capitalism’s spread of wage labour and capital, allows for the conditions that foster the separation of sexuality from what he calls, “the ‘imperative’ to procreate” (D’Emilio, 2009, p.104). This, in turn, made possible the rise of urban communities of lesbians and gay men. Thus, by the time of the Stonewall Riots in New York City in 1969, which sparked off the Gay Liberation Movement, huge crowds of lesbians and gay men could be mobilized. D’Emilio recognizes that while it became significantly easier at the time for men and women to construct a personal life away from the constraints of the family, it was nonetheless more difficult for women, as they were still economically dependent on men. This recognition gestures towards a nuanced understanding of the lesbian movement, wherein instead of it being willingly brought under the general rubric of the Gay Liberation Movement, it is acknowledged in terms of its own politics and struggle. Historically, lesbians have occupied a somewhat uneasy position in social movements that organized protests on issues of gender and sexuality. The international women’s and gay and lesbian movements were instrumental in raising awareness about concerns regarding the inequality of the sexes and the sidelining of gay issues. Both the women’s movement and the gay rights movement questioned and sought to defy traditional beliefs regarding sexuality to destabilize the hegemony of heterosexuality. However, as Nitza Berkovitch and Sara Helman point out, “challenging heterosexuality did not inevitably lead to a critique of patriarchy” (Berkovitch & Helman, 2005, p.271). The gay movement largely privileged male sexuality and there were very few exceptions to this sort of gender hierarchy. Lesbian feminists argued for the specificity of the lesbian experience as an experience specific to women and criticized the assumption that lesbians and gay men share characteristics simply by virtue of being same-sex relationships. Thus, feeling estranged from both these movements, lesbians felt the need to create a distinctively feminist lesbian politics, one that interrogated the creation of heterosexuality as the normative model of sexuality. Lesbianism then, was seen as being more than a sexual preference, it was a political choice. It defied the power equation that always existed between men and women, and in doing so, lesbianism posed the most radical challenge to the established order.

Transsexuals

While discussing non-normative relationships, it is essential to mention non-normative sexualities other than those of lesbians and gay men, such as transsexuals. For a long time, transsexuals were either relegated to the field

of abnormal psychology or were seen as fascinating because of their cross dressing. As part of the advocacy for gender expression, the term 'transgender' was coined in the 1980s. It was used by **Virginia Prince** to refer to individuals whose identities fell between 'transvestite' and 'transsexual'. However, 'transgender' as defined by **Leslie Feinberg**, came to signify a term for all those people who embodied different genders from what was normative and those who were marginalized or oppressed as a result of it. It stood for, "an imagined community encompassing transsexuals, drag queens, butches, hermaphrodites, cross-dressers, masculine women, effeminate men, sissies, tomboys, and anybody else willing to be interpolated by the term, who felt compelled to answer the call to mobilization" (Stryker, 2006, p.4). Several feminists tended to see transsexuality as a "false consciousness" (Janice Raymond in Stryker, 2006), as they were adopting masculine or feminine stereotypes and altering their bodies in order to do so. It questioned some very basic assumptions—how can a person born with male genitalia claim to be a woman, when it defies the biological basis for being a woman? So, the basic belief of feminists, of there being two sexes and two genders, is thrown into question by the presence of transsexuals and propelled them to be seen as, "the visible symptoms of a disturbed gender system" (Raymond in Stryker, 2006, p.4).

In India, according to the Transgender Persons (Protection Of Rights) Act, 2019; there is a clarification for the definition of transgender as a person whose gender does not match with the gender assigned to that person at birth and includes trans-man or trans-woman (whether or not such persons have undergone sex reassignment surgery or hormone therapy or laser therapy or such other therapy), person with intersex variation, gender queer and person having such socio-cultural identities as *kinner* (term used in the west and northern India), *hijra* (universally used for eunuch), *aravani* (term used in Tamil Nadu) and *jogta* (term used in Maharashtra and Karnataka).

Again, the definition of person with intersex variation is also mentioned as a person who at birth shows variation in his or her primary sexual characteristics, external genitalia, chromosomes or hormones from normative standard of male and female body. There is also a queer culture of acknowledging plural sexual behaviors, sexual identities and liberation movement (Ana Garcia-Arroyo, 2010).

3.2.2 Origin of the term 'queer'

This sub-section is adapted from the **Unit 2: Literary and Cultural Perspectives of the course MWG 001: Theories of Women's and Gender Studies**. It may be interesting for you to know that the term "queer" is recent in origin and the genesis of queer theory is heavily influenced by several theoretical and identical movements such as feminism, black movement, poststructuralism and postmodernism.

Lesbian/gay studies thus attempts to foreground social and political issues concerning queer people, and the marginalization of queer persons who find themselves in an 'oppositional' stance vis-à-vis mainstream society, due to existing prejudices and hostility towards them. While in recent years, the

term ‘queer’ has been chiefly associated with lesbian and gay subjects, the scope of the term extends to issues such as cross-dressing, hermaphroditism, gender ambiguity, gender-corrective surgery, intersex persons, gender queer, and non-conforming and transgender persons as well. The term ‘queer theory’ was coined by **Teresa de Lauretis**; several writers such as Eve Kosofsky Sedgwick, Judith Butler, Adrienne Rich and Diana Fuss have positioned the queer and queer theory in the light of culturally marginal sexual self-identifications. It was in the year 1869 that the term ‘homosexuality’ appeared in print for the first time in a German pamphlet written by **Karl-Maria Kertbeny (1824-1882)**. In 1886 with the Criminal Law Amendment Act (1885), sexual relations between men (not women) were given Royal Assent by Queen Victoria. And further, it was in 1892 that the word ‘bisexual’, in its current sense, was used in Charles Gilbert Chaddock’s translation of Kraft-Ebing’s Psychopathic Sexualism.

Check Your Progress Exercise I

Note: I. Use this space given below to answer the question.

II. Compare your answer with the Course material in this Unit.

1. Define the term ‘Queer’.

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2. How do you define the concept of sexuality?

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3.3 NON-NORMATIVE GENDER AND HEALTH CARE: RIGHTS AND ISSUES

There is a delay in getting urgent medical attention within the Queen Community due to the historic discrimination. The discrimination is due to the structural ignorance and negligence as the non-normative gender does not fit into the category of binary male and female. 70% of transgender and gender non-confirming individuals are subjected to discrimination in health care setting (Lambda Legal, 2009). Studies have revealed that care was being refused to around 19% of the transgender (Hollenbach et.al 2014). Again, coming to the historic ‘The Transgender Persons (Protection of Rights) Act, 2019’, chapter II 3d (d), reveals that no person or establishment shall discriminate a transgender person on the ground of denial or discontinuation

of, or unfair treatment in, healthcare services. Under the same Act Section 15 (b), (c) and (d), provides the medical care facility of sex reassignment surgery and hormonal therapy. It also brings the purview of before and after surgery; hormonal therapy counselling, bringing out a manual in accordance with World Professional Association for Transgender Health guidelines. The sections 15 (f) and (g) of the Transgender Persons (Protection of Rights) Act, 2019 facilitates access to health care institutions and centres and most importantly covering medical expenses for wide range of health issues such as hormonal therapy, Sex Reassignment Surgery and laser therapy.

3.3.1 Health Issues and Sex Reassignment Surgeries

According to World Professional Association of Transgender Health (2012), there are certain health issues confining to feminizing hormones therapies such as: hypertriglyceridemia, gall stone, thrombotic disease, and weight gain. Male hormonal therapy creates issues of polyethemia, sleep apnea and acne.

According to **Wiley et.al. (2016)**, in the article “*Serving transgender people clinical care consideration and service delivery models in transgender health*”, the operative procedures undergone by transgender women are breast reconstruction, orchiectomy, penectomy, vaginoplasty, labiaplasty, clitoroplasty, urethral meatus, reconstruction; others include facial feminization therapy. For transgender men, it involves mastectomy, hysterectomy, oophorectomy, vaginectomy, scrotoplasty, metoidioplasty, phalloplasty; others are vocal deepening, body hair growth, increased musculature, cessation of their menstrual cycle (hormonal therapy). **Jeftovic et.al (2018)**, also includes the same operative proceedings removal of female genitalia (hysterectomy with bilateral salpingo-oophorectomy and vaginectomy), chest masculinization (bilateral mastectomy), and genital reconstructive surgery (metoidioplasty or phalloplasty, urethral lengthening, and scrotoplasty with testicular implants). Hysterectomy could be both transvaginal and laparoscopic. There are hormonal issues which can severely affect female to male transgender population, hence, specific aspects must be considered including effects of testosterone treatment, gynecological malignancy, thromboembolic events and operative bleedings (Winkler 1996; Ose et.al 2017). For surgical necessity, before two weeks, it is important to stop testosterone administration. It helps to avoid excess intra-operative bleeding. Also, some prefer laparoscopic hysterectomy for better visualization of tissues and controlling haemorrhage (Ott, et. al. 2010; O’Hanlan, 2007). It is easier and comfortable for sex reassignment (also known as gender affirmation (confirmation) surgery with transvaginal hysterectomy. New age robotic single-port access hysterectomy and laparoscopic can be a future alternative as there are limited current experiences (Bogliolo et. al, 2014; Lazard et.al, 2013). In a study conducted for sex reassignment surgery for 124 female-to male transsexuals it was found that there is an increased risk of bleeding. Increased operative time can also increase the risk for the life of patients for instance, repositioning the patient, removing equipments (Gomes da Costa et.al, 2016). The laparoscopic approach is associated with a longer operative time and higher cost. The scars

in the anterior abdominal wall may also compromise abdominal phalloplasty. These characteristics make transvaginal hysterectomy with bilateral salpingo-oophorectomy as the optimal choice in transsexuals. The clear advantages of transvaginal approach are especially important in our setting of one-stage gender affirmation surgery, where a fast and the least invasive procedure with minimal blood loss, is highly appreciated (Sheth, 2014; Sheth et.al , 2011)

3.4 CASE STUDIES

Let us read some case studies to understand the health care issues faced by the non-normative gender categories.

A Transgender Female: She is involved in dancing profession and initiation ritual (during the birth ceremony where blessings are required by the newborn family). Jeena is from Assam. She moved to Delhi when there was a discovery of fondness towards femininity, and it was not accepted by the family members. Delhi has a better acceptance of transgender community and soon she was initiated in a transgender circle. After gaining professional and personal experiences, she returned to her home state. She shared her life experience – ‘We have lots of problems. We have lot of struggles. In public spaces, we are judged and mistrusted. If someone is unwell, we go to a private hospital. Our disciple (chela) was unwell, haemoglobin was low. People do not accept us easily. Four people helped us financially and we donated and arranged for blood. I also have nerve problem. I have consulted doctors in public and private hospitals and treatment is very expensive. Since I have less awareness level in hospital setting, I wait in queue for two/ three hours. On reception counter too, the employees do not help. The dilemma is, there is no alternative queue for third gender as I do not belong to male and female standing place for Outpatient Department (OPD). Even if I complain, they ask me to wait in the last place. Some nurse and doctors are good. Private hospital and private chambers have good accessibility. Atal Amrit Card was used in Private Hospital only for partial facility as some components were not covered like MRI and operation. I am an elder in my group and I look after the group. I have a daughter. In Delhi, situation is different; here people are much aware of the community therefore my health issue is prioritized’ (Primary data from the field).

Let us look into the perspective of a psychiatrist to give a perspective on mental health issues and non-normative gender categories. For a very long period of time, non-normative sexual identities were stigmatized. Recently, there is a change of definition and meaning as well. According to Diagnostic and Statistical Manual- DSM-V, gender dysphoria is psychological distress associated with gender non-confirming a marked incongruence between one's experienced/exposed gender and assigned gender of at least 6-month duration (Reisman, 2019, p. 284). Hence, it is the counselling for gender dysphoria that is sought by the non-normative sexual identities.

Box No. 3.1: A Psychiatrist’s Account who Works for an NGO

The present health care system is not equipped for non-normative sexual identity population. Still many medical personnel are not much aware about the problems faced by the community. Many times they are discriminated on the basis of their gender identity. On few occasions I have counselled patients with gender dysphoria. Even many mental health workers are well informed or experienced about counseling for gender dysphoria but many patients come for counseling quite late due to stigma, shame and lack of awareness. Main problems faced by them are having a strong feeling of guilt and trapped/caged in opposite gender body. Many people cannot bare this caged feeling which ultimately pushes them to severe symptoms of depression. Most of the time family support is lacking for the community of LGBTQ+. They along with the family also undergo severe trauma of what society and family members will think about them. A few people opt for surgery but it is not affordable for many. Overall, in medical curriculum least importance is given to the issues of LGBTQ+.

Source: Primary Data from the field

Non-normative sexual identities need to be an integral part of an inclusive and patient-centered care advocacy approach. Health disparities and unique health care needs of the LGBTQ+ community must be considered at all levels of health policy development (Daniel & Butkus, 2015). Furthermore, eliminating hetero-normativity assumptions, developing person-centric approaches, and improving communication strategies in preparatory programs are crucial changes for addressing deficits in the health care delivery system. Developing an inclusive existing health care and community services for LGBTQ+ community along with public communication, documentation, representation of images, and language choices and terminology used in various forums remain critical for development of the community (HCC, 2019).

Check Your Progress Exercise II

Note: I. Use this space given below to answer the question.

II. Compare your answer with the Course material in this Unit.

1. Write short note on sex reassignment surgeries and its health implications.

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2. Explain the concept of non-normative sexual identities.

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3.5 LET US SUM UP

As every child matter when they grow, it is not important to enforce the binary gender identity as there are more than two. It is the lack of cultural representation and norms that enforces non-normative identities invisible. The need is to challenge gatekeepers of medical community for the language used in the medical community influences and reflects societal perceptions of non- normative identities. The health sector must move beyond bodies and gender identities towards the innate experience of the community to change the whole dynamic of gender dysphoria and homophobia. As non-normative sexual identities face homelessness, impoverishment due to societal ostracization like social stigma, domestic abuse, cultural apathy and victimization; the issue of health suffers due to the lack of expertise and exposure on medical fraternity. There should be Inclusion of family, adolescent counselling, sensitive to the health needs of the people to uncover their bodily shame and comfort.

3.6 UNIT END QUESTIONS

1. Define the concept of Non-normative sexual identities with examples.
2. Discuss the in-section between gender and health in relation to non-normative sexual identities. Give examples and case notes to substantiate your answer.
3. How does access to health care differ in the context of non-normative community? Critically analyse.

3.7 REFERENCES

Ana Garcia-Arroyo (2010). *Alternative Sexualities in India. The Construction of Queer Culture*. Kolkata: Books Way.

Bolam, E and Jarvis, S. (2016). The Language of Non-normative Sexuality and Genders. *Scholars Week*. May 19th, 12:00 PM - 3:00 PM. Western Washington University. Retrieved https://cedar.wvu.edu/scholwk/2016/Day_one/30

Bogliolo S., Cassani C., Babilonti L., Musacchi V., Nappi R. E., Spinillo A. (2014). Robotic single site hysterectomy with bilateral salpingo-oophorectomy in female to male transsexualism. 11(1):313–313. doi: 10.1111/jsm.12356

Butler, J. (2006). *Gender Trouble. Feminism and the Subversion of Identity*. Routledge.

Daniel, H., & Butkus, R. (2015). Lesbian, gay, bisexual, and transgender health disparities: Executive summary of a policy position paper from the American College of Physicians. *Annals of Internal Medicine*, 163, 135-137. doi:10.7326/M14-2482

Fausto-Sterling, A. (1993). *The Five Sexes Why Male and Female Are Not Enough*. The Sciences.

Gomes da Costa A., Valentim-Lourenço A., Santos-Ribeiro S., et al. (2016). Laparoscopic vaginal-assisted hysterectomy with complete vaginectomy for female-to-male genital reassignment surgery; 23(3):404–409. doi: 10.1016/j.jmig.2015.12.014.

Hollenbach, A.D., Eckstrand, K.C, Drege, A.D. (2014). *Implementing curriculum and institutional climate changes to improve health care for individuals who are LGBT, gender non-confirming or born with DSD, a resource for medical educators*. Washington DC: Association of American Medical Colleges.

The Gazette of India. (Ministry Of Law and Justice). *The Transgender Persons (Protection of Rights) Act, 2019 No. 40 Of 2019*.

Retrieved from <http://socialjustice.nic.in/writereaddata/UploadFile/TG%20bill%20gazette.pdf>

Lambda Legal (2009). *When health care isn't caring: Lambda Legal's survey on discrimination against LGBT people living with HIV*.

Lazard A., Cravello L., Poizac S., Gorin-Lazard A., Gamberre M., Agostini A. (2013). Hysterectomy and bilateral adnexectomy by laparoscopic single port access for female to male transsexualism; 10(5): p.1439. doi: 10.1111/jsm.12091.

Jeftovic, M., Stojanovic, B., Bizic, M., Stanojevic, D., Kistic, J., Bencic, M., & Djordjevic, M. L. (2018). Hysterectomy with Bilateral Salpingo-Oophorectomy in Female-to-Male Gender Affirmation Surgery: Comparison of Two Methods. *BioMed research international*, 3472471. <https://doi.org/10.1155/2018/3472471> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5964534/>

O'Hanlan K. A., Dibble S. L., Young-Spint M. (2007); Total laparoscopic hysterectomy for female-to-male transsexuals.; 110(5):1096–1101. doi: 10.1097/01.AOG.0000286778.44943.5a.

Ose J., Poole E. M., Schock H., et al. (2017) Androgens are differentially associated with ovarian cancer subtypes in the Ovarian Cancer Cohort Consortium. 77(14):3951–3960. doi: 10.1158/0008-5472.CAN-16-3322.

Ott J., van Trotsenburg M., Kaufmann U., et al. (2010). Combined hysterectomy/salpingo-oophorectomy and mastectomy is a safe and valuable procedure for female-to-male transsexuals; 7(6):2130–2138. doi: 10.1111/j.1743-6109.2010.01719.x

Sheth S. S. (2014). Vaginal or abdominal hysterectomy? In: Sheth S. S., editor. 2nd. New Delhi, India: Jaypee Brothers Medical Publishers (P) Ltd. pp. 273–293.

Sheth S. S., Paghdwalla K. P., Hajari A. R. (2011). Vaginal route: A gynecological route for much more than hysterectomy. *25*(2):115–132. doi: 10.1016/j.bpobgyn.2010.12.005.

Johari, A (2014). Hijra, kothi, aravani: a quick guide to transgender terminology. Retrieved from <https://scroll.in/article/662023/hijra-kothi-aravani-a-quick-guide-to-transgender-terminology>.

Tamar Reisman, Dennis Dacarett- Galeano and Zil Goldstien. Transgender Care and Medical Education. pp 283.

The Human Rights Campaign. (2017). Retrieved from <http://www.hrc.org/hei/hei-scoring-criteria>

Wiley, K. Knudson G, Khan ST et al (2016). Serving transgender people clinical care consideration and service delivery models in transgender health. *Lancet*. 388: 401-411

Winkler U. H. (1996); Effects of androgens on hemostasis. *24*(3):147–155. doi: 10.1016/S0378-5122(96)82004-4.

World Professional Association for Transgender Health (2012). Standard of Care for the Health of transsexual, transgender and gender non-confirming people. 7th edition.

3.8 SUGGESTED READING

Michel Foucault. (1976). *The History of Sexuality*, vol I: *La Volonté de savoir*.