SUMMER INTERNSHIP PROGRAM

at

NATIONAL INSTITUTE OF FAMILY HEALTH AND WELFARE, MUNIRKA,DELHI

From 1 May 2024 to 28 June 2024

A REPORT BY

Dr Ankit bhonsle

Master of Hospital and Health management

2023-25

under the Mentorship of

Dr Anupam Mehrotra

(Assistant Professor)

IIHMR UNIVERSITY

राष्ट्रीय स्वास्थ्य एवं परिवार कल्याण संस्थान
(स्वास्थ्य एवं परिवार कल्याण मंत्रालय, भारत सरकार के अधीन एक स्वायत्तशासी संस्थान)

आरोग्यम् सुखसम्पदा

The National Institute of Health and Family Welfare
(An Autonomous Institute under Ministry of Health & Family Welfare, Government of India)

बाबा गंगनाथ मार्ग, मुनीरका, नई दिल्ली-110067
दूरभाष (कार्यालय): 91-11-26165959, 26166441, 26188485, 26107773
फैक्स: 91-11-26101623, ई.मेल: info@nihfw.org
वेब साईट: www.nihfw.org

Baba Gangnath Marg, Munirka, New Delhi-110067
Phones: 91-11-26165959, 26166441, 26188485, 26107773
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Web Site: www.nihfw.org

F.No. A-33012/5/2007-Acad.
Dated: 28/06/2024

TO WHOM SO EVER IT MAY CONCERN

This is to certify that Dr. Ankit Bhonsle, currently enrolled in the MBA (Hospital and Health Management), student from IIHMR University, Jaipur has successfully completed his Summer Training/ Internship programme on the Project Report entitled– "**Prevalence of Abnormal Semen Parameters in Men Attending Infertility Clinic in Delhi: A Retrospective Cross-Sectional Study**" at The National Institute of Health and Family Welfare, New Delhi for the period from 1st May, 2024 to 28th June, 2024 under the guidance of Dr. Rajesh Kumar.

His conduct during the Summer Training Programme was good and I wish him a bright career ahead.

(Dr. V.K. Tiwari)
Dean of Studies

प्रो. वी. के. तिवारी / Prof. V. K. Tiwari,
डीन / Dean of Studies,
राष्ट्रीय स्वास्थ्य एवं परिवार कल्याण संस्थान /
The National Institute of Health & Family Welfare
मुनीरका, नई दिल्ली / Munirka, New Delhi-110067.

Annexure A

Completion Certification from the Organization

CERTIFICATE

This is to certify that Dr./Mr./ Ms. ANIKIT BHOSALE of MBA HHM 2023-25 (batch) of IIHMR UNIVERSITY (Name of the department/institute) has worked with our organization for his/her summer internship from 01/05/24 to 28/6/24 (date). The overall performance shown by him/her during the period was excellent/good/average. This certificate is being issued to meet the requirements of the IIHMR University.

Date: 28/6/24

(Signature of organization Mentor)

Name: Dr. Rajesh Kumar

Designation: Associate Professor

Seal/Stamp of the Organization

डा. राजेश कुमार / Dr. Rajesh Kumar
सहायक प्रोफेसर / Assistant Professor
राष्ट्रीय स्वास्थ्य एवं परिवार कल्याण संस्थान
National Institute of Health & Family Welfare
मुनीरका, नई दिल्ली / Munirka, New Delhi-110067

IIHMR UNIVERSITY

IIHMR University Faculty Mentor Approval

This is to certify that **Dr. Ankit Bhonsle** of academic year 2023-25 of **INSTITUTE OF HEALTH MANAGEMENT RESEARCH** has prepared a poster with respect to his/her summer internship held during May-June 2024.

He /she has carried out work as per the guidelines. His / Her poster is approved for presentation.

Date: 20/07/2024

Anupam 20/7/24

(Signature of Faculty Mentor)

Dr. Anupam Mehrotra
Assistant Professor
IIHMR UNIVERSITY JAIPUR

1, Prabhu Dayal Marg, Near Sanganer Airport, Jaipur- 302029, Rajasthan, India.
Ph.: 0141- 3924700, 2791431- 32, Fax: 0141 3924738, E-mail: iihmr@iihmr.edu.in, Web.: www.iihmr.edu.in

Prevalence of Abnormal Semen Parameters in Men Attending Infertility Clinic in Delhi: A Retrospective Cross-Sectional Study

Name: Dr. ANKIT BHONSLE
BATCH: HM 28
ROLL NO:1678
FACULTY MENTOR: Dr. ANUPAM MEHROTRA
INTERSHIP ORGANIZATION: NIFHW

BRIEF HISTORY AND INTRODUCTION

The National Institute of Health and Family Welfare (NIHFW) was established on 9th March,1977 by the merger of two national level institutions, viz. the National Institute of Health Administration and Education (NIHAE) and the National Institute of Family Planning (NIFP). The NIHFW, an autonomous organization, under the Ministry of Health and Family Welfare, Government of India, acts as an 'apex technical institute' as well as a 'think tank' for the promotion of health and family welfare programmes in the country. The Institute addresses a wide range of issues on health and family welfare from a variety of perspectives through the departments of Communication, Community Health Administration, Education and Training, Epidemiology, Management Sciences, Medical Care and Hospital Administration, Population Genetics and Human Development, Planning and Evaluation, Reproductive Bio-Medicine, Statistics and Demography and Social Sciences.

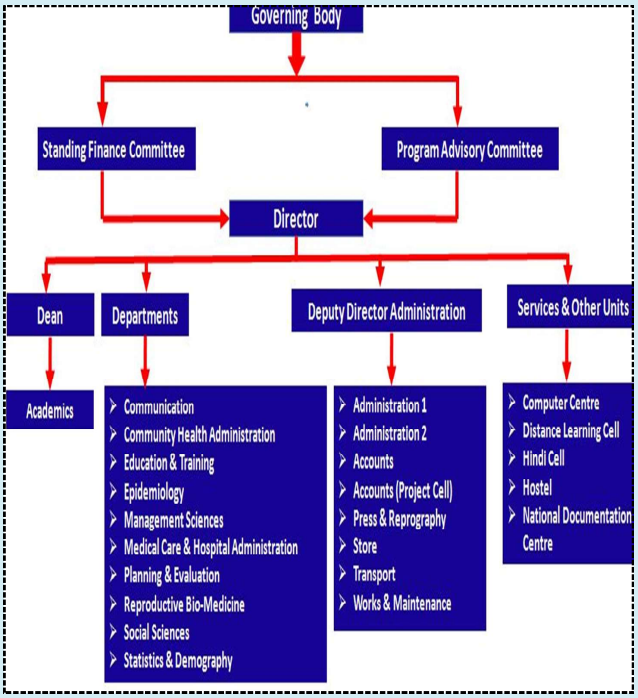
VISION

NIHFW is to be seen as an Institute of global repute in public health & family welfare management.

MISSION

To act as think tank, catalyst & innovator for management of public health and related health & family welfare programmes by pursuing multiple functions of Education & Training, Research & Evaluation, Consultancy & Advisory services as well as provision of specialised services through inter-disciplinary teams.

ORGANISATION CHART



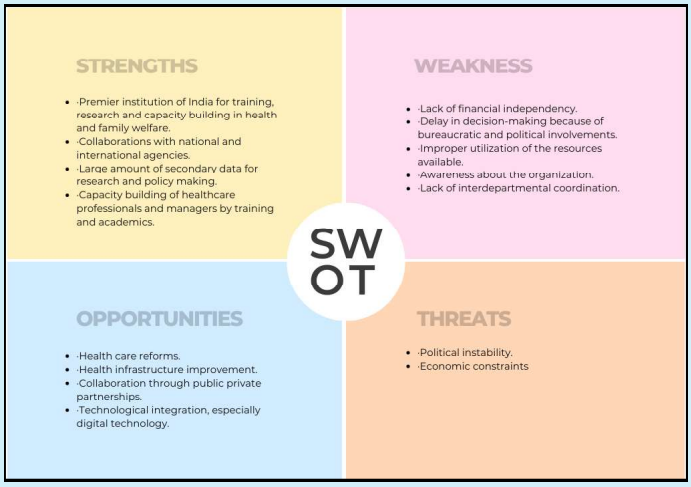
USEFULNESS OF INTERNSHIP

·Helped in gaining practical experience of how central government Organisation works on daily basis.
·How to work in a challenging environment with limited resources.
·Communication with higher authority.
·Improves self confidence

ABSTRACT OF THE STUDY

Infertility, a disorder of the reproductive system, is characterized by the inability to conceive a healthy child after 12 months or more of consistent, unprotected sexual activity. According to the World Health Organization, 60–80 million couples worldwide struggle with infertility, affecting 15%–20% of the general population, with male factors accounting for 20%–40% of these cases. This study utilized existing laboratory reports of semen analysis, conducted according to WHO guidelines, from January 1, 2023, to April 30, 2023. These reports were obtained from infertility clinics at NIHFW Munirka, Delhi, with permission from concerned authorities and in strict adherence to ethical guidelines. A total of 504 males, aged between 21 and 52 years with an average age of 31.492 ± 4.727 years, were investigated. The study found that 77.57% of the cases exhibited severe forms of semen abnormalities, including azoospermia, oligospermia, and asthenospermia, while 22.42% of the cases had normal semen. The most common abnormalities observed were asthenospermia (reduced sperm motility) at 46.725%, oligospermia (reduced sperm concentration) at 22.42%, and oligoasthenospermia (reduced motility and sperm concentration) at 14.28%, followed by azoospermia (no sperm present) at 8.33%.

SWOT ANALYSIS



DIFFERNCE BETWEEN PRACTICAL EXPOSURE AND THEORETICAL UNDERSTANDING

·Theoretical understanding provides the foundation knowledge and concepts about the organization. But practical exposure provides real time functioning, challenges of the organization.
·Theoretical knowledge increases information, but practical exposure increases the application of the information for better outcomes.
·Practical exposure improves creativity.
·Practical exposure improves adaptability to work in challenging situations.

CHALLENGES FACED DURING INTERNSHIP

• Limited Research knowledge
• Data privacy and confidentiality
• Lack of intradepartmental coordination in the Organisation
• Lack of data analytics software knowledge
• Limited guidance from Organisation mentor
• No live projects for interns and limited access to trainings and workshops

LEARNINGS DURING INTERSHIP

·Learned about the research using secondary data
·Visual representation of data
·Data analysis with interpretation
·Introduction to SPSS software
·How to work in a government Organisation
·Collaboration of government and non-government Organisation
·India's vaccine management and cold chain logistics

SUGGESTIONS

·The Information, Education, and Communication (IEC) materials should be updated.
·Infrastructure improvements.
·Greater usage of secondary data for research.
·Frequents meeting of ethical review committee.
·Better marketing strategy for awareness about infertility clinics.
·Interdepartmental coordination

Annexure-E

Reporting Format

(Weekly)

Name of the Organisation: NIHFW

Area/ Department/ Project of Summer Internship Program: Reproductive Biomedicine

Name of the Student: Dr. Ankit Bhonsle

Roll no:1678 **Stream:** MBA Hospital and Health Management

Week no: 1 **From:** 1/05/2024 **to** 3/05/2024

Activity Done	**-DISCUSSION WITH MY MENTOR DR RAJESH SIR AND DR VIKRAM SIR ABOUT VARIOUS ONGOING PROJECTS AND TRAINING PROGRAMMES.** **- DISCUSSION WITH MY MENTOR ABOUT THE RESEARCH TOPIC TO BE TAKEN.** **- LITERATURE REVIEW FOR SEMEN ANALYSIS, INFERTILITY IN MALES AS SUGGESTED BY DR RAJESH SIR.** **-ATTENEDED DISASTER MANAGEMENT AND NATIONAL ORAL HEALTH PROGRAMME SEMINAR AT THE TECHING BLOCK** **- VISITED ADMINISTRATIVE DEPARTMENT AND SOME LABORATOIES UNDER REPRODUCTIVE BIOMEDICINE DEPARTMENT.** **-VISITED NHSRC AND MET OUR COLLEGE SENIORS AND HAD DISCUSSION ABOUT THE ORGANIZATIONAND THEIR WORK CULTURE**
Linking theory (Classroom learning) with practice at your organisation	**-LEARNED ABOUT THE NIHFW ORGANIZATION STRUCTURE, GOVERNING BODIES AND VARIOUS DEPARTMENT AS WERE TOLD ABOUT IN OUR HEALTH SYSTEM CLASSES. (BY DR SANJAY GUPTA SIR)** **-DISASTER MANAGEMENT SEMINAR, WE CAN RELATE WITH THE EPIDEMILOGY CLASSES, EX- EPIDEMIC OUTBREAK.** **-NHOP SEMMINAR AND INFERTILITY CLINIC HERE AT NIHFW, WE CAN RELATE WITH NHP CLASSES. (BY DR VARSHA TANU AND DR MAMTA CHOUHAN MAM)**

	- EHTICAL ISSUES FOR USING THE DATA, NEED PERMISSION BY THE THICAL COMMITTEE. WE CAN RELATE WITH THE EPIDEMIOLOGY CLASSES AND RESEARCH METHODS CLASSES. **-VERTICAL TYPE OF ORGANIZATION AND PROPER CHAIN OF COMMAND AT NIHFW, WE CAN RELATE WITH PRINCIPLES OF MANAGEMENT CLASSES.**
Gaps identified on the working area.	**-LACKING IN THE ESTABLISHMENT INFRASTRUCTURE AT NIHFW**
Suggestions for improvement	**NIL**
Plan for the next week.	**-RESEARCH WORK TOPIC FINALIZATION.** **-MAY VIVIST THE NEARBY UPHC FOR SEEING DATA COLLECTION WITH RESPECT TO TO ONGOING PROSTATE SPECIFIC ANTIGEN STUDIES.**

Signature of the Student

DR ANKIT BHONSLE

Approved by the IIHMR University's Mentor

On the last day of every week report in the above format should be submitted to the faculty mentor. Submission of total 8 reports in 8 weeks is compulsory. Each report should not be more than 2 pages.

Annexure-E

Reporting Format

(Weekly)

Name of the Organisation: NIHFW

Area/ Department/ Project of Summer Internship Program: Reproductive Biomedicine

Name of the Student: Dr. Ankit Bhonsle

Roll no:1678 **Stream:** MBA Hospital and Health Management

Week no: 2 **From:** 4/05/2024 **to** 12/05/2024

Activity Done	**-RESEARCH TOPIC FINALIZATION- SEMEN TREND ANALYSIS AND PREVALANCE OF INFERTILITY BY 1 YEAR LABORATORY REPORT OF PATIENTS.ACCORDING TO WHO GUIDELINES.** **- DOING LITERATURE REVIEW, WRITING INTRODUCTION RELAVANCE AND OBJECTIVES OF THE STUDY.** **-ATTENDED SEMINAR ON DIGITAL TECHNOLOGY IN NCD MANAGEMENT IN INDIA.** **-PREPARING MS EXCEL DATA SHEET FOR MONTHLY SEMEN LAB REPORTS**
Linking theory (Classroom learning) with practice at your organisation	**-RESEARCH WORK, WE CAN RELATE IT WITH RESEARCH METHODOLGY CLASSES. BY DR NEETU MAM AND DR ANOOP SIR.** **- CAN RELATE DIGITAL TECHNOLOGY SEMINAR WITH DIGITAL HEALTH MODULE.** **-CAN ALSO RELATE E SANJEEVANI TAUGHT IN THE SEMINAR WITH HEALTH SYSTEM MODULE. BY DR SANJAY GUPTA SIR**
Gaps identified on the working area.	**NIL**

Suggestions for improvement	**NIL**
Plan for the next week.	**-CONVERTING LAB REPORT INTO MS EXCEL DATA SHEETS FOR REST 9 MONTHS.** **- VISIT INFERTILITY CLINIC AND LABORATORIES.**

Signature of the Student

DR ANKIT BHONSLE

Approved by the IIHMR University's Mentor

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Annexure-E

Reporting Format

(Weekly)

Name of the Organisation: NIHFW

Area/ Department/ Project of Summer Internship Program: Reproductive Biomedicine

Name of the Student: Dr Ankit Bhonsle

Roll no:1678 **Stream:** MBA Hospital and Health Management

Week no: 3 **From:** 13/05/2024 **to** 19/05/2024

Activity Done	- **MAKING FINAL EXCEL SHEET BY DATA SCRAPING AND ARRANGING DATA MONTH WISE FOR DATA ANALYSIS.** - **MAKING TABLE, PIE CHART, BAR GRAPH OF VARIOUS VARIABLES TO BE ANALYSED.** - **WRINTING INTRODUCTION WITH CITATIONS.** - **ATTENDED ORIENTATION SESSION BY SHARAD SIR OF MCTFC CALL CENTER.LEARNED IN DETAIL WHAT THEY, HOW THEY DO AND WHOM THEY REPORT.**
Linking theory (Classroom learning) with practice at your organisation	- **DATA SORTING AND SCRAPING LEARNED IN EXCEL CLASSES.** - **CAN RELATE HOW TO WRITE AN INTRODUCTION IN RESEARCH BY RESERCH METHODOLOGY CLASSES BY DR ANOOP SIR AND DR NEETU MAM.** -
Gaps identified on the working area.	**NIL**

Suggestions for improvement	**NIL**
Plan for the next week.	- **APPLYING VARIOUS TEST TO DATA OF VARIOUS VARIBLES.** - **WRITING LITERATURE REVIEW WRTING.** - **ATTENDING ORIENTATION SESSION OF SKILL LAB BY DR GEETANJALI MAM**

Signature of the Student

DR ANKIT BHONSLE

Approved by the IIHMR University's Mentor

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Annexure-E

Reporting Format

(Weekly)

Name of the Organisation: NIHFW

Area/ Department/ Project of Summer Internship Program: Reproductive Biomedicine

Name of the Student: Dr Ankit Bhonsle

Roll no:1678 **Stream:** MBA Hospital and Health Management

Week no: 4 **From:** 20/05/2024 **to** 26/05/2024

Activity Done	- **WRITTEN INTRODUCTION, LITERATURE REVIEW.** - **DATA IS CONVERTED INTO TABLES, BAR AND PIE CHART.** - **ATTENDED SKILL LAB ORIENTATION BY DR GEETANJALI MAAM.** - **VISITED NATIONAL SKILL LAB DAKSH AT NIHFW.**
Linking theory (Classroom learning) with practice at your organisation	- **CAN RELATE WITH NHP CLASSES BY DR MAMTA MAM AND DR VARSHA TANU MAM** - **CAN RELATE WITH RESEARCH METHODOLOGY CLASSES BY DR NEETU MAM AND DR ANOOP SIR** -
Gaps identified on the working area.	- **NO LIVE PROJECTS FOR INTERN.** - **LIMITED ACCESS TO ONGOING WORKSHOPS.**

Suggestions for improvement	- **LIVE PROJECTS SHOULD BE A COMPULSORY PART FOR INTERNSHIP** - **STUDENT SHOULD BE ALLOWED TO VISIT NHSRC FOR OBSERVATION AND LEARNING.**
Plan for the next week.	- **DATA ANALYSIS** - **RESEARCH METHODOLOGY WRTING** - **ATTEND CHI ORIENTATION.**

Signature of the Student

DR ANKIT BHONSLE

Approved by the IIHMR University's Mentor

On the last day of every week report in the above format should be submitted to the faculty mentor. Submission of total 8 reports in 8 weeks is compulsory. Each report should not be more than 2 pages.

Annexure-E

Reporting Format

(Weekly)

Name of the Organisation: NIHFW

Area/ Department/ Project of Summer Internship Program: Reproductive Biomedicine

Name of the Student: Dr Ankit Bhonsle

Roll no:1678 **Stream:** MBA Hospital and Health Management

Week no: 5 **From:** 27/05/2024 **to** 02/05/2024

Activity Done	- **WRITING METHODOLOGY.** - **ATTENDED CENTER FOR HEALTH INFORMATICS ORIENTATION BY MR GAURAV SHARMA.** - **ATTENTED LMIS ORIENTATION BY DR D.K YADAV.** - **ATTENDED NCCVMRC ORIENTATION BY PROFESSOR RENU SHAHRAWAT.**
Linking theory (Classroom learning) with practice at your organisation	- **CAN RELATE WITH NHP CLASSES BY DR MAMTA MAM AND DR VARSHA TANU MAM** - **CAN RELATE WITH RESEARCH METHODOLOGY CLASSES BY DR NEETU MAM AND DR ANOOP SIR** - **CAN RELATE WITH DIGITAL HEALTH CLASSES.** - **CAN RELATE WITH HEALTH CARE DELIVERY SYSTEM CLASSES BY DR SANJAY GUPTA SIR**
Gaps identified on the working area.	- **NIL**

Suggestions for improvement	- **NIL**
Plan for the next week.	- **DATA ANALYSIS** - **RESEARCH METHODOLOGY WRTING** - **INFERTILITY CLINIC VISIT**

Signature of the Student

DR ANKIT BHONSLE

Approved by the IIHMR University's Mentor

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Annexure-E

Reporting Format

(Weekly)

Name of the Organisation: NIHFW

Area/ Department/ Project of Summer Internship Program: Reproductive Biomedicine

Name of the Student: Dr Ankit Bhonsle

Roll no:1678 **Stream:** MBA Hospital and Health Management

Week no: 6 **From: 03**/05/2024 **to** 09/05/2024

Activity Done	- **Data analysis and making line, bar, and pie chart.** - **Attended distance learning session.** - **Attended hindi kaaryashaala session.** - **Visited infertility clinc and their laboratory.**
Linking theory (Classroom learning) with practice at your organisation	- **Research methodology by dr neeetu mam and dr Anoop sir.** - **Nhp classes by dr mamta and dr varsha mam**
Gaps identified on the working area.	**NIL**

Suggestions for improvement	**NIL**
Plan for the next week.	- **Result writing**

Signature of the Student

DR ANKIT BHONSLE

Approved by the IIHMR University's Mentor

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Annexure-E

Reporting Format

(Weekly)

Name of the Organisation: NIHFW

Area/ Department/ Project of Summer Internship Program: Reproductive Biomedicine

Name of the Student: Dr Ankit Bhonsle

Roll no:1678 **Stream:** MBA Hospital and Health Management

Week no: 7 **From: 10**/05/2024 **to** 16/05/2024

Activity Done	- **Results and discussions writing** - **Descriptive statistics use to analyse various semen parameter**
Linking theory (Classroom learning) with practice at your organisation	- **Research methodology by dr neeetu mam and dr Anoop sir.** - **Nhp classes by dr mamta and dr varsha mam**
Gaps identified on the working area.	**NIL**

Suggestions for improvement	**NIL**
Plan for the next week.	- **Recommendations and limitations writing** - **Thesis printing and Final submission of the thesis**

Signature of the Student

DR ANKIT BHONSLE

Approved by the IIHMR University's Mentor

On the last day of every week report in the above format should be submitted to the faculty mentor. Submission of total 8 reports in 8 weeks is compulsory. Each report should not be more than 2 pages.

Annexure-E

Reporting Format

(Weekly)

Name of the Organisation: NIHFW

Area/ Department/ Project of Summer Internship Program: Reproductive Biomedicine

Name of the Student: Dr Ankit Bhonsle

Roll no:1678 **Stream:** MBA Hospital and Health Management

Week no: 8 **From: 17**/06/2024 **to 23**/06/2024

Activity Done	- **Written discussions, limitations conclusion of the study.** - **Finalise the report** - **Plagiarism check** -
Linking theory (Classroom learning) with practice at your organisation	- **Research methodology by dr Neetu mam and dr Anoop sir.** - **Plagiarism checking in principles of management class by dr Alok Mathur sir**
Gaps identified on the working area.	**NIL**

Suggestions for improvement	**NIL**
Plan for the next week.	- **Printing of the final thesis document**

Signature of the Student

DR ANKIT BHONSLE

Approved by the IIHMR University's Mentor

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Annexure-E

Reporting Format

(Weekly)

Name of the Organisation: NIHFW

Area/ Department/ Project of Summer Internship Program: Reproductive Biomedicine

Name of the Student: Dr Ankit Bhonsle

Roll no:1678 **Stream:** MBA Hospital and Health Management

Week no: 9 **From: 24**/06/2024 **to 28**/06/2024

Activity Done	**Submission of the report** **Final signature by the mentor** **Submitted printed and signed report to the mentor, academics**
Linking theory (Classroom learning) with practice at your organisation	**NIL**
Gaps identified on the working area.	**NIL**

Suggestions for improvement	**NIL**
Plan for the next week.	**NIL**

Signature of the Student

DR ANKIT BHONSLE

Approved by the IIHMR University's Mentor

On the last day of every week report in the above format should be submitted to the faculty mentor. Submission of total 8 reports in 8 weeks is compulsory. Each report should not be more than 2 pages.

NIHFW

The National Institute of Health and Family Welfare (NIHFW) was established on 9th March,1977 by the merger of two national level institutions, viz. the National Institute of Health Administration and Education (NIHAE) and the National Institute of Family Planning (NIFP). The NIHFW, an autonomous organization, under the Ministry of Health and Family Welfare, Government of India, acts as an 'apex technical institute' as well as a 'think tank' for the promotion of health and family welfare programmes in the country. The Institute addresses a wide range of issues on health and family welfare from a variety of perspectives through the departments of Communication, Community Health Administration, Education and Training, Epidemiology, Management Sciences, Medical Care and Hospital Administration, Population Genetics and Human Development, Planning and Evaluation, Reproductive Bio-Medicine, Statistics and Demography and Social Sciences.

VALUES AND PRIORITY AREAS

Core Values

- Excellence
- Equity
- Convergence
- Market Orientation
- Sustainability

Thrust Areas

- Health & related Policies
- Public Health Management
- Health Sector Reforms
- Health Economics & Financing
- Population Optimisation
- Reproductive Health
- Hospital Management
- Communication for Health
- Training Technology in Health

VISION AND MISSION

VISION

NIHFW is to be seen as an Institute of global repute in public health & family welfare management.

MISSION

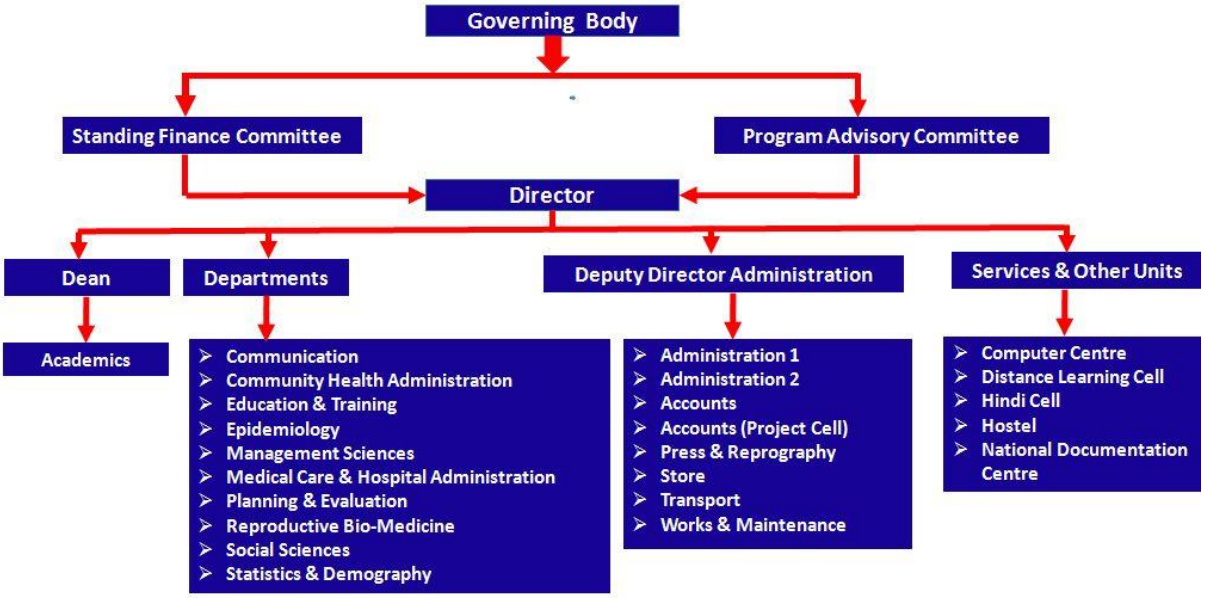
To act as think tank, catalyst & innovator for management of public health and related health & family welfare programmes by pursuing multiple functions of Education & Training,

Research & Evaluation, Consultancy & Advisory services as well as provision of specialised services through inter-disciplinary teams.

OBJECTIVES

The National Institute of Health and Family Welfare (NIHFW) was established on 9th March 1977 by the merger of two national level institutions, viz. the National Institute of Health Administration and Education (NIHAE) and the National Institute of Family Planning (NIFP). The NIHFW, an autonomous organization, under the Ministry of Health and Family Welfare, Government of India, acts as an 'apex technical institute' as well as a 'think tank' for the promotion of health and family welfare programmes in the country.
To become a global healthcare policy, research and management Institute.
To promote health care facility, training and function as a catalyst for achievement Health for All in the country.

ORGANIZATION CHART/ ORGANOGRAM



LIVE PROJECTS

- PC & PNDT - Nodal Agency
- Training Management Information System (TMIS)
- National Cold Chain and Vaccine Management Resource Centre (NCCVMRC)
- National Skills Lab (DAKSH)
- SAKSHAM: LMIS
- Center for Health Informatics (CHI)
- National Technical Advisory Group on Immunization (NTAGI)

DEPARTMENTS

- Communication
- Community Health Administration
- Education and Training
- Epidemiology
- Medical Care and Hospital Administration
- Management Sciences
- Planning and Evaluation
- Reproductive Biomedicine
- Statistics and Demography
- Social Sciences

NHSRC –

Established in 2007, the National Health Systems Resource Centre, a premier Think Tank for MoHFW, is mandated to assist in policy and strategy development in the provision and mobilization of technical assistance to the states and in capacity building for the Ministry of Health. National Health Systems Resource Centre (NHSRC) has been set up under the National Rural Health Mission (NRHM) of Government of India to serve as an apex body for technical assistance. Established in 2006, the National Health Systems Resource Centre's mandate is to assist in policy and strategy development in the provision and mobilization of technical assistance to the states and in capacity building for the Ministry of Health and Family Welfare (MoHFW) at the Centre and in the states.

The goal of this institution is to improve health outcomes by facilitating governance reform, health systems innovations and improved information sharing among all stake holders at the national, state, district and sub-district levels through specific capacity development and convergence models. It has a 23 member Governing Body, chaired by the Secretary, MoHFW, Government of India with the Mission Director, NRHM as the Vice Chairperson of the GB and the Chairperson of its Executive Committee. Of the 23 members, 14 are ex-officio senior health administrators, including four from the states. Nine are public health experts, from academics and Management Experts. The Executive Director, NHSRC is the Member Secretary of both the Governing body and the Executive Committee. NHSRC's annual governing board meet sanctions its work agenda and its budget. The NHSRC currently consists of seven divisions – Community Processes, Healthcare Financing, Healthcare Technology, Human Resources for Health, Public Health Administration, Knowledge Management Division, Quality Improvement in Healthcare the NHSRC has a branch office in the north-east region of India.

The Northeast Regional Resource Centre (NERRC) has functional autonomy and implements a similar range of activities. Other than Northeast Regional Resource Centre (NERRC), there is no other regional office of NHSRC in any State of India or outside India territory.

COMPILED WEEKLY REPORT (1 MAY 2024 – 28 JUNE 2024)

Name of the Organisation: NIHFW

Area/ Department/ Project of Summer Internship Program: Reproductive Biomedicine

Name of the Student: Dr Ankit Bhonsle

Roll no:1678 **Stream:** MBA Hospital and Health Management

Week no: 1 TO 9 **From: 1**/05/2024 **to 28**/06/2024

ACTIVITY DONE: On 1 may we reported to the academics for documentation process. After that we were asked to directly report to the assigned mentor.

An initial briefing was given by the organization mentor, Dr Rajesh Kumar (Associate professor) in the department of reproductive biomedicine at NIHFW. He told me briefly about the department of RBM, ongoing training and projects. Later he asked me to give my introduction and what are the areas of my interest. Afterwards he suggested to me that he will provide me secondary data of semen in the form of laboratory report , if I'm interested in writing a paper on the same topic. Later that day he introduced me to Dr Vikram Singh sir for future assistance in the internship programme. I discussed it with my IIHMR mentor Dr Anupam Mehrotra sir about the research topic.

After further discussion ,Dr Rajesh sir allotted me the research topic, **Prevalence of Abnormal Semen Parameters in Men Attending Infertility Clinic in Delhi: A Retrospective Cross-Sectional Study** and asked me to do thorough literature review for the same and make notes of the findings of the study and read WHO laboratory manual for semen analysis.

After a few days Dr Vikram sir provided me the data of semen report for four months starting from 1 January 2023 to 30 April 2023.I asked me to convert it into the excel sheet for further analysis.

After thorough reading of the various papers, sir asked me to write a synopsis for the thesis. When the synopsis got approved, he told me to carry on with the research.

Below mentioned activities were performed to write the thesis.

1. Writing the introduction with proper references.
2. Writing a literature review with proper references.
3. Writing the Relevance ,aim and objectives of the study.
4. Writing research methodology.
5. Data analysis and table and bar chart was prepared with excel and prism.
6. Writing the results of the study.
7. Writing the discussions of the study.
8. Writing the limitations of the study.
9. Writing the conclusions and recommendations of the study

10. Writing the references.(Vancouver style was used)

Each step was proceeded after the approval of the mentor. After final approval thesis was printed and signed ,submitted to the mentor and academics.

INFERTILITY CLINIC AND LABORATORIES: With permission from my mentor dr Rajesh sir, I visited the infertility clinic of both genders . I also visited the laboratories and observed ,how the detailed semen analysis is performed and how lab reports are made.

Dr Vikram sir explained in brief about the ongoing prostrate specific antigens studies in elderly patients in nearby UPHC.

He also briefed me about the mission KAYA KALP, FSSAI AND CDSCO . Dr Rajesh sir the nodal officer and in-charge in these projects and programmes.

Visited NHSRC and interacted with IIHMR seniors about the organization work and culture.

SEMINAR ATTENDED:

1. Disaster Management
2. National oral health progamme,
3. Digital Technology in NCD Management.,
4. Hindi Karyashala.

ORIENTATION PROGRAMME FOR SUMMER INTERN:

MCTFC CALL CENTRE: The MCTFC (Mother and Child Tracking Facilitation Centre) Call Centre at the National Institute of Health and Family Welfare (NIHFW) is a vital support facility for maternal and child health programs in India. It serves as a centralized communication hub, providing comprehensive information, guidance, and assistance to health workers, beneficiaries, and the public. The call Centre disseminates accurate and timely information on maternal and child health services, offers guidance and counseling to expectant mothers and new parents, and assists health workers with updates and support for their activities. It resolves queries, directs the public to appropriate health services, and collects data for monitoring health programs. By facilitating the implementation of health initiatives and providing emergency support, the MCTFC Call Centre ensures that maternal and child health services reach those in need efficiently, significantly contributing to improved health outcomes in India.(Conducted by Mr. Sharad sir)

SKILL LAB: The National Skill Lab at the National Institute of Health and Family Welfare (NIHFW) serves as a pivotal training and capacity-building center aimed at enhancing the competencies of healthcare professionals across India. Established with the vision of improving public health outcomes, the lab offers a range of simulation-based training programs that cover essential skills in maternal and child health, family planning, and reproductive health, among other areas. By providing hands-on training in a controlled environment, the lab enables healthcare workers to practice and refine their skills, thereby reducing errors and improving patient care quality. The lab is equipped with state-of-the-art facilities and staffed by experienced trainers, ensuring that the participants receive comprehensive and up-to-date training. Through its focus on skill development and

continuous education, the National Skill Lab at NIHFW plays a crucial role in strengthening the healthcare workforce and advancing the nation's health agenda. .(Conducted by Dr Geetanjali mam)

CHI: The Centre for Health Informatics (CHI) at the National Institute of Health and Family Welfare (NIHFW) is a dedicated hub for advancing the use of information technology in the health sector. The CHI focuses on developing, implementing, and promoting digital health initiatives that enhance healthcare delivery and management. It plays a pivotal role in integrating health informatics into national health programs, aiming to improve data collection, analysis, and dissemination processes. The center also emphasizes capacity building by offering training programs and resources to healthcare professionals, enabling them to effectively utilize health information systems. Through its efforts, the CHI at NIHFW strives to create a more efficient, transparent, and patient-centric healthcare system, thereby contributing to the overall improvement of public health in India. .(Conducted by Mr. Gaurav Sharma sir)

LMIS: Learning Management Information System (LMIS) – SAKSHAMSAKSHAM is an innovative online learning and training initiative developed by the Ministry of Health and Family Welfare (MoHFW) to provide essential training for frontline workers during the COVID-19 pandemic through the Diksha Portal. Building on this experience, the MoHFW created a dedicated portal for more tailored training solutions. SAKSHAM facilitates online learning and medical education for students, offering a robust platform for continuous professional development. It provides comprehensive online training programs for all health professionals under the MoHFW. The Training Management Information System (TMIS), initially used to record data from online training sessions across states, is now integrated with the Learning Management Information System (LMIS) to track both online and offline training activities. LMIS currently offers two types of courses: Public Health Courses, with around 200 offerings, and Clinical Courses, with over 100 offerings in collaboration with the National Medical College Network (NMCN). SAKSHAM is built on the MOODLE platform. (Conducted by Dr D.K Yadav sir)

NCCVMRC: The National Cold Chain and Vaccine Management Resource Centre (NCCVMRC) is central to India's vaccine management and cold chain logistics. Established in 2013 through a collaboration between the Ministry of Health & Family Welfare (MoHFW), NIHFW, and UNICEF, and formally inaugurated in 2015, it operates under the NIHFW's Immunization Nodal Officer with technical support from UNICEF. NCCVMRC enhances the skills and knowledge of program managers and policymakers, serving as a resource center for research, training, and policy development in immunization supply chains. The center ensures vaccines are stored and transported within the mandatory temperature range using walk-in coolers, freezers, and icepack devices. It is responsible for forecasting vaccine needs, assessing and improving cold chain systems, and managing spare parts. The infrastructure includes state, regional, and district vaccine stores, utilizing air and road transport for vaccine distribution. The visit underscored NCCVMRC's critical role in ensuring vaccine efficacy and safety, contributing significantly to the success of India's immunization programs. .(Conducted by Prof.Renu Shahrawat mam)

DLC: The Distance Learning Cell at the National Institute of Health and Family Welfare (NIHFW) is a key initiative designed to enhance the reach and impact of health education and training across India. This cell leverages technology to provide accessible, flexible, and high-quality education to healthcare professionals, regardless of their geographic location. Through various online courses, webinars, and digital resources, the Distance Learning Cell facilitates continuous learning and professional development in critical areas such as public health, family welfare, and health management. The programs are designed to be interactive and engaging, ensuring that participants can effectively apply the knowledge and skills acquired in their professional practice. By bridging the gap between healthcare professionals in remote areas and the latest advancements in health education, the Distance Learning Cell at NIHFW plays a crucial role in building a more competent and responsive health workforce, ultimately contributing to improved health outcomes nationwide. (Conducted by Dr Dutta sir)

LINKING THEORY (CLASSROOM LEARNING) WITH PRACTICE AT YOUR ORGANIZATION:

1. Research methodology: Entire thesis writing staring from title of the study to conclusions was based on the learning from the classes conducted by Dr Neetu purohit mam and Dr Anoop Khanna
2. Epidemiology : Disaster management , Ethical issues(Dr Anupam Mehrotra)
3. Health care delivery system: Nihfw, organization structure governing bodies, and various departments , e sanjeevani (Dr Sanjay Gupta)
4. Business Communication and Behavior Change Communication: How to behave in an organization, writing email and communication with the mentor.(Dr Alok Mathur and Dr Neetu Purohit)
5. Organization Behaviour:Better understanding of how organization works, professional behaviours.(Dr Neetu Purohit)
6. Principles of management: Vertical type of organization, Plagiarism (Dr Alok Mathur)
7. National health programmes:RMNCHA+, NOHP.(Dr Mamta Chauhan and Dr Varsha Tanu)
8. Digital health : Digital technology seminar (Dr Swapnil)
9. Biostatistics: mean median mode standard deviation range calculation for dependent variables.(Dr Jp Singh)
10. Excel classes: Data arrangement and analysis , Making table and bar chart (Dr Anupam Mehrotra)

Apart from the classroom learning my IIHMR mentor Dr Anupam Mehrotra sir guided and helped in each step of my summer internship programmes.

GAPS IDENTIFIED IN THE WORKING AREA:

1. The infrastructure is lacking.
2. There are no live projects available for interns.
3. Access to ongoing workshops is limited.

4. Secondary data for research is difficult to obtain.
5. Additionally, there has been no orientation or official visit to the National Health Systems Resource Centre (NHSRC).
6. The Information, Education, and Communication (IEC) materials are also outdated.

SUGGESTIONS FOR THE IMPROVEMENT:

NIHFW-

1. Infrastructure improvements.
2. Inclusion of live projects for interns.
3. Enhanced access to ongoing training workshops.
4. Greater availability of secondary data for research.
5. Compulsory NHSRC visits for interns.
6. The Information, Education, and Communication (IEC) materials should be updated.

IIHMR UNIVERSITY:

1. At least one case study, articles or research paper publication should be made compulsory for the students as a part of the MBA curriculum.
2. Live projects should be given to the students in their first year for better understanding of the domain.
3. Duration of internship can be increased for the students who are doing research and projects.
4. Research methodology classes should contain more practical classes for better understanding.

Summary of the thesis report prepared during summer internship programmes:

A thesis entitled "**Prevalence of Abnormal Semen Parameters in Men Attending Infertility Clinic in Delhi: A Retrospective Cross-Sectional Study**" was pursued during the internship duration, under the supervision of Dr. Rajesh Kumar, Associate Professor, Department of Reproductive Biomedicine, National Institute of Health and Family Welfare, New Delhi.

ABSTRACT

Background: A disorder of the reproductive system known as infertility is characterized by the inability to conceive a healthy child after 12 months or more of consistent, unprotected sexual activity. According to the World Health Organization, 60–80 million couples worldwide struggle with infertility. Infertility affects 15%–20% of the general population. The male factor accounts for 20%–40% of this.

Materials and method: This study will utilize existing laboratory reports of semen analysis (according to WHO guidelines) conducted from January 1, 2023, to April 30, 2023. These reports are obtained from infertility clinics at NIHFW Munirka, Delhi, with permission from concerned authorities and strict adherence to ethical guidelines. These samples were collected either through masturbation in a dedicated sample collection room or using clean plastic containers. The methods and standards adhered to were based on the World Health Organization (WHO) laboratory manual for examining and processing human semen, 2021 edition. Semen parameters like semen volume, liquefaction time, sperm concentration, motility, vitality, and morphology were evaluated.

Results: A total of 504 males were investigated in this study. The age range of males started from 21 to 52 years, with an average age of 31.492 ± 4.727 years. In this study, 77.57% of cases of the severe form of semen abnormality (including only azoospermia, oligospermia, and asthenospermia) and 22.42% of cases of normal semen were found. The most common abnormalities found were asthenospermia (reduced sperm motility) (46.725%), oligospermia (reduced sperm concentration) (22.42%), and oligoasthenospermia (reduced motility and sperm concentration) (14.28%), followed by azoospermia (no sperm present) (8.33%).

Conclusions: In this study, the most common abnormality found was asthenospermia (reduced sperm motility) (46.825%). The maximum number of males were present in the age group 31 to 35 years (192). This underscores the importance of routine semen analysis in assessing male infertility and guiding appropriate treatment strategies

Keywords: Infertility, Semen Analysis, Azoospermia, Oligospermia, Asthenospermia,

Signature

Student: Dr Ankt Bhosle

Signature

Mentor: Dr Anupam Mehrotra