AN ANALYSIS OF MEDICAL CONDITIONS IMPACTING FITNESS IN FEMALE AIRCREW OF THE INDIAN AIR FORCE

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SCOPE

• INTRODUCTION
• AIM OF THE STUDY
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INTRODUCTION

Women aviators inducted into Indian Air Force in 1993

First detailed analysis of medical fitness in serving women aircrew of IAF
AIM

• TO ANALYSE MEDICAL CONDITIONS IMPACTING FITNESS TO FLY IN FEMALE AIRCREW OF IAF

• TO COMPARE LOW MEDICAL CATEGORY/CLASSIFICATION TRENDS WITH FEMALE GROUND DUTY AND MALE AIRCREW OFFICERS
MATERIAL & METHODS

• PERIOD OF STUDY: OCT 2015- JAN 2016

• DATA SOURCE: MEDICAL RECORDS/ DATABASE AT AIR HQs

• STUDY POPULATION:
  ➢ ALL SERVING WOMEN AIRCREW OF THE INDIAN AIR FORCE
  ➢ NUMBER: 108
  ➢ AGE: 22-40 YRS
  ➢ STREAM: TRANSPORT, HELICOPTER, NAVIGATION (NO FIGHTER PILOTS)
MATERIAL & METHODS

DATA ANALYSIS UNDER FOLLOWING HEADS:

✓ PERCENTAGE OF FEMALE AIRCREW IN LOW MEDICAL CATEGORY/CLASSIFICATION

✓ LEADING CAUSES OF MEDICAL UNFITNESS

✓ AGE WISE DISTRIBUTION OF DISABILITY

✓ COMPARISON OF UNFITNESS TRENDS IN FEMALE AIRCREW vis a vis THOSE IN FEMALE GROUND DUTY OFFICERS AND MALE AIRCREW OFFICERS
MATERIAL & METHODS

STATISTICAL ANALYSIS

▪ SPSS VERSION 21
▪ CHI SQUARE TEST
▪ P<= 0.05 CONSIDERED STATISTICALLY SIGNIFICANT

LIMITATIONS OF THE STUDY

▪ SMALL SAMPLE SIZE (ONLY 108 ON STRENGTH)
▪ LACK OF ARCHIVAL/ RETROSPECTIVE DATA
RESULTS

FEMALE AIRCREW

N= 23
(21.3%)

N=85
(78.7%)
LEADING CAUSES OF MEDICAL UNFITNESS: FEMALE AIRCREW

- Pregnancy: 34.78%
- Endocrine: 17.4%
- PIVD: 13%
- Injuries: 13%
- Anaemia: 17.4%
- Others: 13%
AGE WISE DISTRIBUTION OF LOW MED CATEGORY (LMC) : FEMALE AIRCREW

50% 20 to 30 yrs

50% 30+ to 40 yrs
LMC TRENDS IN FEMALE AIRCREW VS FEMALE GROUND DUTY OFFICERS

➢ PERCENTAGE OF LOW MED CATEGORY (LMC) FEMALE GROUND DUTY OFFRS= 15.63%

➢ DIFFERENCE WITH FEMALE AIRCREW STATISTICALLY NOT SIGNIFICANT (p=0.121)

➢ LEADING CAUSE OF MEDICAL UNFITNESS= PREGNANCY (50.21%), FOLLOWED BY ENDOCRINE DISORDERS & OBESITY, 14% EACH

➢ AGE WISE DISTRIBUTION OF DISABILITY:
  ➢ 20-30 yrs = 36.8%
  ➢ +30-40 yrs = 49.1%
  ➢ +40-55 yrs = 14.1%
LMC TRENDS IN FEMALE AIRCREW VS MALE AIRCREW OFFICERS

➢ DIFFERENCE WITH MALE AIRCREW (ACROSS ALL AGE GROUPS) STATISTICALLY NOT SIGNIFICANT (p=0.113)

➢ HOWEVER WHEN COMPARED TO SIMILAR AGE GROUP (20-40 yrs), HIGHER PERCENTAGE OF FEMALE AIRCREW ARE UNFIT AND THIS IS STATISTICALLY SIGNIFICANT (p= 0.0015)

➢ LEADING CAUSES OF MEDICAL UNFITNESS IN MALE AIRCREW: LIFE STYLE DISEASES (HYPERTENSION (15.6%), DM TYPE 2 (10%))
WOMAN AVIATORS ARE SUBJECT TO MORE TEMPORARY RESTRICTIONS FROM FLYING DUTIES

THIS TREND IS SIGNIFICANT IN THE AGE GROUP OF 22-40 YRS WHEN MAXIMUM ACTIVE MILITARY FLYING TAKES PLACE

THE LEADING CAUSE OF MEDICAL UNFITNESS IS PREGNANCY (35%), A PHYSIOLOGICAL PHENOMENON, FOLLOWED BY ENDOCRINE CAUSES & PIVD
ANALYSIS/ DISCUSSION

✓ FEMALE AIRCREW IN THE IAF ARE PLACED IN A NON FLYING CATEGORY AS SOON AS PREGNANCY IS CONFIRMED (SIMILAR TO MANY OTHER AIR FORCES THE WORLD OVER)

✓ THEREFORE, AVERAGE PERIOD OF OPERATIONAL NON- AVAILABILITY DUE TO EACH NORMAL PREGNANCY & SUBSEQUENT MATERNITY LEAVE IS 12-15 MONTHS
ANALYSIS/ DISCUSSION

• IN THE US, PREGNANCY WHILE IN AN ‘ACTIVE FLYING STATUS’, HAS BEEN MINIMAL

• FEMALE AIRCREW CAN ALSO REQUEST A WAIVER TO CONTINUE FLYING UP TO 24 WKS OF PREGNANCY

• DIFFERENT SOCIO-CULTURAL CONTEXT IN INDIA AND OTHER ASIAN COUNTRIES:
  ❖ ASIAN WOMEN STILL GENERALLY FACE SIGNIFICANT SOCIETAL PRESSURE TO MARRY AND BEAR CHILDREN YOUNG — AN IMPERATIVE AT ODDS WITH THE GRUELING TRAINING AND DUTIES REQUIRED OF A PILOT.
ANALYSIS/ DISCUSSION

VARIOUS REASONS FOR INDUCTION OF FEMALE MILITARY AIRCREW DESPITE PATRIARCHAL VALUES & SOCIO CULTURAL OBSTACLES:

- Desire to expand the pool of motivated and well-educated personnel esp in countries with small populations like Japan, Singapore
- Transformative, political act in the face of persistent gender inequality.
- Nationalistic and patriotic sentiments
- Government’s aspirations to modernise/ Symbols of a state’s modernity eg in Afghanistan
- Pressure to ‘keep up’ with inclusion of females in each other’s militaries.
- Modern fighters require greater technical and analytical skills vs requirement of greater physical strength and stamina of older generation aircraft
North American and European air arms began inducting female combat pilots in the 1990s. Today, nearly one-fifth of the active-duty U.S. Air Force is female — the highest percentage of any U.S. military service. However, out of 62,500 female personnel, there are only 665 pilots, of which 100 are fighter pilots.

Pregnancy and the possibility of foetal damage in the early stages of pregnancy (before diagnosis of pregnancy) appears to be perhaps the biggest single medical concern in allowing women unrestricted access to all aviation/space related careers (5).
RECOMMENDATIONS

✓ CONTINUED ANALYSIS OF UNFITNESS/ DISEASE STATISTICS AND TRENDS IN WOMEN AIRCREW

✓ FORMULATION OF SUITABLE HR AND TRAINING POLICIES, IN VIEW OF THEIR UNIQUE PHYSIOLOGICAL REQUIREMENTS

✓ BETTER MENTORING AND COUNSELLING OF FEMALE AIRCREW WHILE IN ACTIVE FLYING PHASE

✓ RIGHT BALANCE BETWEEN GENDER ASPIRATIONS AND OPERATIONAL REQUIREMENTS OF ANY AIR FORCE
CONCLUSION

❖ AIR FORCES MUST UNDERSTAND THE BACKGROUND AND CONTEXT OF THE HEALTH OF WOMEN IN MILITARY AVIATION AND SUPPORT RESEARCH EFFORTS TO ADDRESS THEIR HEALTH ISSUES, LEADERSHIP CHALLENGES AND UNIQUE MEDICAL CONCERNS.

❖ THERE MUST BE A SUSTAINED INSTITUTIONAL EFFORT FOCUSED NOT ONLY ON WOMEN’S HEALTH RESEARCH BUT ALSO POLICY, IN ORDER TO IDENTIFY GAPS AND SOLUTIONS SO AS TO SUCCESSFULLY INTEGRATE WOMEN AIRCREW FULLY INTO COMBAT ASSIGNMENTS.
DISCLAIMER

• VIEWS/OPINIONS EXPRESSED ARE PURELY THE AUTHOR’S & DO NOT REFLECT THE ORGANISATION’S

• NO CONFLICT OF INTEREST


REFERENCES


REFERENCES


THANK YOU!

NAMASTE!  KHOB KHUN KHA!