

Gender Variance and Deployment of Women in Combat: An Overview

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Abstract Military is a profession which is mostly dominated by men. Often the words like combat, war and bravery are used for men folk. However, the scenario has changed in last few decades and women have also been commissioned in the forces in many countries. Despite the induction of women in forces they are mostly assigned desk jobs and not taken for combat role or command positions. Since their induction, women are having only 15% or less representation in forces worldwide. They continue to strive to achieve professional competence in the field. Women today are excelling in every field but military is a field where their potential has not been recognised yet. The current paper presents a review of relevant studies in order to investigate the root of gender variance in forces and provides an in-depth understanding into the issues and challenges in achieving gender equality in forces. Various psychological theories along with supporting studies have been discussed to critically analyse the pros and cons of employing women in combat role. It is recognized that armed forces need the fittest and finest, irrespective of gender. Hence, a competency based approach in deployment for combat role is recommended as it will give women equal opportunity to prove their competency and serve in combat role.

Keywords Military, Gender, Combat, Armed forces, and Gender Variance

1. Introduction

Gender is one of the most prominent aspects of an individual's identity which refers to the biological categories of male and female. Gender differentiates a person by his or her appearance, interests, activities, interpersonal relationships and choice of careers (Miller C. F., 2016). Males and Females are unique in many ways. The biological phenotypes and psychological traits are the main reason behind this uniqueness. In addition to that, social surroundings and environmental factors also influence gender-based behavior remarkably. Though gender is interplay of biology, psychology, social and environmental factors, the fundamental uniqueness in behavior between the genders are rooted in biology of an individual (Ngun, T. C. & et al., 2011). Our biology affects our behaviour and is responsible for gender specific behaviour. The debate that men and women are equal in terms of their skills, aptitude and potential reflects our progressive thinking, but science has proved that our biology has not changed much over hundreds of years (Pease, A. & Pease, B. 2001).

Considering the universal importance of gender in an individual's life, various theories have emerged to specify

gender variance in the span of development. These theories have been majorly classified in three clusters namely-biological, social and cognitive. To include all three aspects Unger (1990) defined gender as "*the cognitive and perceptual mechanisms by which biological differentiation is translated into social differentiation*".

In order to analyse how gender influences career choice and occupational opportunity of an individual, it is important to understand how gender development and differentiation takes place through various clusters.

2. Theories of Gender Development & Gender Specific Behaviour

a. Evolutionary Perspective:

Evolutionary theory reveals the process of development of gender specific roles. Our ancestor men worked as lunch chaser and went for hunting whereas women stayed at home as nest defender and nourished offspring. For hunting men needed to be aggressive and have good spatial and navigation skills to follow and chase the hunt. Women needed to be cautious to prevent possible danger at home. Since women were dependent on men for food they needed a partner who could hunt well and feed family. Hence, women became choosy in selecting a partner who was taller and stronger because such males were better protector and

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Received: Feb. 16, 2021; Accepted: Mar. 29, 2021; Published: Apr. 15, 2021

Published online at <http://journal.sapub.org/ijap>

providers. Mate preference resulted in competition and aggressive behaviour among males.

Evolutionists emphasize that the survival of the human species is dependent on successful reproduction and therefore selecting physically healthy partner was required for evolution. The evolutionary process itself has led to the psychological gender differences in cognitive process because the behaviours needed for successful reproduction required gender specific roles (Geary 1998; Buss 2000).

The strategies needed for successful hunting has led the visual system of men to be more sensitive in tracking the movements in spatial objects. This explains why boys prefer toys which elicit motion, for example – cars and toy tank. In the process of evolution, men acquired strong spatial ability as they needed these skills at hunting, on other hand these abilities were less important for women who stayed at home to take care of children (Eals and Silverman, 1992). The skills needed for taking care of offspring and search widely for plant food resulted in females to have high sensitivity to the features of objects which results in their toy preferences for dolls and colours (Alexander, 2003).

These evolutionist perspectives have been criticised for its failure to take account of individual differences in gender-based behaviour. Subsequently, biological theorists tried to give more proximal biological explanation of gender development that are of testable hypothesis.

b. Biological Perspective:

According to biological theorists, all the physical and psychological attributes including external observable behaviours are due to a person's biological structure which is distinguished by genes, chromosomes and hormones.

Studies have been conducted to investigate the role of chromosome and hormones in development of gender and gender specific/based behaviour. It has been found that manipulating genes on Y chromosome in rodents affects the brain and gender based behaviour in specific (Lonstein, J.S. & De Vries, G.J., 2000). Studies on patients with Turner Syndrome reveal that it partly influences gender differences in spatial ability and social skills (Skuse, 1997). Turner syndrome is caused by missing or partial missing of X chromosome and occurs only in females.

The role of hormones in development of gender specific behaviour has been examined by studying cases of Congenital Adrenal Hyperplasia or CAH (Berenbaum, 2002). CAH is a condition in which the affected person is exposed to excessive androgens during prenatal development. It was found that compared to girls without CAH, girls with CAH displayed higher interest in masculine-typed toys, stronger spatial abilities, more aggressive behaviour and showed less interest in babies. This proved that higher exposure to androgen in females (naturally or by manipulation) may change their gender-based behaviour.

c. Psychological Perspective:

Psychological theories provide scientific explanation of the gender – based behaviour with supportive studies.

i. Learning Theories

Traditional learning theories view gender differences as a by-product of the differential treatment that girls and boys receive in their development span. Operant conditioning explains that boys and girls develop gender typed behaviours because they are constantly reinforced or punished for displaying behaviours that are accord to gender norms. For example, boys are reinforced when they play with masculine typed toys like car, but are punished when they show preferences for feminine typed toys like dolls.

Social Cognitive theory believes that observational learning one of the powerful mechanisms by which children learn about gender typed behaviour and conducts (Bussey & Bandura, 1999). Gender based behaviour patterns are developed through modelling, experiencing the consequences of gender typed behaviours and by direct teaching of gender roles. With these exposures children tend to accumulate the outcome expectancies, self- efficacy beliefs and self- sanctions which directly results in gender typed behaviours.

ii. Cognitive theories

Cognitive theorist Kohlberg (1966) explained that children learn about gender when they get motivated to match their behaviour to gender norms in which the belief about gender is permanent and immutable. Gender constancy takes place in three stages - Gender identity, Gender stability and Gender consistency.

Gender schema theory proposes that individuals develop gender schemas through the knowledge and attitude about the gender. Development of gender schemas is caused by the universal gender messages in environment. The learnt behaviour emerges as self- concept & self-esteem and gets assimilated in their gender schema (Sandra Bam, 1981).

Though theorists of various sphere explained how gender typed behaviour is formed in a particular gender, they failed to stress on individual differences. The recent cognitive theory tried to explain why one gender develops interest in accumulating the quality of the other gender which is known as Dual Pathway Gender Schema Theory proposed by Lynn Liben & Rebecca Bibler (2002). The theory highlights the role of individual differences in two pathways where they illustrate the relationship between the attitude and behaviour. These two pathways are namely Attitudinal Pathway Model (APM) and Personal Pathway Model (PPM). APM says that attitude towards gender predicts the behaviour. For example, if a girl believes that a doll is for girl and a truck is for boy, she will prefer doll over truck. But, on other hand PPM suggests that personal interest affect attitudes and behaviour. Wherein if a boy had an opportunity to play with a kitchen set and enjoyed it, he might regulate his gender schema as kitchen sets are for boys and girls.

After a careful examination of various theories on gender development it is clear that though the role of biological, social and cognitive factors are crucial in gender development, individual differences plays a key role in

gender typed behaviour and may result in role exchange of both gender.

The evolution process itself supported men folk to become strong to defend enemy and to handle the strains efficiently than women. Though such qualities vary to one another, researchers found it is not necessarily to be fixed. The individual differences in personal interest can itself result in change of attitude towards gender and behaviour. Consequently, a female may develop interest to possess the qualities of other gender that may be anything - appearance, type of games or jobs. However, this role change over interest is rare and not so prevalent.

3. Gender Variance in Military: Statistics

Military is a profession that highly demands evolutionarily adapted masculine tendency to handle its immeasurable strains. Women are getting commissioned in forces since long back but they are still striving to be positions into combat and command roles. Women are doing remarkably well in almost every field which highly demands intellectual as well as physical input but when it comes to military it is majorly dominated by men.

Statistical figure of female fighters in world's seven biggest armies shows a huge gender variation in deployment. Women on average could make up to only 15% of the forces in various countries (Army Technology, 2019).

a. Indian Scenario:

Induction of women in the Indian Army began with their joining in the Indian Military Nursing Service, which was formed in 1888 during the British rule. Between the period of 1914 to 1945, Indian Army nurses served in World War I and World War II, where 350 nurses died, taken prisoner or declared missing in action. For the first time in 1992 women were taken into the army in non-medical roles. The first female peacekeeping force for the United Nations was made up of 105 Indian women and deployed to Liberia in 2007.

Women make up 3% (or 36,000) of totals 1.2 million Indian army personnel. However, women in Indian army serve only in non-combat, support roles, such as medical and logistical positions.

b. Global Scenario:

i. China

The National Council for the Social Studies (1994) reported that women make up 4.5% of the People's Liberation Army (PLA). This was confirmed by China Military Online, which gave 2015 estimate of approximately 5% or less, suggesting that just 53,000 women serve in China's Army.

ii. North Korea

North Korean People's Ground Force has 950,000 active

army personnel out of which 380,000 are women. North Korea has universal recruitment for men and selective recruitment for women. Women serve for a maximum of six years and men for ten, so women could make up around 40% which is highest representation of women in forces.

iii. Pakistan

As per International Institute for Strategic Studies (IISS), the Pakistan army has a total 653,800 active military personnel out of which only 4,000 are women, amounting for less than 1%. Women are mostly consigned to medical work and desk jobs, as women are banned from ground combat in the country.

iv. South Korea

According to United Press International (UPI), the Republic of Korea Army has a total of 560,000 troops out of which 6,915 are women. Currently, they make up 5.5% of senior military ranks. However, the government plans to increase the proportion of women serving in senior positions to 7% by 2020.

v. United States

As per Global Security, the US has 476,000 active army personnel. The number of women serving in the forces is 74,000, which equates to approx 16%.

Women have served in the US Army since the American Revolutionary War from 1775 to 1783. During the World War II, 400,000 women served in non-combat roles with hundreds serving as field intelligence agents. Of these, 88 were taken as prisoners and 16 were killed in action. Approximately 11,000 women from US armed forces were deployed to Vietnam from 1962 to 1972 and 41,000 sent to Iraq in 1991.

The American Civil Liberties Union took away the ban against women serving on ships in the 1970s. The ban on women in ground combat was also lifted in 2013 by the union. In 2016, all combat positions were made available to women.

vi. Russia

According to International Institute for Strategic Studies (IISS), Russian Army Known as Ground Force of the Russian Federation comprises of a total of 350,000 army personnel. Women comprise 10% of the Russian Armed Forces amounting to 35,1000 soldiers.

vii. North Korea

North Korea has the highest representation of women in armed forces (approximately 40%) as it has made military services mandatory for women and kept combat roles open for women.

viii. Israel

Israel Defence Forces (IDF) also has mandatory military services for women and gives equal rights to women to serve in any role in IDF. Women in IDF are currently serving in 69% of all roles available to them and 4% in combat position.

ix. Denmark

Danish Armed Forces (DAF) have long history of deployment of women in forces. Women were first employed in forces in 1934 and since then they continue to serve in various roles Danish Armed forces (DAF). Women make up of 5% (862) of the total forces. Women are accepted in combat role and are also provided opportunity to go on international mission.

The representation of women in armed forces of Canada (15-19%), United States (16%) and Russia (10%) is generally higher than other countries. Armed forces in these countries have kept all roles open for women to serve in any of these. India needs to take a lesson from these countries to achieve gender equality in terms of opportunity to join forces in various roles.

Women in Army have a rich history since 1775 with active involvement in Revolutionary War as well as they have carried out impeccable roles in World War I & II. Despite that, women representation in the armed forces throughout the world remains to be low and they continue to strive for combat role. Only few countries like US, Russia, North Korea, Israel, Canada, Denmark and Afghanistan are keen to recruit women in combat roles. Human population has gone through lot of evolutionary process and now both men and women are competent enough to handle their tasks in role reversal but still the statistics don't seem to be revolutionized.

4. Women in Forces: A Critical Analysis

Military is a profession which in any country has mostly been dominated by men. Well, it is vital to empower women and give equal rights in any sector, but not really over a country's safety and security, in case they are proven to be inadequate in taking over command in combat. We must understand that the nature of the army differs distinctly from civil set up. The military doesn't work on the principles of justice and liberalism. Its ethics and codes of conduct are stark opposite from the people they defend from the enemies. For instance, army confines the freedom of movement; it also limits the freedom of speech, and relationships with other officers (fraternization).

Recent debates on deployment of women in combat bring out a many questions - whether the low representation of women in armed forces is due to gender discrimination, lack of peer acceptance, economic input or women are actually lacking potential to lead in combat like situations and deploying them in such role may lead to compromising with country's safety and security. We attempt to answer these questions by taking viewpoints of experts.

On the issue of gender equality in military, American Marine Corps General Robert Barrow remarked in Senate hearing, *"....It is not about women's rights, equal opportunity, and career assignments for enhancement purposes for selection to higher work. It is about combat effectiveness, combat readiness, and so we are talking*

National Security".

Over the issue of deployment of women in combat roles Senior Army Officer Major General Suman (2010) expressed that *"No decision should be taken which even remotely affects the cohesiveness and efficiency of the military. Concern for equality of sexes or political expediency should not influence defence policies"* (Suman, M., 2010).

From expert's opinions it is clear that the goal of army is military effectiveness and not cohesiveness. Therefore, armed forces of most countries are not willing to put gender equality before military effectiveness and national security.

5. What Stops Women to Enter in Combat: Major Concerns

There are a number of studies exploring the issues faced by women in military, which have confirmed that women in military are challenged with physical, psychological and social problems during their services at all levels. Below we discuss the major concerns in inducting women in combat roles.

- a. **Physical Fitness:** Military is a profession which requires physical fitness and readiness to defend enemy at its most at any point of time. Evolutionarily, men and women have shown difference in their physical strength and competencies. Physical fitness can still be achieved to the most extent with rigorous training and practices. In addition to that, there are lot of practical issues faced by women in forces which affects their readiness and active participation in unforeseen situations that are prevalent in military life.
- b. **Menstruation and Pregnancy:** Studies have reported that women deployed in battles are in greater need hygiene and self-care education to prevent incidence like Urinary Tract Infections (UTI), Vaginitis and Menstrual symptoms. These problems occur due to poor intake of water, risking dehydration and postponing urination to avoid inconvenience in active roles. Physical health, poor sanitation can affect their performance and morale. Pregnancy is another major issue with military women which contributes majorly in attrition among women in the army because during pregnancy many duties are often severely curtailed. Since pregnant women cannot be deployed, they need to be evacuated. This evacuation process is costly to the forces and it certainly affects the health of women and their career (Lindberg LD, 2011).
- c. **Anthropometry differences and Injuries:** Both genders vary in their aerobic fitnesses and upper & lower body strength. Due to anthropometric difference between men and women, women tend to suffer more musculoskeletal injuries than men. This variation in physical built and unexpected injuries may result in Military Women's health and performance as well (Tepe V., et al, 2016). Another common issue found in

Military Women is Traumatic Brain Injury (TBI). The undiagnosed and untreated TBI may result in Mild TBI which involves neuro-sensory injuries with multi-sensory impairment (Pogoda TK, et al, 2012). A study among the US Military outpatient women with MTBI found that the number of Military Women with TBI quadrupled between the year 1997 – 2002 (Tepe V, Garcia S, 2015).

- d. **Psychological and Social Health:** Work and family environment significantly affects mental health of individuals. In a longitudinal study on US Marines it was found that females who were deployed to Iraq or Afghanistan identified female gender as a risk factor for psychiatric diagnosis post-deployment (Booth-Kewely S, et al, 2013). Sexual harassment may be another independent factor for post-deployment post-traumatic stress symptoms (Dutra L, et al, 2011). Healthy and supportive family environment would be a great help of officer's mental health and readiness to tackle unforeseen emergencies. Pre-deployment stress is challenging for especially military women who all are single mothers (Kelley ML, et al, 1994 & 2002). Family structure and dynamism also affects the efficiency of women deployed in forces to some extent. Aggression and violence of military personnel on their own family may result in their combat experience, trauma and post-traumatic stress and female service members may be seen as perpetrator for such behaviours (Swan SC, et al, 2008).
- e. **Acceptance issues and Peer Behavior:** In any organizational environment, mutual understanding among superiors, equals and subordinates makes the environment healthy and productive. Military ensures the brotherhood among the serving professionals to bring out the loyalty and acceptance over other to maintain the steadiness in environment. But the same is not seen in the case of cross-gendered environment where the low acceptance of women among men is found to be a great issue. Suman (2010) reveals the issue of low acceptance as, *"Acceptance of women in the military has not been smooth in any country. Every country has to contend with sceptics who consider it to be a counter-productive programme. They tend to view it as a political gimmick to flaunt sexual equality or, at best, a necessary liability. Additionally, every country has to mould the attitude of its society at large and male soldiers in particular to enhance acceptability of women in the military."* (Suman, M., 2010).
- f. **Training:** The general attitude about women is that they lack physical strength and their inability to cope up with tough terrains and high altitudes prevents them to perform effectively in combat environment. Research findings have indicated that the body composition, muscular strength favor men more. Women have difficulty in lifting loads which are heavy, they need more time and space. Also, they

have less muscle mass and more fat. Studies have also shown that during Army basic combat training, 51% of women and 27% of men were injured which was related to lower level of fitness (Roy, T. C. et al, 2012).

- g. **Attitude for Combat Role:** A study investigating whether women officers were willing to lead male troops on a patrol or an ambush, interviewed 600 army personnel and their parents. It was noticed that women officers who were at younger age found it thrilling to join such adventure. Married women officers felt this out of context and were feeling bewildered at the thought of being single woman among all male soldiers. Some senior officers were non-committal for sending women on night duties or ambush and convoy protection duties (Randhawa, D. S., 2005).

6. A Different Perspective on Major Issues

Studies investigating gender variance in military has mostly pointed the shortcomings within women for being not able to achieve the professional competency required for armed forces. However, some studies indicate that low representation of women in forces is not always due to professional incompetency of women. External factors like work environment, peer acceptance etc. also contribute to it. Here, we present a different perspective on gender variance in military.

a. Gender becomes less relevant when Professional Competence is prioritized:

When professionals talk about personal differences in combat roles they put 'Task Cohesion' over 'Social Cohesion' (Kier E & Others, 1993-2006). Here, cohesion in the sense how effectively one can participate in a group or with others in a given task. Cohesion is increasingly based on professional competence and not arbitrary cultural judgments about a person's or sexuality or ethnic minorities. Laterally, homosexuals have been able to serve in the US and UK armed forces, and in the infantry after the restrictions on homosexual service was lifted.

King (2013), a Russian author interviewed Afghan and Canadian army professionals of both genders. In the study it was found that female soldiers were able to meet professional standards enforced on them and were able to integrate. By proving their professional standards, they were slowly vanishing the gender bias. Some female officers excelled even in infantry and were recognized by male officers to be capable of commanding infantry battalion. The officers and soldiers showed willingness to serve under her. It was concluded that gender becomes less relevant when professional competence is given priority (King, A. 2013).

Another study conducted by Suman (2010) revealed that most of the female officers feel their capability is not given

due acknowledgement. They are generally not involved in any major decision-making. They have to work twice as hard as men to prove their worth. Additionally, a woman is always under scrutiny for even minor slip-ups. Mostly women complain that despite their technical qualifications, they are generally assigned women-like jobs such as routine desk jobs or duties related to social particulars (Suman, M., 2010).

b. Gender Discrimination cannot be ignored:

An article recently reflected on BBC News reflected that 'India's soldiers are not ready for women in combat' (Biswas, S. 2020). The reason could be either they find the presence of woman is demeaning to them or they find them professionally unequal. Men tend to trust men only with whom they can sustain and work together to defend the organization. This feeling of uncertainty results in woman being treated in a suspicious way despite she proves her professionalism.

Women officers in British Army are frequently disadvantaged from promotion because of their under-representation in combat roles (King, A. 2013). Also, most of the higher officers are male with a traditionalists assumption on woman they find it hard to comprehend and command women (Basham, V. 2009 & 2010).

In an important research Randhawa (2005) interviewed 600 army personnel and parents on whether women officers were willing to lead male troops on a patrol or an ambush. It was noticed that women officers who were at younger age found it thrilling to join such adventure. Married women officers felt this out of context and were feeling bewildered at the thought of being single woman among all male soldiers. Some senior officers were non-committal for sending women on night duties or ambush and convoy protection duties (Randhawa, D. S. 2005).

So there are mixed views on the issue of women in combat roles. Presently there are some women officers serving in field and counter insurgency areas and performing duties of convoy and QRT commanders. But, the percentage of such women officers in Indian Armed Forces is negligible.

7. Conclusions

Analysis of gender variance in forces made it obvious that globally women representation in armed forces is quite low compared to men. When talking about women in combat role and commanding position, their number is negligible. There can be various reasons behind it like their physical fitness for combat role, health, work environment and peer acceptance etc. Science has proven that universally men and women are not identical in their physical and psychological functions. Women tend to have lesser physical strength compared to men. In addition to that there is some functional variation in women brain functioning which restricts learning certain skills e.g. spatial skills that are crucial for battle and combat roles. However, some

proportions of women are able to achieve physical & psychological standard comparable to men and this individual difference opens the scope for women. Women today, are excelling in every field and if deserving women who are able to meet professional standards are given opportunity keeping aside their gender, they can do equally well in forces too. Indeed, women have represented crucial position in many historical World Wars but they still continue to strive to make adequate representation in armed forces combat role. Women who have proved professionally equal competence should be taken further as specialists such as medics, radio operators, intelligence officers or commanders rather than expecting them to function in traditional sections like nurses, doctors, and desk jobs. We are not suggesting that women should have equal representation in forces but they should be given equal opportunity to prove their professional competence and be recruited based on competency without their gender affecting the recruitment. Failing to recognize these potentials over gender would be folly and betrayal of true professionalism.

REFERENCES

- [1] Albright, T. S., Gehrich, A. P., Buller, J. L., & Davis, G. D. (2005). Acute dysuria among female soldiers. *Military Medicine*, 170(9), 735-738.
- [2] Alexander, G. M. (2003). An evolutionary perspective of sex-typed toy preferences: Pink, blue, and the brain. *Archives of sexual behavior*, 32(1), 7-14.
- [3] Army Technology (2019). Women in the Army: female fighters in the world's seven biggest army. *Verdict Media Limited*. Retrived from <https://www.army-technology.com/unategorised/women-in-the-army/> on 23 Apr 2020.
- [4] Bandura, A. (1999). Social cognitive theory of personality. *Handbook of personality*, 2, 154-196.
- [5] Basham, V. (2008). Everyday gendered experiences and the discursive construction of civilian and military identities in Britain. *NORMA: Nordic Journal for Masculinity Studies*, 3(2), 150-166.
- [6] Basham, V. (2008). Everyday gendered experiences and the discursive construction of civilian and military identities in Britain. *NORMA: Nordic Journal for Masculinity Studies*, 3(2), 150-166.
- [7] Basham, V. (2009). Effecting discrimination: Operational effectiveness and harassment in the British Armed Forces. *Armed Forces & Society*, 35(4), 728-744.
- [8] Bem, S. L. (1981). The BSRI and gender schema theory: A reply to Spence and Helmreich.
- [9] Berenbaum, S. A. (2002). Prenatal androgens and sexual differentiation of behavior. In *Developmental Endocrinology* (pp. 293-311). Humana Press, Totowa, NJ.
- [10] Biswas, S. (2020). India's soldiers are not ready for women

in combat, *BBC News*. Retrieved from <https://www.bbc.com/news/world-asia-india-51385224> on 23 Apr 2020.

- [11] Booth-Kewley, S., Schmied, E. A., Highfill-McRoy, R. M., Larson, G. E., Garland, C. F., & Ziajko, L. A. (2013). Predictors of psychiatric disorders in combat veterans. *BMC psychiatry*, 13(1), 130.
- [12] Boros, P. (2019). An Interpretive Phenomenological Analysis of Women Veterans Transitioning Back into Civilian Life.
- [13] Borsay-Trindle, L. A., Pass, C. M., & Gilzean, S. M. (1991). Unplanned pregnancy among active-duty Army females as a readiness issue. *Military medicine*, 156(2), 82-86.
- [14] Buss, D. M., Larsen, R. J., Westen, D., & Semmelroth, J. (1992). Sex differences in jealousy: Evolution, physiology, and psychology. *Psychological science*, 3(4), 251-256.
- [15] Christopher, L. A., & Miller, L. (2007). Women in war: operational issues of menstruation and unintended pregnancy. *Military medicine*, 172(1), 9-16.
- [16] De Vries, G. J., Rissman, E. F., Simerly, R. B., Yang, L. Y., Scordalakes, E. M., Auger, C. J., ... & Arnold, A. P. (2002). A model system for study of sex chromosome effects on sexually dimorphic neural and behavioral traits. *Journal of Neuroscience*, 22(20), 9005-9014.
- [17] Dutra, L., Grubbs, K., Greene, C., Trego, L. L., McCartin, T. L., Kloezezan, K., & Morland, L. (2010). Women at war: Implications for mental health. *Journal of Trauma & Dissociation*, 12(1), 25-37.
- [18] Friedl, K. E., Evans, R. K., & MORAN, D. S. (2008). Stress fracture and military medical readiness: bridging basic and applied research. *Medicine & Science in Sports & Exercise*, 40(11), S609-S622.
- [19] Geary, D. C. (2010). Male, female: The evolution of human sex differences. American Psychological Association.
- [20] Hawley-Bowland, C. (1996). Epidemiologic overview of common gynecologic disorders and first-trimester complications among active-duty women. Women's health issues: official publication of the Jacobs Institute of Women's Health, 6(6), 353.
- [21] Jonas, W. B., O'Connor, F. G., Deuster, P., Peck, J., Shake, C., & Frost, S. S. (2010). Why total force fitness?. *Military Medicine*, 175(suppl_8), 6-13.
- [22] Joshua, S Goldstein. (2004). War and Gender: How Gender Shapes the War System and Vice Versa. Cambridge University Press, pp. 10, 19.
- [23] Kelley, M. L., Hock, E., Jarvis, M. S., Smith, K. M., Gaffney, M. A., & Bonney, J. F. (2002). Psychological adjustment of Navy mothers experiencing deployment. *Military Psychology*, 14(3), 199-216.
- [24] Kelly, M. L., Herzog-Simmer, P. A., & Harris, M. A. (1994). Effects of military-induced separation on the parenting stress and family functioning of deploying mothers. *Military Psychology*, 6(2), 125-138.
- [25] Kier, E. (1998). Homosexuals in the US military: Open integration and combat effectiveness. *International Security*, 23(2), 5-39.
- [26] King, A. (2013). Women in combat. *The RUSI Journal*, 158(1), 4-11.
- [27] King, N., Fridlund, K. E., & Askew, E. W. (1993). Nutrition issues of military women. *Journal of the American College of Nutrition*, 12(4), 344-348.
- [28] Lindberg, L. D. (2011). Unintended pregnancy among women in the US military. *Contraception*, 84(3), 249-251.
- [29] Lowe, N. K., & Ryan-Wenger, N. A. (2003). Military women's risk factors for and symptoms of genitourinary infections during deployment. *Military medicine*, 168(7), 569-574.
- [30] MacCoun, R. J. (1993). What is known about unit cohesion and military performance. Sexual orientation and US military personnel policy: Options and assessment, 283-331.
- [31] MacCoun, R. J., Kier, E., & Belkin, A. (2006). Does social cohesion determine motivation in combat? An old question with an old answer. *Armed Forces & Society*, 32(4), 646-654.
- [32] Naclerio, A., Stola, J., Trego, L., & Flaherty, E. (2011). The concerns of women currently serving in the Afghanistan Theater of Operations. US Army Women's Health Assessment Team.
- [33] Ngun, T. C., Ghahramani, N., Sánchez, F. J., Bocklandt, S., & Vilain, E. (2011). The genetics of sex differences in brain and behavior. *Frontiers in neuroendocrinology*, 32(2), 227-246.
- [34] Pillsbury, L., Oria, M., & Erdman, J. (Eds.). (2011). Nutrition and traumatic brain injury: improving acute and subacute health outcomes in military personnel. National Academies Press.
- [35] Pogoda, T. K., Hendricks, A. M., Iverson, K. M., Stolzmann, K. L., Kregel, M. H., Baker, E., & Lew, H. L. (2012). Multisensory impairment reported by veterans with and without mild traumatic brain injury history. *Journal of Rehabilitation Research & Development*, 49(7).
- [36] Randhawa, D. S. (2005). Women Officers and Work Environment: Indian Perspective. *USI Journal*.
- [37] Ritchie, E. C. (2001). Issues for military women in deployment: An overview. *Military Medicine*, 166(12), 1033-1037.
- [38] Rowley, A. (2011). Anna Krylova, Soviet Women in Combat: A History of Violence on the Eastern Front.
- [39] Roy, T. C., Knapik, J. J., Ritland, B. M., Murphy, N., & Sharp, M. A. (2012). Risk factors for musculoskeletal injuries for soldiers deployed to Afghanistan. *Aviation, space, and environmental medicine*, 83(11), 1060-1066.
- [40] Segal, D. R., & Kestnbaum, M. (2002). Professional closure in the military labor market: A critique of pure cohesion. The future of the army profession, 441-458.
- [41] Skuse, D. H., James, R. S., Bishop, D. V., Coppin, B., Dalton, P., Aamodt-Leeper, G., ... & Jacobs, P. A. (1997). Evidence from Turner's syndrome of an imprinted X-linked locus affecting cognitive function. *Nature*, 387(6634), 705-708.

- [42] Stearns, P. N. (1988). Cynthia Cockburn, *Brothers: Male Dominance and Technological Change* (Book Review). *Technology and Culture*, 29(4), 937.
- [43] Steele, N., & Yoder, L. H. (2013). Military women's urinary patterns, practices, and complications in deployment settings. *Urologic nursing*, 33(2).
- [44] Suman, M., (2010). Women in the armed forces: Misconceptions and facts. *Indian Defence Review*, 25(1), 6.
- [45] Swan, S. C., Gambone, L. J., Caldwell, J. E., Sullivan, T. P., & Snow, D. L. (2008). A review of research on women's use of violence with male intimate partners. *Violence and victims*, 23(3), 301-314.
- [46] Wahl, A. (2011). Rosabeth Moss Kanter: Men and women of the corporation.
- [47] Wardell, D. W., & Czerwinski, B. (2001). A military challenge to managing feminine and personal hygiene. *Journal of the American Association of Nurse Practitioners*, 13(4), 187.