

## **Gender Differences in Military Thinking among Active Duty Personnel**

D. A. Tsarouchas<sup>1</sup>, A. Igoumenou<sup>2</sup>, M. Nystazaki<sup>1</sup>, K. Krikonis<sup>3</sup>,  
G. A. Alevizopoulos<sup>1</sup>

<sup>1</sup>Dept. of Psychiatry, "Agiol Anargyroi" Hospital, Stavrou & Noufaron, Kifissia, Athens, GREECE

<sup>2</sup>Wolfson Institute of Preventive Medicine, Queen Mary, University of London, UK

<sup>3</sup>DatAnalysis, Statistical Consulting and Research, Dodonis 159, 45221, Ioannina, GREECE

---

**ABSTRACT:** *The Armed Forces until recently were a male dominated environment, thus women's military role has brought attention to their physical and mental fitness when performing various military duties. The aim of the present study was the evaluation of gender differences in military thinking during active duty. For this purpose a questionnaire was distributed to 300 military personnel, 100 to each specialty. The questionnaire was structured according to published guidance and graded according to Likert scale. One hundred twenty individuals returned the questionnaire. The questions showing significant statistical differences in the answers of male and female personnel were those concerning beliefs and expectations of their military occupation. Findings showed that the behavior of male personnel compared to female is significantly influenced by their working environment affecting differently the psychology of male and female personnel.*

**Keywords:** *differences, female, gender, male, thinking*

---

### **I. INTRODUCTION**

The current technological, economic and social transformations have increased female participation in every professional occupation including those regarded as traditionally male held jobs, thus negatively affecting men's traditional social and working roles. These changes could evoke, in some cases, a gender psychological antagonism (Carrol, 2014). One such environment could be the Armed Forces, which were until recently a male dominated environment (Osborne, Gage & Rolbiecki, 2012), since war was conducted by only male armed members to the end of the 20th century. Understandably, the recent employment of women in combat ready military services caused serious concerns over their suitability for war activities or other similar operations needing physical strength (Becraft, 1990).

The role of female personnel in combat positions was best evaluated during the Gulf war of 1991, but also in peacekeeping operations in the late Yugoslavia, Middle East, Afghanistan and elsewhere. They were female personnel of the United States armed forces, currently employing more than 229,000 women, 15% of whom are officers. Their performance in these operations established them as competent and successful leaders showing decisiveness, confidence and assertiveness (Becraft, 1990; Wechsler, 1995; Davis & Thomas, 1998; Nielsen, 2001; Febbraro, 2007; Yanovich, Evans, Israeli, Constantini, Sharvit, Merkel, Epstein, & Moran, 2008). The past decades women of many NATO nations, such as Canada, Denmark, Luxembourg, Norway, Portugal Netherlands and even Turkey have been earning their equal role in armed forces, forcing various changes in combat operations. However, in most nations they continue to serve in support positions or they were permitted to join the armed services very recently (Takahiko, 1990; Human & Fluss, 2001, Pinch et al., 2004), thus not given the full authority required to organize people and resources to accomplish the task-relevant goals that are inherent in their role (Eagly & Johannesen-Schmidt, 2001). In Greece permanent uniformed positions were offered to women in the beginning of the 80's breaking male dominance.

Thus, focus on women's military role has brought attention to their physical fitness when assigning them various duties. The leaders of male dominated armed forces viewed them as physically and emotionally unfit for combat, due to their physiology nurturing life, rather than physically working. However, as social perceptions changed about the roles of genders in most western nations, women were increasingly hired as camp followers, medical personnel, staffs in support positions and many other tasks (Winslow, 2010).

In Greece the Hellenic Military Nursing Academy was established for only women, immediately after WWII. After their three-year studies, they graduated as 2nd Lieutenants (2nd LT) and were assigned duties to Army, Navy and Air Force medical units (Hellenic Army Review, 2004). However, in the 80's females were recruited in the Army, Navy and Air Force as enlisted members, only for supporting duties and not deployment. A few years later females were accepted in non-combat positions from the Academies of the Army and Air Force, but not the Navy. Furthermore, from 2000 and thereafter females are also allowed in the Navy Academy and are deployed in all positions including combat. They are, thus, having the same rights and obligations, as their male colleagues.

Thus efforts are made in Greece, for more than a decade, to integrate female personnel into combat positions, following the increasing involvement of women in the armed forces worldwide (Unwin, Hotopf, Hull, Ismail, David & Wessely, 2002).

In light of this new international trend, the present study aimed to gain some knowledge of the psychological influences military service has on the personnel of the Hellenic Armed Forces. More specifically, the present study is trying to unveil existing gender differences in the thinking of uniformed personnel affected, perhaps, of the psychological impact military life has on each.

## **II. RESEARCH METHODOLOGIES**

### **Procedure**

The present study conforms to the protocol of the personal data protection (Institutional Review Board Researcher's Guide, 2012) and the personnel Subjects Research of 1964 Helsinki declaration (Carlson, Boyd & Webb 2004; Ethical and Legal Principles Governing Human Subject Research, Stanford University, 2013).

After a pilot questionnaire was answered with comments from 25 volunteers, a finalized version was distributed to 300 service members of the three services in a variety of ways (hand to hand, mailbox etc). One hundred and twenty (120) questionnaires were returned.

### **Structure of Questionnaire**

The questionnaire was divided into three parts. The first part focused on general information. The second part included questions concerning variables possibly influencing practices of the military profession. The third and largest part focused on questions determining the influence of the military profession on each participant (Table 1). Each question, structured according to published research, allowed the participant to grade it according to Likert scale (*STRONGLY DISAGREE, DISAGREE, NOR DISAGREE OR AGREE, AGREE, STRONGLY AGREE*) (Tziner & Dolan, 1982; Converse & Presser, 1986; Carter & Biersnerr, 1987; Choi & Pak, 2005; Yount, 2006; Hurt et al., 2006; SPSS Techniques Series 2010).

### **Statistical analysis**

Answers were statistically analyzed using Cronbach's  $\alpha$  in order to determine the internal consistency reliability of the data. Continuous data following the normal distribution are presented as mean  $\pm$  SD. Furthermore, the Kolmogorov-Smirnov test was used to examine the fitting of the data on the normal distribution. To compare mean differences for continuous variables between male and female personnel Student's t-Test was used.

## **III. RESULTS**

### **Participants**

One hundred and twenty (40%) personnel returned the received questionnaire. Of them 70 (58%) served in the Army (Ground Forces), 27 (22.5%) in the Air Force and 23 (19.2%) in the Navy. The Questions showing statistical significant difference between the answers of male and female personnel were 2, 8, 15, 17, 18, 20, 41, 45, 52 and 54 (Table 1). The mean value of answers 2, 8, 17, 41, 45 and 52 was significantly higher for male participants, while the same for female was observed with questions 15, 18, 20 and 54 (Table 2). Furthermore, in every test the value of alpha for Cronbach's test was over 0.7.

## **IV. DISCUSSION**

The main aim of the present investigation was to identify life aspects affected by the military working environments and analyze any gender differences observed. The questions focused on family, cultural aspects, national security situations, opinions about quality of military life and other aspects believed to affect differently male and female members (Nuciari, 2007).

Emphasis was given to questions unveiling opinions on military activities needing swift decision making. Unit deployment and field operations are actions characterized by unstable situations needing swift decisions affecting the success of a mission. Hence, the way male and female military personnel react on the moment of a decision could affect the final outcome of the mission. This is why gender decisions are continuously scrutinized in nations increasing recently female involvement in highly demanding missions (Kelley, 1997; Baranyi & Powell, 2005; Bradley, 2007; Erturgut, 2008), a practice not yet officially admitted in Greece.

The results of the present investigation showed that males significantly perceive their working environment as influencing their behavior. They also believe that their military position is more than an "occupation". It is an inspiration, giving them freedom for initiatives (Question 8) and feelings of national pride (Question 17), but also affecting their family life in a variety of ways (Question 2). Significant differences were recorded in the mean grade between male and female to the answers of questions 2, 8, 9 and 17. However,

although the scores of females were lower, they perceived their occupation as inspiring. Thus, regardless of strenuous job situations affecting family and social life both genders thought that their military job affected their lives in a variety of ways (Table 2, Questions 2, 3). However, males perceived their occupation as a promoter of initiatives satisfying their personal and family well-being and happiness (Table 2, Question 8). Similar conclusions are made by others showing the crucial role of the leader or employer in achieving balance between work and family, if the workplace is supportive (OECD, 2012). Thus, males believe that their physical, psychological and intellectual standards are fulfilled during challenging military operations, using modern equipment and technology. Their job satisfaction is evident in their willingness to follow leading commands demanding group synergy as a prerequisite for acceptance in the military community. If one is not accepting group activities could experience physical or emotional isolation (Table 2, Question 45) (Milgram, 1973). Thus, changes in certain attitudes are not always easy for males obliged to respond to the imposed conditions.

An observation enforced by the answers given for question 17 is showing that males choose their occupation affected by their national sentiment, rather than their need for having a job. They view military profession as guarding national stability and security, thus shaping foreign affairs and fusing military profession with national interest. However, the current economic situation, global and national, is changing the role of the armed forces. Military activity is increasingly judged with purely commercial terms affected by reductions in national budgets (Cilliers & Douglas, 1999), thus forced to personnel reductions making conscription more selective (Cohen, 1995). Therefore, the economic situation is increasing concerns (Table 2, Question 41) on post-military life, not only in case of retirement or dismissal, affecting ethos and increasing survival anxieties. Moreover, the continuous and systematic decrease of armed forces role creates low sense of self-esteem and doubts of the role of command personnel (Table 2, Question 52) (Davis & Cragin, 2009; Stanford Encyclopedia of Philosophy, 2010).

On the other hand, the answers of female personnel showed that they chose military profession as a last “resort” job opportunity after their vocational training. Women’s unemployment in all countries, including developed ones is an important reason for choosing a military career coming with a large degree of job security. The same appeared to be the case in Greece where female personnel said that they viewed their profession as “a choice of necessity for employment or economic emergence” (Questions 15, 18, Table 2). They appear as regarding their military duties like any other occupation, thus, not really allowing it affect their private lives. For them family and personal issues are of higher importance (Question 2, Table 2), compared to men and deferring from military women elsewhere dependant on the decisions of mixed gender team leaders equalizing responsibilities (Davis, 2007).

Nowadays, Greek military women are increasingly occupying highly visible leadership roles in armed forces, having the opportunity to show their interpersonal qualities and increase their career aspirations and expectations (Table 2, Question 18) (Veenhoven, 2011). Hence, as they are replacing men in authority positions, women are increasingly demanding more recognition, thus equal share in professional opportunities. Some authors (Febbraro, 2007) consider military females as more skillful than males in some positions exhibiting ambition, assertiveness and rigidity in decision making. That is in accordance to Eagly & Johannesen-Schmidt (2001), saying that even though there are some differences in various management styles, the sex differences are small because the leader role itself carries a lot of weight in determining people's behavior.

Although females believe that their profession is highly respected within their social environment seeing benefits in military life not evident among civilians (Table 2, Question 20), some believe that this is actually a false perception (Hewlett & Buck, 2005). Until a few decades ago, society viewed military duty as unsuited for women and men had contributed to this perception through their exclusive “hard” combat duties. As gender equality was enforced, physical fitness tests became neutral and all military occupations opened to women (Febbraro, 2007). However, gender equality empowering women forced them to also multiply their carrier development efforts, increasing their degree of self-esteem, well-being and happiness (Veenhoven, 2011).

## **V. CONCLUSION**

In the past, women were excluded from joining the armed forces on the excuse of existing biological differences posing barriers in their joining males’ “bulwarks”, as the army was. However, nowadays, sex differences appear to be as mythical as “the Man in the Moon”, since recent research underscores that men and women are basically alike in terms of personality, cognitive ability and leadership (Hyde, 2005). Thus, in recent years, “gender mainstreaming” is highlighted in all traditionally male - dominated occupations, lessening the gap between femininity -leadership, opportunities and effectiveness in restricted working environments, as military. Like other identities, gender identities are constructed in international social environments, including the dynamic military, as well. Thus, the social identities of male and female, their roles, behaviors, social positions, access to power and resources create gender specific vulnerabilities (Carreiras & Kömmel, 2008). Social researchers focusing on women have increased awareness of women’s status as military professionals

and military family members. The present study showed that although females of the armed forces chose their profession on rehabilitation reasons, regarding family affairs as a first priority, they are likely to adapt to their special duties collaborative approaches, enhancing their aspiration, power and leadership ambitions.

However, gender differences in behavior should be further investigated as to what extent they are inborn or they are due to training and socialization. The answer to these may come from the fields of biology and neurosciences.

Conclusively, it is important to remember that gender is not just about males and females. A gender perspective would also improve peacekeeping research.

## VI. TABLES

**Table 1:** The third part of the distributed questionnaire

1	The current Command (Administration) has an effect (positive or negative) in your professional environment
2	The current Administration has an effect (positive or negative) in your home environment
3	Your daily professional activities affect your personality forcing you to put personal life in second place
4	The hierarchy has an interest for subordinates
5	It is not natural and is manifested by fear of disclosure problems
6	You are satisfied with the role - tasks assigned to you
7	Your profession provides you with opportunities for personal development and promotion
8	Your work permits your taking initiatives
9	Your profession is in a first priority
10	Your family is in a first priority
11	The military environment fosters a spirit of close relationships and cooperation among colleagues
12	The current economic crisis is endangering your professional future
13	You have confidence in your professional hierarchy
14	Your profession is a choice by desire
15	This job is a necessity choice
16	You followed your family tradition in choosing this job
17	You chose this profession due to a feeling of patriotism
18	You choose this job for rehabilitation reasons
19	Your profession is useful to society
20	Your profession has a highly social recognition
21	You are satisfied with your earnings
22	Your work hours are not financially and morally compensated
23	The various working benefits are satisfactory
24	Under the current economic compensations, you would choose the same profession
25	You would highly recommend to a young person your profession
26	The current economic crisis is targeting a decline to the military personnel
27	The manipulation of behavior in the Armed Forces is referred as "forced persuasion "
28	The manipulation of behavior in the Armed Forces is using methods of influence and psychological oppression
29	The basic strategy used in manipulation methods is an effective coordination of many different systems of influence
30	The basic strategy used in manipulation methods is stress production and anxiety on a regular basis
31	The manipulation methods used mask the psychological changes of the target
32	The aim of manipulation methods is to weaken the identification of manipulation procedures
33	You are submitted to psychosomatic activities with simultaneous pressure and inadequate rest as a part of manipulation methods
34	The personnel of the Armed Forces are not aware of the ultimate target of psychological programs
35	The person gradually loses the ability to act independently
36	Critical thinking, cognitive processes, ideas, attitudes and behavior are altered
37	The process undermines decisions
38	The psychological influence has as a main target the ability to direct the critical thinking of the target
39	A set of actions (such as prolonged use of sound, repetition of social activities, restriction of sleep) aim to promote personnel uniformity
40	In the working environment exists a continuous and systematic control by the hierarchy or a system based on rewards and punishments
41	Economic dependence is used as a measure for survival compared to retirement – dismissal
42	Rules are imposed on issues that may be discussed with people outside the immediate working environment
43	Communication is highly controlled for reasons of security
44	The main characteristic of working environment is obedience and unquestionable acceptance of beliefs and orders through discouragement and prohibition of questions.
45	The non compliance with a specific behavior or attitude results in serious punishments and isolation within the group
46	During lectures - presentations the speakers use a repetitive tone of voice in order to create fanaticism and ecstasy among audience
47	Messages are subconsciously implanted or transferred through presentations and lectures
48	Pressure from the working environment suppresses individual innovation and implementation of new ideas
49	Armed forces cultivate the sense of dependency and emotional ties among colleagues
50	Integration in the armed forces environment is progressively rejecting free existing values in favor of adopting a new lifestyle
51	Interpersonal reporting is key words or slung phrases
52	The continuous and systematic devaluation of armed forces role creates high ranking low sense of self-esteem and

	doubting feelings
53	The current economic situation is creating a feeling of increased dependence on the military as a safe and stable employer
54	There is a stimulated false sense of perfection in military by emphasizing the deficiencies of the "outside world"
55	To improve the physical esteem, there is a trend to adopt a diet, using drugs and formulations that are designed to increase athletic performance

**Table 2:** Statistical analysis of (Table 1) the questions answered differently by the two genders

No of Question	Sex	N	Mean grading	Std. Deviation	t	Sig. (2-tailed)
2. The current Administration has an effect (positive or negative) in your home environment	F	33	2,85	1,202	-	0.029
	M	87	3,32	0,982	2.212	
8. Your work permits your taking initiatives	F	33	3,09	0,843	-	0.027
	M	87	3,54	1,032	2.233	
15. This job is a necessity choice	F	33	2,76	0,867	-	0.011
	M	87	2,2	1,129	2.583	
17. You chose this profession due to a feeling of patriotism	F	33	3,03	1,075	-	0.019
	M	87	3,55	1,076	2.371	
18. You choose this job for rehabilitation reasons	F	33	4	0,612	-	0.001
	M	87	3,3	1,101	3.456	
20. Your profession has a highly social recognition	F	33	3,7	0,951	-	0.013
	M	87	3,2	0,986	2.511	
41. Economic dependence is used as a measure for survival compared to retirement – dismissal	F	33	3,15	0,939	-	0.028
	M	87	3,6	0,994	2.229	
45. The non compliance with a specific behavior or attitude results in serious punishments and isolation, within the group	F	33	2,73	1,126	-	0.022
	M	87	3,2	0,926	2.327	
52. The continuous and systematic devaluation of armed forces role creates high ranking low sense of self-esteem and doubting feelings	F	33	2,97	1,159	-	0.008
	M	87	3,55	1,009	2.707	
54. There is a stimulated false sense of perfection in military by emphasizing the deficiencies of the "outside world"	F	33	3,52	0,972	-	0.043
	M	87	3,06	1,135	2.048	

F=Female, M=Male

## REFERENCES

- [1]. Baranyi, S., & Powell, K. (2005). Fragile states, Gender Equality and Aid Effectiveness: a Review of Donor Perspectives. Ottawa: North South Institute. <http://www.nsi-ins.ca/wp-content/uploads/2012/10/2005-Fragile-States-Gender-Equality-and-Aid-Effectiveness-A-Review-of-Donor-Perspectives.pdf>.
- [2]. Becraft, C. Facts about women in the military 1980-1990. (1990). Womens Research and Education Institute., <http://Feminism.eserver.org>.
- [3]. Bradley L. (2007). Leadership and Women: Should We be Leading ‘Like a Man’ or Adopting Women’s Ways?’ In KD Davis (Ed), Women and Leadership in the Canadian Forces: Perspectives and Experience (pp. 139-155). Winnipeg: Canadian Defence Academy Press.
- [4]. Carlson, R., Boyd, K., & Webb, D. (2004). The revision of the Declaration of Helsinki: past, present and future. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1884510/>.
- [5]. Carreiras, H., & Kömmel, G. (2008). Women in the Military and in Armed Conflict. Wiesbaden, Germany: VS Verlag for Sozialwissenschaften.
- [6]. Carrol, L. (2014). Raising a Female-centric Infantry Battalion: Do We Have the Nerve? Australian Army Journal, 11, 34-56. <http://apo.org.au/node/40560>.
- [7]. Carter, R.C., & Biersner, R.J. (1987). Job requirements derived from the Position Analysis Questionnaire and validated using military aptitude test scores. Journal of Occupational and Organizational Psychology, 60, 273–351. doi: 10.1111/j.2044-8325.1987.tb00263.x
- [8]. Choi, B.C.K., & Pak A.W.P. (2005). A catalog of biases in questionnaires. Preventing Chronic Disease, 2, 1–13.
- [9]. Cilliers, J., & Douglas I. (1999). The Military as Business-Military Professional Resources, Incorporated. In J Cilliers & P Mason (Eds), Peace, Profit, or Plunder: The Privatisation of Security in War-Torn African Societies (pp 111-122). Institute for Security Studies, Capetown: South Africa.
- [10]. Cohen, S.A. (1995). The Israel Defense Forces (IDF): From a “People’s Army” to a “Professional Military”—Causes and Implications. Armed Forces & Society, 21, 237-254. doi: 10.1177/0095327X9502100205.
- [11]. Converse, M., Presser, S. (1986). Survey Questions handcrafting the standardized questionnaire. Series: Quantitative Applications in the Social Sciences. Sage Publications Inc., USA, pp 9-25, 31-441.
- [12]. David, P.K., & Cragin K. (2009). Introduction. In P.K. David & K.Cragin (Eds), Social science for counterterrorism: Putting the pieces together (pp. 1-10), Santa Monica, CA: RAND.
- [13]. Davis, K. D. (2007). Women and Leadership in the Canadian Forces: Perspectives and Experience. Winnipeg: Canadian Defence Academy Press. [http://publications.gc.ca/collections/collection\\_2011/dn-nd/D2-210-2007-eng.pdf](http://publications.gc.ca/collections/collection_2011/dn-nd/D2-210-2007-eng.pdf)
- [14]. Davis, K.D., & Thomas V. (1998). Chief land staff gender integration study: The experience of women who have served in the combat arms. Personnel Research Team Report 98-1. Ottawa, Canada: National Defence Headquarters.

- [15]. Eagly, A. H., & Johannesen-Schmidt, M. C. (2001). The leadership styles of women and men. *Journal of Social Issues*, 57, 781 – 797. doi: 10.1111/0022-4537.00241
- [16]. Erturgut, R. (2008). Organizational Consequences of Gender Differences in Armed Forces and Evaluation of Operational Stress in the Context of Recent Wars. Turkish Air Force, Air Logistic Command Etimesgut/Ankara RTO-MP-HFM-158.
- [17]. Ethical and Legal Principles Governing Human Subject Research, Stanford University. (2013). [http://humansubjects.stanford.edu/hrpp/Chapter1.html#ch1\\_6](http://humansubjects.stanford.edu/hrpp/Chapter1.html#ch1_6).
- [18]. Febbraro, A.R. (2007). Gender and Leadership in the Canadian Forces Combat Arms: Perspectives of Women Leaders. In: *Women and Leadership in the Canadian Forces: Perspectives and Experience* (pp. 93-138). Canadian Defence Academy Press.
- [19]. Hellenic Army Review Jul-Aug 2004 pg 46-55.
- [20]. Hewlett, S.A., & Luce, C.B. (2005). Off Ramps and On Ramps: Keeping Talented Women on the Road to Success. *Harvard Business Review* 43-45.
- [21]. Human D., & Fluss S., (2001). The world medical association's declaration of helsinki: historical and contemporary perspectives. Available via [http://www.wma.net/en/20activities/10ethics/10helsinki/draft\\_historical\\_contemporary\\_perspectives.pdf](http://www.wma.net/en/20activities/10ethics/10helsinki/draft_historical_contemporary_perspectives.pdf).
- [22]. Hurt, T., Joseph, K., & Cook, C. (2006). Scales for the Measurement of Innovativeness. *Hum Communication Research*, 4, 58–65. doi: 10.1111/j.1468-2958.1977.tb00597.x
- [23]. Hyde, J. S. (2005). The Gender Similarities Hypothesis. *American Psychologist*, 60, 581 – 592. doi: 10.1037/0003-066X.60.6.581.
- [24]. Institutional Review Board Researcher's Guide, 2012. [http://www.umbc.edu/irb/IRBResearchersGuide\\_09\\_13\\_11.pdf](http://www.umbc.edu/irb/IRBResearchersGuide_09_13_11.pdf).
- [25]. Kelley, M. (1997). *Gender Differences and Leadership*. Dissertation, War College Air University, Alabama.
- [26]. Milgram, S. (1973). The Perils of Obedience. *Harper's Magazine*, 247, 1483:62-77.
- [27]. Nielsen, V. (2001). Women in Uniform NATO Review, The Peacekeeping Challenge, <http://www.nato.int/docu/review/2001/Peacekeeping-Challenge/Womenuniform/EN/index>.
- [28]. Nuciar, M (2007). Women soldiers in a transcultural perspective. In G. Carforio (Ed.), *Social Sciences and the Military. An interdisciplinary overview* (pp 238-260) Routledge, New York.
- [29]. OECD- Organisation for Economic Co-operation and Development (2012). *Gender Equality in Education, Employment and Entrepreneurship: Final Report to the MCM 2012C/MIN(2012)5*. <https://www.oecd.org/els/emp/50423364.pdf>.
- [30]. Osborne, V.A., Gage, L.A., & Rolbiecki, A.J. (2012). Psychosocial Effects of Trauma on Military Women Serving in the National Guard and Reserves. *Advances in Social Work*, 13, 166-184. doi: 10.1056/NEJMoa040603.
- [31]. Pinch, F.C., MacIntyre, A.T., Browne, P., & Okros A.C. (2004). *Challenge and change in the military: Gender and diversity issues*. Winnipeg, Canada: Wing Publishing Office.
- [32]. SPSS Techniques Series: Statistics on Likert Scale Surveys (2010), ITS Information Technology Series, University Of Northern Iowa. <https://www.uni.edu/its/kb/8040>.
- [33]. Stanford Encyclopedia of Philosophy. (2010). Collective Responsibility. Available via <http://plato.stanford.edu/entries/collective-responsibility/>.
- [34]. Takahiko, U. (1990). Limited Roles for Women Warriors. *The Japan Times*, May 28-June 3.
- [35]. Tziner, A., & Dolan S. (1982). Validity of an assessment center for identifying future female officers in the military. *Journal of Applied Psychology*, 67, 728-36. <http://dx.doi.org/10.1037/0021-9010.67.6.728>
- [36]. Unwin, C., Hotopf, M., Hull, L., Ismail, K., David, A., & Wessely, S. (2002). Women in the Persian gulf: lack of gender differences in long- term health effects of service in United Kingdom armed forces in the 1991 Persian gulf war. *Military Medicine*, 167, 406–413.
- [37]. Veenhoven, R. (2001). *Social Development and Happiness in Nations 1990-2010*, Presentation at Conference Taking Stock: Measuring Social Development, International Institute of Social Studies, December 14-15. [4] Wechsler, S.M. (1995). Women's Military Roles Cross-nationally: past, present and future. *Gender and Society*, 9, 757-775. doi: 10.1177/089124395009006008
- [38]. Winslow, D. (2010). *Gender and Military Sociology*. Stockholm : Swedish National Defence College, Dep. of Leadership and Management, 2010. [http://www.fhs.se/Documents/Externwebben/omfhs/Organisation/ILM/Sociologi%20och%20ledarskap/Dokument/Gender%20and%20Military%20Sociology\\_webb.pdf](http://www.fhs.se/Documents/Externwebben/omfhs/Organisation/ILM/Sociologi%20och%20ledarskap/Dokument/Gender%20and%20Military%20Sociology_webb.pdf).
- [39]. Yanovich, R., Evans, R., Israeli, E., Constantini, N., Sharvit, N., Merkel, D., Epstein, Y., & Moran, D.S. (2008). Differences in Physical Fitness of Male and Female Recruits in Gender-Integrated Army Basic Training. *Medicine & Science in Sports & Exercise*, 40 (11 Suppl), 654-659. doi: 10.1249/MSS.0b013e3181893f30.
- [40]. Yount, R. (2006). *Developing Scales, The Likert Scale The Thurstone Scale The Q-Sort Scale The Semantic Differential Chapter 12, 4th ed.* 2006. [http://www.napce.org/documents/research-design-yount/12\\_scales\\_4th.pdf](http://www.napce.org/documents/research-design-yount/12_scales_4th.pdf).