



COED SPORTS AS AN 'INTEGRATION TOOL' IN HELLENIC MILITARY HIGHER EDUCATION INSTITUTIONS

Kefi-Chatzichamperi, E.¹ⁱ,

Kamberidou, I.²,

Patsantaras, N.³

¹Doctoral candidate,

School of Physical Education and Sport Science,
National and Kapodistrian University of Athens (NKUA),
Greece

²Professor of Sociology: Gender in Sport and Society,
School of Physical Education and Sport Science,
National and Kapodistrian University of Athens (NKUA),
Greece

³Professor of Sport Sociology,
School of Physical Education and Sport Science,
National and Kapodistrian University of Athens (NKUA),
Greece

Abstract:

This study focuses on women's integration in the military through sports, and particularly coed sports in the Hellenic Military Higher Education Institutions: 1) the Hellenic Army Academy, 2) the Hellenic Military Academy of Corps Officers, 3) the Hellenic Military Nursing Academy, 4) the Hellenic Naval Academy, and 5) the Hellenic Air Force Academy. We argue that coed sports (mixed-gender teams) can be used as an *integration tool* in military institutions, although research on this topic is scarce. Our study begins with a literature review on gender, the military, and sport combining a qualitative and quantitative approach to facilitate a better understanding of how women and men navigate and perceive the meaning of their mixed-gender military sport experience in the Hellenic Military Higher Education Institutions. Initially, twelve Greek women, active officers in the Armed Forces, took part in a series of semi-structured interviews. The twelve women, all high-ranking military officers today – between the ages of 25 to 49 – were randomly chosen. Subsequently, a total of 120 active officers of both genders responded to the Greek version of the "Group Environment Questionnaire" (Angelonidis, 1995). From a total of 18 questions, nine were selected to examine gender integration through sport. The main research question is whether sport in the five military higher education academies/schools in Greece contributes to gender integration as perceived

ⁱ Correspondence: email evangeliakxa1@yahoo.com, evangeliakxa@phed.uoa.gr

and understood by the 120 participants (female and male officers). The findings showed that integration is a process involving non-isolation, meaning acceptance of the gender subject (the officer cadet/military student) regardless of his/her gender into the team, as opposed to his/her exclusion, and as a result the union-unity-acceptance in a sport team of all the subjects (officer cadets of both genders). According to the results of the analysis, there is a statistically significant interaction between the variables 'joint participation of men and women in sports' and the 'integration of women' in the five Hellenic Military Higher Education Institutions. The results of this study indicate that mixed-gender military sport programs serve as a means for gender integration, unity, and cohesion. Other than strengthening physical capacity, fitness and performance, the findings confirm that coed military sport activities could prevent sexism; eliminate or reduce gender harassment, discrimination, and stereotypes; strengthen interpersonal communication/relationships and teamwork; reinforce team and social cohesion, unity, and cooperation skills.

Keywords: hegemonic masculinity, sidestreaming, gender integration, women, Armed Forces, military academies, coed sports, mixed-gender activities

1. Introduction

In Greece, the "Military Educational Institutions" (ASEI) are equivalent to those of the university sector: Higher Education Institutions ([law 3187/2003](#)).ⁱ More accurately, the *Hellenic Military Higher Education Institutions*ⁱⁱ are made up of five Schools/Academies of the Ministry of National Defenceⁱⁱⁱ: 1) the Hellenic Army Academy^{iv}, 2) the Hellenic Military Academy of Corps Officers^v, 3) the Hellenic Military Nursing Academy^{vi}, 4) the Hellenic Naval Academy^{vii}, and 5) the Hellenic Air Force Academy.^{viii}

The five Schools/Academies are equivalent to university studies (four academic years), with the same entry requirements and qualifications as any other constitutionally recognized and accredited public university in Greece. In this article we will be using the English translation *Academy* for the Greek term *Σχολή* (School), as translated in their official English websites. We need point out here, as regards the English term *Academy* (instead of *School*), by no means is it a reference to a two-year training program or a two-year course of study, as the term implies.

The five Hellenic Military Higher Education Institutions, ^{ix} constitutionally recognized and accredited university programs, began accepting women students/cadets in 1991 (law 1414, article 16, par. 4), exactly 30 years ago. Accordingly, this article incorporates the gender dimension in the Hellenic Military Higher Education Institutions, in order to gain a better understanding of how women and men have been navigating and perceiving the meaning of their mixed-gender experiences (in these five military academies), and specifically the impact of coed sports on women's integration in the military culture.

We begin with a literature review on gender integration, the military's hegemonic structure, and sport participation, combining a qualitative and quantitative approach,

subsequently focusing on women's integration in the military through sports, and specifically coed sports in the Hellenic Military Higher Education Institutions.

2. Background and Literature review: Integration through sports

NATO (2016) has acknowledged that the complementary skills of both male and female personnel are essential in today's world. Utilizing the full potential of all human resources—the entire talent pool—is critical in military operations that require a diversity of qualifications, skills, and resources to ensure success.

Studies on gender integration in the Armed Forces indicate that developed and developing nations alike have come to understand that women's integration contributes to ensuring peace, security, and development. Evidence shows that female peacekeepers are more effective than their male counterparts in navigating cultural boundaries; building relationships with marginalized social groups and ethnic minorities; surpassing socio-cultural restrictions; reducing sexual violence and exploitation in conflict areas; gaining trust, since female civilians are more likely to confide in them about gender-based violence; encouraging gender reforms in post-conflict environments, and so on (Egnell & Alam, 2019; Dvorakova, 2018; Hlatky, 2017b; Kamberidou, 2019; NATO, 2016; Neby & Segal, 2021).

On the other hand, as regards the gender participation gap, women represent an overall average of only 11.1% of the active-duty military personnel in the Armed Forces of NATO member states. Hungary holds the highest female participation rate (19.3%), Greece has 15.5%, and Turkey the lowest (0.8%), according to the data provided by Lt Col Magdalena Dvorakova (2018), the International Military Staff (IMS) Gender Advisor, NATO HQ.^x Women currently comprise just under 5 per cent of uniformed military personnel in UN peacekeeping missions, according to a current study by Neby and Segal (2021).

The gender imbalance in the militaries around the world is documented in Egnell and Alam's (2019) cross-national analysis which compares gender perspectives, women's integration, and the women, peace, and security agenda in the Armed Forces of eight countries^{xi} plus NATO and United Nations peacekeeping operations. They argue that there is no single model for change that can be applied to every country, and despite the wider recognition of the value of including gender perspectives to enhance operational effectiveness and the opportunities offered to women in many countries, barriers persist (Egnell & Alam's, 2019), even after the October 2020 United Nations Security Council Resolution 1325 that kicked off the women, peace, and security agenda.

The military institution's broader culture needs a gender perspective, argues Stefanie von Hlatky (2017a), while observing that the UN links the number of women in peacekeeping to operational effectiveness. She points out, that today's democracies are diversifying and military organizational culture conforming to civilian expectations of gender equality. Hlatky (2017b) challenges established beliefs about gender relations, physical strength, and military effectiveness in the Armed Forces in Canada, the United States and Norway. She argues that it was not possible for the Armed Forces to achieve

change from within, but only after interventions and pressures from outside actors, primarily international organizations, governments, and courts, including pressures from NATO and the United Nations, on the issue of integrating women and members of the LGBTQ community.

Certainly, the *gender order* does not change overnight. The hegemonic military structure created an ideology of male superiority that has marginalized women, as well as historically marginalized groups, although women are not a social group! Women's military contributions in complementary or supportive roles— that do not disrupt the *gender order* or the military's hegemonic masculinity— have been welcomed and endorsed throughout the centuries.

Historically, women have been playing vital roles in military operations, including conflict or combat situations as messengers, spies, volunteers, war nurses, caregivers, peacemakers, philanthropists, and educators. Such an example are the European women volunteers and professional nurses during the Crimean War (1853-1856), when the English and French colonial experience encouraged female engagement. During this period, English, French, and German nurses, "lady volunteers", philanthropists, missionaries, and educators cared for the soldiers in the hospitals of Constantinople and its environs. They also cared for the wives and children of the French and English soldiers who followed their husbands to war (Kamberidou, 2017).

Clearly, military institutions convey strong messages regarding the socially constructed *gender order*, as does the sport institution (competitive sports, in particular). Both institutions have been traditionally viewed as male domains that encouraged men and boys to pursue a *masculine* gender role identity, and women and girls to pursue supportive or complementary roles that do not disturb the established *gender order*. The Armed Forces and Sport, share one common ground, that of women's marginalization. This is defined as hegemonic masculinity, a culturally idealized type of manhood associated with male superiority, that is socially and hierarchically exclusive (Georgiou, Patsantaras, Kamberidou, 2018).

Stacie R. Furia (2009) argues that women's presence challenges "*the maintenance of the military's hegemonically masculine institution*", although women are acknowledged as necessary! She observes that the military has been having a hard time deciding on women's place and roles within the military institution, adding that while the Army has reconciled itself to the necessity of women's participation, it still has not figured out how to successfully integrate them.

Why have militaries been having such a hard time deciding on women's place and roles? Could gender *sidestreaming*, as opposed to mainstreaming, be the reason? A current study reflects the lack of gender mainstreaming in national militaries globally which spills over into peacekeeping. Vanessa Neby and Clotilde Segal (2021), drawing on empirical evidence from national militaries, introduce the concept of *sidestreaming*, which is the practice of deliberately or unintentionally: 1) leaving women in low-status and gender defined spaces in national militaries, and 2) placing women in specialized spaces in peacekeeping operations, while seemingly attempting gender mainstreaming or increased gender integration. The term *sidestreaming* illustrates how the process of

mainstreaming can be undermined, confused, or weakened, thus failing to challenge hegemonic masculinity, and consequently perpetuating and reinforcing gender dichotomy as regards men's and women's capabilities "*as protector and protected*" (Neby & Segal, 2021).

Their study shows how *sidestreaming* occurs in both national militaries and peacekeeping operations. In their discussion on how the low status of non-combat roles obscures women's visibility and the value of their contributions in national militaries, they argue that this has a negative impact on women's recruitment, promotion, and retention, which is evident in the low numbers of women as peacekeepers in UN peace operations today: e.g., women currently comprise just under 5 per cent of uniformed military personnel in UN peacekeeping missions. Their research indicates that the Global North militaries do not differ greatly from those in the Global South, despite a great deal of rhetorical commitment on gender mainstreaming. Neby and Segal (2021) insist that increasing women's contribution to peace operations is important because peacekeeping operations are vehicles for the advancement of gender reforms in the post-conflict environment. They conclude that gender mainstreaming requires military reforms that will dissociate violence and combat skills from hegemonic masculinity perceptions, in addition to inclusive research strategies for both men and women.

Traditionally, hegemonic masculinity in the Armed Forces is associated with power relations and male-dominated environments. We need reiterate here, that this is a common trait and characteristic which the military institution shares with the sport institution. For instance, the gender leadership gap endures, not only in military institutions, but in all sport governing bodies as well: International Olympic Committee (IOC), sport federations, National Olympic Committees (NOCs), and so on.

According to Cohen and Melton (2014), the norms and traditions of sport reinforce and perpetuate notions of hegemonic masculinity. In sport, they argue, gendered discourses, belief systems, and policies typically disadvantage women and privilege men, making it seem natural to view as superior athletes only those who possess super-masculine or super-competitive traits, casting sport as a male domain in which women should limit themselves to the boundaries of women's sports or play supportive roles. This has resulted, as Cohen and Melton (2014) point out, in "*dropout rates*" among both male and female participants, or what we define as the *leaky pipeline*, a term/concept typically used in reference to women.

As regards women's integration in military institutions, research emphasizes the need for change in the military culture on all levels—legal and organizational—including diversity and gender-awareness training, especially on the complimentary skills that both genders bring to the table as opposed to the *wastage of talent*. Unquestionably, competitive sports and sport activities are crucial as a preparation for military operations—as regards fitness, including mental and physical strength—to produce soldiers, men and women, who can manage pressure, build and lead teams, and generate cohesion and ethos. A plethora of studies confirm that sport creates social bonds and ties; improves relationships and social interactions; promotes friendships, collaborations, unity, cohesion, and engagement, while facilitating integration and inclusion (Channon,

Dashper, Fletcher, & Lake, 2017; EOC, 2017; Hertting & Karlefcors, 2013; Kamberidou, 2019; Kamberidou, Bonias, & Patsantaras, 2019; Muench, 2001; Williams, 2013).

Then again, few researchers have examined the impact of mixed-gender sport participation/teams (coed sports) in facilitating gender integration. Studies on coed sport's ability to encourage equality and inclusion are extremely rare (Cohen & Melton, 2014; Kamberidou, 2019), but even scarcer is research on mixed-gender or coed sports and exercises/training in the Armed Forces, in military institutions, academies, and schools (Kefi-Chatzichamperi, 2020), although integration is enabled when both genders engage together in sport activities and games.

The United Nations (2007) recognizes the role sport in promoting social integration and accordingly encourages sport programs for both genders and for all ages. Patsantaras (2013) argues that sport is a "*social activity*" which is used as a tool in the integration processes, specifically a social activity through which the social subject, regardless of gender, engages in sports—individual, group, coed, organized or non-organized—which contribute to breaking down socio-cultural barriers. His research also shows that technological developments have had a tremendous effect on women's advancement and integration in both sport and military institutions (Patsantaras 2020, 2019).

In this framework, Kamberidou (2019) focuses on the socio-cultural aspects of women's integration in the Armed Forces, arguing for "*degendering*" the system, namely "*gender-neutral standards*" that promote equality and inclusive practices that reproduce women's participation, retention, and advancement. She argues that coed military sport participation and coed exercises/physical training serve as a means of "*bridging the gender-divide*", "*eliminating gender harassment*", and "*wastage of talent*", gradually changing the military culture.

Research also indicates that mixed-gender sport activities and military training strengthen and consolidate friendships, interpersonal relationships, ethos (work ethics), teamwork, unity, cohesion, solidarity and collaborations between men and women (Kefi-Chatzichamperi, 2020).

2.1 Main research question

This study focuses on women's integration in the military through sport, and specifically coed sport activities in the five Hellenic Military Higher Education Institutions.^{xii} Twelve Greek women, all high-ranking military officers, between the ages of 25 to 49, took part in a series of semi-structured interviews. Successively, a total of 120 active officers of both genders responded to the Greek version of the "Group Environment Questionnaire" (Angelonidis, 1995). From a total of 18 questions, nine were selected to examine gender integration through sport. On this basis, the main research question is whether sport in the five military academies contributes to gender integration as perceived and understood by the 120 participants themselves (meaning the 120 female and male active officers who took part in the study).

Integration, in line with the questionnaire, is a process involving non-isolation, specifically acceptance of the gender subject (the military cadet/student regardless of

his/her gender) into the team, as opposed to his/her exclusion, and as a result the union-unity-acceptance of all the subjects (military cadets/students of both genders) in a sport team.

It seems women's sport participation (individual, team, or coed) is a means of self-empowerment which leads to breaking down anachronistic gender stereotypes, in other words social myths and exclusionary practices, consequently contributing to gender integration.

3. Material and Methods

The researchers chose the "Group Environment Questionnaire" (Carron, Widmeyer & Brawley, 1985), a closed questionnaire adapted to the Greek population by Angelonidis (1995). The statistical package SPSSv.24 was used to analyze the data; the Cronbach Alpha to check reliability; and the Multivariate Analysis of Variance (MANOVA), which takes into account the multiple continuous dependent variables (Field, 2013 in Mavri, Giossos, & Gaki, 2016).

Specifically, the first part of the questionnaire covers demographic characteristics and the second 18 questions which are divided into four categories/variables, two of which are related to the research question: (1) "individual attraction in social relationships (ATGS)" and (2) "group integration in social relationships (GIS)" (Carron, Widmeyer, Brawley, 1985).

The first variable, "individual attraction in social relationships" determines the individual emotions of group members: their personal involvement-engagement-attraction, concerning their acceptance and social interaction with the entire group (as a whole/ as one unity). The second, "group integration in social relationships" determines the feelings of the group members which are linked to similarities, closeness, and commitment within the group as a single social environment.

More analytically, a total of 120 active officers of both genders responded to nine questions in the "Group Environment Questionnaire" in relation to two variables, that of "individual attraction in social relationships (ATGS)" and "group integration in social relationships (GIS)" (Carron, Widmeyer, & Brawley, 1985).

The results— of the questionnaire adapted to the Greek language (Angelonidis, 1995)— show that a) sports/coed sports contribute to women's integration and b) there are no gender differences. Furthermore, the results indicate that participation in different types of sports (individual, group, coed) contributes to gender integration, and that there are no statistically significant differences from the different types of military academies in terms of "individual attraction in social relationships (ATGS)" and "group integration in social relationships (GIS)" (Carron, Widmeyer, & Brawley 1985).

The MANOVA analysis (Field, 2013 in Mavri, Giossos, & Gaki, 2016) did not show any significant differences between the independent variables and the two dependent variables, confirming that sports and coed sport activities cultivate and encourage: a) teamwork, b) cooperation, c) equality, and d) integration. Moreover, they contribute to

creating a healthy military sport environment and culture by supporting women's integration, in addition to the unity, closeness and commitment of the military team.

3.1 Sample details

A total of 120 active officers of both genders participated in the study, all of which had been enrolled in the five Hellenic Military Higher Education Institutions: 1) the Hellenic Army Academy, 2) the Military Academy of Corps Officers, 3) the Military Academy of Nursing Officers, 4) the Naval Academy, and 5) the Air Force Academy.

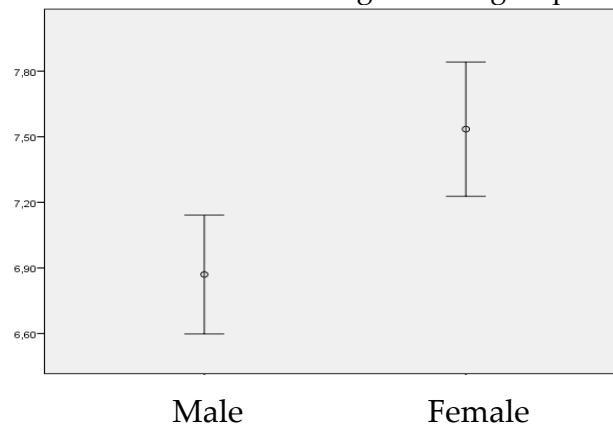
All the participants engaged in group/team sports, individual sports, and coed sports, specifically basketball, volleyball, track, swimming, tennis, and shooting. The 120 active officers of both genders, after reading and signing the consent form, responded to the questionnaire.

4. Results and Discussion

The population was 120 officers of which those of the male gender represented population $N = 74$ and those of the female gender $N = 46$. Of the 120 active officers, 85 represented the Hellenic Army (Hellenic Army Academy, the Military Academy of Corps Officers, and the Military Academy of Nursing Officers); 11 officers were from the Hellenic Naval Academy and 24 officers from the Hellenic Air Force Academy. As regards the entire study sample, the Mean value of individual attraction was very high ($M = 7.13$, $SD = 1.16$) as well as group integration in social relationships ($M = 7.00$, $SD = 1.02$). Cronbach's internal consistency index was used to test the reliability of the measuring instrument. The index ranged for the dimension of individual attraction was $\alpha = .63$ and for group integration in social relationships was $\alpha = .81$. Finally, for the overall questionnaire, the ratio was $\alpha = .84$.

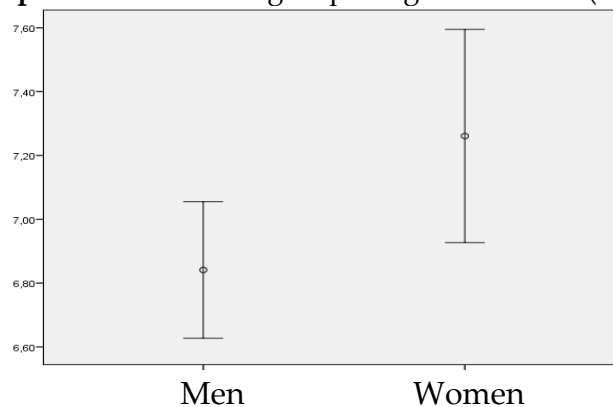
Graph 1 shows the results of the MANOVA analysis which examines the differences between individual integration (ATGS) and group integration (GIS) in relation to "gender", showing statistically significant differences $F_{(2,117)} = 4.938$, $p < 0.009$; Wilks' $L = 0.922$, partial $\eta^2 = .078$. Specifically, the univariate analysis of variance then performed at $p = .025$ showed statistically significant differences in "individual integration to group-social (ATGS)" $F_{(1,118)} = 9.941$, $p < 0.002$; partial $\eta^2 = .078$, with the male gender showing lower mean values ($M = 6.87$ $SD = 1.17$) than female ($M = 7.53$ $SD = 1.03$).

Graph 1: "Gender" to "individual integration to group-social (ATGS)"



In contrast, differences in "group integration-social (GIS)" were not statistically significant $F_{(1,118)} = 4.935, p < 0.028$; partial $\eta^2 = .040$, with the male gender averaging $M = 6.84$ $SD = .92$ and the female $M = 7.26$ $SD = 1.13$ (Graph 2).

Graph 2: "Gender" to "group integration-social (GIS)"



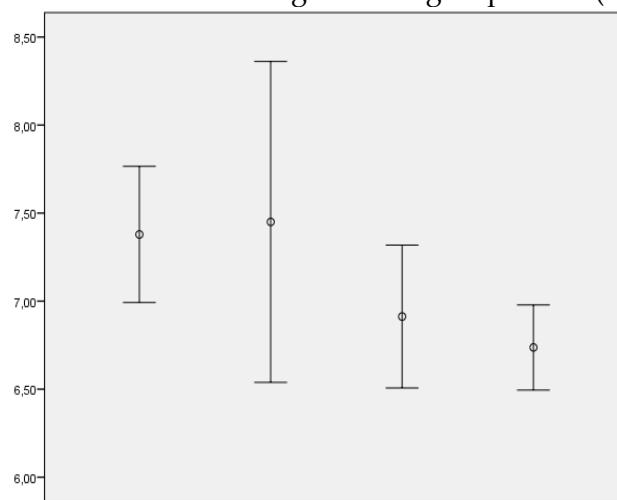
Subsequently, Table 1 shows the results of the MANOVA analysis as regards the differences between individual integration (ATGS) and group integration (GIS) in Sport. The analysis showed statistically significant differences $F_{(4,232)} = 2.619, p < 0.036$; Wilks' $L = 0.915$, partial $\eta^2 = .043$. In particular, the univariate analysis of variance then performed at $p = .016$ showed statistically significant differences in group integration $F_{(2,117)} = 5.223, p < 0.006$; partial $\eta^2 = .084$ and more specific for team sports $M = 6.6$ $SD = 1.1$, for individual sports $M = 7.24$ $SD = 1.02$ and for general sports $M = 7.17$ $SD = .84$. In contrast, there were no statistically significant differences in atomic attraction $F_{(2,117)} = 3.269, p < 0.089$; partial $\eta^2 = .041$ as for team sports $M = 6.8$ $SD = 1.24$, for individual sports $M = 7.3$ $SD = 1.14$ and for general sports $M = 7.3$ $SD = 1.03$. Then the Bonferroni test showed statistically significant differences between individual and group, individual and general but not between group and general.

Table 1: Descriptive Statistics of Sports Activities

	Sports Activities	Mean	Std. Deviation	N
Individual Integration (ATGS)	Team Sports	6,7950	1,24075	40
	Individual Sports	7,2957	1,14910	46
	General Sports	7,2824	1,03293	34
	Total	7,1250	1,16390	120
Group Integration (GIS)	Team Sports	6,5875	1,05087	40
	Individual Sports	7,2446	1,02400	46
	General Sports	7,1618	8,4809	34
	Total	7,0021	1,02259	120

The MANOVA analysis was used to investigate the differences between individual integration (ATGS) and group integration (GIS) with different types of military training. The analysis showed statistically significant differences $F_{(6,230)} = 2.634, p < 0.017$; Wilks' $L = 0.876$, partial $\eta^2 = .064$. In particular, the univariate analysis of variance subsequently performed at $p = .0125$ showed no statistically significant differences in either group integration $F_{(3,116)} = 3.697, p < 0.014$; partial $\eta^2 = .087$, with H.M.A. officers ($M = 7.38$ $SD = 1.09$), officers of the H.N.A. ($M = 7.46$ $SD = 1.27$), the officers of the H.A.F. ($M = 6.91$ $SD = .87$) and the Hellenic Military Corps officers ($M = 6.73$ $SD = .911$) (Graph 3).

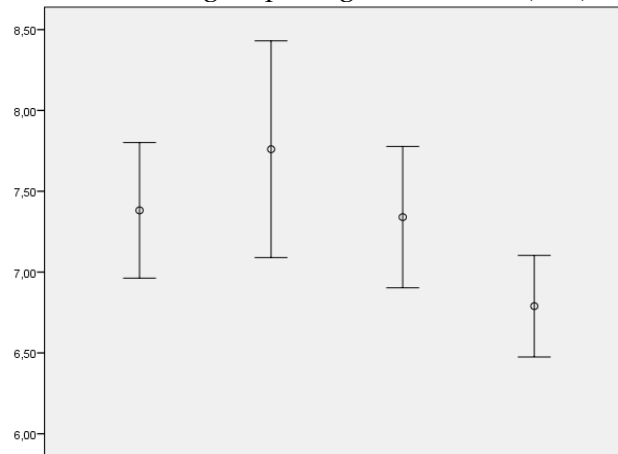
Graph 3: "Different types of Military Academies" in terms of "individual integration to group-social (ATGS)"



Military Academies: H.M.A. H.N.A. H.A.F. Corps

Additionally, it showed no statistically significant differences in atomic attraction $F_{(3,116)} = 3.548, p < 0.017$; partial $\eta^2 = .084$ with the H.M.A. officers ($M = 7.38$ $SD = 1.18$), the H.N.A. officers ($M = 7.76$ $SD = .94$), the H.A.F. officers ($M = 7.34$ $SD = .93$) and Hellenic Military Corps officers ($M = 7.34$ $SD = .933$) (Graph 4).

Graph 4: "Different type of Military Academies"
in terms of "group integration-social (GIS)"



Military Academies: H.M.A. H.N.A. H.A.F. Corps

The MANOVA analysis was used to investigate the differences between individual integration (ATGS) and group integration (GIS) regarding the officers and showed statistically significant differences $F_{(4,232)} = 2.702, p < 0.031$; Wilks' L = 0.913, partial $\eta^2 = .045$. In particular, the univariate analysis of variance then performed at $p = .016$ showed no statistically significant differences in group integration $F_{(2,117)} = .068, p < 0.935$; partial $\eta^2 = .001, (M = 7.00 SD = 1.04)$, the Army Corps officers ($M = 7.08 SD = 1.10$) and Hellenic Navy officers ($M = 6.96 SD = .917$). It also showed no statistically significant differences in atomic attraction $F_{(2,117)} = 2.989, p < 0.054$; partial $\eta^2 = .049$ with Army Corps have ($M = 6.926 SD = 1.26$), the Hellenic Navy officers ($M = 7.64 SD = .888$) and Hellenic Air Force officers ($M = 7.368 SD = 1.26$).

The aim of this study was to investigate whether sport in the military academies contributes to gender integration as perceived and understood by the participants themselves (meaning female and male officers). The literature review revealed that there are no similar studies that examine or investigate this research topic and question in Greece or internationally. The independent variables were selected following a literature review on gender, military academies, and sport activities (team sports, individual sports, general/coed sports and the dependent variables "individual attraction in social (ATGS)" and "group integration in social (GIS)".

The results showed a statistically significant interaction of the independent variable "gender" with respect to the variables "individual attraction in social relationships" and "group integration in social relationships".

These results are consistent with earlier studies that examined "gender" in "individual attraction in social relationships" and in "group integration in social relationships" (Carron, Brawley & Widmeyer, 1998; Carron, Brawley, & Widmeyer, 2002; Mbirsimis, 2014), confirming that a sport environment (specifically, social relationships) plays an important role in gender integration.

Moreover, the results showed statistically significant differences between individual and team sports, individual and general/coed sports but not between team

and general/coed sports which is consistent with the research conducted by James and Collins (1997), Wilson and Eklund (1998) and McGowan et al. (2008), according to which group effectiveness is primarily based on individual gender integration within the group and subsequently on group integration that enhances the characteristics of team sports: equality, communication, cooperation, trust, integration/inclusion.

As far as general/coed sports are concerned, in their studies, Widmeyer and Williams (1991) and Carron, Brawley and Widmeyer (2002) argued that by strengthening the individuality of male and female athletes, the result would be team building and team effectiveness.

Based on the findings there were no statistically significant differences stemming from the "*different type of military academies*" in terms of "*individual attraction in social relationships*" and in "*group integration in social relationships*". These differences may be the outcomes of the sports and academic programs of the five Hellenic military academies (the Military Higher Education Institutions), in addition to military efficiency, such as leadership skills, discipline, ingenuity, communication, cooperation, respect, organization and teamwork (PaD, 2015).

Such traits are initially required to 'build' (create/develop) an athlete, and in this case, in our study the male or female officer cadet who achieves his/her acceptance in the team. In general, the gender dimension/variable along with the sports variable, have a statistically significant effect on gender integration.

As regards his/her acceptance in the team, Theodorakis, Goudas and Papaioannou (2000) also ascertained that a professional athlete learns how to: define his/her training and competition goals; set long-term and short-term goals; monitor his/her development and achievement of goals; redefine goals if necessary; set both individual sport goals and team sport goals and commit to these goals.

To summarize, the results confirmed the first research hypothesis that sport in the five military academies contributes to gender integration, consequently there is no gender discrimination. The results also confirmed the second research hypothesis, according to which, participation in different types of sports (individual, group, coed) contributes to gender integration. In contrast, regarding the third research hypothesis, there were no statistically significant differences stemming from *the different type of military academies* in terms of "*individual attraction in social relations*" and "*group integration in social relations*". Therefore, the gender of the officers and the sport activities produce and reproduce (a) teamwork, (b) cooperation, (c) communication and (d) equality. This creates a healthy sport environment; supports military similarity, proximity/closeness, and commitment within the group; and establishes a social military environment.

Finally, sport as a profession appears to: a) encourage men and women to engage in direct communication with each other, b) facilitate learning rules, regulations, respect, teamwork and cooperation, and c) create friendships while maintaining the hierarchy within the team.

5. Concluding remarks and recommendations

The gender imbalance in the militaries around the world lives on, despite the broader recognition of the value of including the gender dimension in military institutions, and especially in today's democracies which advocate gender equality. Many studies argue for change in military culture on all levels, including legal and organizational (Egnell & Alam, 2019; Furia, 2009; 2017b; Kamberidou, 2019; NATO, 2016).

Diversity and gender-awareness training, especially on the complimentary skills that both genders bring to the table is essential. However, women's integration in the military—and specifically in the Hellenic Military Higher Education Institutions—through coed sport activities is discussed for the first time in Kefi-Chatzichamperi's (2020) doctoral dissertation, confirming that further research on the subject is required not only in Greece but internationally.

Though coed sports (mixed-gender teams) and gender-mixed activities as a *tool* for women's integration and inclusion in military institutions seem to be part of the solution, it is a topic on which research is scarce, and not only! It is equally important to point out that there is no specific model, prototype, protocol, or theoretical perspective for change that can be applied to all countries, due to the diversity of social and cultural barriers, including social stereotypes regarding gender identity.

To promote women's participation, retention and advancement in military institutions, sport could prove a valuable *tool*. This study confirms that coed sports games, and activities can be used as a gender *integration tool* in the military system.

Moreover, to produce military officers and soldiers—women and men—who can manage pressure, build and lead teams, and generate cohesion, competitive sports and sport activities are vital. Women's integration in the Armed Forces, the military system and culture, means utilizing the entire talent pool, namely all human resources, a diversity of skills and qualifications, to ensure success in peacekeeping operations, enhance operational effectiveness, and contribute to peace, security and development, and especially in surpassing cultural barriers in areas with social restrictions regarding access to female civilians. Increasing women's contribution to peace operations is important especially in post-conflict environments.

Consequently, there is no longer any excuse for women's underrepresentation. Newby and Sebag (2021) provide up-to-date empirical data on women in national militaries worldwide, illustrating how women remain under-represented and under-valued in many areas of military life. Their study shows that under 5 per cent of military personnel in UN peacekeeping missions are women—although the UN consistently calls for more—which reflects a lack of gender mainstreaming and gender inclusive practices in national militaries globally.

Acknowledgments

Our sincerest appreciation to Professor Gerassimos Karabelias of Panteion University of Social and Political Sciences for his expertise in Military Sociology, and his lectures on the military environment and culture. A special thanks to Associate Professor Yiannis

Giossos of the School of Physical Education and Sport Science (SPSS), the National and Kapodistrian University of Athens (NKUA) for his invaluable advice and support in the statistical analysis IBM and SPSS, and in particular the multivariate analysis of variance (MANOVA).

Conflict of Interest Statement

The authors declare no conflict of interest.

About the Authors

Evangelia Kefi-Chatzichamperi holds a BS in Physical Education, an MA in Education and has recently completed her PhD at the School of Physical Education and Sport Science (SPESS), the National and Kapodistrian University of Athens (NKUA). She is part of the Special Teaching Staff at the Hellenic Navy Academy, where she teaches physical education. She is also an active member of the Sociology Studies Lab of the SPESS/NKUA. RG: <https://www.researchgate.net/profile/Evangelia-Kefi-Chatzichamperi-2>.

Irene Kamberidou is a Professor of Sociology at the School of Physical Education and Sport Science (SPESS), the National and Kapodistrian University of Athens (NKUA), where she teaches the undergraduate and graduate courses: Sociology, Gender in Sport and Society, and Sport Sociology. UoA Scholar: <http://scholar.uoa.gr/ikamper/home>
Publications: <http://scholar.uoa.gr/ikamper/publications> (UoA-National and Kapodistrian University of Athens).

Nikolaos Patsantaras is a Professor of Sport Sociology at the School of Physical Education and Sport Science (SPESS), the National and Kapodistrian University of Athens (NKUA), where he teaches the undergraduate and graduate courses: Sport Sociology, Olympism: a sociological perspective, and Sociology. SPESS: <http://en.phed.uoa.gr/human-resources/professional-staff/patsantaras-nikolaos.html>.

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Endnotes

- ⁱ"They offer equivalent higher education and degrees." See: Types of Higher Education Institutions (HEI) in Greece. Military Educational Institutions (ASEI). European Commission, EURYDICE, 30 March 2021-13:45 https://eacea.ec.europa.eu/national-policies/eurydice/content/types-higher-education-institutions-33_en
- ⁱⁱ The authors' English translation from the Greek: ΑΝΩΤΑΤΑ ΣΤΡΑΤΙΩΤΙΚΑ ΕΚΠΑΙΔΕΥΤΙΚΑ ΙΔΡΥΜΑΤΑ (Anotata Stratiotika Ekpaideftika Idrimata).
- ⁱⁱⁱ Specifically, the Hellenic Republic Ministry of National Defence (<https://www.mod.mil.gr/en/>)
- ^{iv} Hellenic Army Academy <https://sse.army.gr/en>
- ^v Hellenic Military Academy of Combat Support Officers' website: <https://ssas.army.gr/en>
- ^{vi} Hellenic Military Nursing School/Academy, both terms used interchangeably <https://free-apply.com/en/university/1030000086>
- ^{vii} Hellenic Naval Academy <https://www.hna.gr/en/>
- ^{viii} Hellenic Airforce Academy <https://www.haf.gr/en/>
- ^{ix} Also translated in their English websites as *Higher Military Training Institutes*, although the term 'institute', is commonly used for research organizations/facilities/organizational bodies, and in some countries, institutes are part of a university.
- ^x The top ten countries in 2017: Hungary (19.3%), Slovenia (16.5%), the United States (16.2%), Bulgaria (15.9%), Canada (15.7%), Greece (15.5%), Latvia (15.3%), France (15.2%), Albania (13.1%), Czech Republic (12.7%).
- ^{xi} Canada, the United States, the United Kingdom, Sweden, the Netherlands, Israel, Australia, and South Africa.
- ^{xii} In Greece, sport in the military academies— and specifically the Hellenic Military Higher Education Institutions— is defined, in the military directive, as the systematic cultivation of a physical culture/activity, which uses a specialized pedagogy and methodology with the aim of achieving the highest possible physical performance (PaD, 2015).