**Background**

Since the Secretary of Defense fully rescinded the Direct Ground Combat Definition and Assignment Rule (DGCDAR) in January 2013, the Marine Corps Force Integration Plan has been the Service’s deliberate, measured, and responsible approach to better understand all aspects of gender integration while setting the conditions for successful policy implementation. Central to this historic research effort has been the clear recognition that the brutal and extremely physical nature of direct ground combat, often marked by close, interpersonal violence, remains largely unchanged throughout centuries of warfare, despite technological advancements.

The precursor to the full DGCDAR rescission was the Department of Defense lifting of the co-location restriction in February 2012, which enabled female service members to co-locate with ground combat units that had a high probability of engaging in direct ground combat. The lifting of that restriction has been an unquestionable combat multiplier for our Marine Air Ground Task Forces (MAGTF) serving throughout the world. As an agile, adaptable, expeditionary force that task organizes as a rule, our MAGTF commanders now have the widest latitude to employ the fullest capabilities of their force. Leveraging the talents of every Marine without restrictions throughout the depth and breadth of what are increasingly more complex operating environments enables a more capable Marine Corps.

The Marine Corps consists of 7.6% female Marines within the Active Component and 7% of the Total Force. Today, female Marines are eligible to serve in 315 of the 337 primary military occupational specialties. Female Marines have performed superbly in the combat environments of Iraq and Afghanistan and are fully part of the fabric of a combat-hardened Marine Corps after the longest period of continuous combat operations in the Corps’ history. Moreover, visits with numerous allied militaries throughout this past year, designed to better understand their experiences in successfully integrating female service members into ground combat occupations, point to the fact that female Marines are clearly among the most combat experienced servicewomen in the world.

**Research & Planning**

The 1992 Presidential Commission on the Assignment of Women in the Armed Forces, the last extensive examination of gender integration within U.S. ground combat units, concluded in its formal report:

“A military unit at maximum combat effectiveness is a military unit least likely to suffer casualties. Winning in war is often only a matter of inches, and unnecessary distraction or any dilution of the combat effectiveness puts the mission and lives in jeopardy. Risking the lives of a military unit in combat to provide career opportunities or accommodate the personal desires or interests of an individual, or group of individuals, is more than bad military judgment. It is morally wrong.”

In light of that report, the Marine Corps recognized the need to conduct a deliberate and comprehensive research effort to base future recommendations on quantitative data to the fullest extent possible. As part of its Force Integration Plan, the Marine Corps commissioned and/or reviewed a number of studies, employing both internal Marine Corps agencies and external/civilian research entities. This far-reaching and fully integrated research and analytical effort has significantly increased the Marine Corps’ understanding of the requirements associated with service in ground combat occupations and units. The Marine Corps holds as an axiom that all Marines, male and female, are equal and possess the same strong character demanded of United States Marines. Therefore, these studies principally focused on
those unique physical and physiological demands of service in ground combat occupations and units, while also analyzing the more intangible yet all-important aspects of unit cohesion and morale.

Concurrent with this unprecedented research effort has been detailed planning to ensure the successful integration of female Marines into previously closed ground combat arms occupations and units. This deliberate planning effort, which has spanned the past year, has been guided by previous Marine Corps gender integration experiences and informed by visits to a number of allied militaries in an effort to better understand successful implementation strategies. A key component of this planning has been the development of a Long Term Assessment Plan designed to provide a detailed, quantitative assessment of female integration over time. This assessment, which includes regular formal reporting to senior Marine Corps leaders, will also inform in-stride policy adjustments, as required.

At the heart of this research effort was the analysis of female Marine volunteer performance at ground combat arms entry-level, military occupational specialty-producing formal schools. The results from the Training & Education Command entry-level training research provided insights into relative propensity among new female Marines to serve in various ground combat arms occupations, as well as relative success and injury rates and causes, by gender. Since the programs of instruction at these formal learning centers necessarily focus on basic individual tasks, this research alone was unable to answer the broader questions: “What does it actually take to do the job in the operating forces within these MOSs?” and, “What is the impact, if any, of female integration in ground combat arms units on collective task performance under conditions that most closely approximate combat?” Because formal congressional notification requirements precluded simply introducing female Marines into previously closed ground combat units to answer the above broader questions, it was necessary to build a unit designed specifically to conduct such research – the Ground Combat Element Integrated Task Force (GCEITF).

Considerations

In analyzing the results of the research and analysis, the primary consideration throughout has been to understand any impact on the combat effectiveness of Marine ground combat units. Based on the unique role the Marine Corps fulfills within the Joint Force and in the security of the nation, the benchmark of achieving the “most combat effective” force has remained the unwavering focus. With this primary consideration, the Marine Corps has analyzed factors such as speed and tempo, lethality, readiness, survivability, and cohesion – critical components to fighting and winning in direct ground combat.

The Marine Corps’ capstone doctrinal publication, Warfighting, has served as the operational lens for the assessment of research results, particularly passages such as:

“Of all the consistent patterns we can discern in war, there are two concepts of universal significance in generating combat power: speed and focus. Speed is rapidity of action. It applies to both time and space. Speed over time is tempo – the consistent ability to operate quickly. Speed over distance, or space, is the ability to move rapidly. Both forms are genuine sources of combat power. In other words, speed is a weapon.”

A second consideration in assessing research results has been the health and welfare of the individual Marine. The Marine Corps recognizes the extreme and, in some cases, increasing physical demands of direct ground combat as well as the unchanging differences in human physiology between males and females as an essential element of its responsible approach to gender integration. Moreover, the
Marine Corps has a solemn obligation, as outlined in one of Chairman Dempsey’s five guiding principles, to “set each [Marine] up for success with viable career paths.”

Tied directly to the previous considerations is the imperative of managing the talents of the force – today and into the future. The importance of leveraging the talents of each individual Marine to the fullest extent possible within our Marine Air Ground Task Forces cannot be overstated – assigning the right Marine to the right job with the appropriate skills and qualifications. The Marine Corps fights as units; therefore developing and maintaining the most combat effective units must always be at the forefront of any contemplated institutional change.

In viewing the results of research through these three inter-related lenses – combat effectiveness, the health and welfare of individual Marines, and talent management – the Commandant of the Marine Corps has been afforded unprecedented quantitative information in support of fielding the most combat effective units. This will ensure that the Marine Corps remains fully capable of fighting and winning on today’s and tomorrow’s extremely complex and challenging battlefields.

Summary of Research Findings

- Combat Effectiveness
  - Overall: All-male squads, teams and crews demonstrated higher performance levels on 69% of tasks evaluated (93 of 134) as compared to gender-integrated squads, teams and crews. Gender-integrated teams performed better than their all-male counterparts on (2) events.
  - Speed: All-male squads, regardless of infantry MOS, were faster than the gender-integrated squads in each tactical movement. The differences were more pronounced in infantry crew-served weapons specialties that carried the assault load plus the additional weight of crew-served weapons and ammunition.
  - Lethality:
    All-male 0311 (rifleman) infantry squads had better accuracy compared to gender-integrated squads. There was a notable difference between genders for every individual weapons system (i.e. M4, M27, and M203) within the 0311 squads, except for the probability of hit & near miss with the M4.
    - Male provisional infantry (those with no formal 03xx school training) had higher hit percentages than the 0311 (school trained) females: M4: 44% vs 28%, M27: 38% vs 25%, M16A4w/M203: 26% vs 15%.
    - All-male infantry crew-served weapons teams engaged targets quicker and registered more hits on target as compared to gender-integrated infantry crew-served weapons teams, with the exception of M2 accuracy.
    - All-male squads, teams and crews and gender-integrated squads, teams, and crews had a noticeable difference in their performance of the basic combat tasks of negotiating obstacles and evacuating casualties. For example, when negotiating the wall obstacle, male Marines threw their packs to the top of the wall, whereas female Marines required regular assistance in getting their packs to the top. During casualty evacuation assessments, there were notable differences in execution times between all-male and gender-integrated groups, except in the case where teams conducted a casualty evacuation as a one-Marine fireman’s carry of another (in which case it was most often a male Marine who "evacuated" the casualty).
• Health and Welfare of Marines
In addition to performance, evidence of higher injury rates for females when compared to males performing the same tactical tasks was noted. The well documented comparative disadvantage in upper and lower-body strength resulted in higher fatigue levels of most women, which contributed to greater incidents of overuse injuries such as stress fractures. Research from various U.S. and allied military studies reveal that the two primary factors associated with success in the task of movement under load are 1) lean body mass and 2) absolute VO2 Max. Findings from the physiological assessment of GCEITF males and females conducted by the University of Pittsburgh’s Neuromuscular Research Laboratory include:

- Body composition: Males averaged 178 lbs, with 20% body fat; females averaged 142 lbs, with 24% body fat
- Anaerobic Power: Females possessed 15% less power than males; the female top 25th percentile overlaps with the bottom 25th percentile for males
- Anaerobic Capacity: Females possessed 15% less capacity; the female top 10th percentile overlaps with the bottom 50th percentile of males
- Aerobic Capacity (VO2Max): Females had 10% lower capacity; the female top 10th percentile overlaps with bottom 50th percentile of males
- Within the research at the Infantry Training Battalion, females undergoing that entry-level training were injured at more than six-times the rate of their male counterparts
  - 27% of female injuries were attributed to the task of movement under load, compared to 13% for their male counterparts, carrying a similar load.
- During the GCEITF assessment, musculoskeletal injury rates were 40.5% for females, compared to 18.8% for males
  - Of the 21 time-loss injuries incurred by female Marines, 19 were lower extremity injuries and 16 occurred during a movement under load task

• Talent Management
The Marine Corps Recruiting Command has significantly increased the number of female accessions, both officer and enlisted, to unprecedented levels over the past few years. The Marine Corps must continue to attract, develop, and retain highly talented female Marines to meet current and future challenges throughout the range of military operations.

- Female enlisted accessions have increased to 10.8% in 2014, an ~4.5% increase since 2008
- Female officer accessions have increased to 11.6% in 2014, an ~ 5% increase since 2008
- Female officer applicants represent a growing percentage of applications received each year, increasing from 8.9% in 2010 to 13.7% in 2014

- Infantry Officer Course graduation rate between May 12 – Apr 15: 0% of 29 females as compared to 71% of 978 males
- Infantry Training Battalion graduation rates between Sep 13 – Jun 15: 144 of 401 female volunteers (36%) as compared to 5448 of 5503 males (99%)
- Artillery Cannon Crewman Course: 12 of 14 female volunteers (86%) as compared to 226 of 263 males (86%)
- Tank Crewman Course: 5 of 7 female volunteers (71%) as compared to 67 of 68 males (99%)
- AAV Crewman Course: 5 of 7 female volunteers (71%) as compared to 106 of 113 males (94%)

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