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United States Marine Corps
Command and Staff College
Marine Corps University
2076 South Street
Quantico, Virginia 22134-5068

MASTER OF MILITARY STUDIES

Culture, Class and Impacts to Diversity in the Officer Corps:
Applying an Organizational Culture Model to Analyze Self-Efficacy, Physical and Cognitive
Development Factors Often Surrounding Minority Service Members.

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Jason A. Porter

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Mentor and Oral Defense Committee Member: Dr. Lauren Mackenzie

Approved: SIGNED

Date: 29 April 2020

Oral Defense Committee Member: Lt. Col. Anil Hariharan

Approved: SIGNED

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Executive Summary

Title: Culture, Class and Impacts to Diversity in the Officer Corps: Applying an Organizational Model to Analyze Self-Efficacy, Physical and Cognitive Development Factors Often Surrounding Minority Service Members.

Author: Maj. Jason A. Porter, United States Army

Thesis: Historically, the United States Military has not been an accurate representation of the American population. While it has become more representative of the society it serves today, there is still a need to integrate more diversity, particularly within the officer corps and special operations community. It is essential to first examine ways the current military culture came to be and ascertain the limitation of this culture in order to create and enact measures which will produce a diverse military force. Variations in economic prosperity and opportunity during key developmental years continue to create a strong divide in cultural norms and beliefs throughout American society. This paper highlights opportunities for policy change within the Department of Defense to diversify the officer corps. Applying an organizational culture model enables analysis of the impact of self-efficacy, physical development and cognitive development on the underrepresentation of ethnic minorities.¹ It will be argued that a more diverse military organizational culture will enable the United States to employ an adaptive, agile, and creative force better designed to protect American interests and values throughout the world.

Conclusion: Discovering cultural assumptions through research and observations enables greater understanding of the social identity, norms, values and beliefs represented among an organization's individuals. The way individuals view themselves within the organization shapes its climate and provides understanding for the history and future of the organization.² Applying an organizational culture analysis to the military's officer corps led to the conclusion there are specific assumptions surrounding minority ranks and values within the military organizational culture that inhibits a more diverse officer corps. Assumptions include perceived racism, a lack of relatable role models and the tendency of minority officer candidates to select combat service support fields. The military's organizational values include high academic performance, zero criminal records, and robust physical fitness levels which are all prerequisites for officer candidates, combat arms fields and special operations forces. Physical and cognitive development and self-efficacy are three key areas education professionals and military leaders can impact to change the tide of readiness and subsequently increase diversity within the Department of Defense's officer corps. These efforts will take systematic approaches to influence change, and leaders at all levels of the military must see the effects of disproportionately represented ethnic minorities in the officer corps or current trends within the military's culture will not change.

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Preface

Why do some young people fulfill more potential than others? Is it a function of intellect or environment? I believe the phenomenon of success, which results in drastic differences on an individual and societal scale, is a combination of both nature and nurture. No one inherently wants to live an unsuccessful life. Indeed, we can debate the measures of success, but the amount of nurturing a child receives directly influences the extent of his or her successes in the game of life. Since I was an undergraduate student at Ithaca College, I have tried to understand why and how some people and organizations thrive while others fall short.

Growing up in a single-parent home with a mother who was addicted to drugs and alcohol was difficult. This adversity was compounded by the expectation from society that young people who grow up in similar households, with similar struggles, are destined to fail. This expectation, whether based on stereotypes or environmental influences of growing up in a lower socioeconomic status (SES) environment, prevents many individuals from achieving success in organizational or macro-level culture. If not for specific mentors and coaches, I may have fallen into the same traps and behavioral patterns that many of my high school friends did.

One such mentor in my life was my high school football coach. Towards the end of my junior year, he brought me into his office and asked me about my plans after high school. At that time, I did not have a plan. I had never thought about my life beyond high school, nor had I thought about going to college, let alone paying for it. I had not taken any college entrance exams, researched available scholarship opportunities, or taken any other steps towards attending college.

Some may say I just floated through life, living in the moment, instead of actively and intentionally planning my future. This is a fair characterization of my mentality at the time, it

was typical of those in my social circle. I lacked adult mentors who could provide guidance and counseling during the critical developmental stages of my adolescence. Similar to me, single mothers without any education beyond high school also raised my friends. The adults in our lives, and those we looked to as examples, did not have the experience or intellectual understanding of how to guide us through the next phase of our lives. This was not a reflection of a lack of desire—surely all parents wish every possible success for their children. Instead, our parents inherited this deficit from the limitations placed on them by each preceding generation. For those of us with elite athletic abilities, our coach acted as a surrogate parent, encouraging us to consider life after high school because he believed we had the necessary skills which would lead to opportunities to go to college to play football.

The impact of such a small gesture, like mentorship, on one's life trajectory is fascinating. Based on my experiences through athletics, I believe instilling self-confidence and exposing adolescents to numerous opportunities can positively influence the trajectory of an entire family towards success. Giving a generation the tools needed to attend college, trade school, or join the military adequately prepares these individuals to be active members of society and creates a cycle of pursuing success. Through partnerships between JROTC programs and universities, mentors who invest in character development can impact individuals far beyond their formative years.

Introduction

Historically, the United States military has not been an accurate representation of the American population.³ While it has become more representative of the society it serves today, there is still a need to integrate more diversity, particularly within the officer corps and special operations community. Subsequent sections of this paper address benefits of diversity and ways a more diverse force will enable a military best equipped to protect the American way of life.⁴ It is essential to first examine ways the current military culture came to be and ascertain the limitation of this culture in order to create and enact measures which will produce a diverse military force. Variations in economic prosperity and opportunity during key developmental years continue to create a strong divide in cultural norms and beliefs throughout American society. This paper highlights opportunities for policy change within the Department of Defense to diversify the officer corps. Applying an organizational culture model enables analysis of the impact of self-efficacy, physical development and cognitive development on the underrepresentation of ethnic minorities.⁵ It will be argued that a more diverse military organizational culture will enable the United States to employ an adaptive, agile, and creative force better designed to protect American interests and values throughout the world.

Applying Schein's organizational culture model to support this argument emphasizes the various layers of complexity within macro and micro-cultures.⁶ He describes culture as the accumulated shared learning of a group of people as they solve problems. The group then teaches new members the correct way to "perceive, think, feel and behave in relation to those problems."⁷ Utilizing his definition of culture can aid in dissecting the complex history and current demographics of the military's officer corps. The shared learning becomes a system of beliefs, values, and behavioral norms for the group. This paper provides a background on the

history and culture of the U.S. Military while applying Schein's organizational culture model to analyze self-efficacy, physical development and cognitive development factors often surrounding minority service members. It concludes by providing recommendations for additional research to understand the demographic diversity of commissioning sources while implementing programming opportunities that will increase diversity in the officer corps.

Background

The shared history and cultural beliefs of the ethnic majority within the U.S. military has led to systemic oppression that continues to play a critical role in the underrepresentation of ethnic minorities in the officer corps. This manifested itself in a number of ways, to include findings during a 2017 report to Congress on diversity and inclusion in the military. The report noted that many minority Soldiers served in combat positions on the front lines, despite being pushed to fulfill unskilled jobs that are less likely to lead to the most senior ranks and positions.⁸

The historical culture that pushed minorities to serve in combat service support roles continues to affect the demographics of the military today. Throughout history, military leaders have struggled to integrate diverse service members into the officer corps. Although the military was a racially segregated institution until the mid-20th century, racial minorities volunteered for service or served as drafted Soldiers since the American Revolution. During the Civil War, approximately 216,000 black Americans served in the Union military, and thousands more assisted the cause.⁹ In the 2017 report, researchers noted that Congress authorized six permanent battalion-sized 'colored' units following the Civil War, as part of the Army Reorganization Act of 1866. The act also authorized 1,000 Native Americans to enlist as scouts.¹⁰ Due to the cultural norms of the time, many senior military and government officials did not consider these

segregation practices to be wrong which developed an organizational culture that lacked diversity.

Mission Command principles emphasize that successful leaders build mutual trust and teamwork through the consistent demonstration of character, competence, and commitment.¹¹ Leaders must create a shared understanding and mutual trust by getting to know the subordinates within their units. However, because of the societal norms of the early 20th Century, the organizational culture did not promote creating a shared understanding nor a desire for trust between white soldiers and other ethnic minorities. Although the formation of the segregated units following the Army Reorganization Act in the late 19th Century created career opportunities for specific minorities, it also introduced an era of institutionalized segregation in the armed services.

The Korean War was the radical stimulus needed to end racial segregation in the Army. To supply an adequate number of replacements for casualties in Korea, the unofficial practice of assigning blacks to white units began. Contrary to widespread belief at the time, this practice did not lower the success of these units. Because of the success of this wartime and political pressure, the Army officially began to integrate units in 1951. In 1954, then-Secretary of Defense Charles Erwin Wilson announced the abolishment of the last all-black active-duty unit.¹² Due to the inferior public education that many blacks received during that time, they generally scored low on assessment tests, which would cause them to qualify for only combat service support branches.

By 1981, African Americans only accounted for 7.8% of the officer corps. In August 2017, the Army reported a racial and ethnic breakdown of 58% white, 21% African Americans, 13% Hispanic, 4% Asian, and 3% other. African Americans accounted for 8.7% of the total

officer corps; however, they make up 13.7% of the general American population. Even more intriguing is that at this time, African Americans accounted for nearly 20.1% of the enlisted ranks, making blacks overrepresented in lower ranks while underrepresented in the officer corps.¹³ Thus, the enlisted corps was more racially diverse than the American population, yet representation in the officer corps does not reflect that diversity.¹⁴

Table 1.

Race and Ethnic Representation in the Active Duty and Selected Reserve and U.S. Population							
As of August 2017							
	Rank and Grade	White	Black	Asian	Other	Multi/ Unknown	Hispanic*
Active Duty	General/Flag Officer (O-7 and above)	87.6%	8.2%	2.1%	0.3%	18%	1.4%
	Officer (all)	76.9%	8.7%	4.9%	1.2%	8.3%	7.7%
	Warrant Officer	66.7%	17.8%	3.2%	1.4%	10.8%	11.3%
	Senior Enlisted	62.3%	20.1%	3.9%	2.3%	11.4%	14.0%
	Enlisted (all)	67.0%	19.1%	4.4%	2.6%	7.1%	17.0%
	Total Active Duty	68.7%	17.3%	4.5%	2.3%	7.3%	15.4%
Selected Reserve	General/Flag Officer (O-7 and above)	91.3%	4.0%	2.3%	0.8%	1.7%	3.0%
	Officer (all)	74.8%	9.8%	4.4%	1.0%	5.8%	6.4%
	Warrant Officer	80.3%	8.7%	2.4%	0.9%	2.9%	6.5%
	Senior Enlisted	76.1%	14.7%	2.4%	1.3%	5.5%	9.5%
	Enlisted (all)	72.7%	17.8%	4.2%	1.5%	3.7%	12.5%
	Total Selected Reserve	73.9%	16.5%	4.2%	1.5%	4.0%	11.5%
U.S. Resident Population (age 18-64, estimated)		76.6%	13.7%	6.1%	1.5%	2.1%	17.5%

Sources: Officer and Enlisted figures are as reported by the Defense Manpower Data Center, August 2017. Annual Estimates of the Resident Population by Sex, Age, Race and Hispanic Origin for the United States, States, and Counties: April 1, 2010, to July 1, 2016, U.S. Census Bureau, Population Division, Release Date: July 1, 2016.

Notes: Race and Hispanic origin are self-identified. *The concept of race is separate from the concept of Hispanic origin. Hispanic may be more than one race (e.g., Hispanic and White or Hispanic and Black). Percentages for race should not be combined with percent Hispanic. The "Other" category includes Native Hawaiian and Other Pacific Islanders, and American Indian and Alaskan Natives.

While the Department of Defense actively tries to increase diversity, the percentage of minorities in enlisted ranks continues to exceed that of the officer corps. Drawing from the belief that a force should be proportionate to the population that it serves, the military has sought to achieve racial balance within its ranks; however, it has encountered both structural and perceptual barriers. Historically, structural barriers (defined as those requirements or prerequisites inherent in the policies and procedures of an organization) excluded minorities

more than non-minorities. Examples of these barriers which will be further elaborated on include swimming, service entry test scores and undergraduate degree academic performance.¹⁵ Perceptual barriers are the perceptions, attitudes, or beliefs that lead minorities to perceive they cannot or should not pursue particular jobs or higher ranks within the military.¹⁶ Barriers can arise from a lack of interest due to a lack of knowledge, a lack of belief in one's self, or a lack of support and/or appropriate role models.¹⁷ One area of the military that severely underrepresents minority officers and enlisted personnel is the Special Operations (SOF) community.

Similar to the officer corps, the special operations community has difficulty recruiting, retaining, and integrating minorities into their ranks. Some of the main criteria used in the selection of SOF personnel and the officer corps include test score cutoffs, clean discipline records, and rigorous physical standards.¹⁸ Due to the difficult prerequisites and eligibility criteria for SOF, minority populations often have fewer eligible candidates for the elite force. Sheila Kirby, a Senior Fellow in the Education and Child Development Studies Department at the University of Chicago spent 35 years leading teams in education and military manpower research. She published a report on reasons minorities fail to join the SOF stating, "Seventy-five percent of non-Hispanic white males score high enough to pass the entrance General Technical composite test for Special Forces; whereas, only a third of blacks can pass the test."¹⁹ The underrepresentation of minorities suggests that there are barriers to overcome in regards to minority presence in certain military occupational specialties and ranks that can lead to a more diverse and ready force. These barriers have direct implications to the lack of diversification within the officer corps and the intrinsic value of diversity in conjunction with the value that persons of varying backgrounds and cultures can bring to units.²⁰

Diversity brings new skills and competencies that specific minority subset groups exhibit.²¹ A diverse military force that is representative of the society it serves is more likely to “uphold national values and to be loyal to the government—and country—that raised it.”²² Additionally, diverse teams add value when it comes to "making connections between disparate ideas originating from different cultural sources, given their extensive knowledge of different cultures. Second, extensive intercultural experience also makes potential contradictory perspectives available. This helps individuals with intercultural experience to overcome cognitive fixedness, to break away from structured and routine ways of approaching problems, and to inspire creative thinking."²³ Although the DoD has made strides to create a more diverse force, it has not been without opposition.

The RAND organization is a nonprofit institution that aims to improve policy and decision-making in the Armed Forces. They published a study on reasons minorities elect not to join elite forces, reporting both majority and minority military personnel who oppose diversity initiatives fear that it will affect military readiness and discredit the current military’s merit-based system,²⁴ leading to “accessions and promotions that prioritize demographic targets ahead of performance criteria.”²⁵ This is problematic if diversity is the only goal. The emphasis must be ensuring that minority candidates are equipped with the resources and skills to excel and compete in accordance with high standards. Developing early interventions will promote increased diversity through deeper and broader pools of qualified applicants. When more minority candidates qualify according to the highest standard, the organization will achieve diversity and excellence.

Some current and past service members believe the inclusion of specific demographic groups could affect “unit cohesion, morale, and readiness – particularly in elite combat units.”²⁶

However, studies indicate that a strong predictor of group performance lies in shared experiences and not in the “sameness” of individuals in units.²⁷ In addition, a more diverse force has the potential to meet a greater variety of challenges because with diversity comes more “creative problem solving, innovation, and improved decision making.”²⁸ The decision making may be enhanced by the more diverse culture of youth today.

Organizational Culture

Many factors, to include self-efficacy, physical fitness, and cognitive development play into the demographics of the officer corps within the Department of Defense. Academic institutions, corporate business, and the DoD all have one thing in common: people. Understanding people as individuals, and the way they fit into the broader context of an organization is one of the most valuable tools for successful management.²⁹ Social scientists have long examined the complexities associated with the interactions of people, subcultures, and organizational culture. Viewing culture using Schein’s three “levels” identifies how the “cultural phenomenon” is visible to participants or observers of the culture.³⁰ Between the levels are beliefs, values, norms and behavioral expectations that depict the organizational culture to individuals both inside and outside the group. Schein argues the three levels of culture include artifacts, espoused beliefs and values, and basic underlying assumptions. Artifacts include the visible structures, processes and observed behaviors of an organization. Additionally, artifacts include the climate or underlying assumptions or published list of values that creates the organization’s culture.³¹ Espoused beliefs and values are underlying assumptions a culture uses to guide performance and rationalize behavior.³² Lastly, basic underlying assumptions are those unconscious beliefs and values that are learned behaviors, which develop and determine thoughts, feelings, and perceptions.³³

In a 2019 study published by RAND, researchers argue, “service personalities are alive and well.”³⁴ Researchers applied Schein’s levels of culture to conclude that each service has a unique method behind its force manning and personnel development initiatives. For example, the primary mission of the Army is ground combat warfare.³⁵ Minority officers often do not select ground combat specialties and rather lean towards combat service support roles due to a lack of belief in their abilities and developed historical patterns. A potential area for further inquiry is the effect of implicit bias on recruiters and recruitment practices.

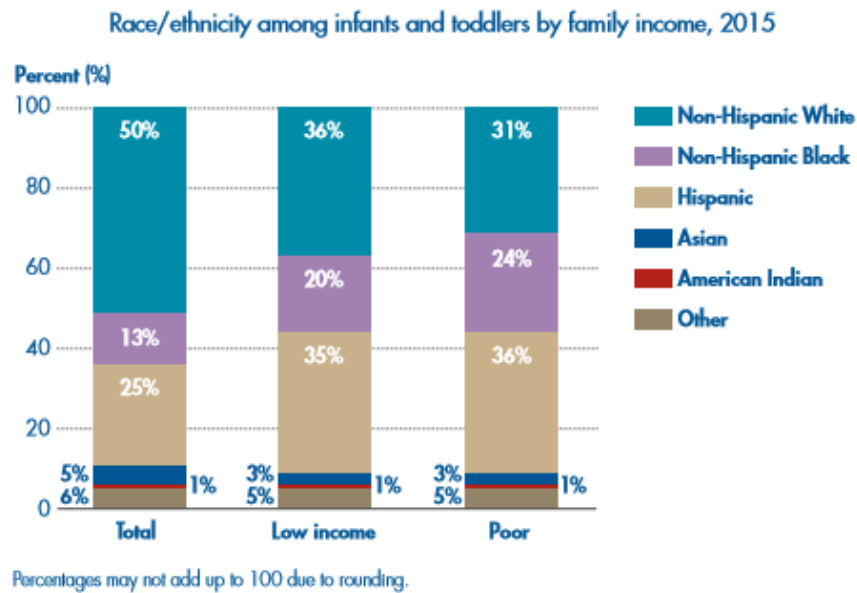
The Army’s second goal is to maximize the size and force capabilities, but this is not conducive to diversifying the officer corps.³⁶ The Army favors combat arms and maneuver leadership positions over institutional or strategic support roles. Ethnic majority officers typically fill initial combat force recruitment and senior ranks. Regardless of service culture, premier command positions which are valued as optimal leadership roles, foster a climate that hinders diversifying officer ranks because minority junior officers often do not have senior mentors who share their cultural experience (e.g. one must see it to believe it).³⁷

Self-Efficacy

Education, physical fitness, moral character, cultural norms, and self-efficacy are all factors that affect a person’s decision to join the military, particularly in the ranks of special operations and the officer corps. An elevated level of confidence strengthens self-efficacy, a perception or belief of being worthy and able to demonstrate specific behaviors necessary to produce particular results. Self-efficacy reflects confidence in an individual’s ability to control one’s own motivation, behavior, and social environment.³⁸ Social cognitive theories state that individuals who have the capability and resources to meet a specific task or situational demand tend to have high levels of self-efficacy, which directly relates to their overall performance.³⁹

Bandura, a social scientist specializing in self-efficacy, argues that mastery experiences in childhood promote self-efficacy.⁴⁰ Childhood is a critical time to set up a foundation of self-concept, physical, cognitive, social, emotional, and behavioral development. Children face many challenges (e.g., oppression, stress, adverse experiences) that can hinder the development of this foundation and be catalysts for negative developmental trajectories of overall physical and psychological health and well-being across the lifespan. Specific to the focus of this thesis, ethnic minorities disproportionately represent variations in economic prosperity and opportunities during key developmental years that continue to create a strong divide in cultural norms and beliefs throughout American society.⁴¹

Figure 1.



The lower socioeconomic status (SES) impact negatively influences an individual's levels of self-efficacy and self-confidence from a social-emotional and academic lens due to a lack of resources, positive experiences and successful mentors who foster the development of self-esteem. The growth of self-efficacy promoted via success early in life in one or several domains is critical to global development. However, an effort to improve various aspects of

children’s overall functioning through discipline-specific isolation (i.e., focusing on only one aspect of development) hinders a comprehensive approach to child development.

The US military culture dating from the Civil War era reflects the jarring fact that African Americans transitioned in status from property to human beings, even without the rights that men in the majority enjoyed. The cultural evolution of the US military reflects the national reality that minority individuals and minority service members have never been on equal footing. Similar to the concept of self-efficacy in children, minority service members have consistently lacked the confidence from within and the evidence from military culture, that they can and in fact should have equal opportunity. The DoD’s organizational culture created values and beliefs that were not conducive for high levels of self-efficacy in minorities, including societal racism, unequal pay, and poorer, segregated and inadequate educational systems. In December 1946, President Harry Truman issued an Executive Order establishing the President’s Committee on Civil Rights.⁴² The committee analyzed conditions for service members both while in uniform and while off duty. While it may seem an integral principle, many people do not consider the impact that SES conditions foster in the development of Soldiers and their families, which may ultimately play a pivotal role in one’s self-efficacy. The report, *To Secure These Rights*, “concluded that blacks and other minority service members faced many barriers to equal treatment both inside and outside of the military.”⁴³

While desegregation occurred during the Truman era in the early 1950s, it only held true for the federal services. Both the National Guard and public facilities remained segregated.

Army Lieutenant General Edward M. Almond said,

I do not agree that integration improves military efficiency; I believe it weakens it. I believe that integration was and is a political solution for the composition of our military forces because those responsible for the procedures...do not understand the characteristics of the two human elements concerned...This is not racism—it is common

sense and understanding. Those who ignore these differences merely interfere with the combat effectiveness of combat units.⁴⁴

Past strategic leaders openly displayed thoughts and actions reflecting this premise, which created a mindset and systematic approach for the military's cultural divide in relation to job and promotional patterns. This mindset and diminished role with the DoD created an organizational culture that led black officers to doubt their ability to achieve senior ranks or command positions in combat arms branches. The lack of self-efficacy combined with observations of the norm (e.g., preponderance of service in combat service support roles) created a pattern of belief that black officers could perform best in combat service and support elements. Taken together, this lack of self-efficacy, combined with observed norms and behaviors, comprises the current day organizational culture in the U.S. military.

Predominantly white service members represent the Pentagon's most elite forces, including the Navy SEALs.⁴⁵ During a 2015 study conducted by the *Military Times*, only eight of 753 (1%) SEAL Officers were black.⁴⁶ Throughout the history of the military, the Army, the military's largest service component, struggled to integrate racially diverse officers into its senior leadership. Commanding a main combat unit, referred to as “the principle pathway to command” is rare for black officers.⁴⁷ According to Army officials and military sociologists, black officers experience less opportunity due a lack of diversity and structural or perceptual barriers, which damages Army effectiveness and disconnects it from society.⁴⁸

Due to challenges stemming from a lack of self-efficacy and cognitive development shortfalls, integrating diversity changes in the senior ranks requires significant organizational reform. Commanding a combat battalion followed by command of a brigade are virtual prerequisites to reach the four-star level.⁴⁹ USA Today reported that Army boards projected only one black officer to lead its 31 top combat brigades. Expanding the pool of minority candidates

for combat leadership has proved challenging for the Pentagon because “Developing a continuous pipeline of diverse senior leaders might require recruitment, retention and promotion of an equally diverse officer corps.”⁵⁰ It is critical these efforts begin in areas such as JROTC programs and preparatory schools, service academy recruitment, and ROTC programs to ensure a diverse officer corps that capitalizes on individuals’ potential and strengths. Reports from a 2016 study indicated black, Hispanic, and Asian students represented between 33%—38% of the service academy enrollment but represented 45% of the population of U.S. postsecondary institutions.⁵¹

For decades, African American’s opted for fields other than combat arms, including logistics and human resources when ranking career branch preferences. During a study conducted in 2009 of ROTC cadets’ assignment preferences, researchers found that black cadets tended to select combat service support branches while white cadets opted for combat arms branches upon commissioning.⁵² The systematic development of these glaring statistics may, *apriori*, influence the self-efficacy of black service members, which reinforces the cultural mindset that success in combat arms and special operations forces is a challenge for minorities because they believe they are not capable of meeting the qualifications to join these ranks.

To assess the foundations of an individual’s self-efficacy from childhood to adulthood, it is critical to take a holistic look into their physical and cognitive development; however, researchers routinely apply disciplinary knowledge in *one* area to focus intervening on *one* factor (e.g., promoting physical activity or social-emotional factors) and assessing its impact on *one* variable (e.g., cognition or behavioral factors).⁵³ This traditional paradigm for conducting research in related, yet disparate siloed areas led to advancements promoting positive trajectories of human development across childhood, adolescence and into adulthood. However,

development appears as the result of complex, synergistic interactions and transactions that occur across time within the physical, cognitive, self-concept, and social-emotional and behavioral domains.⁵⁴ A multidisciplinary approach to understanding the lack of physical and cognitive performance in predominantly lower SES youth highlights the impacts of the lack of physical, psychological and academic readiness. This impact towards their readiness contributes to the lack of diversity in the officer corps. This complex problem set has critical implications for long-term development and requires comprehensively addressing children's overall health and well-being.⁵⁵

Addressing children's overall health and well-being using a more holistic and integrated model will help to bridge physical, cognitive, and social-emotional and behavioral domains of development. The physical domain includes body size, brain development and motor development; the cognitive domain includes thought processes and intellectual abilities; the social/emotional domain includes an understanding of one's own emotions and those of others, and an ability to build healthy relationships. Binding the physical, psychological and social-emotional domains are the hypotheses of a conceptual model that hypothesizes the synergistic and reciprocal changes in these domains that occur across a developmental cascade.⁵⁶ However, viewing the complexities of this proposed approach from a practical perspective also requires the understanding that each child's specific developmental pathway is unique.

The identification of critical factors of physical and cognitive performance will supply insight on ways to intervene in the developmental process of youth to promote increased self-efficacy that leads to further successes later in life. Efforts to promote self-efficacy throughout a young person's development may positively influence cultural ideologies in both the black and military communities, which is further elaborated on during the recommendations section of this

paper. As a result, these communities may potentially experience increased representation in the officer corps.

Physical Development

Self-efficacy is consistently associated with function and well-being and is particularly influential in the enactment of physical activity.⁵⁷ Due to self-efficacy's direct effect on physical activity, it is crucial to examine how physical development influences the diversification of the officer corps. This is supported by the 2016 World Health Organization study assessing the world's more than 1.1 million adolescents aged 10-19. Over 3,000 adolescents died daily from preventable or treatable causes. The most significant contributing factors included alcohol and tobacco use, lack of physical activity, unprotected sex, and exposure to violence.⁵⁸

Each of the services and special operations forces continue to struggle to diversify initial entry officer corps and senior officers alike.⁵⁹ The services generally choose their senior leaders from frontline combat units, such as infantry,⁶⁰ where the physical fitness requirements are the most stringent and the standards for initial entry training (Reserve Officer Training Corps, Officer Candidate School, and Senior Service Academies) are incredibly high. To achieve the standards of the combat arms branches, an individual trainee must have or be able to develop a prominent level of physical competence and confidence quickly due to the academic, physical, and mental stressors of managing the rigors of combat.⁶¹

Current physical activity guidelines recommend adolescents engage in at least 60 minutes of moderate to intense level physical activity daily. Globally, only 1 in 5 young people aged 10-19 meet these guidelines. According to the 2008 *Physical Activity Guidelines for Americans*, physical activity at the recommended levels reduces risk factors for cardiometabolic disease, enhances bone health, improves cardiovascular fitness and muscular strength, reduces symptoms of anxiety and depression, and improves body composition.⁶² Physical inactivity is a major

public health concern and recognized as a global epidemic, as physical inactivity is a precursor to childhood obesity and metabolic syndrome. Currently only 24% of children and adolescents meet the recommended physical activity rates,⁶³ with minorities having even lower rates at 19%. Accordingly, some 18.5% of children and adolescents are obese, but minority and low SES household rates are even higher at 24%.⁶⁴ Excessive cost, poor access to facilities, and unsafe environments are all barriers to physical activity for low SES households.

Because of sedentary lifestyles, physical readiness of military recruits in the United States is inadequate. Approximately 47% of males and 59% of females who entered basic training in 2010 did not meet the Army's entry-level physical fitness standards. Low physical readiness combined with high rates of obesity present a threat to national security. Research shows that 27% of Americans aged 17 to 24 are too overweight to qualify for military service.⁶⁵ During initial basic combat training, services reported injury rates of 42% in men and 62% in women,⁶⁶ which further shows, recruits are unprepared for the rigorous physical training. This decreased level of military readiness is a culmination of decades of secular decline in physical fitness and increased obesity in youth. Furthermore, due to increased inadequacies in lower SES areas, ethnic minorities often have higher rates of underperformance and lessened physical readiness during military recruitment processes.⁶⁷

Failure to develop functional motor competence in childhood and adolescence negatively affects the development of strength, power, and agility, which directly influences future physical military readiness. There are links between general decreased physical activity levels in a child and his or her diminished development of motor competence skills across childhood.⁶⁸ Functional motor competence, the coordination and control required to perform a wide range of motor skills, is a fundamental skill necessary for the development of positive trajectories of

fitness and healthy weight status. Functional motor competence ties to aspects of multiple health-related fitness constructs to include muscular strength and power and agility because of similar neuromuscular demands required in the development of various locomotor and objects control skill performance.

The development of functional motor competence in a variety of movement forms allows children to successfully navigate the physical environment and interact with other individuals throughout many social contexts (e.g., family, peers, play, school, sports). Utilizing motor competency as a form of social capital on children allows them to interact on multiple levels within their social and physical environment.⁶⁹ This aspect of development has immense potential as a fundamental mechanism to bridge the evident gaps in research among physical, cognitive, self-concept and social emotional behavioral development. The development of motor competence acts as a physical catalyst that promotes a wide reaching positive developmental cascade across multiple aspects of an individual's physical and mental health, such as physical fitness, body weight status, self-concept, and cognition across childhood and into adulthood.⁷⁰ This long-term developmental cascade is critical to address the issue with physical, psychological and cognitive readiness issues currently affecting the US military.

Failure of lower SES youth to develop functional motor competence and physical fitness in childhood and adolescence is leaving military recruits without the skills necessary to pass the current Army Physical Fitness Test (APFT) standards. However, over the past several years, the Army recognized that the APFT does not provide a complete overview of a participant's physical abilities and transitioned towards implementing the Army Combat Fitness Test (ACFT) in October 2020. The new fitness assessment will better reflect the physical readiness of the force

for war.⁷¹ The ACFT includes many of the same requirements inherent in advanced functional motor competence performance.

Furthermore, the new ACFT assesses a participant's strength and power through the hex bar deadlift, leg tuck, standing power throw, and sprint drag carry as well as cardiovascular endurance through the two-mile run, all of which are foundationally linked to functional motor competence. Since 2017, the University of South Carolina spearheaded research to link functional motor competence and performance on the ACFT to develop a better-rounded program to prepare JROTC and ROTC cadets for entry into the military and higher education. The pilot study examined the association between 11 locomotor/agility, object control/projection and balance/stability tests in 99 ROTC cadets, aged 17-32. The population tested included 74 men and 25 women with a mean age of 19.8 years. The data from the study showed a moderate to strong correlation ($r = .29 - .75$) between functional motor competence performance and the composite ACFT score. It is interesting to note that 36% of the participants in the study failed the APFT and 54% failed the ACFT. Specifically, 78% of 1st year ROTC Cadets in this sample failed the APFT and further showing the possible lack of proper development in functional motor competence in youth.⁷² (Silvey et al., 2019).

Pilot data from a larger University of South Carolina JROTC project (Corridor to Possibilities) that included participants from underserved and low performing urban school districts whose demographics are 99% African American also demonstrates the continuing secular decline, specific to low SES African Americans, in physical development. Over 96% of a sample of 234 JROTC Cadets did not demonstrate adequate cardiorespiratory fitness to be classified in the "Healthy Fitness Zone" based on norm-referenced data.⁷³ In addition, 42% of that same sample was overweight/obese (22% obese) based on current BMI standards. These

physical readiness deficits not only affect individuals' long-term physical health trajectories, but also are linked to other aspects of health and well-being.

Promoting physical readiness in recruits is vital to positive psychological and mental development that is critical to create a force that is readily able to deploy, fight, and win against any adversary. Recruits must be physically, mentally, and morally ready upon entering the military. However, approximately one in four adolescents experience symptoms and impairment from mental and behavioral health disorders, most often related to anxiety (31.9%), behavioral functioning (19.1%), emotion regulation (14.3%), and substance abuse (11.4%).⁷⁴ Despite these staggering numbers, future emphasis on youth developmental programming can improve and decrease the likelihood that adolescents will encounter these issues, especially in lower SES communities that disproportionately affect minority youth.

During physical activity, the body releases chemicals such as endorphins and serotonin into the bloodstream causing a rise in mood and a reduction of stress.⁷⁵ During exercises, a person's heart pumps more blood and oxygen to the brain, which helps increase the size of the hippocampus, the part of the brain responsible for memory, and increases the connections between nerve cells in the brain.⁷⁶ Physical activity indirectly influences increases in cognition and self-efficacy creating a triad effect of adequate readiness. Low SES communities across the United States generally show higher rates of inadequate readiness⁷⁷ due to a lack of resources, mentors, poor nutrition, and higher levels of environmental stress.

Poor nutrition and obesity hinder many young, potential military recruits. Studies by the Center for Disease Control (CDC) show many low-income, minority youth continue to experience higher rates of hunger and obesity in America despite efforts to provide government-funded healthy breakfast and lunch meals that allow them to realize their full potential and avoid

obesity. These meals may be the most effective tool to combating obesity and reducing the limitations it places on career opportunities in the officer corps and other major health concerns.⁷⁸ Connections between these emerging physical and mental readiness issues, along with lower academic performance can be linked to potential recruits within the DoD as result of their performance on the Armed Services Vocational Aptitude Battery (ASVAB) which indicates eligibility for commissioning programs.

Academic performance influences the number of individuals eligible to enroll in University ROTC programs, which produces a sizable proportion of new entry-level officers in the military. Specifically, low academic performance in lower social economic communities is a critical hurdle for meeting college entrance requirements.⁷⁹ In early childhood, school readiness is multidimensional and encompasses physical, cognitive, psychological, and social-emotional readiness domains, all of which are critical to academic readiness and long-term academic success.⁸⁰ Poor children demonstrate serious deficits in these school readiness domains and subsequent long-term academic failure. Over 95% of the poorest U.S. counties are rural. Issues of school readiness and academic failure compound for children in these counties because of the geographic isolation of high-poverty rural areas.⁸¹ In addition, only 50% of young children who are disadvantaged meet current physical activity guidelines and a high percentage also demonstrate gross motor competence delay.⁸² As academic performance is a criterion measure for advancement in the military, inadequate holistic development, which links to inadequate academic preparation is *a priori* a critical antecedent to future success for enlisted personnel.

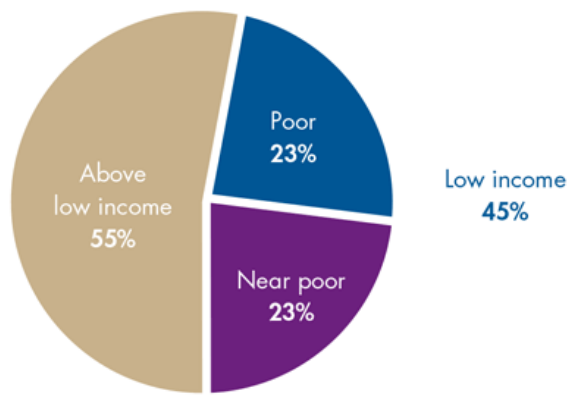
Cognitive Development

Since the late 1960s, agencies developed a variety of federal, state, and locally funded programs in order to counteract the profound environmental difficulties children from economically and socially impoverished backgrounds face when they enter school.⁸³ A child's

social class is one of the most significant predictors of their academic success. The driving force behind such programs is to give these students the educational and social skills necessary to become positive contributors of society. Performance gaps usually emerge in early life and worsen over the course of development. The crucial tie between cognitive development, physical development and self-efficacy is critical to the success of youth growing up in lower socioeconomic communities in the United States.

Approximately 15 million children (21%) living in the United States live in families with incomes below the poverty line.⁸⁴

Figure 2. **Infants and toddlers by family income, 2015**



Percentages may not add up to 100 due to rounding.

In general, poor children are less likely to “exercise, eat healthy, get proper diagnoses, receive appropriate and prompt medical attention, or be prescribed appropriate medications or interventions.”⁸⁵ Each of these health factors can play a role in affecting attention, reasoning, learning, and memory.⁸⁶ Because poor children are receiving poorer nutrition and health practices, it is significantly more difficult for them to listen, concentrate, and learn.⁸⁷

According to Stumm and Plomin, “children from lower socioeconomic backgrounds frequently perform below those from higher socioeconomic backgrounds on tests of intelligence and academic achievement.”⁸⁸ These children often exhibit cognitive problems to include short

attention spans, high levels of distractibility, difficulty monitoring the quality of their work, and difficulty generating new solutions to problems. Their cognitive difficulties can ultimately cause him or her to either act out or shut down. Moreover, 75% of all children from poverty have a single-parent caregiver.⁸⁹ This too can affect a child's ability to grow cognitively by impacting insecurity and stress due to the chaotic and often unpredictable nature of these homes.

Learning can be even more challenging for children who lack proper role models and adequate support. The chronic stress associated with living in turbulent, impoverished households negatively affects various parts of the brain. According to Ferguson, "six specific poverty-related factors influence a child's development in general and school readiness: the incidence of poverty, depth of poverty, the duration of poverty, the timing of poverty, community characteristics, and the impact of poverty has on the child's social network."⁹⁰ Many argue that poor children arrive at school at a cognitive and behavioral disadvantage. Unfortunately, due to zoning restrictions, cities place children in low economic areas in public school districts that are poorly funded, which makes it more difficult to promote quality education.

Despite the many challenges, a positive and holistic developmental focus in the early years can promote a positive cascade of development for any child and promote success later in life. Foremost, concentrating on the fundamental academic skills children need the most: how to organize, study, take notes, prioritize, and remember key ideas will improve their overall cognitive abilities.⁹¹ With educators and mentors allocating their time and attention to each child, they have the potential to alleviate stressors because they have multiple caring adults in their life. Modeling proper attitudes, values and behaviors will have a greater impact on children than simply telling them what to do. Teachers have the opportunity of "encouraging

responsibility and leadership by offering choices, having students engage in projects, and supporting teamwork and classroom decision making” to empower children with control over their own life while in school.⁹²

Growing up in supportive environments can have significant positive influences on operational units, which is an important consideration while developing the demographics of the officer corps, combat arms, and special operations. Because military mentors teach those from lower SES environments, they can change the way their subordinates view stressful situations by establishing clear and precise policies, providing positive feedback, offering advice and counsel, and by leading by example. The hardiness developed from disenfranchised communities can have positive influences on organizational culture especially in an operational environment.

It is imperative to examine what hardiness is and how it might operate as a stress resiliency factor. Bartone states that “hardiness is a personality dimension that develops early in life and is reasonably stable over time, although amenable to change and probably trainable under certain conditions.”⁹³ People who have a hardy personality can interpret stressful situations as a normal part of life that is otherwise enjoyable and worthwhile. These people often view experiences through a lens of it being “overall interesting and worthwhile, something they can exert control over, or challenging, presenting opportunities to gain experience and grow.”⁹⁴

In the military, leaders can have a considerable influence over self-efficacy and resilience. With the proper investment and mentorship, individuals who grow up in these disenfranchised communities can develop a high sense of life and work commitment, a greater feeling of control, and a mindset more open to change and challenges in life.⁹⁵ This aligns directly with self-efficacy and increased confidence associated with physical development and adaptability. According to Bartone,

The hardy leader influence hypothesis states that leaders who are high in hardiness themselves exert influence on their subordinates to interpret stressful experiences in ways characteristic of high-hardy persons. An army cadet who is high in hardiness – a characteristic sense of commitment, control, and challenge – is more effective as a leader in a military environment because they can aid other cadets in adjusting and performing well in stressful situations.⁹⁶

Through example and discussion, these leaders can communicate a positive construction of the shared stressful experience in order to influence the way a group perceives the experience. This process could have the ability to generate a sense of shared values, mutual respect, and cohesion. In the military, an organization where exposure to extreme stressors and hazards is common, leaders need to consider the positive attributes individuals from diverse backgrounds can provide.

Another important aspect to consider with cognitive development is how it relates to physical activity, nutrition, and obesity. Regular physical activity facilitates brain development (size and density) of cortical and sub-cortical areas important for the coordination of higher order motor and cognitive functions.⁹⁷ Increased physical activity and fitness levels enhance brain function during motor, cognitive, and academic (reading and math) tests.⁹⁸ Accordingly, these children exhibit greater academic achievement than their less active peers.⁹⁹

Physically active and more physically fit children more efficiently allocate neural resources during conditions of increased stress, and environmental distractions.¹⁰⁰ Not surprisingly, physically active and higher fit children score higher on tests of crystalized and fluid intelligence and novel problem solving.¹⁰¹ Importantly, these children also exhibit greater levels of sustained attention, working memory, impulse control, and mental flexibility, as well as enhanced decision-making¹⁰² function, which are critical for becoming an effective military officer.

Conversely, obesity and poor nutrition have a negative effect on brain and cognitive development. Specifically, obesity and poor nutrition negatively relates to the development of brain areas underlying motor development and control, and higher cognitive functions.¹⁰³ Not surprisingly, obese and malnourished children exhibit delayed motor milestone achievement, cognitive deficits in critical functions such as executive control and spatial-relational memory, and lower academic achievement levels.¹⁰⁴ Lastly, both visceral adiposity and high-carbohydrate diets directly lead to increased neuroinflammation¹⁰⁵ which, combined with low physical activity, can severely alter the developmental trajectories of low-SES children's brains.

These children and adolescents are not lost cases, however, physical activity (acute and chronic bouts) has a disproportionately positive influence in low-performing and low-SES individuals.¹⁰⁶ Furthermore, making nutrition changes and losing fat even in late adolescence can sharply change the development of brain health, cognition, and academic achievement.¹⁰⁷ Thus, even though children from low-SES environments may have “cognitively” fallen behind during critical development periods, JROTC and ROTC programs can alter their trajectories towards brain and behavioral health, ultimately leading to successful careers.

Recommendations

- Utilize infrastructure of US Army Cadet Command to encourage partnerships with academic institutions across the country that can directly promote increased readiness and diversity in the officer corps.
- Conduct longitudinal studies to indicate performance deficiencies of potential recruits to create proof of concepts for increased readiness.
- Develop transformative training, education and research partnerships between university departments across the country, faculty members and ROTC programs to supply education and training currently lacking in the Cadet Command's core curriculum.

- Enhance partnerships between JROTC and ROTC programs.

Over the past decade, Congress directed the Secretary of Defense to conduct an assessment on the social representation at the service academies in recruiting, admissions,

graduation rates and career success rates. From the results of the 2010 study, service academies implemented changes aimed to create a more favorable environment for racial minorities.

Further research to understand the demographic diversity of other commissioning sources or programs (such as JROTC and service academy preparatory schools) has the potential to identify key indicators of performance to implement the appropriate interventions to improve performance and lead to higher career success rates.¹⁰⁸

DOD invests in service academies, senior military colleges, and junior military colleges to promote performance and increase the competitive officer candidate pool. The barriers to qualification that minority candidates face emerge before college. Sustained investment at the pre-collegiate level in JROTC will contribute to overcoming the barriers that young people, particularly minorities, face in their holistic development. Improving and expanding the pool of cadets has benefits for the military and society. JROTC cadets outperform their peers in attendance, discipline, grade point average, and graduation rates.¹⁰⁹

Utilizing the current infrastructure and mission of US Army Cadet Command (USACC), academic institutions across the country can directly affect the human ecosystem that feeds the officer ranks within all of DoD. The USACC Mission Statement states:

The U.S. Army Cadet Command partners with universities to recruit, educate, develop, and inspire Senior ROTC Cadets in order to commission officers of character for the Total Army; and partners with high schools to conduct JROTC in order to develop citizens of character for a lifetime of commitment and service to the Nation.¹¹⁰

The University of South Carolina (UofSC) took steps to conduct and act upon this mission while enhancing partnerships between JROTC and ROTC programs. The UofSC has a team comprised of over 35 researchers dedicated to conducting studies and program development to increase diversity and readiness within the DoD. This team includes nationally and internationally renowned faculty with expertise in strength and conditioning (Tactical Human Performance &

Long-Term Athletic Development), exercise science, sports medicine, cognition/executive function, mental/behavioral health, nutrition, heat/hydration and cyber computing/engineering and artificial intelligence.

Additionally, the university developed strategic partnerships with The Citadel that recently developed the Center for Performance, Readiness, Resiliency, and Recovery (CPR3) to

Develop and implement academic, research, and community outreach programs focused on individual-level, unit-level, and community-level fitness and health in order to immediately and forever improve performance, readiness, resiliency, and recovery of our Cadet, military, first responder, veteran, and general populations.¹¹¹

As a senior military institution located in South Carolina, The Citadel offers undergraduate and graduate degrees to Cadets and veterans aligned directly with the purpose of holistically educating cohorts who have the ability to increase diversity in the Southeastern region of the United States which produces a large percentage of the US military.

The long-term goal of the UofSC initiative is to be the national leader in promoting critical military initiatives including military readiness, injury prevention, education, training, and research. The University of South Carolina has the potential to reach this goal with the support of the faculty and staff from the University and the Citadel. The ROTC Youth Development Initiative focuses on developing human capital associated primarily with USACC Senior and Junior ROTC units across the nation and services to maximize the young cadets' potential.

By conducting longitudinal quantitative and qualitative research, scientists from the universities can analyze data derived from the Cadet Command Information Management System (CCIMs) and similar management systems to investigate physical and cognitive performance of junior and senior ROTC cadets. This research provides proof of concept to maximize performance of all demographics represented in the military. The goal is to identify

trends in underperforming cohorts to implement the appropriate interventions to improve performance for prerequisites for initial officer corps training.

Establishing transformative training, education, and research partnerships with university departments and faculty in conjunction with ROTC programs will supply education and training that currently does not exist in the core curriculum via Cadet Command. Curriculum development and its execution across four years of college will promote high-level education, training, and research programs focusing on physical, mental, psychological, and cognitive domains. Modeling JROTC (and middle school clubs) programs with the synergy developed between ROTC programs and their respective universities creates a similar foundational structure (functional fitness and mental/psychological training), which will improve self-efficacy, physical fitness and, cognitive development.¹¹² With improved performance, ethnic minorities will then be eligible to commission and branch into combat arms military occupational specialties. As more underrepresented cohorts trend towards combat arms and special operations, not only will the Department of Defense have a more lethal and diverse force, organizational culture will change towards embracing diversity.

Additionally, mentor/leadership opportunities align to develop the next generation of combat-ready military and future leaders in society. This developmental focus will translate to the growth of JROTC and Senior ROTC programs and significantly while enhance the preparation of future initial entry Soldiers, both enlisted and commissioned officers. The long-term goal of this initiative is to create a developmental platform that supplies an implementation plan to universities across the nation. This program promotes a self-perpetuating cycle of positive development from youth into adulthood (via integration with JROTC programs) and enhances multiple domains of military readiness (physical, mental, psychological, and cognitive

preparation) that will translate into a more diverse, resilient, and lethal military deployment force.

Conclusion

To reiterate, the research conducted for this paper aimed to highlight the value that increased diversity in the officer ranks will bring to the force. Diversity for diversity's sake is not enough. Rather, a more diverse force will enhance the kind of decision-making, problem-solving and innovation needed to meet the demands of a complex and unpredictable future operational environment. Displayed patterns of behavior that contribute to the success and failure of an organization's ability to overcome external and internal challenges requires analysis of its macro and micro levels of culture.¹¹³ Leaders and policy makers must examine the degree of assumptions to untangle the values and norms that ultimately shape the organizational culture. Discovering cultural assumptions through research and observations enables greater understanding of the social identity, norms, values, and beliefs represented among the organization's individuals. The way individuals view themselves within the organization shapes its climate and provides understanding for the history and future of the organization.¹¹⁴

Applying an organizational culture analysis to the military's officer corps led to the conclusion there are specific assumptions surrounding minority ranks and values within the military organizational culture that inhibits a more diverse officer corps. Assumptions include perceived racism, a lack of relatable role models and the tendency of minority officer candidates to select combat service support fields. The military's organizational values include high academic performance, zero criminal records, and robust physical fitness levels which are all prerequisites for officer candidates, combat arms fields and special operations forces.

Military professionals throughout history led efforts to implement changes to the various aspects of organizational culture. Great examples of ways leaders rose to the occasion to ensure the U.S. military remained the most lethal and ready force was the desegregation of the military during the Truman Era, the National School Lunch Program in 1946 that helped improve wellbeing of the Nation's youth,¹¹⁵ and the Don't Ask Don't Tell Repeal Act of 2010. Obesity remains the primary medical reason that disqualifies applicants for military service, which disproportionately affects minority and lower SES youth. Approximately 27% of all young adults are still "Too Fat to Serve" in the United States military.¹¹⁶ As a result, health care professionals, academic leaders and the military must take holistic health and fitness seriously. Physical and cognitive development and self-efficacy are three key areas education professionals and military leaders can use to change the tide of readiness and subsequently increase diversity within the Department of Defense's officer corps. These efforts will take systematic approaches to influence change, and leaders at all levels of the military must see the effects of disproportionately represented ethnic minorities in the officer corps, or current trends within the military's culture will not change.

¹ This paper is designed to contribute to a larger research project underway at University of South Carolina devoted to increasing human performance and diversity in the DoD.

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⁷ Schein, *Organizational Culture and Leadership*, 2017.

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¹³ The scale of this paper narrows the focus to African American representation and opportunities in the officer corps. African Americans have the longest historical civil representation and today are the largest ethnic minority group in the country yet have the greatest disproportionate representation of ethnic minorities in the officer corps.

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²⁷ Kamarck, *Diversity, Inclusion and Equal Opportunity*, 2017, 3.

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