The Influence of Social Factors in U.S. Army ROTC
A Qualitative Exploration

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Abstract

More than 60% of the commissioned officers in the U.S. Army are initially trained in the Reserve Officers' Training Corps (ROTC; U.S. Army, n.d.). Therefore, it is important to cultivate an environment in ROTC that allows cadets to function optimally, learn at a high level, and develop into competent, well-rounded leaders. According to self-determination theory (Ryan & Deci, 2017), people's perceptions of the three basic psychological needs of competence, autonomy, and relatedness serve as the mediators between social factors in the environment and their cognitive, affective, and behavioral development. The purpose of this study was to qualitatively explore the perceived influence of social factors on U.S. Army ROTC cadets' basic psychological needs. Analysis of semistructured interviews with 14 cadets revealed three themes: (a) social factors that influenced cadets' perceptions of competence, (b) social factors that influenced cadets' perceptions of autonomy, and (c) social factors that influenced cadets' perceptions of relatedness. Findings suggest that the presence and magnitude of situational and contextual factors initiated intra- and interpersonal fluctuations in participants'

perceptions of all three basic psychological needs. Therefore, by facilitating social factors that nurture individuals' needs and removing those that thwart them, it is possible to cultivate an optimal learning environment in ROTC.

The Reserve Officers' Training Corps (ROTC) represents a cornerstone of the U.S. Army's organizational structure. ROTC is responsible for developing more officers than all other commissioning sources in the U.S. Army combined (U.S. Army, n.d.). Since its inception in 1916, more than 500,000 individuals and, therefore, over 60% of all commissioned officers have been trained in ROTC (U.S. Army, n.d.).[1]

The time in ROTC is crucial in officers' development, because this "pre-commissioning phase of an officer's training will lay the framework and foundation for lifelong learning" (Wiedemann, 2005, p. 1). As cadets mature in ROTC, they become aware of the importance of situational contexts that can influence effective leadership and optimal performance (Gilson et al., 2015). The general process and quality of ongoing learning have become increasingly critical in the military because with "evolving threats and an ever-changing environment, the Army of today and the future must have leaders who know how to think and not just what to think" (Wiedemann, 2005, p. 1). In fact, with the introduction of "mission command" as the foundational philosophy for leadership in the U.S. Army, officers are required more than ever to "exercise disciplined initiative to respond to unanticipated problems" (U.S. Department of the Army, 2012, p. 2). Without the successful indoctrination of cadets, there is a meaningful threat to the Armed Forces that is directly associated with an increased likelihood of mission failure and, in the worst case, fatality (Jennings & Hannah, 2011). It is crucial for the U.S. Army to cultivate an environment in ROTC that allows cadets to function optimally, learn at a high level, and develop into competent, well-rounded leaders.

The literature in social psychology indicates that people's thoughts, feelings, and behavior are meaningfully shaped by situational and contextual factors in the environment. In particular, how others behave toward individuals can tremendously influence their cognitive, affective, and behavioral experiences (Vallerand & Losier, 1999). In ROTC, cadets are taught, trained, and mentored by their cadre who are directly responsible for providing "assessment and feedback arranged around the attributes and core leader competencies" (U.S. Army Cadet Command, 2011, p. 7) of the U.S. Army. The relationship with those cadre plays a substantial role in determining, among others, cadets' organizational commitment (Mathieu, 1988). Furthermore, cadets spend a significant amount of time learning, training, and socializing with their peers. Such formal and informal group interactions can have a substantial im-

pact on individuals' motivation, performance, personal development, and interpersonal development, as well as their internalization of organizational values, goals, and behaviors (e.g., Goodwin et al., 2018; Raabe et al., 2016). In an attempt to nurture an optimal learning environment in ROTC, it therefore seems valuable to investigate the role of social factors (e.g., cadre, peers) in shaping cadets' experiences.

Across various settings (e.g., academics, military, sport; Alivernini & Lucidi, 2011; Delahaij et al., 2014; Raabe et al., 2016), self-determination theory (Ryan & Deci, 2017) has been utilized as a framework to explore the influence of social factors on individuals' cognitive, affective, and behavioral development. Ryan and Deci (2017) propose that every person has three inherent basic psychological needs: competence (the ability to interact effectively in the environment), autonomy (being the director of one's actions), and relatedness (having a meaningful connection to others in the surrounding). People's perceptions of competence, autonomy, and relatedness function as mediators between social factors in the environment and individuals' thoughts, feelings, and behavior (Vallerand & Losier, 1999). What appears of particular relevance in the development of future military leaders in ROTC is that the satisfaction of the three basic psychological needs has shown to enhance people's motivation toward learning, allowing them to be more persistent and effective in their pursuit (e.g., Alivernini & Lucidi, 2011; Carmona-Halty et al., 2019; Goldman

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et al., 2017). More specifically, mission command empowers leaders when "decisions must be made quickly at the point of action" (U.S. Department of the Army, 2012, p. 2). Therefore, military learning environments such as ROTC need to nurture individuals' ability to act independently and confidently or, in line with self-determination theory, with autonomy and competence. Cadets who feel competent, autonomous, and related are also more likely "to transform socially sanctioned mores or requests into personally endorsed values and self-regulations" (Deci & Ryan, 2000, pp. 235–236), which means they will more effectively internalize U.S. Army values and immerse into the military's organizational culture. In contrast, when cadets' basic psychological needs are "being obstructed or actively frustrated within a given context [i.e., thwarted]" (Bartholomew et al., 2011, p. 78), they have a higher likelihood of experiencing negative cognitive, affective, and behavioral outcomes in their engagement (Costa et al., 2015).

Delahaij et al. (2014) utilized self-determination theory as a framework to examine the influence of instructor support on Royal Dutch Navy recruits' intent to quit basic military training. A total of 208 recruits evaluated how much autonomy support their instructor provided (i.e., "the extent to which instructor behavior endorses the intrinsic interests of students and avoids external incentives and threat" [Delahaij et al., 2014, p. 179]). Delahaij and colleagues (2014) found that these perceptions of instructor behavior significantly predicted recruits' self-efficacy, which, in turn, affected their intent (or lack thereof) to leave basic training. Although this endeavor provided an understanding of one potential benefit of fostering optimal social interactions in a military setting, the study was not conducted in ROTC, was limited to the influence of instructors, and did not explore the impact of social factors on individuals' basic psychological needs.

In ROTC, Raabe et al. (2020) quantitatively investigated the perceived cadre behavior, basic psychological need satisfaction, and motivation of 728 cadets. They found that, on average, cadets in their research indicated satisfactory levels of perceived competence (M = 5.22 out of 7) and autonomy (M = 4.87 out of 7).[2] Despite these promising findings, Raabe et al. (2020) also revealed shortcomings in cadre's support of cadets' need fulfillment. That is, while cadre were perceived to be actively involved in cadets' lives in ROTC, they did not seem to sufficiently engage in behaviors that fostered participants' feelings of competence and autonomy. It appears that cadre may be missing an opportunity to further contribute positively to cadets' cognitive, affective, and behavioral development. However, Raabe et al.'s (2020) quantitative approach did not allow for a more in-depth exploration of social factors. In addition, the endeavor was limited to an investigation of the impact of cadre and, therefore, did not consider other potentially important social factors in cadets' environment (e.g., peers). Accordingly, the purpose of the current research was to explore qualitatively the perceived influence of social factors on U.S. Army ROTC cadets' basic psychological needs.

Method

Participants

A total of 14 ROTC cadets (seven men, seven women) from universities in the northeast and southeast of the United States partook in this study. All participants self-identified as White/Caucasian and were, on average, 20.9 (± 1.1) years old. The sample comprised six seniors (Military Science [MS] IV), four juniors (MSIII), and four sophomores (MSII). At the time of their involvement, all cadets received financial support from an ROTC scholarship. While 11 participants planned to serve on active duty upon graduation, three wanted to join the U.S. National Guard. Only one participant had enlisted in the U.S. Army before entering ROTC.

Philosophy

An interpretivist research paradigm (Smith et al., 2012) was adopted for this study. In terms of ontology, the authors believed in "social reality as multiple, subjective, and existing in the form of mental and discursive constructions" (Smith et al., 2012, p. 376). This philosophy entailed a subjectivist and constructionist epistemology as the researchers acknowledged that "the knower and the known are interdependent and fused together in such a way that the 'findings' are the creation of the process of interaction between the two" (Smith et al., 2012, p. 376). That is, while cadets subjectively construed their experience in ROTC and perceptions of competence, autonomy, and relatedness are inherently subjective, the researchers constructed knowledge about social factors and their influence on participants' basic psychological needs following an interpretation of the data in accordance to self-determination theory.

Procedure

Upon approval by the respective universities' institutional review boards and U.S. Army Cadet Command, current ROTC cadets who were at least 18 years of age were recruited to participate in the present study. Initially, first author Johannes Raabe contacted cadets from a sample of convenience (i.e., those whose contact information was already available to the researchers; $n = 6$). Using a snowball method, those individuals were subsequently asked for the name and contact information of other current cadets they knew who may be interested in participating in the study. All participants were informed of the purpose of the research and that their participation was volun-

tary. Overall, 24 cadets were contacted and, of those, 14 agreed to partake in this study (58.3% response rate) and provided informed consent for their involvement.

Semistructured interviews were used to collect all data. The interview guide was developed based on an in-depth review of the literature on self-determination theory (Ryan & Deci, 2017) as well as previous protocols that have been used to explore social influences on individuals' perceptions of competence, autonomy, and relatedness (e.g., Raabe et al., 2016). Raabe, who conducted all interviews, initially explained each basic psychological need to the interviewees separately. In this process, participants were encouraged to ask questions for further clarification. Once the interviewer felt the cadets had a good understanding of a particular need, he inquired about (a) their perceptions of this need in ROTC and (b) the influence of social factors on their perception of the need. The interviewer utilized a neutral (e.g., "affect" or "influence") instead of a valued (e.g., "satisfy" or "thwart") perspective when inquiring about the perceived impact of social factors to allow participants to, if appropriate, describe accounts of both need satisfaction and thwarting (see Costa et al., 2015, for a discussion of conceptual differences). For an in-depth exploration of individuals' experiences, Raabe used probes and follow-up questions throughout the interview.

Before data collection, Raabe conducted a pilot interview with one current cadet from a sample of convenience. This process allowed for slight adjustments to the protocol, which improved the clarity of the explanations of the three basic psychological needs as well as the wording of some of the individual questions. Subsequently, interviews were conducted either in person (n = 8) or via phone (n = 6) based on the participants' location. Interviews were audio-recorded, transcribed verbatim, and lasted between 30 and 71 minutes (Mdn = 44 minutes).

Researchers' Backgrounds and Subjectivities

Self-reflexivity on behalf of investigators about their assumptions before and throughout data analysis helps to improve the trustworthiness of the process and allows for interpretations to be more accurately grounded in the data (Tracy, 2010). While it is not possible to fully remove subjectivities, describing researchers' backgrounds and biases offers transparency regarding their potential influence on the procedures. The interview data in the current study were analyzed by a research team that consisted of the first, second, and third authors as well as a research assistant. The first author is a male PhD and faculty member in sport psychology. He has previously conducted research with ROTC and has provided applied sport psychology services for cadets and cadre. The second author, Zakrajsek, is a female PhD and faculty member in sport psychology. The third author, Eckenrod, is a female PhD and faculty member in sport psychology who has experience as a mental performance consultant in ROTC.[3] The research assistant is a female undergraduate

student in psychology. All researchers are well-versed in self-determination theory, had previous experience analyzing qualitative data, and did not have a professional relationship with any of the participants.

The researchers expected that cadets' basic psychological needs, especially autonomy, would not be fully satisfied in ROTC. They believed that contextual factors (e.g., time constraints) would meaningfully hinder individuals' need fulfillment. Furthermore, all researchers thought that relationships with cadre and peers would play a crucial role in determining cadets' perceptions of competence, autonomy, and relatedness and, in turn, their overall experiences in ROTC.

Data Analysis

The interview data were analyzed using thematic analysis (Braun & Clarke, 2017). First, the four members of the research team independently read the interview transcripts multiple times to familiarize themselves with the data. This process also allowed for a preliminary exploration of the data for meaning in participants' words and potential patterns across the 14 interviews. Second, the researchers independently generated initial codes. In line with the current study's purpose, the coding procedures were deductive to explore participants' perceptions of the influence of social factors on their three basic psychological needs. Third, once the researchers completed their independent analysis, they met multiple times to discuss how to organize different codes into lower-order themes. Based on their relationships and significance in representing the data, the subthemes were subsequently collapsed into higher-order themes. Fourth, the research team members personally reflected on the initial themes before reconvening as a group to finalize a thematic structure that accurately represented the participants' accounts. Engaging multiple people in the thematic procedures helped to enhance the trustworthiness of the findings (Tracy, 2010). Fifth, the themes and subthemes were labeled to give the reader an immediate understanding of their meaning. Sixth, once the researchers consensually agreed that the thematic structure was trustworthy in representing the data, the current manuscript was produced. All names associated with the quotes in the following descriptions are pseudonyms (chosen by participants).

Results

The current findings depict social factors in the ROTC environment that affected cadets' three basic psychological needs. Depending on the perceived presence and magnitude of these factors, cadets described their experiences as either need-fulfilling or need-thwarting. One participant highlighted this when he explained that

cadets' sense of competence, autonomy, and relatedness "in ROTC fluctuates incredibly, no matter what anyone tells you."

Theme 1: Social Factors That Influenced Cadets' Perceptions of Competence

Cadets described three social factors they perceived to have a meaningful influence on their sense of competence: (a) type and extent of experience in ROTC, (b) support from "older" cadets, and (c) cadre guidance.

Type and Extent of Experience in ROTC. Cadets described that their experience in ROTC played a meaningful role in determining how competent they felt. Jim mentioned that initially, "as an [MS]I, it is a little tricky 'cause you're definitely not as confident." As Jim continued to explain, the low levels of competence most cadets perceived as freshmen (and sophomores) mainly developed because they compared themselves to other, more experienced ones in the programs, "being around all these older guys … it seems like I'm looking up at a skyscraper when I'm talking to somebody." However, the more time cadets spent in ROTC, the more they perceived their need for competence to be satisfied. It was particularly cadets who were involved in specialty companies (e.g., Color Guard, Ranger Company) who reported a high level of perceived competence, because they thought that these opportunities allowed them to spend additional time interacting with cadre and, as a result, advance their knowledge and skill beyond the regular instruction they received in ROTC.

The most impactful experiences on cadets' sense of competence were related to leadership. Lilly, for example, described that her perceived competence improved when cadre "distributed the leadership for this semester. I never thought of myself as super high up in the class, but then when they announced all of the squad leaders … the leadership fulfills that [perceived competence]." Many of the seniors in the current study shared how different experiences helped them feel competent during the Leadership Development and Assessment Course. Brennan described,

> We do a lot of marching movements, a lot of facing movements and being in front of a platoon, so I think that helped me prepare, and I wasn't nervous at all. I can call in cadence, do the right movements and turns … We all take turns here doing that starting MSII year, so I feel like I was competent in that … we do the same tactics every year … it's instilled in my brain now. I feel like that was positive and throughout all the camp tests … I was very prepared.

Support From "Older" Cadets. Cadets explained that "older" cadets (i.e., those individuals with more years in the program) had a meaningful influence on their sense of competence. The guidance they perceived from MSIII and MSIV cadets

during their early years in the program allowed them to learn more effectively and feel capable of meeting the expectations of ROTC. John shared that when the seniors interacted with him as a freshman, he started to believe that "Maybe I'm worth something a little more than I thought, you know? Maybe this program needs me a little bit," which enhanced his perceived competence.

Erica mentioned that mentorship from more experienced cadets also happened outside of the formal structure of ROTC:

> You would come and hang out in the [name] building. That's where ROTC had the cadet lounge. We had a whiteboard and you can write down training plans. We also had a google drive, and I got the crash course on how to make PT plans. They did all of that outside of like regular ROTC stuff.

These informal interactions helped cadets feel more competent in completing their responsibilities. Regardless of the specific nature, support from "older" cadets had a powerful effect on participants' overall experience in ROTC. Erica, for instance, mentioned that the mentorship she received was "the reason why I ended up staying with the program because there was a female in the class ahead of me that kept me accountable. She was like a role model for me; I wanted to be like her." In turn, participants who felt supported by "older" cadets during their early years in ROTC were compelled to help younger cadets when they were in MSIII and MSIV.

Cadre Guidance. Cadets explained that the more guidance they perceived from their cadre, which included information, instruction, praise, constructive criticism, and personal advice, the more competent they felt. For example, Dan described the value of positive feedback from cadre: "If they keep praising you, then you feel more confident." He continued to share that he also perceived cadre's criticism as beneficial as long as they communicated it constructively. "If you do bad, and they're like, 'You did bad, but here's what you could work on.' And they try to curve that. Then, your confidence doesn't go down." While cadre's guidance entailed structure that cadets had to adhere to, participants were able to differentiate between having a lack of control and receiving valuable instruction. Formal guidance nurtured cadets' sense of competence but not at the expense of their perceived autonomy.

However, while participants expressed that cadre guidance played a vital role in fostering their perceived competence, they also thought there were discrepancies in the frequency and quality of guidance cadre offered to different cadets, which affected their satisfaction of this basic psychological need. Buck, for example, shared a positive perspective:

> I believe that they enjoy teaching us 'cause they realize like "[explicit] I gotta teach 'em because nobody else will. When they're in [the U.S. Army], they're gonna be in charge of people and I don't want them killing my people."

In contrast, Lilly described that she sometimes felt neglected due to her appearance:

> I think the cadre a lot of times just see a blond girl. So when they see me out in the field or whatever they don't really want to give a lot of feedback 'cuz it's kind of like they are wasting their time.

While not many cadets in this study reported such examples of sexism, it was not uncommon for them to discuss that the feedback they received from their cadre was based on factors other than their actual performance.

Theme 2: Social Factors That Influenced Cadets' Perceptions of Autonomy

Cadets described three social factors they perceived to have a meaningful influence on their sense of autonomy: (a) structure of ROTC, (b) cadet standing, and (c) relationship with cadre.

Structure of ROTC. Cadets discussed various aspects of the structure of the U.S. Army, and by extension ROTC, and the role it played in determining their perceived autonomy. Buck stated that "the Army is not a democracy" and this hierarchy was something that all participants acknowledged. As a result, they recognized that the choice and input they had in their role was restricted due to their position in the overall organization. Cadets were aware that the content of their training was largely predetermined by cadre and, on a higher level, cadet command. Consequently, as Dan mentioned, cadets thought their choice and input was generally "on a very small scale" and mainly related to the implementation of the instructions they received. For example, Brennan described that the topic of labs was typically prearranged, and then cadets "get to decide how we're going to teach … so we'll do like stations or something on how to physically do it." According to the cadets, the structure of ROTC directly impacted the *type* of choices and input they had. However, it was primarily the following two social factors that determined the *magnitude* of autonomy they perceived.

Cadet Standing. Cadets thought that within the structure of ROTC, the degree to which they were able to give input, make decisions, and consequently perceive autonomy largely depended on their year in the program and leadership position within the battalion. As Michael summarized, cadets' sense of autonomy was extremely limited during their first two years in ROTC:

> As an MSI, you are really just there to absorb the very base working knowledge. We don't really try to overwhelm them with the whole leadership thing. You're just there to watch … and figure out what's going on and if it's

something you might be interested in. As an MSII, they have like that base-line knowledge, so they think they know what's going on, but they still don't have any leadership roles really. So they're still kind of there just learning and seeing what's going on and waiting for their turn to get to lead.

However, cadets also acknowledged that this initial lack of choice and input was generally accepted because they recognized that new cadets typically do not have the necessary knowledge to make adequate decisions. Cadets in MSI and MSII seemed to feel less autonomy than upper-level students, but their lack of choice and input did not appear to actively thwart their perception of this basic psychological need. As cadets progressed through the program, they thought that cadre involved them more in decisions. Reflecting on her senior year, Erica explained that her need for autonomy was "completely satisfied as an [MS]IV, and there was no one telling me what to do ... as long as I met those PT and lab expectations."

Relationship with Cadre. In addition to the structure of and their standing in ROTC, cadets shared that the nature of their relationship with cadre members affected the level of autonomy they perceived. Dan described that the quality of the cadet-cadre relationship was meaningfully shaped by "how much you put yourself out there in ROTC ... if you're really involved, you'll talk to [cadre] more 'cuz you'll see them more." In turn, cadets felt that when they interacted with cadre members on a more regular basis, they were able to cultivate the trust that was necessary to receive a high level of input and choice, which fostered their sense of autonomy.

Yet, cadets also explained that their perception of autonomy was often simply determined by how much cadre liked them. Dan expressed this sentiment when stating,

There are some cadets that the cadre don't like at all and no matter what they do, they're probably gonna shoot them down. There are some cadets that the cadre love and no matter what they do, they're gonna pull them up.

Thus, whether positive or negative, cadets perceived their relationship with cadre to have a strong influence on the level of autonomy they thought they had in ROTC.

Theme 3: Social Factors That Influenced Cadets' Perceptions of Relatedness

Cadets described five social factors they perceived to have a meaningful influence on their sense of relatedness: (a) friendships with other cadets, (b) alignment of personality and interests, (c) cadet standing, (d) cadre rank and experiences, and (e) post-ROTC plans.

Friendships with Other Cadets. Cadets thought that the quality of relationships with their fellow cadets was an essential determinant of their perceived relatedness. When asked about her relatedness, Lilly shared,

> I think it's really satisfied because it's just an entire family where people will accept you if you are able to stay and able to go through the trials and tribulations that come along with it … considering a lot of my friends are in ROTC and people I think I'll know for the rest of my life, there's a lot of relationships and feeling valued and being accepted.

These friendships with fellow cadets and the associated influence on cadets' sense of relatedness had a critical effect on their overall experiences in ROTC. For example, Lilly explained how close friendships helped her persist in ROTC: "I think that's kind of what brought me back the second semester when I wanted to quit, that there were just so many people I was really good friends with and wanted to stay around."

While the majority of participants described positive relationships with other cadets, some recognized that there was also strong competition between cadets, especially for preferred assignments upon commission, which at times diminished their sense of relatedness. Brittney explained,

> You really have that rivalry between everybody because, honestly, ROTC is a competition. It's a huge competition with every other ROTC cadet in the nation. I think that's kind of where some tension comes from. Yeah, these people are your friends, but ultimately, you're competing with them.

Cadets' need for relatedness was more fulfilled when they were able to develop friendships with their peers and supported one another rather than focusing on the inherent competition between them.

Alignment of Personality and Interests. While ROTC provided cadets with ample opportunities to interact and spend time with one another, their personalities and interests did not always seem to align, which diminished their feelings of relatedness. Brittney described that

> The Army is definitely a place for type-A personalities, especially when you're talking about going into a leadership role as an officer. I mean your first day you'll be in charge of 40 something people, so it definitely takes somebody who's gonna stand up and not be afraid to say "Alright, I'm here. We're gonna get stuff done." So when you have those type-A personalities, they kind of butt heads with you know, "My idea is better. No, we need to do it this way. No, you haven't thought this through."

As Brittney continued to explain, having different personalities in a battalion and "figuring out how to work with people is probably the biggest challenge, especially for people who don't have that many people skills." Whether or not cadets were able to successfully navigate interpersonal conflicts affected their sense of relatedness.

Cadet Standing. Similar to their perceptions of autonomy, cadets' year in the program and leadership position within the battalion had a meaningful impact on how related they felt with cadre. Partially, this was simply due to logistics as Jim described:

> Each year you have a different cadre member who's kind of the advisor of your class … you'll form a bond with them and you'll get close to them. Then, you'll go to the next year and get close to another cadre member.

Cadets also shared that they generally developed closer relationships with their cadre once they progressed in the program. John stated,

> I would say the higher in the leadership you are, the more of a relationship you get with your cadre. Obviously, as a freshman, you're not going to be with your cadre much at all. You see them in class, that's about it … But as you move up in leadership, you become a lot closer with your cadre because you're working with them more.

Cadets thought it was typically not until their later years in ROTC that they developed a strong sense of relatedness with their cadre.

Cadre Rank and Experiences. Cadets shared that cadre's rank and experiences influenced the development of relationships and their sense of relatedness. One aspect that positively contributed to cadets' perceived relatedness was their admiration for cadre's achievements in the military. For example, Jim mentioned,

> You see all their great accomplishments, all the badges they have on their chests, what's on their shoulders, and stuff like that. And you hear about some of their stories that they talk about during class, you're like, "you guys were high speed" … they're pretty badass … talking to them and seeing these cadre members walk around, it just makes you think you belong here.

This admiration ultimately not only increased cadets' sense of belonging with their cadre but with the military in general.

However, while cadre's experiences seemed to enhance how related cadets felt to them, their rank sometimes represented a challenge for the fulfillment of this need. Cadets had immense respect for cadre's rank and, as a result, were often too intimidated to approach them. This interpersonal challenge was most often

mentioned about the professor of military science, and it was not uncommon for cadets to share experiences similar to what Johnny described when asked about his connection with the head of the program: "My relationship with Major [name]? I don't really know him. We have small-talk now and then, but in general, we stay out of each other's way."

Cadets also expressed that they felt like some cadre did not want to be in ROTC and it was challenging to feel related to them. Brittney described those cadre as

> Closed off. They come across as not really wanting to be there thinking, "This sucks. I'm around a bunch of 18 and 22-year-old cadets. I don't want to do this … This is a stupid assignment … I wanna go back to Afghanistan."

Brittney thought that this mindset not only negatively reflected in those cadre members' attitude but also, more tangibly, in the fact that "some of the cadre my freshman year are members that you could never find anywhere. Like you'd go to ask them for help and they were never there." Such experiences prevented participants from perceiving any relatedness with those cadre.

Post-ROTC Plans. Some cadets mentioned that the plans they had for when they graduated ROTC were not in line with what their cadre expected of them. While this was not the case for all cadets in the current study, those who experienced such a disparity in "expectations" felt it had a powerful negative influence on their perceived relatedness. Cadets who shared this struggle either did not plan on serving on active duty or wanted to go into a different branch than their cadre. The latter seemed to be most prominent when cadre were infantry. Lilly, who wanted to go to medical school and did not plan on serving on active duty, described the meaningful challenges she faced with some cadre due to her post-ROTC plans:

> [Cadre] can be broken up in two groups or the ones that think infantry is the only way to go, and combat arms is the only way to go, and the ones that see the validity in the support branches … that the support branches are just as important and the combat arms can't survive without the support … 'cuz a lot of them if you aren't going infantry, they don't really care. That changes the relationship a lot because if it's somebody that just doesn't see the validity in what I want to do, or they say they do, but it doesn't show when they are trying to teach you something, that kind of defines the relationship a lot.

Cadets felt like it was challenging to develop positive relationships with cadre in those cases. Lilly mentioned, "If they don't see themselves in the cadets, then I don't think they think they are going to succeed." Cadets who shared this experience felt their need for relatedness thwarted because cadre treated them differently (i.e., worse) than other cadets.

Discussion

This research was designed to explore social factors in the ROTC environment that influence cadets' perceived competence, autonomy, and relatedness. Overall, while the present findings emphasize some structural elements (e.g., the hierarchy of the military) that seem to affect cadets' basic psychological needs (especially their perceived autonomy), other people (i.e., peers and cadre) appeared to play a more crucial role in determining cadets' need fulfillment. This result highlights that, to put it in one of the cadets' words, "the Army is a people business" (Brittney) and the development of an optimal learning environment in ROTC seems to largely depend on the cultivation of need-fulfilling interactions and relationships.

Implications for the Development of a Competence-Supportive Learning Environment

Cadets in this study expressed that when they felt they received information, instruction, constructive criticism, and personal advice from cadre and more experienced peers, they were able to learn more effectively and, as a result, felt more competent in meeting the expectations of ROTC. These results support the conceptual assumptions of self-determination theory in that the best circumstances for the satisfaction of competence (and autonomy) are not necessarily those that provide individuals with complete independence (Deci & Ryan, 2000). In fact, most individuals require "the provision of clear and consistent rules and goals before the activity, guidance and assistance during the activity, and constructive feedback after the activity" (Curran et al., 2013, p. 31) to develop achievement-related competencies, which is a key aspect of cadets' learning process in ROTC (U.S. Army Cadet Command, 2011).

In practice, this conclusion suggests that developing an optimal learning environment in ROTC is not a matter of limiting structure and guidance, but instead, dependent on the way such input is implemented. Specifically, cadre (and cadets) need to be aware of how they provide leadership to enhance cadets' perceived competence as they learn military competencies without simultaneously diminishing their autonomy. This can be accomplished when cadre are mindful of the way they give competence feedback as to focus on its informational (i.e., offering relevant advice focused on behavioral change) rather than controlling aspect (i.e., communicating pressure to obtain a specific outcome; Ryan, 1982). According to Carpentier and Mageau (2013), such change-oriented feedback should be empathetic (e.g., considerate of task-difficulty), accompanied by possible solutions and tips (i.e., different choices and relevant information on how to correct the behavior), based on clear and attainable objectives, delivered in a considerate tone of voice, and avoid

person-related statements (e.g., personal attacks or depreciation). Future researchers should explore how cadre can best find the balance between guidance and independence to most effectively nurture cadets' perceived autonomy and competence as they matriculate through ROTC.

Implications for the Development of an Autonomy-Supportive Learning Environment

Cadets described that they perceived more autonomy when they had a sense of choice and input in their engagement, which is in line with the conclusions from previous research in other settings (e.g., sport; Curran et al., 2013). What deserves particular attention is that while this sense of autonomy was generally experienced more meaningfully by "older" cadets (i.e., MSIII and MSIV), the apparent lack of choice and input for cadets early in the program (i.e., MSI and MSII) did not seem to thwart their need fulfillment. When considering the basic psychological need of autonomy, scholars often emphasize people's ability to be the director of their own actions (i.e., have meaningful input and choice in their behavior; Ryan & Deci, 2006). However, Ryan and Deci (2006) argued that this perspective is insufficient because

> One can have many options and not feel autonomy, but instead feel overwhelmed and resentful at the effort entailed in the decision making. Alternatively, one could have only one option (which functionally means no choice) and yet feel quite autonomous so long as one truly endorses that option. (p. 1577)

In other words, Ryan and Deci (2006) suggested that to feel genuinely autonomous, individuals must not only be able to act with a sense of volition but also need to do so in accordance with their values.

The current findings indicate that cadets—especially MSI and MSII—did not have much control over their participation in ROTC and, therefore, may not experience complete satisfaction of their need for autonomy. Conversely, these very same cadets might have experienced a partial internalization based on the pride they felt for being an ROTC cadet; as such, they were willing to give up choice to pursue something that they valued. As a result, future researchers should investigate ROTC cadets' values to better align the learning environment with those principles. In the development of ROTC cadets, there are certainly times when it is not practical or appropriate for cadre to offer choice. In these situations, cadre should attempt to provide cadets with a rationale for their decisions because awareness of the underlying reason for their behavior allows individuals to engage with more purpose (Mageau & Vallerand, 2003) and, consequently, increas-

es the likelihood that they will internalize (i.e., personally endorse; Deci & Ryan, 2000) the value of their activities.

Implications for the Development of a Relatedness-Supportive Learning Environment

Cadets described the importance of the cadre-cadet relationship in fostering not only their relatedness but also their satisfaction of all three basic psychological needs. This finding supports Deci and Ryan's (2000) assertion that "a secure relational base appears to provide a needed backdrop—a distal support—for intrinsic motivation, a sense of security that makes the expression of this innate growth tendency more likely and more robust" (p. 235). The present findings highlight several considerations for the development of an optimal learning environment in ROTC. First, cadre should be acutely aware of their own experiences, rank, and biases and how those subjectivities may influence their interactions with cadets. Specifically, while cadre's military background fostered inherent respect from cadets (which nurtured perceived relatedness), it also made cadets less comfortable to approach them. Moreover, whether cadre were aware of it or not, several cadets in the current study thought that cadre treated them differently when their career plans did not align with cadre's own path (e.g., different branch). While it may not be possible to eliminate their subjectivities altogether, improved self-awareness can likely help cadre to—at least—bracket their biases to foster more optimal cadet-cadre relationships.

Second, in line with the results of Raabe et al. (2020), individuals in the present study felt that cadre gave meaningfully less attention to cadets in their first or second year in the program. Most participants appeared to understand that due to their lack of experience, those "younger" cadets may not be able to receive the same amount of choice as upper-level students. Yet, participants did not share the same sense of understanding or acceptance concerning the disparity in the attention cadre paid to cadets based on their student grade level. It is possible that cadre wanted to focus on those cadets who are closer to graduation to prepare them more optimally for their upcoming transition into active duty (or the National Guard). However, the current findings indicate that this perceived discrepancy in involvement from cadre has a negative influence on "younger" cadets' need fulfillment. It seems reasonable to suggest that MSI (and MSII) cadets require just as much help as upper-level students because they face their own transition into ROTC and the military. Doganca (2006) reported that about 10.3% of all scholarship cadets leave ROTC following their freshman year. In line with the findings of Delahaij et al. (2014), it is possible that by providing additional support (e.g., in the form of emotional encouragement; Mageau & Vallerand, 2003) to cadets during their early years in the program, cadre can foster individuals' motivation to persist

in ROTC. Overall, it would also be valuable for future researchers to explore potential discrepancies in the perceptions of cadets and cadre that exist with respect to cadre behavior. This process would help to identify whether it is cadre's actual behavior, cadets' perceptions thereof, or both that need to be changed to foster an optimal learning environment.

Lastly, cadre should also actively invest in the development of positive group interactions among cadets, which appeared to play a meaningful role in the learning environment. In the sport setting, Raabe et al. (2016) found that among collegiate student-athletes, coaches were able to foster need-fulfilling intrateam relationships by establishing formal and informal roles, nurturing positive competition (i.e., focused on task mastery rather than outcome), implementing peer coaches, and developing team goals. In turn, such activities established a sense of groupness (i.e., an understanding that members of the team share a common fate and are not just an aggregate of individuals) and cultivated the foundation for positive peer interactions among student-athletes. Accordingly, cadre should be encouraged to clearly establish the program's identity, purpose, rules, expectations, and goals, share those group elements with cadets as they enter the program, and then consistently revisit them throughout cadets' four years in ROTC. Ideally, this should be an interactive process that includes the ideas of cadets as much as possible. The development of groupness appears particularly valuable in light of the inherent competition that exists among cadets, which can distract from cadets' learning.

Limitations

Despite the value of the present findings, there are limitations in this study that should be addressed in future research. First and foremost, the current sample did not include any cadets in their first year in the program. Thus, while participants shared their experience of MSI and how their standing as a cadet influenced their perception of autonomy and relatedness, these accounts were based on their retroactive recollection and may have been shaped by the subsequent time in ROTC. Exploring the experiences of current freshman would likely contribute to the depth and accuracy of the findings. In addition, all participants self-identified as White/Caucasian and recruiting a more diverse sample can help to gain a more holistic understanding of social factors in ROTC.

Conclusion

Participants' accounts highlighted the importance of cadre and fellow cadets as social factors in ROTC. To cultivate an environment in ROTC that allows cadets to

function optimally, learn at a high level, and develop into competent, well-rounded leaders, it appears crucial to nurture optimal interactions and relationships with their leaders and peers. The present findings offer several practical recommendations that can help in this endeavor. ❧

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Notes

1. While other branches of the U.S. military also have ROTC programs, this study focused specifically on Army ROTC. Therefore, all further mentioning of the term ROTC will solely refer to the U.S. Army's commissioning source.

2. Due to issues with the psychometric properties of the measurement model, Raabe et al. (2020) did not evaluate participants' perceptions of relatedness.

3. The fourth author, Gilson, who was not directly involved in the data analysis, is a male PhD and faculty member in sport psychology who has previously conducted research with ROTC cadets.