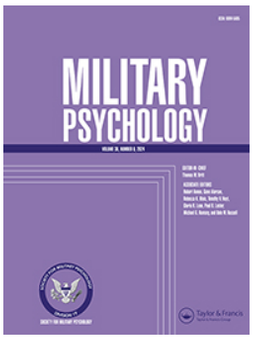

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Mission command: A self-determination theory perspective

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ABSTRACT

It is well documented that leadership behavior influences employees' motivation. In particular are autonomy-supportive leadership styles associated with desirable outcomes through basic psychological needs satisfaction and subsequent autonomous motivation. Mission Command, a leadership philosophy endorsed by the armed forces of many nations, can be considered autonomy-supportive and should therefore foster motivational outcomes beyond effective mission execution. Despite this, research on the relationship between mission command and soldiers' motivation is currently lacking. In the current study, an instrument was developed to measure the perceived degree of mission command behavior. Using structural equation modeling, the instrument was then used to examine the relationship between perceived degree of mission command, basic psychological needs satisfaction and autonomous motivation, as well as soldiers' job satisfaction and turnover intention. The empirical sample comprised 286 respondents from three different rapid-reaction forces in the Norwegian Home Guard. The results indicate that mission command was not directly related to autonomous motivation. However, there was a direct relationship between mission command and the satisfaction of the need for autonomy, and a significant indirect effect of mission command on autonomous motivation through satisfaction of the need for autonomy. Moreover, there was a positive relationship between autonomous motivation and job satisfaction and a negative relationship between autonomous motivation and turnover intention. Taken together, this study suggests that mission command leadership behaviors can contribute to basic needs satisfaction, promote soldiers' autonomous motivation and job satisfaction, and reduce turnover intention. Practical and theoretical implications are discussed.

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Mission command; leadership; job satisfaction; turnover intention; self-determination theory

What is the public significance of this article?— Whereas the purpose of mission command has been to cope with uncertainty and enable high tempo in operations, the attitudinal and motivational consequences among subordinates remain largely uncharted. This study aimed to empirically examine whether mission command influences job satisfaction and turnover intention through basic psychological needs satisfaction and autonomous motivation. Understanding the psychological consequences of mission command could provide valuable information for military leaders who seek to enhance subordinates' motivation and positive work-related attitudes within the mission command framework.

Leadership is regarded as one of the key factors in organizational performance (Yukl, 2012). In the military context, leadership has been and continues to be crucial for success in military operations (Dempsey, 2012). Mission command, based on the Prussian concept of *Auftragstaktik*, developed to mitigate the negative effects of war known as "friction", is a key example. Defined as an "approach to command and control that empowers subordinate decision making and decentralized execution appropriate to the situation" (A. Army Doctrine Publication, 2019), mission command is endorsed as a cornerstone of command and control (Ben-Shalom & Shamir, 2011). The purpose of the leadership philosophy is to decentralize decision-making authority in order to create greater flexibility and increased speed, by encouraging initiative and allowing subordinates to utilize their competence, creativity, and situational understanding (Forsvaret, 2020). Moreover, it is in line with extant organization theory (e.g. Simon, 1957; Stea et al., 2015) as well as contemporary leadership theory, such as empowering leadership, which emphasizes sharing power with and motivate employees to cope with complexity and fast-paced changes (Lee et al., 2018). Empowering leadership may be particularly relevant as it positively influences subordinates' motivation, work attitudes, and performance for complex tasks (Gagné & Deci, 2005; Kim et al., 2018).

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Given its similarity to empowering leadership, the mission command concept could have implications not only for how efficiently troops execute missions, but also for important individual job attitudes, such as motivation (Hon, 2012; Kim et al., 2018; Siebold & Lindsay, 1999; Stea et al., 2015; Zhang & Bartol, 2010). According to self-determination theory (SDT), satisfaction of the basic psychological needs for autonomy, competence, and relatedness leads to autonomous motivation, defined as acting with a sense of volition and having the experience of choice. Autonomous motivation, in turn, influences work-related outcomes such as persistence, effective performance, positive work attitudes, and psychological well-being (Gagné & Deci, 2005). In SDT, leader behavior is regarded as an important aspect of the work environment (Gagné, 2014). Leaders who adopt an autonomy-supportive managerial approach contribute to employees' needs satisfaction and create a favorable work environment that results in positive outcomes (Baard et al., 2004). Moreover, extant research indicates that leadership is a part of the organizational climate, which satisfies basic psychological needs and strongly influences work motivation and performance (Deci et al., 2017). For example, Slemp et al. (2018) found that satisfaction of the basic needs for autonomy, competence, and relatedness mediates the effect of leadership on autonomous motivation, which in turn influences work performance and well-being.

The topic of motivation in military contexts has received some attention in prior research, such as motivation to lead (Allen et al., 2014), prosocial motivation (Castanheira et al., 2016), and the work context and its influence on internal work motivation (Österberg & Rydstedt, 2018). Gillet et al. (2017) found that supervisor support, which is also intrinsic to mission command, positively affected autonomous motivation, while Raabe et al. (2020) found that instructors, and cadres, may influence military cadets' autonomous motivation through needs satisfaction. Mission command, via basic needs satisfaction and autonomous motivation, could ultimately affect important attitudes of subordinates, that go beyond efficiency in the execution of particular missions, specifically by positively affecting job satisfaction and negatively affecting turnover intention (Gagné & Deci, 2005; Williams et al., 2014).

However, prior research on mission command and motivation (Riley et al., 2015, 2016) has not clearly specified, or empirically examined, specific effects of mission command on motivation. Drawing on self-determination theory, we suggest that it may be particularly important to consider satisfaction of the three basic psychological needs as explanatory mechanisms between mission command and autonomous motivation (Deci et al., 2017).

The purpose of this article is therefore to empirically examine whether mission command influences job satisfaction and turnover intention through the satisfaction of basic psychological needs (autonomy, competence, relatedness) and autonomous motivation. We investigate this through two studies. In study 1 we establish a measure of mission command using data collected in a sample consisting of both retired and active duty military personnel. Subsequently in study 2, and with a separate sample consisting of active duty personnel serving in the Norwegian Home Guard, we test the hypothesized relationships between our variables of interest.

We see several implications of our article. First, we contribute new knowledge about the psychological consequences for subordinates of practicing mission command, a largely under-researched topic. In doing this, we seek to bridge two major research traditions, military theory and organizational psychology, as motivational mechanisms and outcomes have been largely overlooked by military theorists working with mission command, and mission command remains mostly overlooked by empirical psychologists, despite being NATO's official leadership philosophy (Ministry of Defence, 2022). Second, our study could pinpoint which basic psychological need may be particularly influential in this regard. This could be valuable information for military leaders when they employ mission command and other leadership practices that seek to foster individuals' job satisfaction, reduce turnover intention, and increase motivation and task accomplishment in general (Zaccaro, 2014). Third, our study contributes with a measure that may be used in military units to assess to what extent mission command philosophy is reflected in leadership practices and unit climate.

Mission command and autonomous motivation

Mission command is not a leadership theory, but a philosophy describing an approach to command and control that is based on the presupposition that war is inherently chaotic and uncertain (Army Doctrine Publication, 2019). The roots of the philosophy can be traced back to the Prussian concept of *Auftragstaktik*, which emerged from the military reforms that followed the Prussian defeat at the Battle of Jena in 1809 (Army Doctrine Publication, 2019). The concept is still considered critical to success in today's increasingly dynamic, complex, and uncertain operating environment (Dempsey, 2012). Mission command philosophy is

enshrined in official NATO doctrine (Ministry of Defence, 2022). Although the fundamental concept remains the same across NATO, countries that practice mission command have incorporated slightly different principles to enable successful execution of the philosophy. Furthermore, the application of mission command may vary across countries and even within services in the same country due to differences in cultural, operational concepts, and command and control requirements.

To defeat Al-Qaeda in Iraq in 2003, General Stanley McChrystal developed and implemented a philosophy for organizational performance in complex environments, which was based on the four principles of trust, shared consciousness, common purpose, and empowered execution (McChrystal et al., 2015). While General Dempsey (2012) points to *understanding*, *intent*, and *trust* as the key attributes enabling mission command, the US Army describes *competence*, *mutual trust*, *shared understanding*, *commander's intent*, *mission orders*, *disciplined initiative*, and *risk acceptance* as the principles that enable successful mission command (Army Doctrine Publication, 2019). The principles are not mutually exclusive, and there is some overlap and dependence between them (Vandergriff & Webber, 2017). Accepting risk is implicit for subordinates to take initiative, and mission type orders is a method for conveying commander's intent and provides freedom of action in the pursuit of common objectives. Shared understanding, established through education and training over time, "denotes a commonality of knowledge, perceptions, values, practices, and purpose" (Nilsson, 2020, p. 439). Without a shared understanding subordinates do not have the required information to make appropriate decisions, thus making effective decentralized execution impossible (Army Doctrine Publication, 2019). Trust is considered to be the basis for all the principles and critical to rapid decision-making, as it affects willingness to exercise initiative and accept risk. Essentially, the principles express that leaders should empower subordinates to take initiative based on the commander's intent by promoting mutual trust and creating a common understanding (Army Doctrine Publication, 2019). Drawing on doctrine and existing scholarly literature, we argue that the central aspects of mission command are empowerment, mutual trust, intent, encouraging initiative, and a shared understanding.

The concept of command and control is unique to the military and, to a certain degree, distinguishes military leadership from traditional leadership theories. However, the art of command is primarily associated with decision-making and key aspects of leadership such as dealing with uncertainty and change by setting direction, communicating, motivating, and inspiring to accomplish the mission (Army Doctrine Publication, 2019; Kotter, 2000). Furthermore, leader behavior in line with the principles of mission command can be seen as a part of the command culture identified through the organizational climate, which leaders influence (Army Doctrine Publication, 2019). Climate research seeks to understand organizational behavior through the subjective perceptions of its members (Seibert et al., 2004). Although there is not necessarily a one-to-one correspondence between specific leadership practices and employees' climate perceptions, these perceptions are important since it is the employees' own understanding of a situation that drives their attitudes and behaviors (Seibert et al., 2004). Leadership climate refers to "ambient leadership behaviors" that are perceived by employees and indicate the extent to which an organization's leadership practices mission command, and can be measured through indicators in the organizational climate (G. Chen et al., 2007).

In line with climate research, we suggest that mission command is an important aspect of the leadership climate, which in turn has bearing on how we choose to measure the perceived degree of mission command. This is consistent with self-determination theory, which recognizes leadership as an important aspect of the work environment (Deci et al., 2017).

Mission command shares many characteristics with traditional leadership constructs, such as empowering leadership, participative leadership, and transformational leadership. Empowering leadership, defined as "*a process of sharing power, and allocating autonomy and responsibilities to followers, teams, or collectives through a specific set of leader behaviors for employees to enhance internal motivation and achieve work success*" (Cheong et al., 2019, p. 34), is perhaps the leadership construct that most closely resembles mission command. Unlike transformational leadership and participative leadership behavior, neither of which assume delegation of decision rights, empowering leadership aligns with the idea of decentralized decision-making and execution (Sharma & Kirkman, 2015). Both mission command and empowering leadership emphasizes decentralized decision-making and empowered employees who, within defined boundaries, take initiative and act in the best interest of the organization in accordance with overarching objectives. Mutual trust between leaders and subordinates is crucial to both concepts.

There are also some important differences between the two concepts. Central to empowering leadership is the motivational aspects, emphasis on psychological empowerment and its influence on performance and job attitudes resulting from increased capability and autonomy (Amundsen & Martinsen, 2014; A. Lee et al., 2018; Sharma & Kirkman, 2015). Empowering

leadership refers to specific leader behaviors that involve power sharing, providing motivation and development support to achieve empowered employees (Amundsen & Martinsen, 2014), and has been found to positively affect autonomous motivation (Hon, 2012; Zhang & Bartol, 2010). Mission command, on the other hand, is a philosophy supplemented by key principles that provides a framework for effective decision-making and execution of military operations. Being a philosophy, mission command may be understood as a way of thinking concerning leadership and command and control, primarily at the organizational level (Granåsen et al., 2018). Mission command philosophy does not depict concrete leader behavior but provides an overall idea with key principles aimed at influencing certain leadership practices and the approach to command and control.

In the present study, given that most tasks in home guard units are highly collective, we would expect that it is primarily the leadership behaviors directed at the collective, i.e., the leadership climate, that will positively impact autonomous motivation (G. Chen et al., 2007). Taken together, this suggests that mission command in a military setting would positively affect autonomous motivation on a par with the effect of empowering leadership, leading to the following hypothesis:

H1: Mission command is positively related to autonomous motivation.

Mission command and basic psychological needs

The direct relationship between mission command and autonomous motivation may be mediated by basic needs satisfaction. Central to self-determination theory is the assumption that people have innate psychological needs for autonomy, competence, and relatedness (Deci & Ryan, 2000). Autonomy refers to a sense of voluntariness and integrity, where individuals can make decisions about their own actions and act according to their own personal values and identity (Deci & Ryan, 2000). Competence concerns the need to feel that we master the environment and to develop new skills (Van den Broeck et al., 2016), while relatedness refers to the need to feel connected to others, to be taken care of and to take care of other people (Ryan et al., 2017).

Empowering leadership is especially suited to satisfy the basic psychological needs in SDT as it emphasizes delegating authority and decision-making rights to subordinates, providing subordinates with support, coaching, and guidance to help them achieve their goals (Amundsen & Martinsen, 2014; Zhang & Bartol, 2010). Kim and Beehr (2020) found a strong and positive relationship between empowering leadership and satisfaction of subordinates' basic psychological needs.

Several characteristics of mission command should support satisfaction of the innate psychological needs of SDT. Satisfaction of the need for autonomy may be particularly important in a work context, as it has been linked to higher job satisfaction, better work performance, greater organizational commitment, and lower turnover intention (Van Den Broeck et al., 2010, 2016). Additionally, employees who experience autonomy find ways themselves to get the other needs satisfied (Ryan et al., 2017). According to Gagné et al. (2000), managers can support the experience of autonomy during performance of a task by explaining the purpose of the task, providing the employee an opportunity to choose how the task will be performed, and acknowledging the employee's feelings about the task.

We suggest that mission command is particularly well suited to satisfy the need for autonomy, as it emphasizes decentralized execution and decision-making authority. This provides subordinates with significant flexibility, control, and influence over how work is carried out within the overall intent. To support competence experience, managers can demonstrate confidence in employees' ability to succeed, identify barriers to success, and provide feedback in a non-judgmental way, as well as facilitating appropriate challenges relating to skills development and problem solving (Williams et al., 2014). Mission command emphasizes mission type orders that may encourage a sense of competence by promoting initiative and independent action, and giving subordinates an opportunity to use their knowledge, skills, and creativity to find suitable solutions to problems. Relatedness can be promoted by managers showing respect even when employees do not achieve the desired result, showing empathy for employees' concerns and facilitating a good interpersonal environment (Williams et al., 2014). Facilitating a shared understanding and encouraging cooperation and problem solving in teams are important aspects of mission command, which, in turn, can contribute to positive interpersonal relationships, mutual trust, and a feeling of relatedness. Leaders who facilitate teamwork and communicate common goals help to create a sense of unity among employees (Gagné, 2014). This indicates that the various dimensions of mission command could contribute to satisfaction of the basic psychological needs for autonomy, competence, and relatedness:

H2: Mission command is positively related to satisfaction of the needs for (a) autonomy, (b) competence, and (c) relatedness.

The satisfaction of these basic psychological needs should, in turn, positively affect autonomous motivation. According to Ryan and Deci (2019), research on both intrinsic motivation and internalization of external motivation has confirmed the importance of satisfying the three basic psychological needs, and repeated findings show that this predicts autonomous motivation:

H3: Satisfaction of the need for a) autonomy, b) competence, and c) relatedness is positively related to autonomous motivation.

The basic self-determination theory model for motivation in the workplace posits that the effect of leadership on employee performance and well-being is initially mediated through the satisfaction of basic psychological needs, followed by autonomous motivation (Deci et al., 2017). Previous studies on transformational leadership (J. Hetland et al., 2015), empowering leadership (O'Donoghue & van der Werff, 2022) and managerial need support (Olafsen et al., 2018) further indicate that the indirect effect of leaders' autonomy-supportive behavior on autonomous motivation is mediated through needs satisfaction. Taken together, our reasoning suggests that mission command will positively affect autonomous motivation through satisfaction of basic psychological needs, and we suggest the following hypothesis:

H4: There is a positive indirect relationship between mission command and autonomous motivation through satisfaction of the needs for a) autonomy, b) competence, and c) relatedness.

Mission command and job satisfaction: the role of needs satisfaction and autonomous motivation

Job satisfaction can be defined as a pleasant or positive state as a result of a job or work experience. It thus reflects an overall assessment of the general attitude toward a job (J. Hetland et al., 2015). Prior research has found a positive relationship between empowering leadership and job satisfaction (Amundsen & Martinsen, 2014). Moreover, a study by Gillet et al. (2013) showed that leader behavior that supported employees' autonomy was positively related to autonomous motivation, which, in turn, was positively related to job satisfaction and negatively related to turnover intention. This was similar to what Gagné and Deci (2005) suggested. We integrate this reasoning with the preceding Hypotheses 1–3 and suggest that the satisfaction of basic psychological needs and autonomous motivation act as mediators between mission command and job satisfaction. This suggests the following hypothesis:

H5: There is a positive indirect relationship between mission command and job satisfaction through satisfaction of the need for a) autonomy, b) competence, and c) relatedness, and through the resultant autonomous motivation.

Mission command and turnover intention: the role of needs satisfaction and autonomous motivation

Turnover intention can be understood as a conscious and deliberate desire to leave an organization. It is often measured with reference to a specific time interval (Tett & Meyer, 2006). Gillet et al. (2013) showed that leader autonomy supportive behavior was positively related to autonomous motivation, while autonomous motivation was negatively related to turnover intention. Moreover, in a military context, intrinsic motivation, of which autonomous motivation is an example, has been found to contribute to maintaining interest in military tasks (Marshburn & Rollin, 2005). Like our reasoning concerning mission command and job satisfaction, we suggest that needs satisfaction and autonomous motivation is an important mechanism that mediates the effect of mission command on turnover intention. Mission command will positively relate to basic needs satisfaction, which, in turn, increases autonomous motivation, ultimately decreasing turnover intention. We thus suggest the following hypothesis:

H6: There is a negative indirect relationship between mission command and turnover intention through satisfaction of the need for a) autonomy, b) competence, and c) relatedness, and through the resultant autonomous motivation.

While mission command shares many similarities with established psychological leadership theories, we suggest that mission command makes a distinct contribution to the dependent variables in our study. To examine this, we included empowering leadership as

a theoretically motivated control variable, since empowering leadership is the leadership construct we consider most similar to mission command.

Study 1

Method

We first needed to develop a measure for the perceived degree of mission command, which was the aim of Study 1. Although the US Army annually measures the degree to which army leaders demonstrate behaviors consistent with the mission command philosophy, the measure uses one item per principle, which are combined in a single-scale composite variable (Riley et al., 2015). The empirical factor structure of perceived mission command behaviors therefore remains unknown.

Sample and procedure

The target group for study 1 was retired or active duty military personnel. An online survey was created, and a link to the survey was distributed through LinkedIn, Facebook, and Signal messaging groups primarily intended for military personnel, requesting anyone with military experience to complete it, and to forward the link to acquaintances who also had military experience. The survey was open for 18 days in spring 2021, after which we had received 160 responses. Of these, 63.1% were currently serving in the armed forces, while 36.9% had previous experience; 21.3% of the respondents had between one and ten years of military experience, while the remaining 78.7% had more than ten years. All items were scored on a seven-point Likert scale.

Scale development

An initial item pool was assembled that included both modified and translated items from existing scales, as well as new items. We included modified items to capture aspects of the organizational climate (Riley et al., 2015). We also designed items to measure aspects of constructs with which mission command has a considerable conceptual overlap. This included empowering leadership (Amundsen & Martinsen, 2014; Konczak et al., 2000; Van Assen, 2020) and cooperative behaviors (Pais et al., 2014). It also included goal clarity (C. Lee et al., 1991) and team skills (Bateman et al., 2002). Consistent with prior conceptualizations and measures of leadership climate (G. Chen et al., 2007; Kirkman & Rosen, 1999), the items asked about characteristics of the organization.

Based on discussions with both leadership scholars at the Norwegian Defence Command and Staff College and practitioners in the Norwegian Armed Forces, a total of 20 items were included that, together, were believed to capture the most central aspects of mission command dimensions. In addition to the mission command item pool, for reasons of comparison, we measured empowering leadership and mission command using the CASAL items.

Measures

The items were translated into Norwegian using translation and back-translation (Brislin, 1970).

Empowering leadership. We measured empowering leadership using seven items from van Dierendonck and Nuijten's empowering leadership dimension of the Servant Leadership Survey (Van Dierendonck & Nuijten, 2011). Example items included "We are encouraged to use our talents" and "We get help to develop ourselves." The reliability was high ($\omega = .90$, 95% CI [.87, .93]).

Adapted version of CASAL mission command. We included five items used by the Center for Army Leadership to measure how effective Army leaders are at demonstrating principles of mission command, as rated by their subordinates (Riley et al., 2016). In order to capture all seven principles from the revised 2019 version of the ADP 6–0 (Army Doctrine Publication, 2019), we created an additional two items. Example items include: "How effective is your immediate superior at accepting prudent risk to capitalize on opportunities?" and "How effective is your immediate superior at determining a clear, concise purpose and desired end state." The reliability was high, with $\omega = .92$, 95% CI [.89, .94].

Strategy of analysis

We used the statistical package R (R Core Team, 2020) for all our analyses. For existing measures, we calculated coefficient omega reliability estimates using the *MBESS* package (Kelley, 2017). For measure development, we first used the *paran* package (Dinno, 2018) to determine the number of factors we would retain for our items. This was done through parallel analysis and interpretation of scree plot. After this step, we decided to retain two factors. We then used the *psych* package (Revelle, 2018) to perform an exploratory factor analysis (EFA) using minimum residuals extraction and *oblimin*

Table 1. Factor loadings after first EFA.

	Item	Source	Factor 1	Factor 2
I1	Alt I alt, hvordan vil du beskrive nivået av tillit mellom alle i din organisasjon/avdeling?	Riley et al. (2016)	−0.06	0.78
I2	Jeg er fornøyd med graden av frihet eller handlingsrom til å utføre mine oppgaver.	Riley et al. (2014)	0.66	0.06
I3*	Alle i min organisasjon/avdeling oppfordres til å lære av sine feil.	Riley et al. (2014)	0.28	0.32
I4*	Alle i min organisasjon/avdeling er myndiggjort til å fatte beslutninger som angår hvordan de skal utføre sine oppgaver.	Riley et al. (2014)	0.41	0.34
I5	Jeg føler meg oppmuntret til å finne nye og bedre måter å gjøre ting på.	Riley et al. (2016)	0.78	−0.01
I6	I min organisasjon/avdeling har vi myndighet til å fatte beslutninger som gjør at vi løser oppgaver/oppdrag på en bedre måte.	Van Assen (2020)	0.60	0.23
I7	I min organisasjon/avdeling deler vi informasjon i den hensikt å gjøre en god jobb.	Van Assen (2020)	0.01	0.77
I8**	I min organisasjon/avdeling deles informasjon vertikalt og horisontalt i den hensikt å løse tildelte oppgaver på en effektiv måte.	Konczak et al. (2000)	0.14	0.66
I9	I min organisasjon/avdeling er det et godt samarbeidsklima.	Pais et al. (2014)	0.02	0.80
I10	I min organisasjon/avdeling holder alle sitt ord og følger opp forpliktelser til andre.	Riley et al. (2016)	−0.15	0.80
I11*	I min organisasjon/avdeling er alle tilstrekkelig trent og kompetente til å gjøre jobben sin.	Bateman et al. (2002)	0.15	0.49
I12*	I min organisasjon/avdeling diskuterer vi og håndterer saker og oppgaver i åpenhet.	Pais et al. (2014)	0.32	0.45
I13	I min organisasjon/avdeling vektlegges resultater som skal oppnås, fremfor hvordan oppgaver skal utføres når oppdrag blir gitt.	Riley et al. (2016)	0.60	−0.05
I14	I min organisasjon/avdeling forstår vi hensikten med våre oppgaver eller mål.	C. Lee et al. (1991)	0.17	0.55
I15*	I min organisasjon/avdeling har vi spesifikke og tydelige målsetninger.	C. Lee et al. (1991)	0.20	0.50
I16*	I min organisasjon/avdeling er det lov å prøve og feile.	Riley et al. (2016)	0.56	0.23
I17**	I min organisasjon/avdeling blir vi oppfordret til å prøve ut nye ting.	Riley et al. (2016)	0.83	−0.04
I18	I min organisasjon/avdeling blir vi oppfordret til å ta initiativ.	Amundsen and Martinsen (2014)	0.73	0.04
I19**	I min organisasjon/avdeling blir vi oppfordret til å prøve ut nye ideer, selv om det er en mulighet for at de ikke vil lykkes.	Konczak et al. (2000)	0.88	−0.06
I20*	I min organisasjon/avdeling ser vi hele tiden etter nye måter å forbedre prosedyrer og arbeidsmetoder.	Van Assen (2020)	0.39	0.39

Note: *Excluded after first EFA, **Excluded after semantic content assessment.

rotation, since we could not assume uncorrelated factors. Table 1 shows factor loadings for our first EFA. Following recommendations by Dysvik et al. (2015), we retained items with factor loadings above .50 and cross loadings below .35. We thus retained 13 of the original 20 items, which we used in a new EFA. All 13 items now had factor loadings and cross loadings within the criteria thresholds, with seven and six items for each of our two factors, respectively. After this step, we removed three items after a qualitative assessment of their semantic content and similarity to other items, leaving us with five items for each factor. We examined these ten items

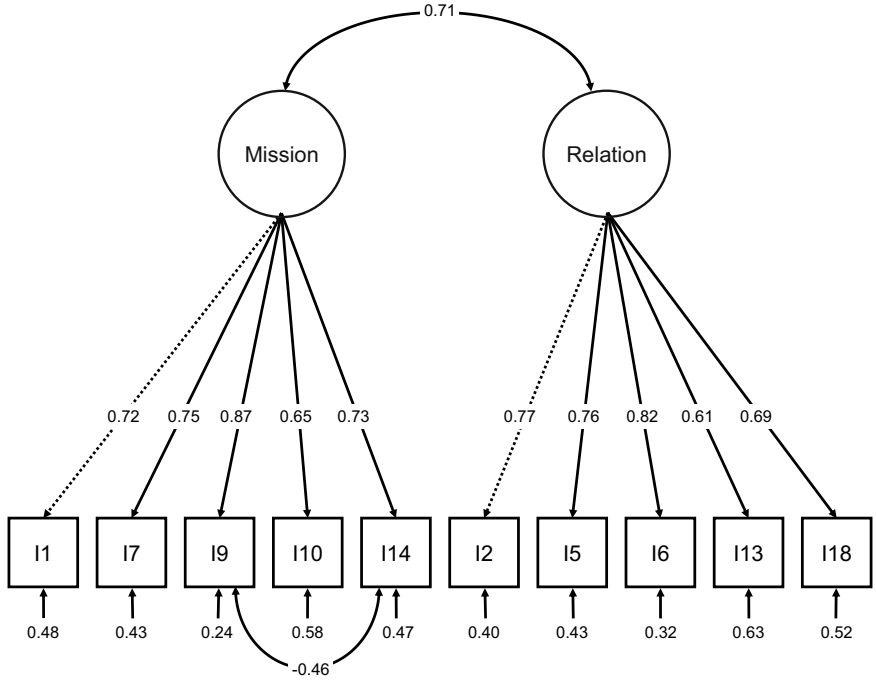

Figure 1. Confirmatory factor analysis of the mission command scale.
Note: Figure shows standardized parameter estimates.

Table 2. Descriptive statistics of study 1 variables.

	M	SD	1	2	3	4
1 – CASAL MC	35.92	7.78				
2 – Empowering Leadership	35.51	7.69	.74***			
3 – NMCS – overall score	54.27	8.94	.71***	.87***		
4 – NMCS – Relation	26.90	4.72	.61***	.75***	.88***	
5 – NMCS – Mission	27.37	5.26	.66***	.80***	.91***	.60***

Note: ***$p < .001$.

in a third EFA, which yielded satisfying results. After a qualitative assessment of the semantic content of the items in each factor, we termed the factors "Relation" and "Mission," respectively. The measure was termed "Norwegian Mission Command Scale" (NMCS, see Appendix A, Table A1).

We then used the *lavaan* package (Rosseel, 2012) to carry out a Confirmatory Factor Analysis (CFA) of the NMCS, with the ten retained items specified in two factors. This model acceptably fitted the data (CFI = .941, TLI = .922, RMSEA = .090), but modification indices indicated a correlation between two items in the Relation factor. As shown in Figure 1, allowing for this correlation in a new CFA yielded a better fit (CFI = .956, TLI = .940, RMSEA = .079), and we decided to keep the measure thus.

Results

Table 2 shows the means, standard deviations, and correlations between empowering Leadership, the CASAL mission command measure, and both subdimensions and the overarching dimension of the NMCS. The reliability of the NMCS was $\omega = .86$, 95% CI [.81, .90] for the "Relation" dimension, $\omega = .86$, 95% CI [.82, .89] for the "Mission" dimension, and $\omega = .89$, 95% CI [.86, .92] for the overall "perceived mission command" construct, as measured using the NMCS.

Study 2

The purpose of Study 2 was to test our hypothesized relationships between mission command, basic psychological needs satisfaction, and autonomous motivation, as well as turnover intention and job satisfaction.

Method

Sample and procedure

The Norwegian Home Guard has a number of rapid reaction forces consisting of personnel who have already completed a minimum of one year compulsory military service. To hold a position as section- or platoon leader, additional training in procedures, tactics and leadership is required. The personnel have civilian day jobs but have volunteered to continue serving on a 3-year readiness contract, committing to a total of 30 days of training per year. They may be rapidly mobilized and deployed if crises arise. As service within the rapid reaction forces is voluntary this group of military personnel is expected to be highly motivated. However, to our knowledge, there has been no research into the quality of motivation and the potential impact of leadership using the framework of self-determination theory. An online survey using our measures of interest was produced and distributed to 617 currently serving members of three different Norwegian Home Guard rapid reaction forces. We received 286 responses, a response rate of 46.4%. The age distribution showed that 127 were between 20 and 29 years, 107 were between 30 and 39 years, 43 were between 40 and 49 years, and 9 were 50 years or more. Moreover, 54.5% had less than 6 years' service, while 45.5% of the respondents had more than 6 years' service in the rapid reaction forces. In our sample, 32.5% held a leadership position at some level, such as section or platoon leader.

Measures

All measures used the same seven-point Likert scale. Except for the NMCS, as in Study 1, all the measures used were based on existing scales translated into Norwegian using translation and back-translation (Brislin, 1970), and with the wording adapted to fit our study context (e.g., "in my job" was substituted with "in the service" or "in the rapid reaction force").

Mission command. We used our newly developed Norwegian Mission Command Scale (NMCS, see Study 1) to measure the perceived degree of mission command. Although the NMCS has two subdimensions, "Relation" (e.g., "In my organization/unit, everybody keeps their word and follows up on their commitments to others") and "Mission" (e.g., "I feel encouraged to find new and improved ways of doing things"), for the present purpose, we combined all items in the overarching "mission command" construct. The reliability was good ($\omega = .89$, 95% CI [.86, .91]).

Empowering leadership. To measure Empowering Leadership, we used the same seven items as in Study 1 (Van Dierendonck & Nuijten, 2011). Coefficient omega showed high reliability ($\omega = .88$, 95% CI [.84, .91]).

Basic psychological needs satisfaction. We measured satisfaction of the basic psychological needs for autonomy, competence, and relatedness using 12 items adapted from B. Chen et al. (2015), four items for each psychological need. The reliability was good overall with $\omega = .83$, 95% CI [.79, .88] for autonomy (e.g., "I feel a sense of choice and freedom in the things I undertake"), $\omega = .87$, 95% CI [.85, .90] for competence (e.g., "I feel capable at what I do"), and $\omega = .90$, 95% CI [.87, .93] for relatedness (e.g., "I feel that the people I care about also care about me").

Autonomous motivation. Autonomous motivation was measured by combining the three items for intrinsic motivation (e.g., "Because I have fun doing my job") and identified regulation (e.g., "Because I personally consider it important to put effort into this job"), obtained from the Multidimensional Work Motivation Scale (Gagné et al., 2015). The reliability was very good ($\omega = .91$, 95% CI [.88, .95]).

Job satisfaction. We used three items from Amundsen and Martinsen (2014) to measure job satisfaction (e.g., "In general, I like working here"). The reliability was adequate ($\omega = .61$, 95% CI [.46, .77]).

Turnover intention. To measure turnover intention, we combined two items from Kuvaas (2006) with one item from an unpublished internal study of the armed forces ("I would like to work in the rapid reaction forces for a long time"). The reliability was good ($\omega = .81$, 95% CI [.76, .87]).

Strategy of analysis

All analyses were carried out using the statistical package R (R Core Team, 2020). In line with recent developments in reliability estimation (Dunn et al., 2014; Morera & Stokes, 2016; Sijtsma, 2009), we used the *MBESS* package (Kelley, 2017) to calculate coefficient omega including 95% confidence intervals. We then used the *lavaan* package (Rosseel, 2012) to test the hypothesized relationships between our variables using Structural Equation Modelling (SEM). First, we specified a measurement model with all constructs of interest and the correlations between them. As detailed in Table 3, this model fitted the data satisfactorily. However, modification indices led us to specify correlations between some of the indicators within each construct in our final measurement model. This led to a substantially improved fit with the data (Table 3), and we proceeded to specify the hypothesized relationships between our constructs in our full SEM Model 3. In order to be able to factor out the contribution that was specifically due to mission command, we controlled for Empowering Leadership. Finally, we used the Monte Carlo approach (Tofighi & MacKinnon, 2016) to calculate the 95% confidence interval for our hypothesized indirect (mediation) effects.

Results

The descriptive statistics and correlations are shown in Table 4. All variables correlated positively with each other, except for turnover intention, which correlated negatively with all other variables.

In Hypothesis 1, we proposed that mission command is positively related to autonomous motivation. To our surprise, there was no significant direct effect of mission command on autonomous motivation. Thus, Hypothesis 1 was not supported.

In Hypothesis 2, we posit that experiencing higher levels of mission command in their unit would satisfy soldiers' basic psychological needs for (a) autonomy, (b) competence, and (c) relatedness. As shown in Figure 2

Table 3. Fit measures, study 2.

		CFI	TLI	RMSEA incl 90% CI
Model 1	First measurement model	.860	.847	.070, [.066, .074]
Model 2	Re-specified measurement model	.928	.919	.051, [.046, .056]
Model 3	Full SEM model	.927	.919	.051, [.046, .056]

Table 4. Descriptive statistics of study 2 variables.

	M	SD	1	2	3	4	5	6	7
1 – Empowering Leadership	5.59	0.90							
2 – Mission Command	5.90	0.74	.801						
3 – Autonomy Satisfaction	5.51	0.96	.632	.672					
4 – Competence Satisfaction	5.85	0.84	.509	.557	.701				
5 – Relatedness Satisfaction	6.05	0.91	.428	.479	.557	.523			
6 – Autonomous Motivation	6.30	0.81	.579	.567	.658	.556	.454		
7 – Job Satisfaction	6.16	0.88	.470	.518	.606	.450	.423	.662	
8 – Turnover Intention	2.34	1.40	−.303	−.312	−.372	−.393	−.290	−.455	−.390

Note: All correlation coefficients are $p < .001$.

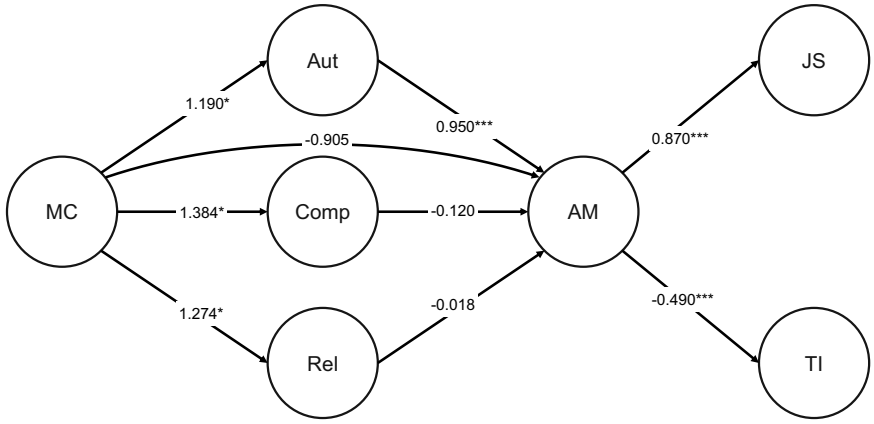

Figure 2. Parameter estimates for final structural model, study 2.
Note: *$p < .05$ **$p < .01$ ***$p < .001$, all path coefficients are standardized coefficients obtained from Model 3, the full SEM model. For the sake of readability, the figure only includes the hypothesized paths. Abbreviations: MC = Mission Command, Aut = Autonomy need satisfaction, Comp = Competence need satisfaction, Rel = Relatedness need satisfaction, AM = Autonomous Motivation, JS = Job Satisfaction, TI = Turnover Intention.

Table 5. Results of structural equation modeling.

Direct paths	std. coef.	SE
Mission Command => Autonomy need satisfaction	1.190*	0.675
Mission Command => Competence need satisfaction	1.384*	0.641
Mission Command => Relatedness need satisfaction	1.274*	0.583
Mission Command => Autonomous motivation	−0.905	0.804
Autonomy need satisfaction => Autonomous motivation	0.950***	0.215
Competence need satisfaction => Autonomous motivation	−0.120	0.145
Relatedness need satisfaction => Autonomous motivation	−0.018	0.110
Autonomous motivation => Turnover intention	−0.490***	0.167
Autonomous motivation => Job satisfaction	0.870***	0.089
Empowering Leadership => Autonomy need satisfaction	−0.441	0.550
Empowering Leadership => Competence need satisfaction	−0.789	0.526
Empowering Leadership => Relatedness need satisfaction	−0.755	0.480
Empowering Leadership => Autonomous motivation	0.909	0.630

Note: *$p < .05$ **$p < .01$ ***$p < .001$, all path coefficients are standardized coefficients obtained from Model 3, the full SEM model.

and Table 5, mission command did indeed have a positive effect on the satisfaction of the need for both autonomy ($\beta = 1.190$, $p = .018$), competence ($\beta = 1.384$, $p = .010$), and relatedness ($\beta = 1.274$, $p = .020$). Thus, Hypotheses 2a, 2b, and 2c were all supported.

In Hypothesis 3, we expected the satisfaction of the basic psychological needs for (a) autonomy, (b) competence, and (c) relatedness to be positively related to autonomous motivation. However, we only found a significant relationship between satisfaction of the need for autonomy and autonomous motivation ($\beta = 0.950$, $p < .001$), while the corresponding relationships regarding the need for competence and relatedness were not significant. Thus, Hypothesis 3a was supported, while 3b and 3c were not.

Hypothesis 4 states that there is a positive indirect effect of perceived mission command on autonomous motivation through the satisfaction of the psychological needs for (a) autonomy, (b) competence, and (c) relatedness. Using the Monte Carlo approach, we estimated this indirect effect through satisfaction of the need for autonomy to be $\mu = 1.684$ (95% CI [0.243, 3.537]). Thus, Hypothesis 4a was supported. The corresponding indirect effect through both the needs for competence and relatedness had 95% confidence intervals that included zero, and Hypotheses 4b and 4c were thus not supported.

In Hypothesis 5, we expected this to further extend to job satisfaction, so that there would be a positive relationship between mission command and job satisfaction, first through satisfaction of the needs for (a) autonomy, (b) competence, and (c) relatedness, and then through autonomous motivation. Using the Monte Carlo approach, and in support of Hypothesis 5a, we found the indirect effect through the satisfaction of the need for autonomy and autonomous motivation to be $\mu = 1.528$ (95% CI [0.235, 3.117]). However, confidence intervals for the corresponding indirect effect concerning competence and relatedness included zero, and Hypotheses 5b and 5c were therefore not supported.

Lastly, in Hypothesis 6, we also expected this to hold for turnover intention, so that there would be a negative indirect relationship between mission command and turnover intention through satisfaction of the needs for (a) autonomy, (b) competence, and (c) relatedness, and subsequent autonomous motivation. In support of Hypothesis 6a, and again using the Monte Carlo approach, we found this indirect effect regarding autonomy to be $\mu = -1.432$ (95% CI [−3.017, −0.224]). However, Hypotheses 6b and 6c were not supported since the confidence intervals for the corresponding indirect effect through competence and relatedness both included zero.

Controlling for empowering leadership did not preclude indications that mission command does have an effect on autonomous motivation, job satisfaction, and turnover intention, through satisfaction of the basic psychological need for autonomy, and autonomous motivation.

Discussion

The purpose of the present study was to examine whether the perceived degree of mission command was related to soldiers' autonomous motivation, both directly and indirectly through satisfaction of the basic psychological needs for autonomy, competence, and relatedness. Taking this further, we extended our model to examine the effect on two important job attitudes: job satisfaction and turnover intention. This was done by first developing a measure for mission command (study 1), and subsequently testing the hypothesized relationships (study 2).

The results of structural equation modeling indicate that there was no direct relationship between mission command and autonomous motivation. However, there were significant positive relationships between mission command and satisfaction of all three basic psychological needs. Surprisingly, in our sample, satisfaction of the needs for competence and relatedness was not related to autonomous motivation. However, satisfaction of the need for autonomy was related to autonomous motivation, and we found a significant indirect relationship between perceived mission command and autonomous motivation mediated through satisfaction of the need for autonomy. Furthermore, this relationship extended to both important job attitudes, as we found a significant indirect effect of mission command on both job satisfaction and turnover intention (negative) through satisfaction of the need for autonomy and autonomous motivation. In the following, we discuss these findings in more detail.

Finding evidence of a positive relationship between perceived mission command and satisfaction of all three basic psychological needs was expected. It follows a long line of research tracing the positive effects of constructive leadership behaviors on subordinates (H. Hetland et al., 2011; Kim & Beehr, 2020; Kovjanic et al., 2012; Slemp et al., 2018). To our knowledge, however, this is the first study to show such a relationship for mission command, which is important since this is the command philosophy used in NATO (Ministry of Defence, 2022). Furthermore, we find that mission command relates positively to satisfaction of all three basic psychological needs even when we control for empowering leadership. This suggests that mission command has unique properties in this respect, rather than any positive effect being due to construct overlap with empowering leadership.

Moreover, this study indicates that mission command is an autonomy-supportive leadership practice, and that it may be beneficial for military organizations to look beyond subordinates' initiative and high-speed decision-making, to encompass individual development and motivational aspects. Ultimately, implementation and employment of mission command in both garrison and training environments is paramount to its successful employment in combat and other high-risk scenarios. Thus, military organizations that manage to practice mission command will not just have an edge in combat operations, the original purpose of the philosophy. A desirable side effect, the resulting climate of trust and autonomy, will have a positive psychological effect throughout the organization, facilitating motivational mechanisms through satisfaction of basic psychological needs.

We were surprised that we did not find positive relationships between satisfaction of the needs for competence and relatedness, respectively, and autonomous motivation in our sample. These relationships are intrinsic to self-determination theory and have been documented in a range of studies spanning decades. It might be that the need for relatedness is considered to play a more distal role in relation to some outcomes than the other needs, as people also engage in intrinsically motivated behavior in isolation (Deci & Ryan, 2000). It could also be that the substantial correlation between the satisfaction scores contributed to decreasing the statistical power of detecting the unique effects of each psychological need.

Importantly, however, our hypothesis concerning a relationship between satisfaction of the need for autonomy and autonomous motivation was supported. This further underlines the importance of the need for autonomy and indicates that autonomy may be the most critical need to satisfy in a work context.

Implications for research and practice

That mission command fosters autonomous motivation, even when controlling for empowering leadership, is interesting in its own right, given that mission command is used by several very large organizations and thus affects millions of employees – soldiers – every day. This has some implications for research on military leadership.

First, the psychological consequences of mission command as a leadership philosophy remain underresearched compared to, e.g., transformational leadership or empowering leadership. We believe the reason for the lack of research is that most military theorists, for whom mission command is ubiquitous, are not concerned with psychological research, while, for psychologists, mission command remains an uncommon construct. Thus, with this cross-disciplinary study, we hope to spur interest in mission command among psychologists and organizational researchers, and interest in the psychological consequences among military theorists. The NMCS could provide a starting point for such future research efforts.

Second, pertaining to the applied domain, it is important that we have extended our model to include job satisfaction and turnover intention. For any organization that wishes to retain its employees, knowledge about the antecedents of these outcomes is important. It might be vital for military organizations, however. As the complexity of military equipment steadily increases, along with the associated cost of training new personnel to operate the equipment, turnover is regarded as not just costly, but also as a risk to operations. Thus, knowledge that builds on military organizations' existing leadership philosophies and that potentially enables interventions that could reduce turnover intention should be of interest to all modern armed forces.

Based on the findings of this study, we recommend that leadership training should incorporate knowledge on types and nature of employees' motivation and autonomy-supportive leader behavior aimed to satisfy subordinates' innate needs for autonomy, competence and relatedness in a military work environment (Deci & Ryan, 2002; Hardré & Reeve, 2009). This approach can help to shape a favorable leadership climate, and effectively enhance job satisfaction and retention rates among military personnel.

Methodological considerations

In study 1 we developed a measure for the perceived degree of mission command, to be utilized in Study 2. We did this by following established procedures for the development of psychometric measures. However, the nature of the construct we are attempting to capture, mission command, introduces some conceptual and methodological complications.

First, being NATO's official command philosophy, the concept with principles is thoroughly described in doctrine (Ministry of Defence, 2022). The concept is therefore common to all member states. However, nations have slightly different principles guiding its practice. Additionally, different organizational cultures within the alliance impact how mission command is interpreted and practiced, ultimately influencing its effectiveness (Shamir & Mcmaster, 2020). Due to the absence of a comprehensive doctrine on mission command within the Norwegian military, we opted to rely on US Army doctrine which is consistent with the Norwegian understanding of the concept (Forsvaret, 2020). The US Army doctrine on mission command is normative in its nature, describing how mission command should be practiced rather than being derived from practice itself, making cultural differences less significant when transferred to a Norwegian military context. However, cultural differences should be considered if evaluating the effectiveness of mission command philosophy across different nations or services.

Second, although mission command is a well-established and defined concept for military leadership, its origins do not stem from an empirical psychological research tradition, with the purpose of describing reality. Rather, mission command was developed as a normative philosophy for efficient command and control of military forces, with the intention of winning battles through superior tempo (Vandergriff & Webber, 2017). The US Army publication on Mission Command has defined seven principles of mission command (Army Doctrine Publication, 2019), while we find empirical evidence for two dimensions. This apparent incongruence raises questions about whether the NMCS captures the full gamut of mission command behaviors. However, there is a conceptual difference between principles that guide leadership and command and control practices at the organizational level, and subdimensions of the experience of organizational culture. Moreover, the items we retained did not necessarily need to reflect all seven dimensions specifically but should instead reflect what the literature seems to consider to be the main characteristics of mission command. More pragmatically, our goal was to develop a measure that could easily be combined with other measures in questionnaires to be distributed in actual military units to investigate antecedents and consequences of mission

command, as it is executed. While it is certainly interesting to examine whether all seven principles of mission command can be empirically distinguished from each other by factor analysis, the number of items needed to meaningfully separate seven subdimensions would probably render such a measure largely impractical for use in actual military samples. We therefore propose our two dimensions as a meaningful construct for practical use. Further, reliability for the NMCS was high for both study 1 ($\omega = .89$, 95% CI [.86, .92]) and study 2 ($\omega = .89$, 95% CI [.86, .91]), indicating consistency of the measure across different samples.

The NMCS is intended to assess the perceived degree of mission command through the perceptions of the leadership climate. However, a significant conceptual overlap exists between mission command and empowering leadership, which is also apparent in our measure as it integrates fundamental principles from empowering leadership. This overlap was also confirmed by our data, in which mission command and empowering leadership shared a correlation coefficient of $r = .87$ ($p < .001$) and $r = .80$ ($p < .001$) in the two studies, respectively. However, developing a unique measure to assess mission command in military units is important since it is the official leadership philosophy established in NATO and member states' doctrines. Unlike empowering leadership, mission command is a well-known concept to most service members, and such a measure could serve as a tool to assess to what extent the philosophy is reflected in leadership practices and unit climate.

The present study is, to our knowledge, the first to combine mission command philosophy and motivation using the self-determination theory framework. However, the study was cross-sectional, which limits the interpretation of causal inferences. Moreover, conclusions were based on data from three different Home Guard units, limiting the generalizability of the findings to other branches. We encourage future research that expands into other services of the armed forces and that uses more stringent designs, such as longitudinal or quantitative diary studies, to help establish the direction of the effects between mission command, motivation, and various work-related outcomes.

Our primary interest in the present study was the individual outcomes in terms of basic needs satisfaction and autonomous motivation. As each respondent in our sample experiences leadership not only from their immediate superior (e.g., a soldier could be given directions by the platoon sergeant or platoon leader, not just their section leader), we opted to have the soldiers report the perceived degree of mission command behaviors in the leadership climate of their unit in general, rather than the specific behaviors of their immediate superiors. Future studies might examine in more detail the specific role of mission command as exercised by leaders and its effect on the dependent variables examined here. Going further, the effects of mission command on mission accomplishment and effectiveness through the psychological constructs should be examined.

We were struck by the comparatively low reliability of our job satisfaction measure ($\omega = .61$, 95% CI [.46, .77]). Upon closer inspection of the data, we found that one item (item 2, which was reversed) was likely to have been misunderstood by some of the respondents, which led them to employ the scale in the wrong direction. Consequently, we attempted to remove the item from the measure and only use two items, which improved reliability. However, running our full SEM model produced the same overall results, but with a slightly poorer model fit. We therefore decided to retain all three items.

Conclusion

Mission Command differs from other theories of leadership in that it does not originate in academic research on desirable outcomes of leader behavior. Rather, its origin is normative in nature, and the purpose is the efficient command and control of military forces in combat operations through subordinates' rapid decision-making, initiative, and decentralized execution in a changing and uncertain environment. Nevertheless, bridging military theory and motivational psychology, we show that mission command has important desirable outcomes beyond its intended purpose of military effectiveness. Our study indicates that mission command contributes to the satisfaction of the basic psychological needs for autonomy, competence, and relatedness, which are associated with higher autonomous motivation and job satisfaction, and lower turnover intention. These outcomes are important to any organization but, to a military organization, whose members might need to persist and perform autonomously under difficult and unclear conditions, capitalizing on every opportunity for enhanced autonomous motivation may be crucial.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Data availability statement

Participants of this study did not consent to having their data shared publicly, so supporting data is not available.

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Appendix A. The Norwegian Mission Command Scale (NMCS)

Table A1. The Norwegian mission command scale (NMCS).

Item	Norwegian	English (recommended translation)
Factor 1: Relation		
1	Alt i alt, hvordan vil du beskrive nivået av tillit mellom alle i din organisasjon/avdeling?	All in all, how would you describe the level of trust in your organization/unit?
2	I min organisasjon/avdeling deler vi informasjon i den hensikt å gjøre en god jobb.	In my organization/unit, we share information in order to do a good job.
3	I min organisasjon/avdeling er det et godt samarbeidsklima.	The collaborative environment in my organization/unit is good.
4	I min organisasjon/avdeling holder alle sitt ord og følger opp forpliktelser til andre.	In my organization/unit, everybody keeps their word and follows up on their commitments to others.
5	I min organisasjon/avdeling forstår vi hensikten med våre oppgaver eller mål.	In my organization/unit, we understand the purpose of our tasks or goals.
Factor 2: Mission		
1	Jeg er fornøyd med graden av frihet eller handlingsrom til å utføre mine oppgaver.	I am satisfied with the degree of freedom or leeway I have in completing my tasks.
2	Jeg føler meg oppmuntret til å finne nye og bedre måter å gjøre ting på.	I feel encouraged to find new and improved ways of doing things.
3	I min organisasjon/avdeling har vi myndighet til å fatte beslutninger som gjør at vi løser oppgaver/oppdrag på en bedre måte.	In my organization/unit, we are authorized to make decisions in order to complete our tasks/missions in a better way.
4	I min organisasjon/avdeling vektlegges resultater som skal oppnås, fremfor hvordan oppgaver skal utføres, når oppdrag blir gitt.	When missions are assigned in my organization/unit, the results to be achieved are stressed, rather than how tasks are to be performed.
5	I min organisasjon/avdeling blir vi oppfordret til å ta initiativ.	In my organization/unit, we are encouraged to take initiative.

Note: Items are scored on a seven-point Likert scale (1 = to a very small extent/i svært liten grad, 2 = to a small extent/i liten grad, 3 = to a somewhat small extent/i litt liten grad, 4 = to a neither large or small extent/i verken stor eller liten grad, 5 = to a somewhat large extent/i litt stor grad, 6 = to a large extent/i stor grad, 7 = to a very large extent/i veldig stor grad). Factor scores are obtained by averaging item scores for each factor. The overall NMCS score is obtained by averaging all item scores. In the present study only the Norwegian wording was tested empirically. The English translation is provided for convenience, to facilitate use in international studies in the future.