

The effectiveness of Balanced Leadership Behaviour within the Norwegian Armed Forces, and the predictive value of personality traits

Håvard Norgård Berger and Johan Maximilian Fjær Matre



MAPSYK345

Master's Program in Psychology

Field of Study: Work- and Industrial Psychology

At the

UNIVERSITY OF BERGEN

FACULTY OF PSYCHOLOGY

SPRING 2022

Academic Supervisor: Thomas Hol Fosse, Norwegian Defence University College

Academic Co-supervisor: Morten Birkeland Nielsen, University of Bergen, Department of

Social-Psychology

Abstract

The selection of individuals to leadership positions is crucial for the effectiveness of most organizations, and especially for the military. Optimizing the selection process is therefore a critical part of securing an organization for the future. This paper investigates whether the new leadership model introduced by the Norwegian Armed Forces, Balanced Leadership Behaviour, is correlated with effectiveness as well as to what degree it can be predicted at selection who will exhibit this behaviour. It was found that all the three sub-factors of Balanced Leadership Behaviour correlated with effectiveness. Support was further found for the claim that personality traits would have a small predictive value in leadership selection beyond that of General Mental Ability, a measure that is heavily used in selection today. Extraversion was found to be the only personality trait that predicted all three sub-categories of Balanced Leadership Behaviour. As a whole this study provides support for the use of Balanced Leadership Behaviour as a leadership framework within the Norwegian military context, and that personality as a selection tool might be useful, as it explains variance beyond that of General Mental Ability.

Keywords: Leader selection, Balanced Leadership Behaviour, Personality, Effectiveness, Military

Sammendrag

Seleksjon av individer til lederstillinger er avgjørende for effektiviteten til de fleste organisasjoner, spesielt i en militær setting. Optimalisering av seleksjonsprosessen er av den grunn en kritisk del av å sikre en organisasjon for fremtiden. Denne studien undersøker om den nye ledelsesmodellen introdusert av det norske Forsvaret, Balansert Lederatferd, er korrelert med effektivitet, samt i hvilken grad det kan predikeres ved seleksjon hvem som vil utvise den denne lederatferden. Gjennom studien ble det funnet at alle de tre underfaktorene til Balansert Lederatferd viste en statistisk signifikant korrelasjon opp mot effektivitetsmålene. Det ble videre funnet støtte for påstanden om at personlighetstrekk ville ha en prediktiv verdi i lederseleksjon, utover det alminnelig evnenivå ville vise. Dette funnet er relevant på bakgrunn av bruken av dette måleinstrumentet i seleksjonsprosessen i dag. Ekstroversjon ble funnet å være det eneste personlighetstrekket som predikerte alle tre underkategoriene av Balansert Lederatferd. Som en helhet gir denne studien støtte for bruken av Balansert Lederatferd som et ledelsesrammeverk i en norsk militær kontekst, samt at personlighet har en verdi som et seleksjonsverktøy, da den forklarer variasjon utover det alminnelig evnenivå har vist seg å gjøre.

Nøkkelord: Lederseleksjon, Balansert Ledelsesatferd, Personlighet, Effektivitet, Militæret

Acknowledgements

After having written our bachelors thesis on destructive leadership, we now wanted to shift our focus to constructive forms of leadership. When presented with an opportunity to write our thesis on data for the Norwegian Armed Forces we saw an opportunity to pursue our shared interest for leadership and the importance of effective leadership selection. It has been a long process, during which we have learned much about dynamic teamwork and how important it can be to take the time to discuss differing ideas and understandings

There are several individuals, for without whom, this paper would not exist. First, and foremost, we would like to thank our academic supervisor Thomas Hol Fosse, at the Norwegian Defence University College. Not only for providing us with guidance and support, but also for the good communication he has facilitated. We would also like to thank the Norwegian Armed Forces for giving us access to the data. Our Academic co-supervisor Morten has also been of help, especially with the data analyses. We would also like to thank the professors on the 4th floor of the psychological faculty, for always leaving their doors open and taking time to bounce ideas around with us. On a personal note, we would like to thank our respective partners for their patience and support during the writing process.

Bergen, April 22nd 2022
Håvard Norgård Berger and Johan Maximilian Fjær Matre

Table of contents

Abstract..... ii

Sammendrag..... iii

Acknowledgements..... iv

Innhold v

Introduction 1

 The Study's Contribution to Research and Practice..... 3

Leadership and Effectiveness..... 5

 General Leadership 5

 Military Leadership 6

 Leadership in the Norwegian Armed Forces..... 6

 Effectiveness 7

Balanced Leadership Behaviour and Effectiveness..... 9

 Task-Oriented behaviour and Effectiveness 11

 Development-Oriented Behaviour 12

 Change-Oriented Leadership Behaviour and Effectiveness..... 12

 Relational-Oriented Behaviour and Effectiveness 13

 Role-Model Leadership Behaviour and Effectiveness 14

 Effectiveness Measures 15

 Effectiveness, Satisfaction and Extra Effort 15

 Work Engagement 16

 Burnout 17

Selection, Personality and Balanced Leadership Behaviour 19

 Selection in the Norwegian Armed Forces 19

 The Role of GMA 20

 Personality, Selection and Leadership 21

Balanced Leadership Behaviour and the Predictive Value of Personality Traits 22

 Task-Oriented Leadership Behaviour..... 22

 Conscientiousness..... 22

 Empirical Basis for Task-Oriented Leadership Behaviour 23

 Development-Oriented Leadership Behaviour 23

 Change-Oriented Leadership Behaviour 24

BALANCED LEADERSHIP BEHAVIOUR, EFFECTIVENESS, AND PERSONALITY

Openness to Experience	24
Empirical Basis for Change-Oriented Leadership Behaviour	25
Relational-Oriented Leadership Behaviour.....	25
Extraversion and Agreeableness.....	26
Empirical Basis for Relational-Oriented Leadership Behaviour	26
Role-Model Behaviour	27
Empirical Basis for Transformational Leadership	28
Empirical Basis for Ethical Leadership.....	29
Method	29
Measurements	30
Statistical Analysis.....	32
Results.....	33
Correlation Hypotheses	34
Predictive Hypotheses	35
Discussion.....	36
Balanced Leadership Behaviour and Effectiveness.....	37
Task-Oriented Leadership Behaviour and Effectiveness	38
Development-Oriented Leadership Behaviour and Effectiveness.....	38
Role-Model Leadership Behaviour and Effectiveness	39
Personality Traits and Balanced Leadership Behaviour.....	39
Conscientiousness, Agreeableness and Task-Oriented Leadership Behaviour	40
Openness, Agreeableness, Extraversion and Development-Oriented Leadership Behaviour	42
Research Question for Role-Model Leadership Behaviour.....	42
The Predictive Value of Extraversion	43
The Predictive Value of Neuroticism	44
The Possible Role of the Military Setting	45
Implications and Limitations.....	46
Strengths.....	46
Limitations	46
Future Research	48
Conclusion.....	49
Literature	51
Appendix	69
Appendix A.....	69

“Few things are more important to human activity than leadership”

- D. Quinn Mills, Harvard Business school

Introduction

The importance of leadership has long been emphasized within the scientific literature, and organisations have to an increasing degree become aware of the vital role that leaders play in gaining and maintaining a competitive advantage (Nielsen, et al., 2017). The ability to identify, select and develop effective leaders is one of the most vital success factors for any organization (Carnes, Houghton & Ellison, 2015; Yukl, 2012; 2013; Lowe, Kroeck & Sivasubramaniam, 1996). As leadership involves communication upwards, downwards, and outwards even a minor leadership position has the potential to influence an organisation, in both positive and negative ways (Ichniowski & Shaw, 1999; Hatch & Dyer, 2004). Zaccaro, Rittman and Marks (2001) argue that perhaps the most critical factor in the success of organizational teams are effective leadership processes. The importance of leadership is further reflected in the number of resources that are currently being spent on leader selection and development every year, as well as the abundance of literature published on the topic (Gardner, Lowe, Moss, Mahoney & Coglisier, 2010). The importance of leadership underlines the need for an effective and targeted selection process. Considerable evidence has shown that the acquisition and retention of skilled leaders has a strong impact on business results (Yukl, 2008; Pfeffer, 2005). The selection of people to positions of leadership can have widespread consequences beyond the role itself, with research showing that the behaviour of leaders can influence several aspects of an organisation (Grant, Christianson, & Price, 2007; Yukl, 2008). For instance, when determining access to resources (e.g., by allocating interesting tasks or limiting autonomy) the leader will at the same time effect the motivation of their subordinates (Inceoglu, Thomas, Chu, Plans, & Gerbasi, 2018). The selection of employees that have good leadership qualities is of great importance to an organizations long-term health, and ability to function effectively (Barney, 1998; Adner & Helfat, 2003; Pfeffer, 2005).

Leadership has further been emphasised as a key determining factor for military effectiveness (Reiter & Wagstaff, 2018). The military faces unique challenges and demands where leadership could, in the most extreme consequences, be the difference between life and

death (Hannah & Sowden, 2013; Hogan, Curphey & Hogan, 1994; NAF, 2020). Leadership and the military have a strong historical link, and military organizations perceive leadership to be fundamental for their effectiveness (Martinsen, Fosse, Johansen & Venemyr, 2020; Reiter & Wagstaff, 2018). Wong, Bliese and McGurk (2003) claim that leadership and the military are inseparable, emphasising that militaries have been enamoured by leadership long before it became a topic of discussion in the corporate, academic, or even public realms. Therefore, one would presume that the military have gone the furthest in articulating a clear vision of effective leadership. However, when it comes to identifying perspectives on what constitutes effective military leadership, the answer is not straightforward (Martinsen, et al., 2020). Military leadership can be viewed as both multifaceted and multilevel, as well as context-specific and context-free. What constitutes effective leadership varies between both countries and military organizations. For instance, the U.S. Army doctrine (2019) define leadership as “the activity of influencing people by providing purpose, direction, and motivation to accomplish the mission and improve the organization” (1-74). Whilst NATO defines good leadership as instilling “courage, energy, determination, respect and unity amongst those under command” (NSO, 2019, 1.21-1). The different viewpoints seem to underline the point that there is not one agreed upon definition of what constitutes effective leadership within the military context (Hannah & Sowden, 2013).

In 2012 the Norwegian Armed Forces introduced their own leadership model called “Balanced Leadership Behaviour” (“BLB”; NAF, 2012). BLB is integrated into the Norwegian Armed Forces view of leadership, which is an internal document that states the Armed Forces view on leadership, as well as the expectations of their leaders. The model is taught to new leadership candidates in the military academies, actively practiced after training and measured in the Norwegian Armed Forces employee surveys. However, there has been a limited amount of research conducted on the concept of BLB (Martinsen, et al., 2020). Bearing this in mind it is imperative for researchers to investigate to what degree BLB contributes to the desired outcomes, and if it is possible to predict in the selection process who will exhibit BLB. This is important as it can provide the Norwegian Armed Forces with a wider range of evidence-based practise to inform their decision making and may guide practitioners involved in personnel selection.

Based on this, the overarching objective of this study is twofold; (1) does BLB contribute to military effectiveness, and (2) can it be predicted in the selection process who will exhibit BLB? Firstly, we will examine to what degree BLB correlates with subordinate-related effectiveness measures – an experience that their leader contributes to extra effort, effectiveness, and satisfaction – and to what degree subordinates feel engaged in their work or experience burnout. As BLB is the leadership style currently used in the Norwegian Armed Forces, it is important that it contributes to military effectiveness, especially considering the number of resources that are being spent each year teaching, and practicing, BLB in the military academy (NAF, 2020). The scarcity of research that has been conducted up to this point underlines the need for a further and deeper understanding of the concept, as well as the consequences of it.

Secondly, this study will investigate to what degree it is possible to predict in the selection process who will exhibit BLB. Supposing that BLB does indeed correlate with effectiveness the next relevant question is to what degree it is possible to predict who will exhibit this behaviour, in the military selection process. Recruitment and selection should focus on factors that have been empirically shown to predict BLB, as the point of the recruitment and selection process is to identify, and select, the individuals with the greatest potential for contribution to the organization. Investigating to what degree personality traits will be able to predict future BLB is also of interest considering how common it is to make use of personality as a predictor for future leadership behaviour (Saksvik-Lehouillier & Hetland, 2015; Barrick, Mount & Judge, 2001), and the fact that the Norwegian Armed Forces already measure the personality traits of all their leadership candidates.

The Study's Contribution to Research and Practice

From a research perspective, it will be important that the choice of leadership behaviour that is being practised is substantiated by empirical evidence (Sellman, Russell & Strickland, 2017). Currently, despite forming the basis for military leadership in the Norwegian Armed Forces, to our knowledge, only one previous proceeding has investigated to what degree BLB contributes to the desired effectiveness outcomes. This is mainly a consequence of the concept being relatively newly implemented by the Norwegian Armed Forces, and thus effectiveness and other measures have not yet been sufficiently tested or measured. In the one proceeding that was conducted Martinsen and colleagues (2020) examined to what degree BLB correlated with

officer performance evaluations and found that the leader construct accounted for 36% of the variance in performance. However, this proceeding only assessed evaluations of leader performance and did not include other measurements of effectiveness, such as subordinate rated effectiveness. As BLB creates the basis for leadership in the Norwegian Armed Forces it will be important to examine to what degree it contributes to effectiveness, and especially effectiveness measures that have not been examined previously. We aim to expand on the cross-sectional study of Martinsen and colleagues (2020) by conducting a study on the relationship between BLB and other effectiveness measures. If the results of this study show that BLB is correlated with effectiveness in the Armed Forces, then this would strengthen the rationale of the current practice. It could also provide potential guidance for future researchers. Should the results however show that the current practice is not optimal, this would point to an important avenue for further research. And, hopefully, help specify what areas of the concept that need to be studied to a greater extent.

Another important aspect of the concept being relatively new is that there has to little degree been investigations into what factors will be able to predict this leadership behaviour. To our knowledge, no previous study has investigated this after BLB was introduced into the Norwegian Armed Forces. This fact represents an imperative need for more research as it is vital for the Norwegian Armed Forces to have an empirical basis for their selection process. As it is currently common practice for the Norwegian Armed Forces to measure the personality profiles of its leadership candidates it seems advantageous to investigate which personality traits will be able to predict future leadership behaviour. This is in line with the intentions of the Norwegian Armed Forces; the purpose of the collected data is to expand the knowledge about what predicts good leadership performance, including quality assurance and developing new selection criteria for the Armed Forces' educations (NAF, 2021a). The Armed Forces further aims to gain broader knowledge about characteristics that can contribute to more targeted measures for leadership development (NAF, 2021a). This is also underlined by Martinsen and colleagues (2020) who urge future researchers to include offices' personalities as a variable. By identifying antecedents, we will aid in the development of strategies for selecting and developing effective leaders.

In this way our study does not only contribute to the current limited literature on the effectiveness of BLB, but also examines which factors may be able to predict this behaviour. By

exploring the predictive value of personality traits in relation to future leadership behaviour, we hope to contribute to the empirical basis for the Armed Forces selection process. These contributions will also have direct practical implications. Firstly, by investigating the leadership model currently being used, against effectiveness measures currently being measured. Secondly, by investigating the predictive value of a variable that all leadership candidates are being measured on, and that has been showed to have a strong correlation with leader effectiveness in earlier studies (Martinsen, 2005).

Leadership and Effectiveness

General Leadership

Leadership has historically been defined in various ways. As noted by Stogdill (1974) “there are almost as many different definitions of leadership as there are persons who have attempted to define the concept” (p.7). At the end of the last century Bennis and Townsend (1995) estimated there to be at least 650 definitions of leadership. Whereas Kellerman estimated in an interview with Volckmann (2012) that there are approximately 1,400 different definitions. One of the more commonly cited definitions of leadership is “a process whereby an individual influences a group of individuals to achieve a common goal” (Northouse, 2019, p.5).

There are several approaches to the study of leadership. The behavioural approach is distinct from the trait- and skills approach, in that it emphasizes what leaders do and how they act (Northouse, 2019). One consistent theme, in terms of the leadership literature, is that behaviours can be divided into four categories: task-oriented behaviours, relational-oriented behaviours, change-oriented behaviours, and passive leadership (DeRue, Nahrgang, Wellman & Humphrey, 2011; Yukl, 2013). It was common in the early leadership literature to make a distinction between task-oriented and relational-oriented behaviour (e.g., Stogdill, 1950; Blake & Mount, 1981), whilst later researchers found change-oriented behaviours to be a third distinct category of behaviour (Yukl, 2008). Researcher have argued that the category of change-oriented leadership may have developed as a consequence of the accelerated rate of change in many organisations (Ekvall & Arvonen, 1991). It has further been emphasised that these categories merely encompass the active forms of leadership behaviour, and that passive leadership is important to include as a category as well (Skogstad, Einarsen, Torsheim, Aasland & Hetland, 2007; DeRue, et al., 2011). Extensive research has been done on the antecedents, prevalence, and

consequences of passive leadership, both in a general setting (e.g., Skogstad, et al., 2015; Aasland, Skogstad, Notelaers, Nielsen & Einarsen, 2010), and in a military setting (e.g., Fosse, Skogstad, Einarsen & Martinussen, 2019). For the sake of this paper however, the focus is on the constructive forms of leadership, and passive leadership will therefore not be considered. Instead, the paper will focus on the first three categories of leadership behaviour which are summed up in the Norwegian Armed Forces definition of BLB.

Military Leadership

As previously discussed, there is no universal definition of military leadership (Hannah, Campbell, & Matthews, 2010; Hannah & Sowden, 2013). Researchers have tended to differentiate between two complementary ways in which military leadership can be studied, based on the context-free and context-specific orientations in research outlined by Blair and Hunt (1986). The context-free approach makes use of theories that have a wide range of applicability, by applying general leadership models to specific contexts. One example of the context-free approach is examining transformational leadership within a military context. There exists considerable research of this nature, as many leadership theories have been applied to the military context (Wong, et al., 2003). By contrast, the context-specific approach focuses on the unique characteristics of different types of organizations (Blair & Hunt, 1986). Hannah and Sowden (2013) argue that what is unique about military leadership is not the leadership itself, but rather the military context that it is operating within. Military jobs are typically more physically and psychologically demanding than civilian jobs (Krueger, 2001). Regardless of what aspect of leadership different militaries have chosen to focus on, the desired outcome remains the same – for leadership to contribute to the effectiveness of the military. As the importance of leadership for military effectiveness has long been emphasized by historians (Reiter & Wagstaff, 2018), the relevant question then becomes what leadership styles contribute to this effectiveness, and to what degree do they do so.

Leadership in the Norwegian Armed Forces

BLB creates the basis for leadership behaviour within the Norwegian Armed Forces, building upon the work of Yukl (2013) and consisting of the three context-free meta-categories of task-, relational-, and change-oriented behaviour. As well as these three categories, the Norwegian Armed Forces emphasize the importance of role-model behaviour and have as such

included it as a fourth distinct category. Role-model behaviour is not part of Yukl's (2013) original framework but has been included as the Armed Forces view it as a fundamental part of military leadership, and integral to their values and expectations for military leadership behaviour (NAF, 2020). All categories are relevant for leadership and organisational effectiveness, both collectively and individually, and entails choosing the behaviour best suited to the task and the team's needs (NAF, 2020). As stated by Yukl (2008) task-oriented behaviours focus on improving effectiveness, relational-oriented behaviours on improving human relations and resources and change-oriented behaviours on improving adaptation. Kivlighan (1997) has demonstrated that task-oriented leadership behaviour is more effective for groups in early stages, and that relational-oriented leader behaviour is more important in later stages. Martinsen and colleagues (2020) on the other hand argue that the initial action of a leader is to establish trust (role-model behaviour), for then to increase the subordinates' competence (relational- and change-oriented behaviour), and finally focus on tasks and accomplishments (task-oriented behaviour). What leadership behaviours are most suited at various times will vary depending on factors such as the nature of the group, the tasks at hand, situational factors, and the lifespan of the group (NAF, 2020). This also reflects the fact that the military is far from monolithic, consisting of a diverse collection of organizations, roles, cultures, and people (Wong, et al., 2003). However, the main point is that groups will at various stages face different challenges and have different needs. This exemplifies the need for different leader behaviours and necessitates leaders with the ability to identify the need of the group and choose the most appropriate behaviour.

Effectiveness

The degree to which previous research has found leadership to contribute to organizational effectiveness has, to a large extent, depended on what factors have been studied (Lowe, et al., 1996). This might be a consequence of the fragmented understanding of the concept of leadership. As previously discussed, there is not one agreed upon conceptualization of leadership within the literature. As such, differences in leadership behaviours, level of the leader, organizational setting and effectiveness measures chosen in different studies have produced different results (Lowe, et al., 1996). However, research findings have generally reported statistically significant relationships between leadership behaviours, and characteristics, and

effectiveness across a range of organizational contexts using a variety of effectiveness measures (Lowe, et al., 1996; Hogan, et al., 1994). For instance, despite only a few models explicitly taking leadership into account as a determining factor in team outcomes, it has been identified as a key variable for team functioning and the main reason for successful implementation of team-based work systems (Gil, Rico, Alcover & Barrasa, 2005; Katzenbach, 1997).

A key challenge to the study of the relationship between leadership and effectiveness is the many ways of measuring the constructs. One of the reasons for this is that the leaders' tasks are mainly diverse, and that the leader's behaviour can have both direct and indirect effects on the organization's efficiency (Martinsen, 2005). Leadership, and its contribution to effectiveness, can be measured both in a subjective context; as a review of a field exercise, and objective context; as a review of collected data based on reliable measure instruments such as economic results.

In terms of general effectiveness, it may be perceived in terms of both a short and a long-term perspective. It is especially the long-term perspective that is interesting when it comes to the effectiveness of leadership, as the effects of leadership can take time before they become apparent (Shamir, 2011). In some cases, the short-term effects may be different from the effects long term. For instance, a change may lead to a temporary decline in effectiveness, followed by a larger, and sustained, increase (Yukl, 2008). Other researchers have pointed out that indices of effectiveness often are hard to specify and are frequently affected by factors beyond the leader's control (Hogan, et al., 1994). Despite this observation Hogan and colleagues argue for the use of effectiveness as a criterion, stating that "effectiveness is the standard by which leaders should be judged; focusing on typical behaviours and ignoring effectiveness is an overarching problem in leadership research" (p.494). From a research perspective Martinsen (2005) has pointed out that researchers will have the greatest amount of control when there is a time difference in between the gathering of data on leadership behaviour, and the data on leadership effectiveness. Repeated measurements over a longer time period will be able to give a more accurate assessment of the influence of leadership behaviour. For example, researchers have found that upwards of 40% of the variance in organizational performance can be explained by leadership, when applying appropriate outcome measures and time lags (Day, 2014; Day & Lord, 1988). These results are in line with the findings of DeRue and colleagues (2011) who found that leader traits and behaviours, combined, explained a minimum of 31% of the variance in leadership effectiveness.

In terms of the organizational context effectiveness may be defined and measured in several ways, such as economical, organizational or in relation to subordinates. Economic results have historically been the most frequently used measurement of effectiveness, as they are easy to measure and compare to previous results (Richard, Devinney, Yip, & Johnson, 2009). This may be optimal for more traditional organizations, who produce a service or product and try to turn a profit. However, this is not the case for military organizations as the Armed Forces are not primarily focused on achieving economic or transactional results. Furthermore, Lowe and colleagues (1996) have stated that economical and organizational measures, while possible reducing the problem of common methods bias, may not be especially valid measures of a leader's contribution to effectiveness, as they often are designed to primarily capture transactional outcomes. Therefore, measures focusing on subordinates' perceptions of effectiveness may be more suitable indicators of the impact that leaders can have on performance for military organizations. Lowe and colleagues (1996) argue in their meta-analysis that organizational measures will likely focus on a narrower perspective of performance (e.g., financial indicators, percentage of goals met) as opposed to subordinate ratings. By making use of subordinate ratings of leader behaviour and effectiveness, the organization will be able to measure effectiveness in a wider sense including factors such as subordinates individual motivation, team cohesion, organizational learning, and development of more ethical practices. This is in line with previous findings, which has provided strong support for the use of subordinate's evaluation of leader effectiveness (Hogan, et. al., 1994).

Bearing these considerations in mind we will examine a combination of three measurements for effectiveness. The effectiveness measures included are effectiveness, work engagement and burnout. The selection of these measurements is based on both previous findings and theoretical frameworks, as well as considerations regarding the measurements currently being used in the Armed Forces selection process. In the next section previous empirical findings and theoretical frameworks are presented, along with the hypotheses regarding the relationship between BLB and effectiveness.

Balanced Leadership Behaviour and Effectiveness

Leadership has been found to have a significant impact on employee performance and well-being (Hogan, et. al., 1994; Kuoppala, Lamminpää, Liira, & Vainio, 2008; Avolio,

Walumbwa, & Weber, 2009). Inept leadership on the other hand has been found to be associated with insubordination, turnover and malingering (Hogan, et al., 1994). As the construct of BLB builds upon decades of leadership research that has been replicated in different settings and countries (Yukl, 1999; 2012; Yukl, Gordon & Taber, 2002; Martinsen, et. al. 2020; Arvonen, 2008), there is reason to believe that it will be correlated with effectiveness in the Norwegian Armed Forces. Previous research has indicated all sub-categories that make up BLB to be correlated with different measures of effectiveness (DeRue, et al., 2011; Yukl, 2008; Martinsen, et al., 2020). Furthermore, other researchers have pointed out that within organizations which are typically organized in a strong hierarchical structure, such as military units, a major portion of the variance in performance and effectiveness may reside in factors associated with leadership (Zaccaro, et al. 2001). Wong and colleagues (2003) argue that the size of militaries results in leaders, even rather junior ones, commanding a large number of subordinates, and that this leads to leadership at all levels having a significant impact in terms of personnel. In their historical review Reiter and Wagstaff (2018) found rigorous empirical evidence for the importance of leadership in relation to military effectiveness, stating that quality leadership boost effectiveness. This all strengthens our assumption that BLB will be correlated with effectiveness.

In a master's thesis Lübbe (2017, p.44) found that BLB is currently being displayed at all levels of the Norwegian Armed Forces, whilst Austad (2018, p.28) found in a master's thesis that BLB is displayed at all three branches of the Norwegian Armed Forces (army, navy and air force). These findings demonstrate that BLB is not only taught to leaders in the Norwegian Armed Forces but is also actively practiced. However, the concept as a whole has only once before been specifically measured against effectiveness within the Norwegian military context. In this study, by Martinsen and colleagues (2020), effectiveness was operationalised as officers in commands evaluation of their subordinate officers. This underlines the need for further research and supports the relevance of our study.

BLB builds on Yukl's three meta-categories of task-, relational-, and change oriented behaviour, with the inclusion of role-model behaviour. However, in a series of studies carried out for the Norwegian Armed Forces, Martinsen and colleagues (2020) conducted both exploratory- (EFA) and confirmatory factor analysis (CFA) to investigate the construct of BLB, making use of the aforementioned categories. In their analysis they identified three categories, and coined

them task-oriented, development-oriented, and role-model. They found that the two original categories of relational- and change-orientations merged into the category of development-oriented. The researchers replicated these findings in several ways in two later studies. Stating that since the three factors were replicated across different sources and samples, that they had shown replication robustness (Martinsen, et al., 2020). The Armed Forces subsequently makes use of these three categories when measuring BLB. Our paper will therefore have to making use of these three categories, as they are the ones data has been collected on.

Since the sub-categories of BLB are qualitatively different (Yukl, 2008), it seems reasonable to assume that they will correlate in different ways with different effectiveness measures. Therefore, in the further section previous findings on the relationship between each sub-category and effectiveness are presented separately. The reasoning for choosing the specific effectiveness measures is also presented, along with the hypotheses.

Task-Oriented behaviour and Effectiveness

Task-oriented behaviour focuses primarily on improving efficiency and includes behaviours such as short-term planning, determining requirements for staffing and allocation of resources, clarifying priorities and objectives, monitoring operations and coordinating activities, as well as day to day operational problems (Yukl, 2008). Extensive research using different measures such as survey questionnaires, observation, and experiments have shown that task-oriented behaviours can enhance the performance of both individual employees and groups (Yukl, 2008; 2013). The degree to which leaders succeed in defining the directions of the team and organize the team to maximize progress along these directions, will significantly contribute to the effectiveness of the team (Zaccaro, et al. 2001). This is also relevant in the military context, where research conducted at the U.S. Army War College concluded that a strategic leader's primary task is to create vision for organisations (Wong, et al. 2003). In a study from 2019 Henkel, Marion, and Bourdeau found that leaders who scored high on task-oriented leadership behaviour also scored higher on leadership effectivity. In this paper it was also found a relationship between leaders who scored high on both task- and relation-oriented behaviours, and subsequent scores on the finishing evaluation (Henkel, et al., 2019). It has further been found in several studies that when leaders exhibit task-oriented behaviours, such as providing clear team goals, clear specifications of team member roles and unambiguous performance strategies,

members of the team are less likely to display emotional reactions to situations or environments (Zaccaro, et al. 2001; Isenberg, 1981; Sugiman & Misumi, 1988).

Hallam and Camobell (1992) argue that successful leaders are leaders who communicate a clear mission or purpose, identify available resources and talent, develop the talent, plan and organize, coordinate work activities and acquire necessary resources. This might be even more evident in the Armed Forces, considering the unique situations and environments that they face. In their experimental study Marks, Zaccaro and Mathiue (2000) found that leaders who communicated enriched task information to team members resulted in more similar and accurate mental models. The degree of similarity and accuracy of the team members mental models subsequently influenced the team's performance in a positive way (Marks, et al., 2000). As military teams often operate in dangerous and time sensitive situations (NAF, 2020), having a similar perception of these situations may be even more important for team performance than for regular teams. These findings all exemplify how task-oriented leadership behaviour can contribute to team effectiveness, in several different ways.

Development-Oriented Behaviour

The Norwegian Armed Forces makes use of their own conceptualisation of development-oriented behaviour to measure change- and relational-oriented behaviour. This conceptualisation is not nested within a theoretical framework, and as such there has been limited research into this concept (Martinsen, et al., 2020). As the concept consist of the categories of change- and relational-oriented behaviour we find it reasonable that previous findings on these two categories will also apply to development-oriented behaviour. Based on this assumption, we will present previous findings on the relationship between effectiveness and change- and relational-oriented behaviour separately.

Change-Oriented Leadership Behaviour and Effectiveness

The Armed Forces' (2020) describes change-oriented leadership behaviour as behaviour that primarily contributes to understanding the environment and making necessary adjustments to adapt to it. In addition to uncovering and implementing changes (NAF, 2020). Change-oriented behaviour has been found to be an important form of behaviour that helps to forward organizational goals and improve organizational effectiveness (Miao & Qian, 2016). The

effectiveness of an organization depends perhaps more than ever on its ability to adapt to external changes (Yukl, 2013). Organizations are faced with a growing degree of ongoing change because of factors such as globalization, turbulent environments, and the application of new technologies (Gil, et al., 2005). This is also the case for the Armed Forces, who are undergoing substantial change adjusting to a fluid world situation and the changing nature of war (NAF, 2020; Wong, et al., 2003). Whilst conducting research for the U.S. Army War College Magee (1998) noted that leading change within the military is one of the key strategic tasks that leaders must perform. As leaders have a great deal of influence, they will to a large extent influence the degree to which an organization is able to anticipate, and adapt to, change. For instance, DeRue and colleagues (2011) found a connection between change-oriented behaviour, and performance-related criteria predictors of group performance. Similar results were demonstrated by Gil and colleagues (2005) who found significant correlations between change-oriented leadership and group potency, team climate, team innovation, team effectiveness, and team satisfaction. Change-oriented leadership was also found to be significantly correlated with both team learning and team performance in a study of public hospitals in Spain (Ortega, Van den Bossche, Sánchez-Manzanares, Rico, & Gil, 2014). These findings support the assumption that change-oriented leadership behaviours will be correlated with effectiveness within the Norwegian Armed Forces.

Relational-Oriented Behaviour and Effectiveness

Leadership happens in the interactions between the leader, the group, and its members (Northouse, 2019). The Norwegian Armed Forces describe relational-oriented leadership behaviour as behaviour that primarily contributes to building mutual trust, cooperation, and identification with the group and its tasks. According to social exchange theory people choose their actions, in large part, based on the type of attachment they have to other people, such as their leaders (Walumbwa & Schaubroeck, 2009). As such, the relational-oriented aspect of leadership is a vital part of effective leadership, and has been found to correlate with both lower turnover and higher employee satisfaction (Bass & Bass, 2009; Yukl, 2008). Leadership development research has suggested that leaders will have stronger interpersonal skills as a consequence of their leadership roles enhancing their interpersonal- and communication skills (Rubin, Bommer, & Baldwin, 2002; Hogan, et al., 1994). Hogan and colleagues (1994) argue

that the key to a leader's effectiveness is their ability to build a team. Furthermore, Henkel and colleagues (2019) found that leaders who scored high on relational-oriented leadership scored higher on both leadership effectiveness and on their finishing evaluations. Along with this a positive mood among team members, a common result of relational-oriented leadership behaviour, has been found to lead to more cooperation, creativity and participation among team members, less amount of conflict and stress, and stronger social cohesion (Carnevale & Isen, 1986; Rafaeli & Sutton, 1989; Zaccaro, 2001; Yukl, 2008). On the other hand, collective negative moods can result in a greater amount of internal conflict and team member being less willing to work with each other (Zaccaro, 2001). This shows not only that relational-oriented leadership can contribute to effectiveness, but also how that the absence of this behaviour can lead to a decrease in effectiveness.

Role-Model Leadership Behaviour and Effectiveness

In the Norwegian Armed Forces basic view of leadership, a good role-model is defined as “someone who takes the lead and shows the way through good attitudes, ethical judgement and long-term risk assessment” (NAF, 2020, p.10). It has been argued that role-model behaviour is probably more strongly emphasized in the military than in other settings and has been found to be a central factor in military leadership (Martinsen, et al., 2020; Sweeney, 2010). In their study conducted in the Norwegian Armed Forces Martinsen and colleagues (2020) found that leader's role-model behaviour was statistically significantly correlated with military performance. The researchers found that role-model characteristics, such as integrity, were positively correlated with performance when measured by both supervisors and peers (Martinsen, et al., 2020). Other researchers have indicated that a leader's degree of credibility and trustworthiness may be the single most important factor in subordinates' judgement of their effectiveness (Campbell, 1991; Harris & Hogan, 1992; Lombardo, Ruderman & McCauley, 1988). In their experimental study Gächter and Renner (2018) found that leaders are in a particularly powerful position to influence their followers, stating that leaders shape the belief of their subordinates and appear to function as role-models for them. The researchers showed that a leader's action affects the employee's expectation of the future behaviours of their co-workers. A positive action from a leader was found to elicit a stronger contribution from employees, as they expected their co-workers to also contribute more (Gächter & Renner, 2018). In their meta-analysis Inceoglu and colleagues

(2018) state that leaders play an important role in framing the collective experience of the group and shaping the social environment of the employees. In this way, leaders exhibiting role-model behaviour may lead to an increase in employee effectiveness, through their influence on the perception of the social environment and by creating a common understanding within the group. This is in line with Bandura's (1977) Social learning theory which claims that people learn from each other through observation and modelling. Research has shown that a higher degree of similarity in mental models (understanding of concepts and/or situations) may lead to an increase in group effectiveness (Mathieu, et.al., 2000). It could be argued that especially within the military setting, a common understanding of the challenges ahead will be a determining factor for group effectiveness.

Effectiveness Measures

Different frameworks for effectiveness have been developed, and one of the more frequently used is the job Demands-Resources Model (JD-R). Taking this into account the JD-R model is applied as the theoretical framework for our correlation hypotheses. The JD-R model proposes that negative outcomes (e.g., burnout) can be the result of both missing resources, and the level of demands the individual experiences. As such the JD-R model may be considered an appropriate framework for measuring effectiveness in a military context. We define BLB as a resource, expecting it to counteract the different demands that the subordinates face in the Armed Forces. Viewing leadership as a resource in the JD-R model is in line with previous research. For instance, Schaufeli (2015) found an indirect connection between leadership and employee wellbeing, when regarding leadership as a resource within the JD-R model framework. As we cannot measure the effectiveness within the military (e.g., economic results), we will be focusing on effectiveness measures in relation to team and group effectiveness. This is in line with the recommendations of previous researchers, who have argued that subordinates are often in a unique position to evaluate leadership effectiveness (e.g., Hogan, et. al., 1994).

Effectiveness, Satisfaction and Extra Effort

We make use of the effectiveness measure in the Multifactor Leadership Questionnaire (MLQ), consisting of measures of effectiveness, satisfaction, and extra effort. The first sub-category is important because it captures the subordinates' subjective experience of their leader's contribution to effectiveness. As previously stated, subordinates are in a unique position to

evaluate the effectiveness of their leader (Hogan, et. al., 1994), and subordinate perception of the leader's contribution towards effectiveness may influence factors such as subordinate motivation, satisfaction and well-being (Nielsen, et al., 2017). One of the strengths of the MLQ is that it not only measures effectiveness, but also employee satisfaction and extra effort. Historically, research on leadership behaviour has focused predominantly on performance treating employee well-being, typically measured as job satisfaction, as a secondary outcome related to performance, rather than as an important outcome in and of itself (Inceoglu, et al., 2018). Bearing this in mind, we include several different aspects of employee performance. The relationship between satisfaction and employee performance has been found in previous studies. In their meta-analysis investigating previous misinterpretations of research findings Judge, Thoresen, Bono and Patton (2001) estimated the true correlation between overall job-satisfaction and job-performance to be .30.

According to the happy-productive worker hypothesis, employees that experience a high degree of satisfaction will exhibit a higher degree of performance and effectiveness than employees who experience a low degree of satisfaction (Wright & Cropanzano, 2000). This supports the use of subordinate satisfaction as a measure of effectiveness. Lastly, we make use of the measure of extra effort: to what extent the subordinate experiences that the leader's behaviour leads to others exerting more effort and strengthens their will to try and to succeed. This measure is important because it establishes whether the subordinates experience of the leader's contribution to effectiveness and satisfaction, leads to the subordinates contributing more than what is expected of them. Having members of the Armed Forces motivated to exert extra effort is vital for military success (Norwegian Armed Forces, 2020).

Work Engagement

Work engagement has in recent times been in focus when it comes to the study of performance, with the thought being that it is more effective to strengthen positives in the organization than just eliminating weaknesses (Kim, Kolb, & Kim, 2013). This reasoning is also in line with the two-factor theory of Herzberg, Mausner and Snydermann (1959). Employee with a high degree of work engagement has been shown to receive better ratings on in-role and extra-role performance, which can be a sign that engaged employees perform better and are more willing to go the extra mile for their co-workers (Bakker, Demerouti, & Verbeke, 2004). Work

engagement has previously been used in conjunction with burnout as a measurement on military performance in a study conducted for the Norwegian Armed Forces (Johansen, Martinussen, & Kvilvang, 2015). Work engagement has also been found to both correlate and predict positive aspects in the work-environment, such as lower turnover intentions (Ivey, Blanc, & Mantler, 2015)

Burnout

When measuring effectiveness, it would be sensible to not only look at the degree to which BLB is correlated with positive outcomes, but also to what degree it is correlated with negative outcomes. Leadership behaviours may have differential relationships with positive and negative outcome measures (Inceoglu, et al., 2018). The research on leadership has, to a large extent, neglected aspects of employee health and well-being in favour of performance (Grant, et al., 2007). To the degree that it has been included in the leadership research, employee well-being has, to a large extent, been treated as a secondary outcome or as a mediator to help understand the relationship between leadership and performance (Inceoglu, et al., 2018). Despite this, extensive research has indicated that the well-being of employees can have a significant impact on the performance and survival of organisations (Grant, et al., 2007). Previous research has suggested that leadership behaviour not only influences employee performance (Judge & Piccolo, 2004) but also employee well-being (Skakon, Nielsen, Borg & Guzman, 2010). Considering the taxing demands subordinates in the Armed Forces face, and the demanding environments in which they operate, burnout might be an especially salient outcome measure.

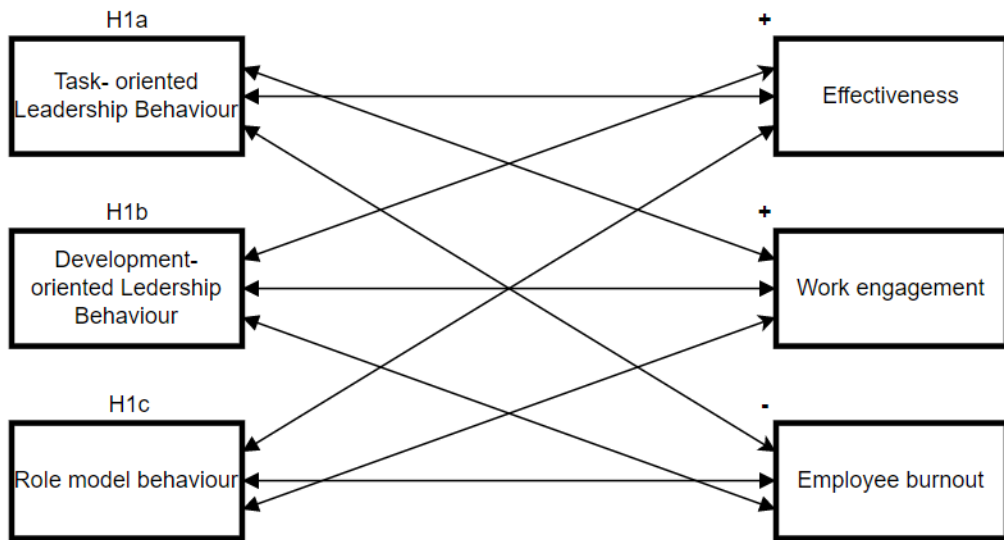
Burnout is considered an important effectiveness measure because of the implication's burnout may have on the general preparedness of the Armed Forces, as preparedness is at the core of what the military is working towards (NAF, 2020). It has further been found to be correlated with a variety of important outcome measures (Halbesleben & Buckley, 2004). Burnout is measured as both disengagement and exhaustion (Demerouti, & Bakker, 2008). Disengagement in this context refers to when individuals begin distancing themselves from their work objective, work content and work in general, whereas exhaustion refers to the consequence of intense physical, affective and cognitive strain. Burnout is measured in terms of both physical and cognitive working conditions (Demerouti & Bakker, 2008).

In totality, by including the positive outcome measures of effectiveness, satisfaction, extra effort and work-engagement, as well as the negative outcome of burnout, we consider this combination to provide a comprehensive reflection of the effectiveness concept. Based on the arguments and theoretical frameworks presented, we put forth the following hypotheses:

H1a: Task-oriented leadership behaviour will correlate positively with effectiveness and work engagement, but negatively with burnout.

H1b: Development-oriented leadership behaviour will correlate positively with effectiveness and work engagement, but negatively with burnout.

H1c: Role-model leadership behaviour will correlate positively with effectiveness and work engagement, but negatively with burnout.



Model 1: Model for correlation relationships

Although leadership in general has been studied to a great extent, less attention has been devoted to understanding the process of leader selection. Carnes and colleagues (2015) have noted that despite the importance of choosing the right individuals for leadership positions, surprisingly little research has concentrated on understanding the formal leader selection processes in organisations. The next section of our paper discusses the current selection practice

of the Norwegian Armed Forces, and to what degree personality should be considered as an appropriate predictor for future leadership behaviour.

Selection, Personality and Balanced Leadership Behaviour

Selection in the Norwegian Armed Forces

Leadership selection has the potential to not only affect the leader's performance, but also the performance of all associated followers (Carnes, et al., 2015). Identifying determinants of future work performance has been a primary emphasis in personnel selection research, and tests of general mental ability and personality traits are examples of valid and established predictors (Skoglund, Fosse, Lange-Ree, Martinsen & Martinussen, 2021). Several meta-analyses have examined to what extent candidate ratings obtained from interviews and assessment centres are associated with cognitive abilities and personality traits (e.g., Berry, Sackett & Landers, 2007; Hoffman, Kennedy, LoPilato, Monahan & Lance, 2015), but there are fewer military studies on this matter, and these have often been limited to the trait of Extraversion (Skoglund, et al., 2021).

A key challenge for the Armed Forces has always been to identify personal determinants of performance and success (Sellman, et al., 2017). In recent years the Norwegian Armed Forces have made major changes to its enlistment and selection systems, such as a two-step process with an initial screening and a subsequent day where physical and cognitive abilities are tested (Køber, Lang-Ree, Stubberud & Martinussen, 2017). Regarding today's practice the Armed Forces makes use of a variety of selection criteria. The current selection has relied heavily on the use of cognitive ability tests, but also on physical and medical requirements (Køber, et al., 2017). Because of the new military demands facing the Armed Forces and the changes to the Norwegian enlistment and selection system, it is important to assess the predictive validity of the various selection criteria that are currently being used (Køber, et al., 2017, Martinsen, et al., 2020). In their study of the selection criteria for the Armed Forces Køber and colleagues (2017) found small, yet statistically significant, correlations between all their predictors and Military Performance for male candidates. For instance, they found that general mental ability (GMA) explained 2% of the variance in Military Performance. Acknowledging the small amount of variance factors like GMA explained, the researchers pointed out that one possibility for improving the model would be to include other relevant predictors, like personality traits (Køber, et al., 2017). The call for personality as a predictor is in line with other researchers' findings, as

several studies has found personality traits to be predictors of both academic and work performance (Martinsen, 2005; Kennair & Hagen, 2015). This is further supported by DeRue and colleagues (2011), who state in their meta-analysis that their data “suggest that organizations might benefit by focusing on certain key aspects of personality, ...when selecting individuals for leadership roles” (p.41).

The Role of GMA

In addition to making use of personality traits as an independent variable, it would be of interest to control for GMA. The psychological construct of GMA was introduced over 100 years ago and has in recent decades been the subject of many papers and much debate (Schmidt & Hunter, 2004; Schermer & Saklofske, 2020). Previous studies have found a connection between GMA and personality however, the fact that GMA and personality traits are measured on very different basis, as GMA is measured on a correct/incorrect basis and personality on a continual scale, it is the consistency of findings, not the magnitude of the correlations that is typically of interest (Schermer & Saklofske, 2020). In 1997 Ackerman and Heggstad conducted a meta-analysis on the correlation between intelligence and the Five Factor Model of personality. They found significant correlations to all the sub-facets except Conscientiousness and Agreeableness (Ackerman & Heggstad, 1997). Later papers have built upon their study, and further strengthened the assumption that there is a relationship between personality and intelligence. Since the 1950s, the Norwegian Armed Forces has made use of a GMA test for selection purposes (Køber, et al., 2017). As the Armed Forces already make use of GMA as one of their main predictors in today's selection process, it will be important to see whether the variables in this study can predict something beyond the predictive value of GMA.

Another reason for controlling for GMA is that researchers have for some time assumed that cognitive ability can predict leadership success (Hogan, et. al., 1994). Schmidt & Hunter (2004) found in their second-order meta-analysis that GMA was the best predictor of job performance across all jobs assessed. They further found that when controlling for GMA the predictive value of Conscientiousness dropped for .44 to .27 (Schmidt & Hunter, 2004). This indicates that Conscientiousness contributes to validity beyond the contribution of GMA alone (Schmidt & Hunter, 1998). Therefore, it would be interesting to investigate to what degree personality traits are able to add any predictive value, beyond GMA, when predicting BLB.

While several cognitive abilities and skills have been found to individually predict performance in both academic and professional settings, it is less clear how personality translates into performance (Fosse, Buch, Säfvenbom & Martinussen, 2015).

Personality, Selection and Leadership

Personality can be defined as “aspects of an individual’s thoughts and behaviour that are stable over time and relatively consistent across different situations” (Walumbwa & Schaubroeck, 2009, p.1277). Since the start of the 1980’s there has been widespread agreement within the scientific community for the use of the Five Factor Model of personality (Goldberg, 1981; 1990; 1999; Judge, Bono, Ilies & Gerhardt, 2002). The model describes personality as consisting of five general traits: Openness to experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (McCrae, 2009). Traits are defined as consistent sets of behaviour that are relatively enduring and cross-situational (De Vries, 2012). Personality testing has long been used for recruitment and selection purposes, especially in the military (Saksvik-Lehouillier & Hetland, 2015), and several studies have identified personality traits as predictors of both academic and work performance (Barrick, Mount & Judge, 2001). The use of personality test for employee selection is increasing, and has become commonplace (Rothstein & Goffin, 2006; Carnes, Houghton & Ellison, 2015).

In their paper on military leadership, Wong and colleagues (2003) argue that one reason for the great deal of research focusing on leaders' personality is because many leadership researchers have a background in psychology or other individual-oriented disciplines, and as such they will tend to focus on individual factors. Another key reason might be the fact that that personality has a high degree of stability over several years, particularly in adults (Caspi & Robertson, 1999; Costa, McCrae & Kay, 1995). A key element of a variable's usefulness is its degree of stability and validity (Saksvik-Lehouillier & Hetland, 2015; McCrae, et al., 1999). Several studies have found personality test to have significant predictive validity in relation to job performance (Caldwell & Burger, 1998; Barrick & Mount, 1991), and that accurate appraisal of job-relevant personality characteristics contributes to validity (Cook, Vance & Spector, 2000). Tett and Christiansen (2007) have claimed that personality test will have equally good validity as cognitive test. There is further widespread agreement among trait researches that personality describes dispositions or inclinations towards different behaviours (Martinsen, 2005), including

individual leadership behaviour (Mihelic, Lipnik & Tekavcic, 2010). Indicating that personality will be a determining factor in what behaviours leaders exhibit and, as an extension, to what degree they contribute to organizational effectiveness. In the next section of our paper, we discuss previous research on personality in relation to BLB, and which personality traits we expect to predict the different aspects of BLB.

Balanced Leadership Behaviour and the Predictive Value of Personality Traits

As previously stated, despite defining BLB as consisting of four separate categories, the Norwegian Armed Forces measure it as consisting of three categories (Martinsen, et al., 2020). Therefore, we will investigate to what degree personality traits are able to predict these three categories. We expect that as each sub-category is qualitatively different (Yukl, 2008), different personality traits will predict different sub-categories. Extensive research has shown that different personality traits will predict different sets of behaviour (Darr, 2011; Martinsen, 2005). As such, the following part is divided in to three sections, one for each sub-category of BLB. The theoretical and empirical basis for each hypothesis is also presented. Due to a lack of military studies (Skoglund, et al., 2021), findings from primarily civilian studies formed the basis for the hypotheses.

Task-Oriented Leadership Behaviour

The Armed Forces´ describe task-oriented leadership behaviour as behaviour that primarily contributes to increasing effectiveness, creating reliable work processes and structure. These behaviours include planning, personnel allocation and distribution of resources. Other examples of such leadership behaviour are clarification of areas of responsibility and goals, follow-up of work and quality of execution, as well as implementing measures and solving problems that arise along the way (Norwegian Armed Forces, 2020).

Conscientiousness

Individuals with a high degree of Conscientiousness tend to be organized, achievement-oriented, responsible, and willing to work hard to attain their goals (Barrick & Mount, 1991). They tend to think before they act, are goal oriented, and intrinsically motivated (Wiersma & Kappe, 2017). Conscientiousness is related to being perceived as trustworthy and organized by others (Hogan, et. al., 1994). As the description of Conscientiousness has parallels to the

Norwegian Armed Forces description of task-oriented leadership behaviour (NAF, 2020), we find it plausible that it will be the personality-trait that is highest correlated with this type of leadership behaviour. There is further empirical basis for this assumption, which is presented in the section below.

Empirical Basis for Task-Oriented Leadership Behaviour

In a paper from 2012, De Vries found a statistically significant correlation between Conscientiousness and task-oriented leadership behaviour, both in self evaluated personality and in evaluation from subordinates, a result that gives credence to the belief that this also will be found in our study. To support this claim, this correlation has also been found in other studies in other contexts. In their longitudinal study Emery, Calvard and Pierce (2013) looked at how personality traits related to leadership emergence, i.e., how different personality traits affected who would be nominated as the leader of a group. Emery and colleagues (2013) found that group members higher on Conscientiousness were statistically more likely to receive more task-oriented leadership nominations over time. They further state that their findings clearly link Conscientiousness to the emergence of task-oriented leadership (Emery, et al., 2013). In their meta-analysis Barrick and colleagues (2001) found Conscientiousness to correlate most strongly with job performance. A finding that has been hypothesised to be a result of these individuals' capacity to work hard and exert extra effort to succeed (Darr, 2011).

Based on the aforementioned studies, we present the following hypothesis:

H2a: Conscientiousness will predict subsequent evaluation of task-oriented leadership behaviour

Development-Oriented Leadership Behaviour

As previously stated, development-oriented leadership behaviour consists of the two categories of relational- and change-oriented behaviours. The Norwegian Armed Forces conceptualization of development-oriented behaviour differs to that of other researchers, and as such it is not a well-established concept within the field of research to the same degree as the two original categories. We therefore regard it as advantageous to present the previous theoretical and empirical findings for the two original categories. Since the category of development-

oriented behaviour is a combination of these two categories, we find it reasonable that findings on the two original categories will be applicable for the new category.

Change-Oriented Leadership Behaviour

In today's organizations change is ever more present, and teams today are increasingly required to perform in complex and dynamic environments (Kotter, Akhtar & Gupta, 2021). This is also the case for the Norwegian Armed Forces (NAF, 2020). Change situations can be experienced as unpredictable and confusing, necessitating the need for constructive leadership. Researcher have previously hypothesised that the category of change-oriented leadership has developed as a consequence of the accelerated rate of change in organizations (Ekvall & Arvonen, 1991). For organizations to be able to prosper in today's turbulent and uncertain environments, they are dependent on leaders that are flexible and adaptive (Yukl, 2013). Leadership focusing on change processes is characterized as change-oriented leadership behaviour and includes monitoring the current environment and identifying possible threats and opportunities, interpreting situations and events and explaining the need for change, articulating a vision for the change, building support for the change efforts, and implementing the change or new initiative (Yukl, 2008; 2013; Gil, et al., 2005). In terms of the military context, this behaviour contributes to strategic planning as well as developing and adjusting to cope with new or unexpected situations. The behaviour encourages creative thinking and new ideas and facilitates collective learning (NAF, 2020). Leadership is necessitated by team problems with multiple viable solutions. In such situations leaders have the responsibility to interpret and define events, as well as providing direction and a common understanding for the team (Zaccaro, et al. 2001).

Openness to Experience

The personality trait Openness to Experience measures the degree of intellect, openness to ideas and experiences, and the ability for aesthetic pleasure (Costa, & McCrae, 1992). Individuals with high scores on this trait tend to be more creative, reflective, intellectually curious and have a scientific interest (Darr, 2011). As the Armed Forces' description of change-oriented leadership behaviour is characterised by understanding the environment and adapting to it, as well as uncovering and implementing changes, we find it plausible that it will have the highest correlation with this trait. People who score high in Openness will tend to be more

creative, be able to come up with new solutions and see other possibilities. There is further empirical basis for this assumption, which is presented below.

Empirical Basis for Change-Oriented Leadership Behaviour

Bergman, Lornudd, Sjöberg and Von Thiele Schwarz (2014) found a significant association between Openness and change-oriented leadership behaviour. They conducted a 360 degrees study and found a significant association in all cases studied. As this paper was based on the health sector, which as a sector shares some similarities with the military one, there is reason to believe that this phenomenon will also exist in a military context. In additions to this Keller (1999) state that the change process, often associated with transformational leadership, may be more fully embraced by individuals high in Openness. As a whole, little research on the specific relationship between change-oriented leadership behaviour and personality has taken place (Yukl, 2012). There are however some studies that link personality as a whole as important to such behaviour (Rubin, et al., 2005: Yukl, 2008).

Relational-Oriented Leadership Behaviour

An important aspect of leadership is the interpersonal dimension (Northouse, 2019). Leaders are not only expected to help reach the organizations goals, but also empower, develop, and look after their subordinates. Within the military context, characterized at times by harsh environments and excruciating demands, this may be especially important. The interpersonal aspect of leadership behaviour has often been defined as relational-oriented leadership behaviour (Yukl, 2012.). Yukl (2013) characterizes this behaviour as showing support and positive regard, recognizing the achievements and contributions of others, delegating tasks to and empowering subordinates and providing them with mentoring and coaching, as well as consulting with the subordinates about decisions that will affect them. This characterization is consistent with the view of the Norwegian Armed Forces who states that it should develop human resources, improve the relations in the department and facilitates conditions for collaboration and participation (NAF, 2020). Within the Norwegian Armed Forces this is done by strengthening the knowledge and skills of the subordinates, creating belonging and unity, as well as providing recognition and social support (NAF, 2020). In other words, it is centred around how a leader approaches, and strengthens, social interactions within the group.

All leaders within the Norwegian Armed Forces are expected to exhibit this behaviour. From a recruitment and selection perspective the question becomes what factors may be able to predict this behaviour. In the following section two personality traits that have been found to correlate with relational-oriented leadership behaviour are presented.

Extraversion and Agreeableness

The two personality traits Agreeableness and Extraversion both have a focus on the interpersonal aspect of relationships. Agreeableness is most often associated with being warm, kind, gentle, trusting, and reliable, while Extraversion is more connected to gregariousness, being assertive, enthusiastic, and seeking excitement (Shi, et.al, 2018). Extroverts tend to exhibit warmth, assertiveness and social vitality (Wiersma & Kappe, 2017), whilst agreeable individuals tend to be viewed as tolerant, compassionate, friendly and helpful (Darr, 2011). DeRue and colleagues (2011) state that “to the degree leadership effectiveness criteria focus on affective and relational elements, we expect that the interpersonal attributes of leaders, namely Extraversion and Agreeableness, will be important” (p.14-15). For example, highly extroverted or agreeable leaders are more likely to interact with their subordinates, build higher-quality relationships with them and invoke strong emotional ties (DeRue, et al., 2011). This might be a consequence of Agreeableness being related to communication, trust and morale (Hogan, et. al., 1994). Costa and McCrae (1992) have demonstrated that extroverts are especially confident and adept with social interactions, which might lead to them initiating more interactions with their subordinates. These behaviours are in line with what the Armed Forces have determined they are looking for in their leaders.

Empirical Basis for Relational-Oriented Leadership Behaviour

In their longitudinal study Emery and colleagues (2013) found that group members who scored high on Extraversion were more likely to receive relationship-oriented leadership nominations over time, than group members who scored lower on Extraversion. They further found that group members higher on Agreeableness received more relationship-oriented leadership nominations over time, than group members scoring lower on Agreeableness. Lastly, they state in their findings that Agreeableness clearly is connected to the emergence of relationship-oriented leadership, pointing to the predictive value of personality regarding leadership behaviour.

Supporting this assumption De Vries (2012), found a connection between Agreeableness and relational-oriented leadership. Although no significant correlation was found between Extraversion and relational-oriented leadership in this study, there is still reason to test this with a larger sample size and different data sample, especially considering that this relationship has been found in other studies. For instance, Judge and colleagues (2002) found in their meta-analysis that Extraversion was the most consistent predictor of leadership across all settings. This included both leadership effectiveness and leader emergence (Judge, et al., 2002). Whereas in their meta-analysis Barrick, et. al., (2001) found Agreeableness to have the strongest association with teamwork.

Based on the aforementioned theories and previous findings, we present the following hypothesis:

H2b: Openness, Agreeableness and Extraversion will predict subsequent evaluation of Development-oriented leadership behaviour

Role-Model Behaviour

Leaders are to a great extent viewed as role-models by their subordinates. Through their actions and behaviours, they serve as an example of how one should conduct oneself (Gächter & Renner, 2018). They create and shape the norms of the group, praising wanted behaviour and sanctioning unwanted behaviour. Setting a good example has historically been viewed as an important aspect of leadership (Wong, et al., 2003), but the Norwegian Armed Forces view it as especially important for their leaders (NAF, 2020). They expect role-models to put the values and interest of the organization before their own, whilst still being true to them self and their values (NAF, 2020).

A great deal of research has examined the relationship between personality traits and leadership behaviour (Lord, de Vader, & Alliger, 1986). But no current study has, to our knowledge, investigated the relationship between personality and the Norwegian Armed Forces conceptualisation of leader's role-model behaviour. Most of the role-model research within the leadership context has investigated questions such as to what degree leaders' childhood role-models effect future leadership behaviours (e.g., Brown & Treviño, 2014), the impact of implicit leadership theories on role-model effectiveness (e.g., Hoyt, Burnette & Innella, 2012), the impact

of same-gender role-models for women (e.g., Lockwood, 2006; Latu, Mast, Lammers & Bombari, 2013), and the gendered nature of role-model status (e.g., Murrell & Zagenczyk, 2006). The predictive value of personality traits has, to the best of our knowledge, not yet been studied in relation to leader's role-model behaviour.

There has however been done extensive research on the relationship between personality traits and other aspects of leadership that may bear a similarity to the Norwegian Armed Forces conceptualization of role-model behaviour. Both transformational- and ethical leadership encompass many of the same elements as the Norwegian Armed Forces definition of role-model behaviour. In a preliminary correlation analysis, we found weak, but significant correlations between the Armed Forces conceptualisation of role-model behaviour and all four elements of transformational leadership – Idealized Influence, Inspirational Motivation, Individualised Consideration, and Intellectual Stimulation (see Appendix A).

As previously mentioned, the Armed Forces emphasise ethical judgement and long-term risk assessment in their definition of good role-models. In their paper on ethical leadership Mihelic and colleagues (2010) characterized ethical leaders as “thinking about long-term consequences, drawbacks and benefits of the decisions they make in the organization” (p.31). They further state that leaders are role-models for their followers, and that they show the behavioural boundaries within the organization (Mihelic, et al., 2010). From a social learning perspective (Bandura & Walters, 1977), when leaders exhibit ethical behaviour, they become a target for emulation and function as role-models (Brown, Trevino & Harrison, 2005).

Based on the findings of our correlation analysis for role-model behaviour and transformational leadership, and the potential parallels between the Norwegian Armed Forces definition of role-model behaviour and ethical leadership, we argue that the same personality traits that predict transformational- and ethical leadership may also predict role-model behaviour.

Empirical Basis for Transformational Leadership

A previous study found that transformational leadership seemingly is correlated with Agreeableness, Extraversion, and Conscientiousness (Cavazotte, Moreno, & Hickmann, 2012) In the same study the author calls for more studies with bigger samples and no self-evaluation. In a study by Judge and Bono (2000), a relationship between the trait's Openness to experience,

Agreeableness, extraversion, and transformational leadership was found. And even though it disappeared once the other traits was controlled for; the authors say that other measurements may be able to find a connection between transformational leadership and personality traits.

Empirical Basis for Ethical Leadership

Several studies have investigated the outcomes of ethical leadership, but fewer have been published on its antecedents, such as personality traits (Chandrasekara, 2018; Kalshoven, Den Hartog, & De Hoogh, 2011). However, Walumbwa and Schaubroeck (2009) have argued that personality antecedents may be uniquely suited to predicting ethical leadership, as ethical behaviour reflects variation in individuals' deep-seated values and beliefs. They argued that ethical leadership should therefore be a behavioural pattern that is cross-situational and consistent over time (Walumbwa & Schaubroeck, 2009). In one of the studies that have investigated this relationship Chandrasekara (2018) found that Agreeableness, Conscientiousness, Openness to Experience, and Extraversion all had a positive effect on ethical leadership, whereas Neuroticism had a negative effect. Walumbwa & Schaubroeck (2009) found that Agreeableness and Conscientiousness were statistically correlated with ethical leadership. In their study the authors did not include Openness to experience or Extraversion but did include Neuroticism – not finding a significant correlation. De Vries (2012), making use of the HEXACO dimension of personality, found that all dimensions, apart from Openness to Experience, were positively related to ethical leadership. Whereas Kalshoven and colleagues (2011) found that Conscientiousness and Agreeableness most consistently related to ethical leadership.

As demonstrated the previous findings have not been conclusive. Taking this into consideration, and acknowledging the lack of previous research on the Norwegian Armed Forces conceptualisation of role-model behaviour, we propose the following research question:

R1: What personality traits will be able to significantly predict role-model behaviour?

Method

In this section of the paper, the choices made concerning the method used to analyse the data are presented. First the data, its facets, and the procedures used in collecting the data are described. Secondly, the instruments used to measure BLB, personality, effectiveness, work

engagement, burnout and GMA are presented. Lastly, the statistical analysis used for the hypotheses are described, along with how the different measurements relate to the hypotheses.

The data in this paper was collected from the Norwegian Armed Forces, on the two admissions taken in during the summer of 2016 and 2017. In the Norwegian Armed Forces selection for officer school, as well as the other education programs, are handled by FOS (Felles Opptak og Seleksjon). To be admitted, the candidates must be 18 years or older as a general rule, be a Norwegian citizen, and must have completed high school. The applicants have already, during the conscript evaluation process, been tried on a variety of tests, from general physical health and strength to general mental ability (GMA). The different measuring instruments are then tested at different points during the applicants training, with the last one being after they are conducted, and have worked for a period of time. The interval between the measurements is either one year after finished training, or six months in the case of the Air Force. As a part the data collection each of the candidates answered a questionnaire during the first part of their selection process. The collection of the data was done in two separate instances. Personality and GMA was measured during the first parts of the selection process, while leader behaviour and outcomes was measured at the end of the first year of working. Anonymous data was provided to us by the project leader and has previously been approved for use by “The Norwegian Centre for Data Research” (NSD), in line with common research practise. All subjects in the study where informed and gave a written letter of approval before the gathering and use of the data. In addition, respondents were assured that the data was to be used solely for research purposes.

The total number of participants was 2264, with 23.8% female and 76.2% male candidates. The age mean was 20.43 years ($SD= 2.25$) ranging from 18 years as the youngest and 35 as the oldest. As some participants did not answer all the questions, the number of valid participants in the analyses for H2 and R1 had a final $N=1841$ resulting in a response rate of 81.32%

Measurements

For each of the following instruments, a reliability analysis was conducted, and is presented. Reliability can be defined as the degree of consistency within a measurement (Cozby, Bates, Krageloh, Lancherez & Van Rooy, 2012). The most common method of measuring internal consistency is Cronbach's alpha (α) (Pallant, 2010). Cronbach's alpha gives an average correlation coefficient for each of the different “points” in the measuring scale. Values over .7

point to an acceptable degree of internal consistency, and values above .8 imply a preferred degree of internal consistency. A Cronbach's alpha test was thus conducted on all the measuring tools.

Balanced Leadership Behaviour is measured on a 7-point Likert-scale (1= strongly disagree to 7= strongly agree), with 12 statements (Martinsen, et al, 2020). The 12 statements are split into three sets of four questions, each taking on one of the categories of balanced leadership behaviour: Role-model, Task-Oriented-, and Development-Oriented leadership. Some of the items were negatively formulated and were reversed before the scale scores were computed. Sample items include the following: “the leader shows respect for other persons” (Role-model), “the leader focuses on that the results are in line with the goals” (Task-oriented), “the leader encourages creativity” (Development-oriented). The Cronbachs alpha for the instrument was as follow: Role-model $\alpha = .71$, task-oriented $\alpha = .93$, and Development-oriented leadership $\alpha = .84$. For the whole instrument the $\alpha = .89$.

The Cronbach's Alpha of role-model leadership behaviour is right at the edge of what is considered acceptable at $\alpha = .71$. It is however important to note that researchers have argued that with only four questions the alpha can be considered stronger at this level than if the measurement was longer (Cortina, 1993)

Personality was measured using the Norwegian version of NEO-PI-3 (NEO), which consists of a 240-points questionnaire used to measure out the five personality traits in the Five Factor Model (Costa & McCrae, 1992; Martinsen, Nordvik, & Østbø, 2011). NEO-PI is among the most known, and established, personality inventories used today (Kennair & Hagen, 2015) This paper is based on the five main parts of the NEO-PI-3 model: Neuroticism (e.g., “Sometimes I feel completely worthless”, $\alpha = .84$, Extraversion (e.g., “I really enjoy talking to people”, $\alpha = .77$, Openness to experience (e.g., “I often enjoy playing with theories and abstract ideas”, $\alpha = .86$, Agreeableness (e.g., “I generally try to be thoughtful and considerate”, $\alpha = .72$ and Conscientiousness (e.g., “When I make a commitment, I can always be counted on to follow through”, $\alpha = .82$. The Cronbach's Alpha for the whole model was measured to be $\alpha = .89$

The Multifactor Leadership Questionnaire (MLQ) consists of 45 questions, but in this study only the nine that measure leadership effectiveness are used (Avolio, Bass, & Jung, 1999) for H1. These are split into three sub-categories: Extra Effort (3 questions), Effectiveness (4

questions), and Satisfaction (2 questions). The MLQ has in previous studies been found to be a valid predictor of leadership effectiveness (Lowe, et al., 1996). Cronbach's Alpha was measured at $\alpha = .86$.

The Utrecht Work Engagement Scale (UWES) consists of 17 questions, measuring work engagement on a 7-point Likert-scale (from 0 = “never” to 6 = “every day”). It is split into three parts: six questions measuring levels of energy, willingness to invest effort, not being easily fatigued, and persistence in the face of difficulties (e.g., “At work, I feel that I’m bursting with energy”, and “I always persevere at work, even when things do not go well”). Dedication is measured with questions such as: “I find the work that I do full of meaning and purpose”. Lastly absorption is measured with questions such as: “Time flies when I'm working” (Schaufeli et.al., 2002). The validity of the scale has been tested across different Norwegian sectors and been found to be valid in these settings (Nerstad, Richardsen & Martinussen, 2010). The Cronbach's alpha was measured as UWES $\alpha = .94$.

The Oldenberg Burnout Inventory (OLBI) is a self-report five-point rating scale (1= “strongly disagree; to 5 = “strongly agree”) and is split in two dimensions consisting of 8 questions each: Within the two dimensions, disengagement (“I always find new and interesting aspects in my work”) and exhaustion (“There are days when I feel tired before I arrive at work”) (Demerouti, & Bakker, 2008). The Cronbach's Alpha of OLBI was measured at $\alpha = .84$

For mental capacity, the Norwegian Armed Forces make use of its own instrument General Mental Ability “alminnerlig evnenivå” during the conscription process (Sundet, Barlaug, & Torjussen, 2004). This is a three-part test that challenges the applicants on word similarities, arithmetic and a Raven-like progressive matrices test. These are then averaged out and measured on a scale from 1-9 with 9 being the highest score. In a paper from 1988, this test was found to have a high correlation with WAIS (Sundet, Tambs, Magnus, & Berg, 1988), which is the most widely used test for IQ today. The participants of this study are skewed however, as a score of 5 or more is needed to apply to education programs in the military. Reliability was not measured for the construct as a whole, but the test-retest reliability for each of the three parts has previously been measured as .84, .72, and .90 respectively (Sundet et.al., 1988)

Statistical Analysis

IBM SPSS Statistics (version 26) was used for all analyses. Before the execution of our main analyses, a screening of the data was conducted, with a focus on finding any wrong inputs within the dataset. A test for the degree of missing data within the dataset was further conducted. This was done as too high a degree of missing inputs could affect the result of our analysis. No such wrong inputs, or too high a degree of missing data was found, and all further analysis were conducted with the assumption that no such errors were to be found in the data.

For hypotheses H1a-c a correlation analysis was conducted, where each of the sub-facets of BLB was measured up against the chosen effectiveness variables. A hierarchical regression analysis was then conducted for each of the hypotheses H2a and b, and R1 respectively. In the first step GMA was added as a control variable. The five facets of The Five Factor Model were then added, each as a separate step in the regression. Preliminary analyses were conducted to ensure no violation of the principles of normality, linearity, multicollinearity, and homoscedasticity.

Results

Firstly, the descriptive statistics and correlation analyses are presented, after which the results of each of the hypotheses are presented. The descriptive statistics give an overview of the data, while the correlation analyses indicate the strength and direction of the relationships between each. Table 1 presents the main model for hypotheses H1a through H1c. Table 2 presents the correlations between BLB and the different personality facets. At the end, the regression analyses are shown, as they show the relationship between the variables.

Correlation Hypotheses

Table 1

Descriptive statistics and Correlations for Study variables (leadership-outcomes)

	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Leadership – Task- oriented	1928	11.32	1.29	—					
2. Leadership – Development-oriented	1933	9.92	1.49	.54**	—				
3. Leadership – Role model	1924	11.24	1.30	.49**	.48**	—			
4. Effectiveness	1820	11.75	1.50	.54**	.42**	.39**	—		
5. Employee engagement	1981	4.55	1.10	.14**	.21**	.14**	.03	—	
6. Employee burnout	1920	2.42	0.49	-.08**	-.16**	-.12**	-.09**	-.13**	—

* $p < .05$. ** $p < .01$. Effectiveness = MLQ, Employee engagement = UWES, Employee burnout = OLBI

Table 2

Descriptive Statistics and Correlations for Study Variables (personality and leadership behaviour)

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. GMA	2162	6.47	1.26	—								
2. Neuroticism	2171	2.28	.38	-.05*	—							
3. Extroversion	2171	3.80	.34	-.04*	-.24**	—						
4. Openness	2160	3.39	.35	.16**	-.09**	.40**	—					
5. Agreeableness	2151	3.63	.32	-.11**	-.31**	.31**	.15**	—				
6. Conscientiousness	2155	3.95	.32	-.09**	-.49**	.29**	.11**	.35**	—			
7. R-O behaviour	1924	11.24	1.30	-.04*	.02	.07**	.05*	.02	-.04*	—		
8. T-O behaviour	1928	11.32	1.29	-.08**	.04	.06**	-.03	-.06**	.01	.49**	—	
9. C-O behaviour	1933	9.92	1.49	-.05*	.01	.12**	.04	-.01	-.01	.48**	.54**	—

* $p < .05$. ** $p < .01$. RO = Role-model, TO = Task-oriented, CO = change-oriented

Hypothesis H1a suggested that Task-oriented leadership behaviour correlates positively with MLQ and UWES, and negatively with OLBI. As seen in Table 1, BLB-task was positively correlated with both MLQ ($r = .54, p < .01$) and UWES ($r = .14, p < .01$), and negatively correlated with OLBI ($r = -.08, p < .01$). Hypothesis H1b suggested that development-oriented leadership behaviour would correlate positively with MLQ and UWES, and negatively with OLBI. This was also supported by our analysis, MLQ ($r = .48, p < .01$), UWES ($r = .21^{**}, p < .01$), and OLBI ($r = -.16, p < .01$). The final hypotheses, H1c, was that Role-model behaviour would correlate positively with MLQ and UWES, and negatively with OLBI, which was also supported: MLQ ($r = .39, p < .01$), UWES ($r = .14, p < .01$), and OLBI ($r = -.12, p < .01$). All H1 hypotheses were therefore supported.

Predictive Hypotheses

Table 3

Hierarchical regression analysis of Task-Oriented leadership behaviour

Variable	Coef.	Std. err	Task	
			β	R ² / Δ R ²
Model 1				.025***
Control variable				
GMA	.024	1.49	-.068**	.006**
Personality				
Openness	.094	1.48	-.211*	.007/.001
Extraversion	.102	1.47	.469***	.014/.007***
Neuroticism	.091	1.47	.161	.017/.003*
Agreeableness	.104	1.47	-.407***	.024/.007***
Consciousness	.112	1.45	.149	.025/.001

* $p < .05$, ** $p < .01$, *** $p < .001$ Note: A second analysis was conducted with all personality traits in the same block, and the Δ R² explanation for personality beyond GMA stayed at .019

Table 4

Hierarchical regression analysis of development-Oriented leadership behaviour

Variable	Coef.	Std. err	Change	
			β	R ² / Δ R ²
Model 1				.026***
Control variable				
GMA	.024	1.49	-.055*	0.003
Personality				
Openness	.094	1.48	.005	.006/.003**
Extraversion	.103	1.47	.161***	.020/.014***
Neuroticism	.090	1.47	.017	.022/.002***
Agreeableness	.105	1.47	-.058*	.025/.003***
Consciousness	.110	1.47	-.032	.026/.001***

* $p < .05$, ** $p < .01$, *** $p < .001$ Note: A second analysis was conducted with all personality traits in the same block, and the Δ R² explanation for personality beyond GMA stayed at .023

Table 5*Hierarchical regression analysis of Role-Model leadership behaviour*

Variable	Coef.	Std. err	Role	
			β	R2/ Δ R2
Model 1				.016***
Control variable				
GMA	.024	1.29	-.053*	.002
Personality				
Openness	.094	1.29	.047	.007/.005**
Extraversion	.103	1.29	.075**	.010/.003***
Neuroticism	.090	1.29	.013	.012/.002***
Agreeableness	.105	1.29	.024	.012/.000**
Consciousness	.110	1.29	-.077**	.016/.004***

* $p < .05$, ** $p < .01$, *** $p < .001$ Note: A second analysis was conducted with all personality traits in the same block, and the Δ R2 explanation for personality beyond GMA stayed at .014

For H2a and H2b hierarchical multiple regression was used to assess the different personality factor's ability to predict the facets of BLB, when controlling for GMA. Including all personality factors was done to assess the effect of each explanatory variable, clarifies the effect of the others (Judge, et al., 2002; Zaccaro, 2012) As seen in Table 3 H2a, whether Consciousness can predict later task-oriented leadership behaviour, was not found be supported as there was no significant unique contribution. What was shown was that Agreeableness ($b = -.40$, $p < .001$) and Extroversion ($b = .46$, $p < .001$) both had a strong predictive value. Delta R2 for the whole model came out as .025, $p < .001$. Hypothesis H2b was found to be partially supported, both Extraversion ($b = .16$, $p < .001$) and Agreeableness ($b = -.05$, $p < .05$) were found to have a significant unique contribution. Delta R2 for the whole model came out as (.026, $p < .001$)

The same hierarchical regression as for the two previous hypotheses was run for R1 in an attempt to ensure consistency between the measurements of our hypotheses and the research question. The analysis found significant predictive values for the following personality factors: Extraversion ($b = .075$, $p < .01$), and Consciousness ($b = -.077$, $p < .01$).

Discussion

The goal of conducting this study was two-fold; (1) to establish whether the leadership model the Norwegian Armed Forces makes use of correlates with effectiveness, and (2) if it would be possible to predict the outcome of leadership training during the selection process, by

making use of personality testing. In this part of the paper the findings of our study are discussed in relation to these goals.

Balanced Leadership Behaviour and Effectiveness

The concept of BLB was introduced in the Norwegian Armed Forces in 2012 (NAF, 2012) and was first measured in 2015 (NAF, 2021b) as such there has been a limited amount of research conducted on the effectiveness of the model. Despite the limited amount of research, BLB represents a vital part of the Norwegian Armed Forces operations. It forms the basis for selection of future leaders, is emphasized in the training of these leadership candidates, and is the criteria upon which these leaders are evaluated after they finish their military education and step into their new position as leaders within the Norwegian Armed Forces (NAF, 2020). It can be said to permeate every aspect of leadership within the Norwegian Armed Forces. As such it is vital that this leadership behaviour is correlated with the effectiveness measures that the Armed Forces view as essential for their functioning. This formed the basis of our first hypotheses.

Hypotheses 1a, b, and c are in essence all concern the same question – does BLB correlate with effectiveness? There were compelling theoretical and empirical arguments for investigating each sub-category of BLB individually. Firstly, each sub-category focuses on qualitatively different aspects of behaviour (Yukl, 2008), and we therefore expected that they might differ in regard to their degree of correlation with the effectiveness measures. Secondly, previous research has indicated that the different sub-categories of BLB are correlated with different effectiveness measures (Martinsen, et al., 2020; DeRue, et al., 2011). As a result of this, investigating the relationships between the individual sub-categories and the effectiveness measures might produce a more nuanced picture of the interactions that are taking place, as opposed to testing the model as a whole.

As demonstrated by our results all sub-categories of BLB were statistically significantly correlated with all the effectiveness measures, in line with our expectations. As the Norwegian Armed Forces conceptualisation of the concept has been adjusted to fit within the Norwegian military context (through the inclusion of role-model behaviour) and considering the unique organizational nature of the Norwegian Armed Forces, these findings still represent an important contribution to the current literature. Especially considering the lack of previous research on the concept within the military- and Norwegian context.

Task-Oriented Leadership Behaviour and Effectiveness

Maybe not surprisingly, of the three sub-categories task-oriented leadership behaviour had the highest correlation with effectiveness. Considering that task-oriented behaviour is characterised by planning, clarification of goals and responsibilities, and monitoring progress (NAF, 2020), it would be expected to have the highest correlation with effectiveness. The same logic applies to its relationship with employee burnout, having the lowest negative correlation to burnout of any of the sub-categories, as it is primarily focused on the tasks at hand and not on employee well-being. This is further demonstrated by the fact that development-oriented leadership behaviour, which encompasses both relational- and change-oriented leadership, has the highest negative correlation with employee burnout. These findings support the assertion by Yukl (2008), that the different leadership behaviours will influence effectiveness in different ways, and to varying degrees. It further reflects the Norwegian Armed Forces emphasis on leaders' ability to choose the behaviour best suited to the task at hand, and the needs of the team (NAF, 2020), as well as our assumption that the different sub-categories would have correlated with the effectiveness measures to different degrees.

It was noteworthy that task-oriented leadership behaviour correlated positively with work engagement and negatively with burnout. This is noteworthy as task-oriented behaviour at first glance don't focus on these aspects of leadership. One possible reason for these findings might be at the leader's task-oriented behaviour reduces negative states in the subordinates. Task-oriented behaviour includes behaviours such as clarification of responsibilities and goals, following up on work progression and helping solve problems that arise along the way. Previous research has found that leaders exhibiting these behaviours often reduce the employee's degree of role-related stressors such as role-conflict and role-ambiguity (Zaccaro, et al., 2001). These stressors have further been found to be correlated with burnout (Papastylianou, Kaila & Polychronopoulos, 2009). As such we hypothesise that the correlation between task-oriented leadership behaviours and employee work engagement and burnout, might be a consequence of a reduction in role-related stressors.

Development-Oriented Leadership Behaviour and Effectiveness

Development-oriented behaviour was correlated with all the effectiveness measures, in line with our expectations, but of the three measures it proved to have the strongest correlation with

work-engagement. As development-oriented behaviour is a combination of Yukl's (2013) conceptualization of change- and relational-oriented behaviour it may be a product of relationship building leading to a stronger group identity, in line with social identity theory (Hogg, 2016). It may also be a product of change-oriented behaviour leading to a stronger feeling of goal-oriented communication with the subordinates. In a previous study change-oriented leadership was found to have the strongest relationship, of Yukl's three categories, with work engagement (Li, Castelli, & Cole, 2021).

Role-Model Leadership Behaviour and Effectiveness

Role-model behaviour was found to have the lowest correlation with effectiveness of the three sub-categories. This might be due to the nature of role-model behaviour, as it is not predominantly focused on executing task, or reaching milestones, but rather on instilling values and norms within the group. It might be argued that instilling effective values and norms within the group would make achieving tasks and goals easier and less time consuming. As such, the positive contribution of role-model behaviour might facilitate task achievement. It could further be argued that the measurement instrument used is not designed to capture this effect – to what degree role-model behaviour facilitates future task-oriented behaviour. Rather, it is designed to measure the degree to which leaders are perceived to act as role-models. From the view of the two-factor theory of Herzberg and colleagues (1959), role-model behaviour might be viewed as a hygiene factor. In that the presence of it contributes to effectiveness to a lesser extent, but it is a prerequisite for effectiveness. When absent, it might lead to a reduction in the correlation between e.g., task-oriented behaviour and effectiveness, as subordinates have not been given a role-model to aspire to and shape their actions and commitments after.

The overall effect sizes found are considered to be more or less in line with a previous finding by Yukl and colleagues (2019). In their paper they also found similar effect sizes when they tested the original model that BLB is based on (Yukl, et al., 2019). As BLB is an adaption of Yukl's original model, this gives credence to the claim that BLB is correlates with effectiveness.

Personality Traits and Balanced Leadership Behaviour

Having found support for our assumption that BLB would correlate with effectiveness in the Norwegian Armed Forces, the next logical question was to what degree it would be possible to predict who would exhibit this behaviour. From a selection point of view, if a leadership behaviour correlates with effectiveness, then it is important to find out how to predict which candidates will exhibit this behaviour. After a leadership candidate is selected within the Norwegian Armed Forces, they spend between ½ to 3 years in training to become officers. During this time, they not only represent a considerable cost, but also take up the place of other potential candidates. As they pose a great cost, both in terms of times and money, it is important to have a selection process that can identify the best possible candidates.

As with our correlation hypotheses, we divided our predictive hypotheses according to the sub-categories of BLB. This was based on the assumption within personality psychology that different aspects of personality will manifest in different behavioural patterns (De Vries, 2012). Here we faced a challenge. The two first categories of BLB are directly based on the framework of Yukl (2008), and as such extensive research has been done regarding these two categories (Yukl, 2013). There have been several studies on their correlation to effectiveness and the predictive value of numerous variables (Yukl, et al., 2019.). However, when defining BLB the Norwegian Armed Forces choose to include the category of role-model behaviour, as they view it as a vital aspect of military leadership (Norwegian Armed Forces, 2020). In doing so the Norwegian Armed Forces did not build on an existing theoretical or empirical framework, and therefore finding a framework or previous studies to base our assumptions on proved futile. As such we decided to include the question of personality traits predictive value for role-model behaviour as a research question. This is a useful practise within the field when there is a limited amount of previous research to base a hypothesis on.

Conscientiousness, Agreeableness and Task-Oriented Leadership Behaviour

H2a stated that Conscientiousness would predict task-oriented leadership behaviour, however, we did not find support for this hypothesis. Considering previous research, both within a general- and military setting, these findings were unexpected. For instance, in their qualitative summary of 15 prior meta-analytical studies Barrick and colleagues (2001) found that Conscientiousness was the only personality trait to predict performance in all occupations studied. Considering the similarities between common Conscientiousness behaviours, and the

behaviours that the Norwegian Armed Forces describe as task-oriented, this seems even more surprising. Darr (2011) has pointed out that features of the military context (e.g., clarity in expectations and requirements, constraints on personnel behaviour and consequences for noncompliance) should be compatible with the attributes of Conscientiousness (e.g., disciplined, responsible, organized). On the surface there appears to be a good person-organization fit in the military for individuals with a high degree of Conscientiousness. Calleja, Hoggan and Temby (2020) found in an investigation of junior officers completing a five-week course in the Australian Army that Conscientiousness was correlated with “planning performance”, which is a task-oriented activity.

One possible reason for our findings might be the culture in which the data was collected. As the military is characterised by a hierarchical structure (Zaccaro, et. al., 2001) and a long tradition of orders and commands, subordinates might have a higher threshold for viewing their superior as task-oriented than employees of civilian organisations. In line with implicit leadership theories (Offermann, Kennedy & Wirtz, 1994) employees evaluate their leaders in accordance with their implicit expectations of how a leader should behave, within the given context. Leadership behaviour that might be viewed as highly task-oriented in other organisations, might therefore be considered more commonplace and average within the military context. The pre-existing expectations might as a result be the reason for the lack of a relationship between Conscientiousness and task-oriented leadership behaviour in the data. Previous research has found military leadership to be a distinct form of leadership (Michael, Eid, Jennifer, & Christopher, 2006).

Extraversion was found to be a significant predictor of task-oriented behaviour. Extroverts tend to be active, energetic and talkative (Wiersma & Kappe, 2017). One potential explanation might therefore be that others experience of the leader's task-oriented behaviour is dependent on their leader's degree of Extraversion. In other words, being Conscientiousness may help in planning and mapping out task-oriented behaviour, but the degree of Extraversion may determine to what extent this behaviour is exhibited, and registered, by those evaluating the leader. Task-oriented behaviour within the military involves behaviours that are both observed, and not observed, by subordinates and superiors, and leaders scoring high on Extraversion may tend to exhibit more overt and observable behaviour. An example of the difficulties with judging

such behaviour has been demonstrated by Barrick, Patton and Haugland (2000) who investigated to what extent interviewers were able to assess personality traits during a job interview. They demonstrated that the correlation between interviewers' ratings and self-ratings were highest for Extraversion, and lowest for Conscientiousness (Barrick, et al., 2000). This finding supports the assumption that Extraversion leads to more easily observable behaviours than Conscientiousness.

Furthermore, Agreeableness was found to be a negative predictor of task-oriented behaviour. Similar findings were demonstrated by De Vries (2012), who found Agreeableness to be a negative predictor of task-oriented leadership behaviour, for both self-ratings and subordinate-ratings. Previous research has found that in a task-oriented leadership position, leaders showing a high degree of Agreeableness can fail to stimulate introspection in their team through constructive feedback, and that in turn this can lessen the task-oriented benefits of such feedback (Harvey, & Green Jr, 2022). These findings might represent a possible explanation for our results.

Openness, Agreeableness, Extraversion and Development-Oriented Leadership Behaviour

Hypothesis 2b stated that Openness, Agreeableness, and Extraversion would predict Development-oriented behaviour, finding that only Agreeableness and Extraversion significantly predicted this behaviour. In line with our findings De Vries (2008) found the strongest correlate of leader consideration to be Agreeableness. De Vries (2012) found Agreeableness to be significantly related to supportive leadership. Darr, Ebel-Lam and Doucet (2018) found the dominance aspect of Extraversion to be related to performance in a sample of trainees completing basic military training. They argue that the context of military training might be advantageous to extraverts, as this context is typically collective, allowing trainees to interact with and lead others. Darr (2011) has argued that because of the strict nature of military training (e.g., weapons handling, first aid, chemical and nuclear defence) using imagination to explore novel approaches or thinking outside the box is likely to have adverse consequences. Consequently, the influences of Openness on success in military training are likely diminished (Darr, 2011).

Research Question for Role-Model Leadership Behaviour

In terms of role-model behaviour we proposed a research question to investigate what, if any, personality traits would be able to predict this leadership behaviour. We found both Extraversion and Conscientiousness to be significant statistical predictors, with Extraversion having a positive relationship and Conscientiousness having a negative relationship. Finding a positive relationship for Extraversion is in line with previous findings from general research. In their meta-analysis Judge and colleagues (2002) found Extraversion to have the strongest correlation with leadership of the five factor traits, for both leadership emergence and leadership effectiveness. They further found that Conscientiousness had the second strongest correlation, which contrasts with the findings in this study. However, the meta-analysis of Judge and colleagues (2002) mainly included non-military samples.

As previously discussed, the Norwegian Armed Forces conceptualization of role-model behaviour is not based on a theoretical framework, or previous empirical findings. Rather, it represents a leadership behaviour that the Armed Forces view as important and in line with their values (NAF, 2020). As a consequence of this there is a very limited amount of research to compare our findings to. In one of the few studies that have investigated the relationship between personality traits and role-model behaviour Skoglund et al., (2021) found, in a sample of candidates attending a selection program for basic officer education in the Norwegian Armed Forces, that Extraversion predicted role-model ratings in military selection interviews. However, this study measured leaders self-perceived role-model behaviour and did not make use of additional third-party ratings (Skoglund, et al., 2021). In a study investigating the personality traits of applicants for officer training in the Norwegian Armed Forces Martinsen, Furnham, Olsson, Satorra & Fosse (2022) found that those who were selected had higher scores on Extraversion and Conscientiousness than those not selected.

The Predictive Value of Extraversion

Extraversion was shown to be the only personality factor to positively predict all three sub-categories of BLB. These findings are in line with the findings of Judge, et al's (2002) meta-analysis in which they found that Extraversion was positively related to leadership performance. The finding in our study might be a result of the way BLB is measured in the Norwegian Armed Forces. BLB is measured by the degree to which subordinates, and superiors, experienced that the leader actively exhibited these behaviours. As stated by Hogan and colleagues (1994) the

ratings of subordinates and superiors involves judgments about the frequency of certain behaviours. Extroversion is typically a personality trait that leads to more observable behaviour, as opposed to Openness or Conscientiousness which are more internal personality traits (Barrick, et al., 2000). Wiersma and Kappe (2017) argued that since Extroversion leads to characteristics such as assertiveness and decisiveness, that individuals who have a high degree of Extroversion will therefore exhibit behaviours that are more easily assessed. This is supported by the findings of Salgado and Moscoso (2002), who found that Extraversion had a higher association with ratings, in conventional interviews, compared with Conscientiousness. In their meta-analysis Darr (2011) found that of all the personality factors measured, Extraversion had the strongest positive association with leadership potential.

Other researchers have argued that the effects of Extraversion could be explained through mediating factors. Tay, Ang, and Van Dyne (2006) hypothesised that Extraversion results in advantageous self-efficacy, and that this leads to more positive evaluations. In other words, leaders who believe that they will succeed will to a greater extent do so. Research on social-cognitive theory (Bandura, 1997) has demonstrated that self-efficacy is both a widely accepted and validated predictor of behaviour. Tay, et al., (2006) found Extraversion to be significantly correlated with self-efficacy. These findings are in line with the findings of Judge and Ilies (2002) that demonstrated Extraversion to be related to the cognitive-motivational process of self-efficacy. The relationship between Extraversion and BLB might therefore be mediated through the leaders experienced self-efficacy. As previously mentioned, Martinsen and colleagues (2022) found that the applicants selected for officer training in the Norwegian Armed Forces had higher scores on Extraversion than those not selected. This could lead to them also having a higher degree of self-efficacy.

However, Judge and Ilies's (2002) meta-analysis also demonstrated that Conscientiousness, and Emotional Stability is related to self-efficacy. More research is therefore needed to clarify the mediating role of self-efficacy, as the findings have been inconclusive.

The Predictive Value of Neuroticism

Another interesting result is that Neuroticism, typically characterised by traits such as anxiety, depression, anger, worry and irritability (Darr, 2011), did not predict any of the three sub-categories of BLB. One might intuitively think that a high degree of Neuroticism would

negatively predict BLB, especially development-oriented behaviour. Barrick, et al's., (2001) second-order meta-analysis found Neuroticism to have the strongest negative correlation with teamwork. In the meta-analysis of Judge, et al., (2002) Neuroticism was found to be negatively associated with leadership effectiveness. This was however not the case in our study. These results might demonstrate that individuals with a high degree of Neuroticism are not being selected for leadership training within the Norwegian Armed Forces. As shown in Table 1 the mean score for Neuroticism was 2.28, the lowest of any personality trait measured. Neuroticism's lack of predictive value could therefore be a consequence of pre-screening, where individuals with a higher score do not progress to leadership positions, within the Norwegian Armed Forces. Support for this assumption was found by Martinsen and colleagues (2022) who found that, in regard to final admission decisions in the Norwegian Armed Forces, the candidates offered officer training had lower scores on Neuroticism than those not selected.

The Possible Role of the Military Setting

The military sample, in which the data was collected, might have affected the results. Mischel (1977) conceptualized situations as being either strong or weak, proposing that strong situation place constraints on the expression of individual differences in behaviour (Darr, 2011). In strong situations individuals tend to behave in accordance with expectations. Situational strengths moderating influence on the personality-outcome relationship has been empirically demonstrated in previous studies (e.g., Beaty, Cleveland & Murphy, 2001). Features of the military, such as the large volume of specific regulations, laws, directives and policies, make it a context that is likely to have a higher degree of strong situations compared to civilian organizations (Darr, 2011). This might lead to individual differences (i.e., personality) having less of an impact on behaviour. In their meta-analysis Tett, Jackson and Rothstein (1991) hypothesised that personality traits would have a lower predictive validity in military samples as opposed to civilian samples. Counter to their hypothesis Tett, et al., (1991) found personality traits to have a stronger predictive value in military samples. Darr (2011) hypothesized in their meta-analysis that personality-outcome associations would be constrained in military samples. Counter to their general hypothesis Darr (2011) found that the majority of the obtained effects were either as strong, or stronger, than previous meta-analytic estimates based largely on civilian

samples. Therefore, it might be that the effects obtained in our sample are stronger than they would be in a civilian sample.

Implications and Limitations

Strengths

There are several strengths to the current study. Firstly, research on the relationship between leadership and effectiveness has overwhelmingly employed common-source research designs (Inceoglu, et al., 2018). Empirical evidence has however shown that self-ratings provide little insight about leader effectiveness (Hogan, et al., 1994). Support for this was found in a study by De Vries (2012), where self-evaluation (.27) was found to have a statistically significant higher score than subordinate rating (.06). Our study made use of both subordinate-, and superior ratings, and may therefore be able to provide more reliable measurements.

Secondly, in an attempt to provide a comprehensive representation of effectiveness, we made use of a combination of effectiveness measures made available to us by the Norwegian Armed Forces. As these variables measure both positive and negative aspect of effectiveness, we consider them to provide a more complete representation of the concept (Inceoglu, et al., 2018).

Another strength with the design of the study is the fact that it measured the predictive value of personality traits for each sub-category of BLB. By measuring the sub-categories individually, as opposed to the model as a whole, the study might provide a more nuance depiction of the interactions taking place. The inclusion of GMA as a control variable is a further strength with the research design, as well as the large number of participants and high response rate obtained in our study.

Limitations

Although our study design provides several strengths, there are also limitations that need to be addressed. Firstly, the highly pre-selected nature of the participants in the study, as the Armed Forces have the possibility to select from most of the 18-year-olds in Norway. From this pool they then select candidate based on different criteria. These include both enthusiasm for joining the military, skills, and physical and mental abilities. From this group an even smaller group is selected to be officers. As shown by Martinsen, et al., (2022) there are qualitative differences

between the individuals selected for officer training, and those not selected (e.g., lower scores on Neuroticism). These differences may limit the degree of generalizability of our findings to civilian samples, but still represent a contribution

The military context that the data was collected in represents a possible limited degree of generalizability to other settings. As demonstrated in the meta-analysis of Tett, et al., (1991) and Darr (2011), the predictive value of personality traits differs in military and civilian samples. To our knowledge BLB has not yet been studied in civilian samples, which may help better the understanding of the model.

Another limitation, from a generalization viewpoint, is the skewed gender balance among the participants in our study. Our study sample was only 23.8% female. We cannot therefore exclude the possibility of gender being a factor. However, as females now are in an equal position as men when it comes to the conscription, the possible effect of gender may be less relevant in the future (Norwegian Defence Department, 2014).

A further limitation is the fact that we made use of archival data. In doing so we were only able to select variables that had already been collected. This might especially affect the results of Role-model, as the instruments used to measure both effectiveness and leadership behaviour may not be suited to measuring role-model behaviour to the same extent as the other sub-categories of BLB. This assumption is supported by the fact that role-model behaviour had the lowest Cronbach's Alpha (.71), of the three sub-categories of BLB. As a consequence of the data being archival, this study uses a combination of cross-sectional and longitudinal data in its analyses.

H1a-c were correlation hypotheses; therefore, we cannot exclude the possibility that the results may differ in a longitudinal analysis. We are also not able to draw conclusions about causality. Nielsen, et al., (2017) found in their meta-analysis that workplace resources, such as leadership, tended to show stronger relationships with well-being and performance in cross-sectional studies than in longitudinal studies. They further found that studies using self-rated and leader/third-party ratings provided stronger relationships than studies using objective performance ratings (Nielsen, et al., 2017). Therefore, it is possible that our findings regarding the first hypotheses might be somewhat inflated, because of the study design.

The personality factors are only measured at the beginning of the training. This can be a limiting factor in our study as there has been more than two years between the measurement of personality and BLB. One of the fundamental beliefs around personality is however the fact that it is stable over time (De Vries, 2012), and as such the results should not change too much with access to longitudinal measurements here. It should be acknowledged however, as we cannot exclude the possibility that 2 years of military training could have, to some degree, affected some aspects of the leader's personality.

Future Research

Considering the limited amount of research that has been conducted on BLB, there are several exiting, and important, avenues for future researchers to explore. One avenue that would be important to explore is whether the new framework for personality that the Norwegian Armed Forces are developing (Nordmo, Skoglund, Lange-ree, Austad & Martinussen, 2021), will give different results than the Neo-PI framework. An instrument tailor-made for use in the Armed Forces might be better able to pick up nuances, and as such may find a stronger relationship between personality and BLB.

Another area for future research to explore concerns testing the predictive value of individual facets of the personality traits in the Five Factor Model, especially for Extroversion. As Extroversion seem to have an effect on all three parts of BLB, it could be of interest to test whether the other personality facets mediate or moderate this relationship.

Another possibility for further research could be to examine the predictive validity of personality for BLB, as measured by other personality inventories than the Five Factor Model. The Five Factor Model has in recent years been challenged by researchers showing that the HEXACO dimensions of personality (Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness and Openness to Experience), represent cross-cultural replicability to a greater extent than the Five Factor Model (Ashton, Lee & de Vries, 2014; Breevaart & de Vries, 2017). The HEXACO model, due to the inclusion of the Honesty-Humility dimension, has been shown to be a better predictor of important workplace behaviours, than the Five Factor Model (Breevaart & de Vries, 2017; De Vries, De Vries, De Hoogh & Feij, 2009; Lee, Ashton & Shin, 2005). Individuals high on the dimension Honesty-Humility tend to be sincere, modest, fair and low on greed (Breevaart & de Vries, 2017). These traits are in line

with the Norwegian Armed Forces expectation of its leaders, and as such we regard it as relevant to study the predictive value of the HEXACO model for BLB.

As the data is a combination of cross sectional and longitudinal, a point of future research could be a purely longitudinal study of BLB and effectiveness, with multiple points of data collection over a longer period of time. This could also be done with more diversity in regard to the ranks included in the study.

As we suggest in our discussion, self-efficacy might have a mediating effect on the relationship between personality traits and BLB. The Norwegian Armed Forces currently measure their officer candidate's degree of self-efficacy; hence it would be feasible to conduct a study on its mediating effects. This could also be of practical interest, as self-efficacy can, to some degree, be trained and developed in leadership candidates (Eden, & Aviram, 1993).

Conclusion

The processes around leadership selection have in recent times been a topic of great interest for organizations, and especially military organizations (NAF, 2020). Factors that may be able to predict effective leadership are as such of importance to the field of research. This study has focused on the Norwegian Armed Forces and their new model for leadership behaviour (BLB). As this model was relatively newly introduced, we first had to test if there was a correlation between the model and effectiveness, as defined by a combination of measured effectiveness, work engagement and burnout. The analysis found that all the sub-categories of the model correlated significantly with all the effectiveness measures. The specific findings and the individual correlations were also discussed. The second part of the paper focused on the predictive power of personality, with GMA as a control variable. GMA was used as a control as it is one of the most frequently used predictors within leadership selection and is actively used in the Norwegian Armed Forces selection process (Køber et al., 2017). The findings were relatively small, as is expected from studies within the field.

The hypotheses were split in two, with H1a, b and c dealing with the three sub-categories of BLB and their correlation with the effectiveness measures. We found support for all of the H1 hypotheses. H2a, b, and R1 concerned the predictive relationship between the sub-categories of BLB and the personality measurements. We found partial support for H2b, finding only

Extraversion and Agreeableness to be statistically significant predictors of development-oriented leadership behaviour. We did not find support for H2a, finding however that Extraversion statistically significantly predicted task-oriented leadership behaviour. As R1 was a research question, no such conclusion was drawn. Extroversion was found to be the only personality trait that correlated with all sub-categories of BLB. The paper discusses this and the other findings and potential contributions this can bring to the leader selection process in the future. It further discusses potential future research that can illuminate the field to a larger degree.

This paper contributes to the field of leader selection research by going beyond previous studies on BLB. Our findings may be able to clarify the relationship between personality traits and the sub-categories of BLB. The findings indicate a small but significant relationship between personality and BLB, where each of the three parts of BLB had a measurable relationship with different parts of the personality measurement. We also found support for our claim that personality would explain some variance beyond that of GMA alone.

Literature

- Aasland, M. S., Skogstad, A., Notelaers, G., Nielsen, M. B., & Einarsen, S. (2010). The prevalence of destructive leadership behaviour. *British Journal of management*, *21*(2), 438-452. <https://doi.org/10.1111/j.1467-8551.2009.00672.x>
- Ackerman, P. L., & Heggestad, E. D. (1997). Intelligence, personality, and interests: Evidence for overlapping traits. *Psychological Bulletin*, *121*(2), 219–245. <https://doi.org/10.1037/0033-2909.121.2.219>
- Adner, R., & Helfat, C. E. (2003). Corporate effects and dynamic managerial capabilities. *Strategic management journal*, *24*(10), 1011-1025. <https://doi.org/10.1002/smj.331>
- Arvonen, J. (2008). Change-oriented leadership behaviour: a consequence of post-bureaucratic organisations?. *The Routledge Companion to Creativity*, 302.
- Ashton, M. C., Lee, K., & De Vries, R. E. (2014). The HEXACO Honesty-Humility, Agreeableness, and Emotionality factors: A review of research and theory. *Personality and Social Psychology Review*, *18*, 139–152. <http://dx.doi.org/10.1177/1088868314523838>.
- Austad, S. K. (2018). *Balansert lederatferd: En sammenligning av oppfattet lederatferd i Hæren, Luftforsvaret og Sjøforsvaret* (Master's thesis, University of Oslo). Retrived from: <http://urn.nb.no/URN:NBN:no-65031>
- Avolio, B. J., Bass, B. M., & Jung, D. I. (1999). Re-examining the components of transformational and transactional leadership using the Multifactor Leadership Questionnaire. *Journal of Occupational and Organizational Psychology*, *72*(4), 441–462. <https://doi.org/10.1348/096317999166789>
- Avolio, B. J., Walumbwa, F. O., & Weber, T. J. (2009). Leadership: Current theories, research, and future directions. *Annual review of psychology*, *60*, 421-449.
- Bandura, A. (1997). Self-efficacy: The exercise of control. New York: Freeman.
- Bandura, A., & Walters, R. H. (1977). *Social learning theory* (Vol. 1). Prentice Hall: Englewood cliffs.

- Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the job demands-resources model to predict burnout and performance. *Human Resource Management: Published in Cooperation with the School of Business Administration, The University of Michigan and in alliance with the Society of Human Resources Management*, 43(1), 83-104. <https://doi.org/10.1002/hrm.20004>
- Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: a meta-analysis. *Personnel psychology*, 44(1), 1-26. <https://doi.org/10.1111/j.1744-6570.1991.tb00688.x>
- Barrick, M. R., Mount, M. K., & Judge, T. A. (2001). Personality and performance at the beginning of the new millennium: What do we know and where do we go next?. *International Journal of Selection and assessment*, 9(1-2), 9-30. DOI:[10.1111/1468-2389.00160](https://doi.org/10.1111/1468-2389.00160)
- Barrick, M. R., Patton, G. K., & Haugland, S. N. (2000). Accuracy of interviewer judgments of job applicant personality traits. *Personnel Psychology*, 53(4), 925-951. <https://doi.org/10.1111/j.1744-6570.2000.tb02424.x>
- Bass, B. M., & Bass, R. (2009). *The Bass handbook of leadership: Theory, research, and managerial applications*. Simon and Schuster.
- Beaty Jr, J. C., Cleveland, J. N., & Murphy, K. R. (2001). The relation between personality and contextual performance in "strong" versus "weak" situations. *Human Performance*, 14(2), 125-148. https://doi.org/10.1207/S15327043HUP1402_01
- Bennis, W.G., and Townsend, R. (1995). *Reinventing leadership*. Collins Business Essential, New York
- Bergman, D., Lornudd, C., Sjöberg, L., & Von Thiele Schwarz, U. (2014). Leader personality and 360-degree assessments of leader behavior. *Scandinavian Journal of Psychology*, 55(4), 389-397. <https://doi.org/10.1111/sjop.12130>
- Berry, C. M., Sackett, P. R., & Landers, R. N. (2007). Revisiting interview–cognitive ability relationships: Attending to specific range restriction mechanisms in meta-analysis. *Personnel Psychology*, 60(4), 837-874. <https://doi.org/10.1111/j.1744-6570.2007.00093.x>

- Blair, J. D., & Hunt, J. G. (1986). Getting inside the head of the management researcher one more time: Context-free and context-specific orientations in research. *Journal of Management*, 12(2), 147-166. <https://doi.org/10.1177/014920638601200202>
- Blake, R. R., & Mouton, J. S. (1981). Management by Grid® principles or situationalism: Which?. *Group & Organization Studies*, 6(4), 439-455. <https://doi.org/10.1177/105960118100600404>
- Breevaart, K., & de Vries, R. E. (2017). Supervisor's HEXACO personality traits and subordinate perceptions of abusive supervision. *The Leadership Quarterly*, 28(5), 691-700. <https://doi.org/10.1016/j.leaqua.2017.02.001>
- Brown, M. E., & Treviño, L. K. (2014). Do role models matter? An investigation of role modeling as an antecedent of perceived ethical leadership. *Journal of Business Ethics*, 122(4), 587-598.
- Brown, M. E., Treviño, L. K., & Harrison, D. A. (2005). Ethical leadership: A social learning perspective for construct development and testing. *Organizational behavior and human decision processes*, 97(2), 117-134. <https://doi.org/10.1016/j.obhdp.2005.03.002>
- Caldwell, D. F., & Burger, J. M. (1998). Personality characteristics of job applicants and success in screening interviews. *Personnel Psychology*, 51(1), 119-136. <https://doi.org/10.1111/j.1744-6570.1998.tb00718.x>
- Calleja, J. A., Hoggan, B. L., & Temby, P. (2020). Individual predictors of tactical planning performance in junior military officers. *Military Psychology*, 32(2), 149-163. <https://doi.org/10.1080/08995605.2019.1691405>
- Campbell, D. P. (1991). Manual for the Campbell leadership index. *Minneapolis, MN: National Computer Systems*.
- Carnes, A., Houghton, J. D., & Ellison, C. N. (2015). What matters most in leader selection? The role of personality and implicit leadership theories. *Leadership & Organization Development Journal*.

- Carnevale, P. J., & Isen, A. M. (1986). The influence of positive affect and visual access on the discovery of integrative solutions in bilateral negotiation. *Organizational behavior and human decision Processes*, 37(1), 1-13. [https://doi.org/10.1016/0749-5978\(86\)90041-5](https://doi.org/10.1016/0749-5978(86)90041-5)
- Caspi, A. & Roberts, B. W. (1999). Personality continuity and change across the life course. In Pervin, L. A. & John, O. P. (Red.), *Handbook of personality. Theory and research. Second edition* (300-327). New York: The Guilford Press.
- Cavazotte, F., Moreno, V., & Hickmann, M. (2012). Effects of leader intelligence, personality and emotional intelligence on transformational leadership and managerial performance. *The Leadership Quarterly*, 23(3), 443-455.
- Chandrasekara, W. S. (2018). Does Personality Matter in Leadership: Impact of Big Five Personality Traits on Ethical Leadership Behaviour of Middle Managers in Sri Lanka. *Wayamba Journal of Management*, 9(2).
- Cook, K. W., Vance, C. A., & Spector, P. E. (2000). The relation of candidate personality with selection-interview outcomes. *Journal of Applied Social Psychology*, 30(4), 867-885. <https://doi.org/10.1111/j.1559-1816.2000.tb02828.x>
- Cozby, P. C., Bates, S., Krageloh, C., Lacherez, P., & Van Rooy, D. (2012). Methods in behavioral research.
- Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78(1), 98-104. doi:10.1037/0021-9010.78.1.98
- Costa Jr, P. T., & McCrae, R. R. (1992). Revised NEO personality inventory (NEO PI-R) and NEO five-factor inventory (NEO-FFI) professional manual. Odessa, FL: Psychological Assessment Resources.
- Costa Jr, P. T., McCrae, R. R., & Kay, G. G. (1995). Persons, places, and personality: Career assessment using the Revised NEO Personality Inventory. *Journal of Career Assessment*, 3(2), 123-139. <https://doi.org/10.1177/106907279500300202>
- Darr, W. (2011). Military personality research: A meta-analysis of the Self Description Inventory. *Military Psychology*, 23(3), 272-296. <https://doi.org/10.1080/08995605.2011.570583>

- Darr, W. A., Ebel-Lam, A., & Doucet, R. G. (2018). Investigating the extravert advantage in training: Exploring reward sensitivity, training motivation, and self-efficacy as intermediary factors. *Canadian Journal of Behavioural Science / Revue canadienne des sciences du comportement*, 50(3), 172–184. <https://doi.org/10.1037/cbs0000102>
- Day, D. V. (Ed.). (2014). *The Oxford handbook of leadership and organizations*. Oxford Library of Psychology.
- Day, D. V., & Lord, R. G. (1988). Executive leadership and organizational performance: Suggestions for a new theory and methodology. *Journal of management*, 14(3), 453-464. <https://doi.org/10.1177/014920638801400308>
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied psychology*, 86(3), 499. doi:10.1037/0021-9010.86.3.499
- Demerouti, E., & Bakker, A. B. (2008). The Oldenburg Burnout Inventory: A good alternative to measure burnout and engagement. *Handbook of stress and burnout in health care*, 65, 78. <https://doi.org/10.1037/a0019408>
- DeRue, D. S., Nahrgang, J. D., Wellmann, N. E. D., & Humphrey, S. E. (2011). Trait and behavioral theories of leadership: An integration and meta-analytical test of their relative validity. *Personnel psychology*, 64(1), 7-52. <https://doi.org/10.1111/j.1744-6570.2010.01201.x>
- De Vries, R. E. (2008). What are we measuring? Convergence of leadership with interpersonal and non-interpersonal personality. *Leadership*, 4(4), 403-417. <https://doi.org/10.1177/1742715008095188>
- De Vries, R. E. (2012). Personality predictors of leadership styles and the self–other agreement problem. *The Leadership Quarterly*, 23(5), 809-821. <https://doi.org/10.1016/j.leaqua.2012.03.002>
- De Vries, R. E., De Vries, A., De Hoogh, A., & Feij, J. (2009). More than the Big Five: Egoism and the HEXACO model of personality. *European Journal of Personality*, 23(8), 635-654. <https://doi.org/10.1002/per.733>

- Eden, D., & Aviram, A. (1993). Self-efficacy training to speed reemployment: Helping people to help themselves. *Journal of Applied Psychology*, 78(3), 352-360. doi:10.1037/0021-9010.78.3.352
- Ekvall, G., & Arvonen, J. (1991). Change-centered leadership: An extension of the two-dimensional model. *Scandinavian Journal of Management*, 7(1), 17-26.
[https://doi.org/10.1016/0956-5221\(91\)90024-U](https://doi.org/10.1016/0956-5221(91)90024-U)
- Emery, C., Calvard, T. S., & Pierce, M. E. (2013). Leadership as an emergent group process: A social network study of personality and leadership. *Group Processes & Intergroup Relations*, 16(1), 28–45. <https://doi.org/10.1177/1368430212461835>
- Fosse, T. H., Buch, R., Säfvenbom, R., & Martinussen, M. (2015). The impact of personality and self-efficacy on academic and military performance: The mediating role of self-efficacy.
- Fosse, T. H., Skogstad, A., Einarsen, S. V., & Martinussen, M. (2019). Active and passive forms of destructive leadership in a military context: A systematic review and meta-analysis. *European Journal of Work and Organizational Psychology*, 28(5), 708-722.
<https://doi.org/10.1080/1359432X.2019.1634550>
- Gächter, S., & Renner, E. (2018). Leaders as role models and ‘belief managers’ in social dilemmas. *Journal of Economic Behavior & Organization*, 154, 321-334.
<https://doi.org/10.1016/j.jebo.2018.08.001>
- Gardner, W. L., Lowe, K. B., Moss, T. W., Mahoney, K. T., & Cogliser, C. C. (2010). Scholarly leadership of the study of leadership: A review of The Leadership Quarterly's second decade, 2000–2009. *The Leadership Quarterly*, 21(6), 922-958.
<https://doi.org/10.1016/j.leaqua.2010.10.003>
- Gil, F., Rico, R., Alcover, C. M., & Barrasa, A. (2005). Change-oriented leadership, satisfaction and performance in work groups: Effects of team climate and group potency. *Journal of Managerial Psychology*.
- Goldberg, L. R. (1981). Language and individual differences: The search for universals in personality lexicons. *Review of personality and social psychology*, 2(1), 141-165.

- Goldberg, L. R. (1990). An alternative" description of personality": the big-five factor structure. *Journal of personality and social psychology*, 59(6), 1216. doi:10.1037/0022-3514.59.6.1216
- Goldberg, L. R. (1999). A broad-bandwidth, public domain, personality inventory measuring the lower-level facets of several five-factor models. *Personality psychology in Europe*, 7(1), 7-28.
- Grant, A. M., Christianson, M. K., & Price, R. H. (2007). Happiness, health, or relationships? Managerial practices and employee well-being tradeoffs. *Academy of management perspectives*, 21(3), 51-63. <https://doi.org/10.5465/amp.2007.26421238>
- Halbesleben, J. R., & Buckley, M. R. (2004). Burnout in organizational life. *Journal of management*, 30(6), 859-879. <https://doi.org/10.1016/j.jm.2004.06.004>
- Hallam, G. L., & Campbell, D. P. (1992). Selecting team members? Start with a theory of team effectiveness. In *7th Annual Meeting of the Society of Industrial and Organizational Psychology, Montreal, Quebec, Canada*.
- Hannah, S. T., Campbell, D. J., & Matthews, M. D. (2010). Advancing a research agenda for leadership in dangerous contexts. *Military Psychology*, 22, 157–189. <https://doi.org/10.1080/08995601003644452>
- Hannah, S. T., & Sowden, W. J. (2013). Leadership in the profession of arms. In M. G. Rumsey (Ed.), *The Oxford handbook of leadership* (pp. 291–310). Oxford University Press.
- Harris, G., & Hogan, J. (1992). Perceptions and personality correlates of managerial effectiveness. Paper. In *13th Annual Psychology in the Department of Defense Symposium, US Air Force Academy, Colorado Springs, CO*.
- Harvey, J. F., & Green Jr, P. (2022). Constructive feedback: When leader Agreeableness stifles team reflexivity. *Personality and Individual Differences*, 194, 111624. <https://doi.org/10.1002/smj.421>
- Hatch, N. W., & Dyer, J. H. (2004). Human capital and learning as a source of sustainable competitive advantage. *Strategic management journal*, 25(12), 1155-1178. <https://doi.org/10.1002/smj.421>

- Hautala, T.M. (2006), "The relationship between personality and transformational leadership", *Journal of Management Development*, Vol. 25 No. 8, pp. 777-794. <https://doi.org/10.1108/02621710610684259>
- Henkel, T. G., Marion, J. W., & Bourdeau, D. T. (2019). Project Manager Leadership Behavior: Task-Oriented Versus Relationship-Oriented. *Journal of Leadership Education*, 18(2). <https://doi.org/10.12806/V18/I2/R8>
- Herzberg, F., Mausner, B., & Snyderman B. (1959). The motivation to work. New York: Wiley.
- Hoffman, B. J., Kennedy, C. L., LoPilato, A. C., Monahan, E. L., & Lance, C. E. (2015). A review of the content, criterion-related, and construct-related validity of assessment center exercises. *Journal of Applied Psychology*, 100(4), 1143. <https://doi.org/10.1037/a0038707>
- Hogan, R., Curphy, G. J., & Hogan, J. (1994). What we know about leadership: Effectiveness and personality. *American psychologist*, 49(6), 493. doi:10.1037/0003-066X.49.6.493
- Hogg, M. A. (2016). Social identity theory. In *Understanding peace and conflict through social identity theory* (pp. 3-17). Springer, Cham.
- Hoyt, C. L., Burnette, J. L., & Innella, A. N. (2012). I can do that: The impact of implicit theories on leadership role model effectiveness. *Personality and Social Psychology Bulletin*, 38(2), 257-268. <https://doi.org/10.1177/0146167211427922>
- Ichniowski, C., & Shaw, K. (1999). The effects of human resource management systems on economic performance: An international comparison of US and Japanese plants. *Management science*, 45(5), 704-721. <https://doi.org/10.1287/mnsc.45.5.704>
- Inceoglu, I., Thomas, G., Chu, C., Plans, D., & Gerbasi, A. (2018). Leadership behavior and employee well-being: An integrated review and a future research agenda. *The Leadership Quarterly*, 29(1), 179-202. <https://doi.org/10.1016/j.leaqua.2017.12.006>
- Ivey, G. W., Blanc, J. R. S., & Mantler, J. (2015). An assessment of the overlap between morale and work engagement in a nonoperational military sample. *Journal of occupational health psychology*, 20(3), 338. doi: 10.1037/a0038559.

- Isenberg, D. J. (1981). Some effects of time-pressures on vertical structure and decision-making accuracy in small groups. *Organizational Behavior and Human Performance*, 27, 119-134. [https://doi.org/10.1016/0030-5073\(81\)90042-8](https://doi.org/10.1016/0030-5073(81)90042-8)
- Johansen, R.B., Martinussen, M. & Kvilvang, N. (2015). The Influence of Military Identity on Work Engagement and Burnout in the Norwegian Army Rapid Reaction Force. *Journal of Military Studies*, 6(1).
- Judge, T. A., & Bono, J. E. (2000). Five-factor model of personality and transformational leadership. *Journal of applied psychology*, 85(5), 751. doi:10.1037/0021-9010.85.5.751
- Judge T.A., Bono J.E., Ilies R. & Gerhardt M.W. (2002). Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology*, 87, 765–780. doi:10.1037/0021-9010.87.4.765
- Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: a meta-analytic test of their relative validity. *Journal of applied psychology*, 89(5), 755. <http://dx.doi.org/10.1037/0021-9010.89.5.755>
- Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological bulletin*, 127(3), 376. doi:10.1037/0033-2909.127.3.376
- Kalshoven, K., Den Hartog, D. N., & De Hoogh, A. H. (2011). Ethical leader behavior and big five factors of personality. *Journal of business ethics*, 100(2), 349-366.
- Katzenbach, J.R. (1997). *Teams at Top: Unleashing the Potential of Both Teams and Individual Leaders*, Harvard Business School Press, Boston, MA.
- Keller, T. (1999). Images of the familiar: Individual differences and implicit leadership theories. *The Leadership Quarterly*, 10(4), 589-607. [https://doi.org/10.1016/S1048-9843\(99\)00033-8](https://doi.org/10.1016/S1048-9843(99)00033-8)
- Kim, W., Kolb, J. A., & Kim, T. (2013). The relationship between work engagement and performance: A review of empirical literature and a proposed research agenda. *Human Resource Development Review*, 12(3), 248-276. <https://doi.org/10.1177/1534484312461635>

- Kivlighan Jr, D. M. (1997). Leader behavior and therapeutic gain: An application of situational leadership theory. *Group Dynamics: Theory, Research, and Practice*, 1(1), 32. <https://doi.org/10.1037/1089-2699.1.1.32>
- Kotter, J. P., Akhtar, V., & Gupta, G. (2021). *Change: How organizations achieve hard-to-imagine results in uncertain and volatile times*. John Wiley & Sons.
- Krueger, G. P. (2001). Military psychology: United States. In N. J. Smelser & P. B. Baltes (Eds.), *International encyclopedia of the social & behavioral sciences* (pp. 9868–9873). Oxford, England: Elsevier.
- Kuoppala, J., Lamminpää, A., Liira, J., & Vainio, H. (2008). Leadership, job well-being, and health effects—a systematic review and a meta-analysis. *Journal of occupational and environmental medicine*, 904-915.
- Køber, P. K., Lang-Ree, O. C., Stubberud, K. V., & Martinussen, M. (2017). Predicting Basic Military Performance for Conscripts in the Norwegian Armed Forces, *Military Psychology*, 29:6, 560-569, DOI: 10.1037/mil0000192
- Latu, I. M., Mast, M. S., Lammers, J., & Bombari, D. (2013). Successful female leaders empower women's behavior in leadership tasks. *Journal of Experimental Social Psychology*, 49(3), 444-448. <https://doi.org/10.1016/j.jesp.2013.01.003>
- Lee, K., Ashton, M. C., & Shin, K. H. (2005). Personality correlates of workplace anti-social behavior. *Applied Psychology*, 54(1), 81-98. <https://doi.org/10.1111/j.1464-0597.2005.00197.x>
- Li, Y., Castelli, P. A., & Cole, M. (2021). The positive effects of task, relation and change oriented leadership behavior on employee engagement. *Journal of Organizational Psychology*, 21(6), 73-90. Retrieved from <https://www.proquest.com/scholarly-journals/positive-effects-task-relation-change-oriented/docview/2618171159/se-2?accountid=8579>
- Lockwood, P. (2006). “Someone like me can be successful”: Do college students need same-gender role models?. *Psychology of women quarterly*, 30(1), 36-46. <https://doi.org/10.1111/j.1471-6402.2006.00260.x>

- Lombardo, M. M., Ruderman, M. N., & McCauley, C. D. (1988). Explanations of success and derailment in upper-level management positions. *Journal of Business and Psychology*, 2(3), 199-216.
- Lord, R. G., de Vader, C. L., & Alliger, G. M. (1986). A meta-analysis of the relation between personality traits and leadership perceptions: An application of validity generalization procedures. *Journal of Applied Psychology*, 71(3), 402–410. <https://doi.org/10.1037/0021-9010.71.3.402>
- Lowe, K. B., Kroeck, K. G., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review of the MLQ literature. *The leadership quarterly*, 7(3), 385-425. [https://doi.org/10.1016/S1048-9843\(96\)90027-2](https://doi.org/10.1016/S1048-9843(96)90027-2)
- Lübbe, A. H. (2017). Balansert lederadferd: En kvantitativ studie av oppfattet lederadferd i Forsvaret (Master's thesis, Forsvarets høgskole). Retrieved from: <https://fhs.brage.unit.no/fhs-xmlui/handle/11250/2479772>
- Magee, R. R. (1998). *Strategic leadership primer*. Army War Coll Carlisle Barracks PA.
- Marks, M. A., Zaccaro, S. J., & Mathieu, J. E. (2000). Performance implications of leader briefings and team-interaction training for team adaptation to novel environments. *Journal of applied psychology*, 85(6), 971. doi:10.1037/0021-9010.85.6.971
- Martinsen, Ø. L. (2005). Lederskap–spiller det noen rolle? Retrieved 21.10.2021 from: <https://biopen.bi.no/bi-xmlui/bitstream/handle/11250/94091/2005-05-martinsen.pdf?sequence=1&isAllowed=y>
- Martinsen, O., Fosse, T. H., Johansen, R. B., & Venemyr, G. O. (2020). A new perspective on military leadership. *In Academy of Management Proceedings* (Vol. 2020, No. 1, p. 17616).
- Martinsen, Ø. L., Furnham, A., Olsson, U. H., Satorra, A. & Fosse, T. H. (2022). Personality traits as predictors of selection, deselection and rejection of leadership roles in the Armed Forces. *Submitted manuscript*

- Martinsen, Ø. L., Nordvik, H., & Østbø, L. E. (2011). The NEO PI-R in a North European context. Retrieved 29.12.2021 from: https://biopen.bi.no/bitstream/handle/11250/93444/Martinsen_Nordvik_%C3%98stb%C3%B8_2011_Sc anJOrgPsyc.pdf?sequence=1
- Mathieu, J. E., Heffner, T. S., Goodwin, G. F., Salas, E., & Cannon-Bowers, J. A. (2000). The influence of shared mental models on team process and performance. *Journal of Applied Psychology*, 85(2), 273–283. <https://doi.org/10.1037/0021-9010.85.2.273>
- McCrae, R. R. (2009). The five-factor model of personality traits: Consensus and controversy. *The Cambridge handbook of personality psychology*, 148-161.
- McCrae, R. R., Costa, P. T., de Lima, M. P., Simões, A., Ostendorf, F., Angleitner, A., ... & Piedmont, R. L. (1999). Age differences in personality across the adult life span: parallels in five cultures. *Developmental psychology*, 35(2), 466. <https://doi.org/10.1037/0012-1649.35.2.466>
- Miao, C., & Qian, S. (2016). Does leadership matter? A multilevel investigation of the moderators for the relationship between Openness and change-oriented behavior. *Journal of Leadership, Accountability and Ethics*, 13(1), 77.
- Michael D. Matthews, Jarle Eid, Dennis Kelly, Jennifer K. S. Bailey & Christopher Peterson (2006) Character Strengths and Virtues of Developing Military Leaders: An International Comparison, *Military Psychology*, 18:sup1, S57-S68, DOI: 10.1207/s15327876mp1803s_5
- Mihelic, K. K., Lipicnik, B., & Tekavcic, M. (2010). Ethical leadership. *International Journal of Management & Information Systems (IJMIS)*, 14(5). <https://doi.org/10.19030/ijmis.v14i5.11>
- Mills, D. Q. (2005) *Leadership: How to Lead, How to Live*. Waltham, MA: MindEdge Press
- Mischel, W. (1977). The interaction of person and situation. In D. Magnusson & N. S. Endler (Eds.), *Personality at the crossroads: Current issues in interactional psychology* (pp. 333–352). Hillsdale, NJ: Lawrence Erlbaum.

- Murrell, A.J. and Zagencyk, T.J. (2006), "The gendered nature of role model status: an empirical study", *Career Development International*, Vol. 11 No. 6, pp. 560-578.
<https://doi.org/10.1108/13620430610692953>
- Nerstad, C. G., Richardsen, A. M., & Martinussen, M. (2010). Factorial validity of the Utrecht Work Engagement Scale (UWES) across occupational groups in Norway. *Scandinavian journal of psychology*, 51(4), 326-333. <https://doi.org/10.1111/j.1467-9450.2009.00770.x>
- Nielsen, K., Nielsen, M. B., Ogbonnaya, C., Käsälä, M., Saari, E., & Isaksson, K. (2017). Workplace resources to improve both employee well-being and performance: A systematic review and meta-analysis. *Work & Stress*, 31(2), 101-120.
<https://doi.org/10.1080/02678373.2017.1304463>
- Nordmo, M., Skoglund, T. H., Lang-ree, O. C., Austad, S. K., & Martinussen, M. (2021). The psychometric properties and norm data of the Norwegian military personality inventory (NMPI). *Scandinavian Journal of Psychology*, 62(4), 596-607.
<https://doi.org/10.1111/sjop.12719>
- NORTH ATLANTIC TRADE ORGANIZATION STANDARIZATION OFFICE (NSO). (2019) *Allied Joint Doctrine for the Conduct of Operations (AJP-3, Edition C)*. Brussels: NATO.
- Northouse, P. G. (2019). *Introduction to leadership: Concepts and practice*. Sage Publications. The influence of change-oriented leadership and psychological safety on team learning in healthcare teams. *Journal of Business and Psychology*, 29(2), 311-321.
- Norwegian Armed Forces (NAF; *Forsvaret*) (2012). *Forsvarssjefens grunnsyn på ledelse i Forsvaret*. Retrieved 02.01.2022 from:
<https://munin.uit.no/bitstream/handle/10037/15693/Forsvarssjefens%20grunnsyn%20p%C3%A5%20ledelse%20i%20Forsvaret.pdf?sequence=3&isAllowed=y>
- Norwegian Armed Forces (NAF; *Forsvaret*) (2020). *Forsvarets grunnsyn på ledelse*. Retrieved 19.09.2021 from: https://www.forsvaret.no/soldater-og-ansatte/regelverk/Forsvarets-grunnsyn-ledelse.pdf/_attachment/inline/74262ea3-bbbd-468d-8464-

[66136d4c7391:2579a67ab56d8ef777618b0da381a722513075b2/Forsvarets%20grunnsyn%20pa%CC%8A%20ledelse.pdf](https://www.forsvaret.no/forskning/prosjekter/leder kandidatstudien/66136d4c7391:2579a67ab56d8ef777618b0da381a722513075b2/Forsvarets%20grunnsyn%20pa%CC%8A%20ledelse.pdf)

Norwegian Armed Forces (NAF; *Forsvaret*) (2021a, 11. January). Lederkandidatstudien.

Retrieved from:

<https://www.forsvaret.no/forskning/prosjekter/leder kandidatstudien>

Norwegian Armed Forces (NAF; *Forsvaret*) (2021b, 10. January) Forsvarets medarbeider- og lederundersøkelse: Retrieved from:

<https://www.forsvaret.no/forskning/prosjekter/forsvarets-medarbeider-og-lederundersokelse>

Norwegian Defence Department (*Forsvarsdepartementet*), 2014. Endringer i vernepliktsloven og heimevernloven (allmenn verneplikt – verneplikt for kvinner) (Prop. 122 L 2013–2014).

Retrieved from: <https://www.regjeringen.no/no/dokumenter/Prop-122-L-20132014/id762771/?ch=1>

Offermann, L. R., Kennedy Jr, J. K., & Wirtz, P. W. (1994). Implicit leadership theories: Content, structure, and generalizability. *The leadership quarterly*, 5(1), 43-58.

[https://doi.org/10.1016/1048-9843\(94\)90005-1](https://doi.org/10.1016/1048-9843(94)90005-1)

Ortega, A., Van den Bossche, P., Sánchez-Manzanares, M., Rico, R., & Gil, F. (2014). The influence of change-oriented leadership and psychological safety on team learning in healthcare teams. *Journal of Business and Psychology*, 29(2), 311-321.

Pallant, J. (2010). *SPSS survival manual: a step by step guide to data analysis using SPSS*.

M Maidenhead :Open University Press/McGraw-Hill,

Papastyliaou, A., Kaila, M., & Polychronopoulos, M. (2009). Teachers' burnout, depression, role ambiguity and conflict. *Social Psychology of Education*, 12(3), 295-314.

Pfeffer, J. (2005). Producing Sustainable Competitive Advantage through the Effective Management of People [and Executive Commentary]. *The Academy of Management Executive* (1993), 19(4), 95-108. <https://doi.org/10.5465/ame.1995.9503133495>

Rafaeli, A., & Sutton, R. I. (1989). The expression of emotion in organizational life. *Research in organizational behavior*, 11(1), 1-42.

- Reiter, D., & Wagstaff, W. A. (2018). Leadership and military effectiveness. *Foreign Policy Analysis*, 14(4), 490-511. <https://doi.org/10.1093/fpa/orx003>
- Richard, P. J., Devinney, T. M., Yip, G. S., & Johnson, G. (2009). Measuring Organizational Performance: Towards Methodological Best Practice. *Journal of Management*, 35(3), 718–804. <https://doi.org/10.1177/0149206308330560>
- Rothstein, M. G., & Goffin, R. D. (2006). The use of personality measures in personnel selection: What does current research support?. *Human resource management review*, 16(2), 155-180. <https://doi.org/10.1016/j.hrmr.2006.03.004>
- Rubin, R. S., Bommer, W. H., & Baldwin, T. T. (2002). Using extracurricular activity as an indicator of interpersonal skill: Prudent evaluation or recruiting malpractice?. *Human Resource Management: Published in Cooperation with the School of Business Administration, The University of Michigan and in alliance with the Society of Human Resources Management*, 41(4), 441-454. <https://doi.org/10.1002/hrm.10053>
- R.S. Rubin, D.C. Munz, W.H. Bommer. Leading from within: the effects of emotion recognition and personality on transformational leadership behavior: *Academy of Management Journal*, 48 (2005), pp. 845-858
- Saksvik-Lehouillier, I. & Hetland, H. (2015). Personlighet og rekruttering/personlighetsseleksjon. I L. E. O. Kennair & R. Hagen (red.), *Personlighetspsykologi* (p.295-314). Bergen: Fagbokforlaget
- Salgado, J. F., & Moscoso, S. (2002). Comprehensive meta-analysis of the construct validity of the employment interview. *European Journal of Work and Organizational Psychology*, 11(3), 299-324.
- Schaufeli, W. B., Salanova, M., González-romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, 3(1), 71-92. doi:<http://dx.doi.org/10.1023/A:1015630930326>
- Schaufeli, W. B. (2015). Engaging leadership in the job demands-resources model. *Career Development International*. <https://doi.org/10.1108/CDI-02-2015-0025>

- Schermer, J., & Saklofske, D. (2020). Personality and Intelligence. In P. Corr & G. Matthews (Eds.), *The Cambridge Handbook of Personality Psychology* (Cambridge Handbooks in Psychology, pp. 142-152). Cambridge: Cambridge University Press.
doi:10.1017/9781108264822.014
- Schmidt, F. L., & Hunter, J. E. (1998). The validity and utility of selection methods in personnel psychology: Practical and theoretical implications of 85 years of research findings. *Psychological bulletin*, 124(2), 262. doi:10.1037/0033-2909.124.2.262
- Schmidt, F. L., & Hunter, J. (2004). General mental ability in the world of work: occupational attainment and job performance. *Journal of personality and social psychology*, 86(1), 162. doi:10.1037/0022-3514.86.1.162
- Sellman, W. S., Russell, T. L., & Strickland, W. J. (2017). Selection and classification in the US military. In *Handbook of employee selection* (pp. 697-721). Routledge.
- Shamir, B. (2011). Leadership takes time: Some implications of (not) taking time seriously in leadership research. *The Leadership Quarterly*, 22(2), 307-315.
<https://doi.org/10.1080/02678373.2010.495262>
- Shi, J., Yao, Y., Zhan, C., Mao, Z., Yin, F., & Zhao, X. (2018). The Relationship Between Big Five Personality Traits and Psychotic Experience in a Large Non-clinical Youth Sample: The Mediating Role of Emotion Regulation. *Frontiers in psychiatry*, 9, 648.
<https://doi.org/10.3389/fpsy.2018.00648>
- Skakon, J., Nielsen, K., Borg, V., & Guzman, J. (2010). Are leaders' well-being, behaviours and style associated with the affective well-being of their employees? A systematic review of three decades of research. *Work & stress*, 24(2), 107-139.
<https://doi.org/10.1080/02678373.2010.495262>
- Skoglund, T. H., Fosse, T. H., Lang-Ree, O. C., Martinsen, Ø. L., & Martinussen, M. (2021). Candidate Personality Traits Associated with Ratings in a Military Officer Selection Setting. <https://doi.org/10.16993/sjwop.135>
- Skogstad, A., Aasland, M. S., Nielsen, M. B., Hetland, J., Matthiesen, S. B., & Einarsen, S. (2015). The relative effects of constructive, laissez-faire, and tyrannical leadership on

subordinate job satisfaction. *Zeitschrift für Psychologie*. <https://doi.org/10.1027/2151-2604/a000189>

Skogstad, A., Einarsen, S., Torsheim, T., Aasland, M. S., & Hetland, H. (2007). The destructiveness of laissez-faire leadership behavior. *Journal of occupational health psychology, 12*(1), 80. doi:10.1037/1076-8998.12.1.80

Stogdill, R. M. (1950). Leadership, membership and organization. *Psychological bulletin, 47*(1), 1. <https://doi.org/10.1037/h0053857>

Stogdill, R.M. (1974). *Handbook of leadership: A survey of theory and research*. New York: The Free Press

Sugiman, T., & Misumi, J. (1988). Development of a new evacuation method for emergencies: control of collective behaviour by emergent small groups. *Journal of applied Psychology, 73*, 3-10. <https://doi.org/10.1037/0021-9010.73.1.3>

Sundet, J. M., Barlaug, D. G., & Torjussen, T. M. (2004). The end of the Flynn effect?: A study of secular trends in mean intelligence test scores of Norwegian conscripts during half a century. *Intelligence, 32*(4), 349–362. doi:10.1016/j. Intell.2004.06.004

Sundet, J. M., Tambs, K., Magnus, P., & Berg, K. (1988). On the question of secular trends in the heritability of intelligence test scores: A study of Norwegian twins. *Intelligence, 12*(1), 47–59. doi:10.1016/0160-2896(88)90022-0

Sweeney, P. J. (2010). Do soldiers reevaluate trust in their leaders prior to combat operations?. *Military Psychology, 22*(sup1), S70-S88. <https://doi.org/10.1080/08995601003644312>

Tay, C., Ang, S., & Van Dyne, L. (2006). Personality, biographical characteristics, and job interview success: a longitudinal study of the mediating effects of interviewing self-efficacy and the moderating effects of internal locus of causality. *Journal of Applied Psychology, 91*(2), 446. <https://doi.org/10.1037/0021-9010.91.2.446>

Tett, R. P., & Christiansen, N. D. (2007). Personality tests at the crossroads: A response to Morgeson, Campion, Dipboye, Hollenbeck, Murphy, and Schmitt (2007). *Personnel psychology, 60*(4), 967-993. <https://doi.org/10.1111/j.1744-6570.2007.00098.x>

Tett, R. P., Jackson, D. N., & Rothstein, M. (1991). Personality measures as predictors of job performance: A meta-analytic review. *Personnel psychology*, 44(4), 703-742.

<https://doi.org/10.1111/j.1744-6570.1991.tb00696.x>

U.S. Army. (2019). *US Army Doctrine Publication: ADP 6-22 Army Leadership and the Profession*. Retrieved October 29, 2021. Retrieved from

https://armypubs.army.mil/ebooks/DR_pubs/DR_a/ARN20039-ADP_6-22-001-WEB-0.pdf

Volckmann, R. (2012). Fresh perspective: Barbara Kellerman and the leadership industry.

Integral Leadership Review, 2012, 6-8.

Walumbwa, F. O., & Schaubroeck, J. (2009). Leader personality traits and employee voice behavior: mediating roles of ethical leadership and work group psychological safety. *Journal of applied psychology*, 94(5), 1275. doi:10.1037/a0015848

Wiersma, U. J., & Kappe, R. (2017). Selecting for Extroversion but rewarding for

Conscientiousness. *European Journal of Work and Organizational Psychology*, 26(2), 314-323. <https://doi.org/10.1080/1359432X.2016.1266340>

Wong, L., Bliese, P., & McGurk, D. (2003). Military leadership: A context specific review. *The Leadership Quarterly*, 14(6), 657-692. <https://doi.org/10.1016/j.leaqua.2003.08.001>

Wright, T. A., & Cropanzano, R. (2000). Psychological well-being and job satisfaction as predictors of job performance. *Journal of occupational health psychology*, 5(1), 84.

<https://doi.org/10.1037/1076-8998.5.1.84>

Yukl, G. (1999). An evaluative essay on current conceptions of effective leadership. *European journal of work and organizational psychology*, 8(1), 33-48.

<https://doi.org/10.1080/135943299398429>

Yukl, G. (2008). How leaders influence organizational effectiveness. *The leadership quarterly*, 19(6), 708-722. <https://doi.org/10.1016/j.leaqua.2008.09.008>

- Yukl, G. (2012). Effective leadership behavior: What we know and what questions need more attention. *Academy of Management perspectives*, 26(4), 66-85.
<https://doi.org/10.5465/amp.2012.0088>
- Yukl, G. (2013). *Leadership in organizations*. (8. Edt.). Upper Saddle River, NJ: Prentice Hall.
- Yukl, G., Gordon, A. & Taber, T. (2002). A hierarchical taxonomy of leadership behaviour: Integrating a half century of behaviour research. *Journal of Leadership and Organizational Studies*, 9, 15-32. <https://doi.org/10.1177/107179190200900102>
- Yukl, G., Mahsud, R., Prussia, G., & Hassan, S. (2019). Effectiveness of broad and specific leadership behaviors. *Personnel Review*, 48(3), 774-783. <https://doi.org/10.1108/PR-03-2018-0100>
- Zaccaro, S. J., Rittman, A. L., & Marks, M. A. (2001). Team leadership. *The leadership quarterly*, 12(4), 451-483. [https://doi.org/10.1016/S1048-9843\(01\)00093-5](https://doi.org/10.1016/S1048-9843(01)00093-5)
- Zaccaro, S. J. (2012). Individual differences and leadership: Contributions to a third tipping point. *The Leadership Quarterly*, 23, 718–728.
<https://doi.org/10.1016/j.leaqua.2012.05.001>

Appendix

Appendix A

Descriptive Statistics and Correlations for Study Variables

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Idealized Influence (attributed)	2009	3.39	.62	—					
2. Idealized Influence (behaviour)	1996	3.25	.63	.50**	—				
3. Inspirational Motivation	2009	3.67	.58	.56**	.58**	—			
4. Individualised Consideration	1999	3.97	.52	.58**	.54**	.47**	—		
5. Intellectual Stimulation	1996	3.48	.60	.52**	.59**	.46**	.56**	—	
6. Role model behaviour	1924	11.24	1.30	.35**	.22**	.23**	.30**	.28**	—

* $p < .05$, ** $p < .01$,