

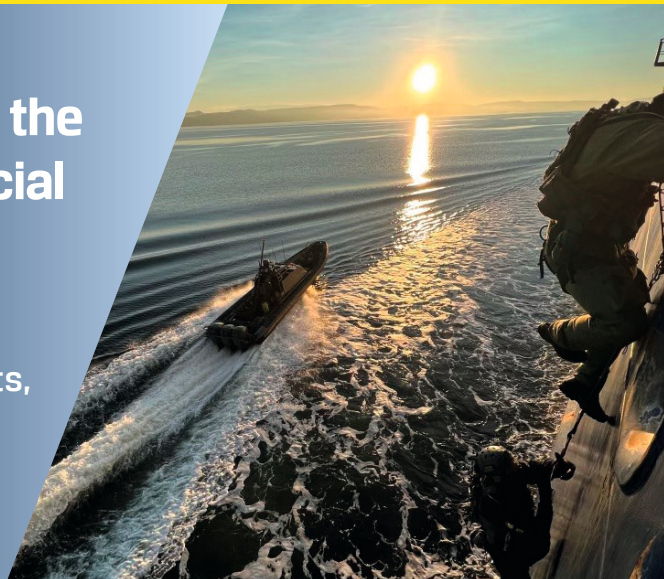


POLITIHØGSKOLEN

WIVI ANDERSEN

Women inclusion in the national police special intervention unit?

BT's physical admission tests, challenges and possible solutions.



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Women inclusion in the national police special intervention unit

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Preface

The project has been a collaboration between the National Police Special Response department (Politiets nasjonale beredskapsressurser, NB), in particular the National Police Special Intervention Unit (Beredskapstroppen, BT), the Police University College (Politi­høgskolen, PHS) and the Norwegian School of Sports Sciences (Norges Idrettshøgskole, NIH). Project funding was granted by the National Police Directorate (Politidirektoratet, POD), and this report is a documentation of and a reflection on the process, and a scientific and philosophical discussion of the issues involved. [translator's note: the majority of these abbreviations are used throughout]. With the exception of the two master's theses presented in Chapter 4 which are summarised and written by the students themselves, the report is written by me, Wivi Andersen. However, the report did not materialise in a vacuum, and I am grateful for the help of many others in this process.

First and foremost, I would like to thank Wenche Ertzaas Granøien for letting me be a part of this. It was fun writing the project outline, and gratifying to see it realised almost in its entirety. I know that is how we both feel. Thanks for the ride, Wenche!

Thank you to the leaders of the National Police Special Intervention Unit (from here on referred to only as BT), the leaders of the education and training unit as well as instructors dealing with admissions and selection who took the time to answer my questions and discuss both the physical and other challenges that operators encounter in their work: you know who you are.

Thanks to Police Inspector Safiye Uysal, Medic Echo, Oslo Police District and Police Superintendent Bjørn-Kristian B. Kjus, leader of the response unit in Oslo Police District, for taking the time in your busy lives to share your knowledge and experiences of the response units.

Thank you for the practical assistance and good cooperation during my time at the Police University College (from here on referred to as PHS), Marianne Solvi-Eriksen and Ossy Riviani Bradbury.

Last, but not least, a big thank you to Lieutenant Commander Andre Ringdal, Chief Commander, Naval Physical Training Centre (SITS)/ Sports Superintendent in the Royal Norwegian Navy.

Any errors or omissions in the report are mine alone.

Atrå, 16.3.23,
Wivi Andersen

1.0 Introduction

This project is a collaboration between the Norwegian School of Sports Sciences (from here on referred to as NIH) the Police University College, from here on referred to as PHS and the National Police Special Response department, (from here on referred to as NB¹), _ in particular the National Police Special Intervention Unit (from here on referred to as BT). Funding for the project was granted by the National Police Directorate. The initiator of the project was Police Superintendent Wenche Ertzaas Granøien, who has also been the driving force in obtaining internal anchoring and funding for the project. Granøien was appointed to NB in 2019 and made responsible for gender equality in recruitment. Superintendent Granøien's appointment was one of several elements in a comprehensive process at NB with the objective of increasing the proportion of women in all sections.

NB consists of several sections: BT, the National Police Bomb Squad, the National Police Air support unit and the National Police Crisis and Hostage Negotiation Unit, which all recruit highly qualified personnel for operational service. The Royal Police Escort was part of NB until 31.12.2021, but has now been transferred from Oslo Police District to the Norwegian Police Security Service (PST). Education and training for many of the sections are provided by the extension studies and continuing education for operational police work at PHS. Each course has specific pre-defined admission requirements, including physical demands. The physical requirements vary between the courses, from being identical to gender differentiated. The proportion of women varies greatly between the sections. Some of the sections have a high proportion of women while others have both a low number of applications from women and few women employees. BT is the only

¹ New from 2022 in accordance with PBSII. Previously known as FNB.

section which neither has nor has ever had female staff. Previous to the intake of 2021, no woman had ever satisfied the physical admission requirements and been able to progress to the further selection process. Superintendent Granøien therefore wished to set up a project to investigate this.

The difference in physical capability between men and women constitutes a challenge for inclusion work in special units both in the armed forces and the police, despite formal gender equality in recruitment. In an opinion piece in 2013, Steder stated that in order to be able to attract more women, the Norwegian armed forces would have to come up with a clear challenge to the masculine ideal, in particular in terms of the physical characteristics required (Steder 2013). The ambition of this project was to discover the actual job demands faced by operators in BT, and to find out whether these demands are reflected in the physical admissions tests. We wanted to find out whether and possibly how the physical requirements can be adjusted in order to enable women to become part of BT, the Police Special Intervention Unit.

2.0 Background

The past decade has seen an increased focus on gender balance in the police. By the time this project was initiated in the autumn of 2020 an overall plan for securing a good gender balance in senior police management jobs had been drawn up - in 2016 (Report to the Storting 29 (2019-2020), p. 67). The aim for the period covered by the plan (2017-2020) was for 30 per cent women in senior management police positions and 40 per cent women in total in senior management (Report to the Storting St. 29 (2019-2020), p. 68). The plan envisaged a focus also on police jobs generally in the police, since a good gender balance at ground level was regarded as a prerequisite for recruitment to senior management positions (Police Directorate, 2016, p. 7).

So, to be clear, the overall goal about a good gender balance covers the whole police force (Police Directorate, 2018, p. 28). The reason given is that gender balance is important for the attractiveness of workplaces, and also for the police to be able to attract and retain qualified and experienced staff (Police Directorate, 2018, s.28). The goal has produced tangible results in that the proportion of women in 2017 was 45.6 per cent distributed across all job categories (police, lawyer and civil); an increase of about 1.5 percentage points from 2013. For police jobs the proportion of women was 31.4 per cent in 2017. A contributing factor in this increase is stated to be the PHS recruitment drive towards women (Police Directorate, 2018, p. 28). In 2019 the female proportion of PHS applicants was 52.6 per cent, which at that time was the highest ever.

However, there are big differences in gender balance within the various police positions. In 2019, when the proportion of women at PHS was just over 50 per cent, the patrol services had a female proportion of around 30 per cent, while in the specialist agencies the proportion was around 10 per cent (Gender Diversity Working Group,

2020, p. 6). Special agencies are all operational sections that require extension studies and/or specialist courses following graduation from PHS. In addition to the sections under NB, (BT, the Police Bomb squad, the Police Air support unit, the Police Crisis and Hostage Negotiation Unit and, until 2021, the Royal Police Escort (DKP)), the Regional Response Units (UEH), Police Dogs, National Police tactical support unit, Special Operations and incident managers are also part of the special agencies. It is the operational field in particular that is experiencing problems with the recruitment of women. In 2022 a new action plan for police work for the period 2022-2025 was published under the name Diversity, Dialogue and Trust (Police Directorate, 2022). It states that in order to secure gender diversity in leadership roles in the operational service it is also necessary to prioritise the recruitment of women into operational service.

2.1 Recruitment and inclusion work in the specialist agencies

In 2019 a Nordic working group consisting of members of the close protection units of the police security services - PST (Norway), PET (Denmark) and SÄPO (Sweden) - was appointed to look into the recruitment of women into close protection service (Gender Diversity Working Group, 2020, p. 3). Despite different starting points in terms of gender balance, the thinking was that the services in the different Nordic countries would be able to benefit from each other's experiences in this field (Gender Diversity Working Group, 2020, p. 3). This led to a report in 2020, which became an important document for the other specialist agencies in terms of their recruitment and inclusion work. A brief review of the report and a presentation of the status of BT's recruitment and inclusion work at the start of the project will therefore follow.

2.1.1 Gender Diversity Working Group

As mentioned above, it is the operational service of the police that has had a problem with the recruitment of women and this is particularly visible in the specialist agencies, i.e. the operational agencies that require extension studies and continuing education. The ambition of the Gender Diversity Working Group was to increase the proportion of women in the close protection service. The work of the group resulted in a report which dealt with the status of and opportunities for improvement in terms of recruitment, basic training, career and the importance of the workplace in terms of gender balance. The background to the appointment of the working group was that the close protection service had for several years aimed to increase the proportion of women, however the measures taken had not had the desired effect. Up to 2020, PHS educated one to two female close protection officers every other year. This number would only maintain the proportion of women in close protection service and not lead to an increase (Gender Diversity Working Group, 2020, p. 5).

As far as this project is concerned, it is the report's review of the recruitment strategies for the basic training of close protection officers that is particularly interesting. From 2016, the Royal Escort and PST had one person responsible for recruitment, and this has provided predictability and structure to the recruitment (Gender Diversity Working Group, 2020, p. 12). The recruitment strategy which has provided the best results so far appears to be informal recruitment through DKP participation in operations or joint training (Gender Diversity Working Group, 2020, p. 12). The flow of information in the shape of openness about the work and admission criteria has improved in the past few years, that is to say knowledge about close protection work has become more easily available to potential applicants. The report proposes that pro-active recruitment in the form of headhunting should also be considered (Gender Diversity Working Group, 2020, p. 12). The recruitment strategies will be discussed in section 6.4 in this report which deals with mentoring.

2.1.2 Inclusion and recruitment work in BT

The other specialist agencies also rallied round the work on increasing the proportion of women, for example by preparing the report 'Rekrutteringsplan kvinner til Beredskapstroppen' (Recruitment Plan Women in BT) in June 2020 (Halvorsen, 2020), which builds on the findings in the DKP report. This section gives an account of recruitment planning and initiatives taken to instigate change based on internal documents from BT: The Recruitment Plan (Halvorsen, 2020), as well as personal communication with Police Superintendent Espen Halvorsen, basic training leader in BT, and Associate Professor Espen Gjevestad, PHS.

Status

The current status for recruitment of women to BT is that there are no female operators, nor has there ever been any. Between 1995 and 2020 there were fifteen selection processes with follow-up basic training, and in 2019 one woman passed the physical admission tests for the first time and got to the interview stage, but did not get through to the selection/basic education stage. That same year, female applicants constituted 2 percent of the total. In 2019, 43 per cent of the applicants got through to the interview stage, however only 7 per cent of applicants (all men) completed the basic training (Halvorsen, 2020, p. 4).

The reason for the focus on gender balance in BT is that it will add another dimension to the unit. In addition, the plan emphasises the potential positive effect of gender diversity on the staff (Halvorsen, 2020, p. 3). The reason for more actively seeking to recruit women now is that changes in the 'assignment portfolio' in recent years have opened up for greater diversity in the operator profiles (Halvorsen, 2020, p. 3). The recruitment goal for the basic training programme in 2021 was that between five and ten per cent of applicants should be women. This is described as a realistic and ambitious goal. The background to this concrete goal was the low application status at

the time of the report (less than two per cent of applicants were women), which coincided with the awareness of a growing interest in BT among female police officers (Halvorsen, 2020, p. 4).

In light of the current application situation as well as the primary objective of the police force to increase the proportion of women in the whole operational field, the plan proposes a future focus on increasing the proportion of women in BT through pro-active recruitment strategies and follow-up of the targets for the recruitment of women. The goal of the recruitment plan is to increase the proportion of women in the next selection process (2023), and to review selection and basic training to see whether any changes can be made that access a broader recruitment base without compromising the quality of the candidates (Halvorsen, 2020, p. 3). The recruitment programme should be particularly aimed at students at PHS, with emphasis on encouraging women to apply for the basic training both when the training course is publicised and at various recruitment seminars.

Initiatives

Eight recruitment initiatives were specified (Halvorsen, 2020, pp. 11-14):

1. Information work signalling that BT is actively looking for female operators and therefore needs women with the right qualifications to apply. The information material should also state that it is in fact possible to pass the physical tests, since one woman succeeded in passing the admission tests in 2019.
2. Recruitment seminars. These will focus on future talks to a greater extent being tailored to female applicants, and also on choosing speakers who are good role models. There is emphasis on the importance of openness around admission requirements and clear information in order to create the right expectations in potential applicants.
3. Participation in a joint information day at NB.

4. Follow-up of previous female applicants in order to ascertain whether they want to re-apply, or why they do not wish to re-apply. This kind of follow-up can tell us where there is potential for improvement in the recruitment process.
5. Using a variety of media to reach out to applicants, and get assistance from Oslo Police District with developing a strong social media strategy in order to reach female applicants.
6. Adjustments for female applicants, for example by establishing a training community leading up to admission and selection to enable potential female applicants to support and push each other. Such joint training groups can promote a psychological bond between the training partners which may lead to applications. It is also proposed to allow women to go through the admissions process together.
7. Reviewing admission criteria in order to adapt the admission tests to the new facilities (NB), and also to discover whether there is bias involved in some of the tests.
8. Revision of the curriculum.

The importance of having one permanent BT staff member with focus on the recruitment of women and who can also be a contact person, is emphasised. This is because a fixed contact point will provide stability and also be a permanent link to BT (Halvorsen, 2020, p. 9). The job of the relevant individual should be to provide information about selection, basic training and service in BT, as well as to be a role model with relevant knowledge of the needs of women in the various phases of the operator training (Halvorsen, 2020, p. 9). For this position, the unit would ideally prefer a woman who has been through the BT training programme.

The test battery developed for the 2021 admission

In 2021, PHS was updating the curriculum in collaboration with BT. In that connection a fresh job analysis, which was to provide the basis for admission and selection, was developed. A new test battery for

the physical tests to be used for the first time in connection with the admissions process in 2021 was also developed (Police Superintendent E. Halvorsen, BT basic training manager, personal communication, 27 January 2023). The training department brought in external expertise from a consultant with a master's degree from NIH who had also been a specialist consultant at the Norwegian Olympic Sports Centre (*Olympiatoppen*). This consultant contributed to the design of the test battery for 2021 and also created the training schedule for admission preparation. This was posted on PHS.no (Police Superintendent E. Halvorsen, BT basic training manager, personal communication, 27 January 2023). Associate Professor Espen Gjevestad at PHS was also involved at an early stage in the work on developing a new test battery. The background to the whole process was the need to renew the test battery both in relation to changes in the assignment portfolio, accessibility, and the need to consider a gender perspective (E. Gjevestad, personal communication, 20 January 2023). As mentioned above, the aim was also to adapt the admission tests to new facilities (NB), and to review the test battery to ascertain whether some tests involve bias. The exercises were also to be chosen based on their relevance in relation to the job of operator and also to be identifiable with the current physical tests. The test should give applicants fairly equal opportunities to prepare, and were thus designed to require a minimum of equipment. They should not be too technical, but measure as much physical capacity as possible. It was also emphasised that the exercises should as far as possible be designed for minimum injury risk (Police Superintendent E. Halvorsen, personal communication, 21 October).

Trials on the new test battery were carried out on all operators in order to ascertain the minimum performance level. This minimum level was then set for individual exercises (E. Gjevestad, personal communication, 20 January 2023).

2.2 The National Police Special Intervention Unit (BT)

In order to establish the basis for the discussion in Chapter 5 regarding job tasks, and the technical definition of job tasks, we need to look at what constitutes the BT's field of responsibility based on the current planning, its admission and selection, and the aim of the training. It is precisely the field of responsibility/mandate which will determine the job requirements of operators, and this needs to be reflected in selection processes and training.

2.2.1 BT in the planning framework

The Police Emergency Preparedness System (PBS I, II and III) forms the basis of police emergency preparedness, i.e. the 'opportunity and ability to provide consistent and effective handling of ordinary as well as extraordinary incidents and crises'. (Bjørnland in PBS I; Police Directorate, 2020, p. 3). As part of the work on improving crisis management following the events of 2011, NB, the National Police Special Response department, were co-located at the National Police Special Response Centre at Taraldrud. NB consists of the specialist units (the Police Air support unit, the Police Bomb squad, the Police Crisis and Hostage Negotiation Unit and BT, with particular expertise in terrorist events and organised crime/other serious crime. The specialist units are meant to complement each other during major incidents, since 'their expertise is meant to be complementary and mutually strengthening' (Police Directorate, 2020, p. 49). NB comes under Oslo Police District and their main task is assistance to all the country's police districts and special agencies (Police Directorate, 2020, p. 49). PBS I describes BT as follows:

Beredskapstroppen (BT) is the police emergency unit against terrorism and organised and other serious crime. BT is called on in situations that demand special expertise and equipment (Police Directorate, 2020, p. 39).

As a part of NB, BT shall provide assistance to all the country's police districts. Unlike the specialist units in many other countries, BT comes under the ordinary patrol service at Oslo Police Headquarters. The committee that investigated the use of firearms in the Norwegian police in 2016 believed it was advantageous for the police in Norway that various categories of operational personnel (IP1, IP3 and IP4) are able to interact in this way, both in daily policing and in special incidents (NOU report, 2017, p. 86).

2.2.2 Admission and selection to BT

Selection and basic training for BT are done under the auspices of PHS. The course is part of the extension studies and continuing education at PHS, and has two parts: Part 1 is worth 30 credits and Part 2 is worth 10 credits (PHS, 2023). This format of the course was implemented for the first time in connection with '*Grunnutdanning* (basic training) BT (GUBT) 2021-22'. The new two-part curriculum was developed in autumn 2020. Admission to the course is limited to every other year, and in 2021 the course was extended to run over a whole academic year (Police Superintendent E. Storaker, personal communication, 16 February 2023).

The course was completed in 2021 and 2022. For GUBT 2023-2024 the plan is to run it for a full academic year, starting in the autumn and finishing the following summer (Police Superintendent E. Storaker, responsible for recruitment and selection, BT, personal communication, 16 February 2023). Part 2 will generally be undertaken immediately after Part 1. The course runs over two calendar years. As both the course itself and the admission and selection that precede it are extremely resource-demanding, the course will only be offered every other year. A decision whether to offer it as often as every other year will be determined by needs analysis (Police Superintendent E. Storaker, personal communication, 16 February 2023).

The admission requirements for Part 1 are a first degree (Bachelor) from PHS, as well as successfully completed admission and selection (PHS 2023). The admission requirement for Part 2 is successful completion of Part 1. Applicants must be 25 years of age in the year the admission is carried out and have passed a health check-up². Applicants must be assessed as suitable for service in BT. Assessment is done through admission tests and a subsequent selection process (for applicants who pass the admission tests) (PHS 2023). Students are expected to want a place in BT on completion of their course. BT wants to employ everyone who completes the course as quickly as possible, however there have been, and will be, occasions where newly trained students have to wait for jobs to become available (Police Superintendent E. Storaker, personal communication 16 February 2023)

Admission

Admission tests consist of physical tests, swimming/diving test, phobia tests, personality tests, motivation tests and an interview (PHS 2023). The BT training department emphasises that the admission test requires strong physical capabilities, tolerance of phobias and a fighting spirit (E. Storaker, lecture at PHS, Stavern, 19.10.22). Successfully completed admission tests are a precondition for advancing to the selection process.

Those assessed to be the best qualified based on the admission tests are eligible for further selection. The selection process assesses personal characteristics, skills and motivation. Candidates who successfully get through the selection period qualify for the training. (PHS 2022)

For female applicants, it is the physical tests in the initial admission procedure that have been the stumbling block in terms of advancing to the selection process.

² The health check-up with a physician is based on a form from the PHS (Police University College 2022)

Selection

One of the characteristics of a specialist squad is a tough selection process (Stensønes, 2018, p. 8), and this process forms the basis of a fellowship between the operators (Stensønes, 2018, p. 44). The selection therefore involves a more comprehensive and time-consuming process to ascertain whether the applicants have the right characteristics, skills and necessary motivation. In terms of the candidates' physical qualifications, the focus is slightly different during selection: since the physical capabilities are tested at the admission stage, the selection process focuses on mapping physical robustness with the aid of physical stress over a period (Police Superintendent E. Halvorsen, personal communication, 25 February 2023). In addition to exercises testing both individual and team capacity, all special force selection processes involve prolonged physical stress which is made worse by sleep deprivation and other stress factors, such as a reduced food intake.³ The candidates are also expected to manage to familiarise themselves with physical skills (firearms handling etc.). The ability to tolerate this kind of strain is a measure of each individual applicant's physical and mental robustness (Police Superintendent E. Halvorsen, personal communication, 24 August 2021). In order to achieve objectivity, staff responsible for the tests at the various stations may not discuss their observations with other operators, and all observations are reported back to the training manager who collects them in a qualitative software application developed by BT themselves. The application resembles qualitative analysis tools such as NVivo (report writer's own observation during selection in week 34, 2021). The aim was to achieve a systematic overview of collected data, making the collective assessment as fair and correct as possible (Police Superintendent E. Halvorsen, personal communication 24 August 2021). The final assessment is done on the basis of the

³ However, it is the intention of the course management that the candidates, in general, will have sufficient food during the selection process (Police Superintendent E. Halvorsen, personal communication, 25 February 2023).

collected data by the managers of the training section in collaboration with experienced psychologists (who are also researchers in the field). They have a deep knowledge of both special forces and their selection processes, and thus bring special expertise to the process in order to validate the assessments.

Selection is not a topic for this report, which will purely look at the physical admission tests. It will be briefly discussed in Chapter 6, but only as an argument for the kind of focus the admission ought to have.

2.2.3 BT, training

Getting through the initial hurdle of admission tests and selection means qualifying for BT training (PHS 2023). The training is designed to provide basic competence in BT methods, tactics and techniques for the handling of terrorism and organised and other serious crime (PHS 2023). It should be pointed out that the main emphasis of the course is on skills training.

It is the aim of PHS to develop a general level of understanding and knowledge about BT, as well as the specific technical skills and knowledge the students will need as operators. The general education comprises an understanding of BT's social responsibility as an emergency resource and the role BT plays in the Oslo patrol service, the role responsibility, ethical and professional judgements in counter-terrorism and in police operational situations. Creativity is also important in the education, since the candidates will be expected to contribute fresh thinking both in policing in general and in the execution of their job in particular (PHS, 2023). The knowledge the students are expected to acquire spans relevant legislation and planning frameworks, terrorism and counter-terrorism, the techniques and tactics employed by BT, ethics, teamwork and communication, medical services and winter conditions (avalanche theory, navigation, clothing and hypothermia) (PHS 2023). The skills requirement of the training involves being able to account for and use the theoretical part of the training. In addition, you need to be able to assess the relevance

and choose and use the various methods, tactics and techniques that are employed by BT. Teamwork is emphasised as a vital skill, the same goes for good communication skills (adapted to situations and teams). Stress management and awareness of one's own strengths and weaknesses are also important (PHS 2023).

There is no detailed information in the PHS course information pages about *which* tactics and techniques the future operators must acquire. From a security point of view, certain sections of the training are understandably off-limits to the general public. In this connection it is still worth taking a closer look at the kind of skills operators are expected to master, since many of these require physical characteristics and physical skills that are relevant to the report's ambition of mapping the relevant work requirements. Some of the skills are discussed in Stensønes's book *På vår vakt: beretninger fra politiets beredskapstropp* (On our watch: Tales from the police special emergency unit) (Stensønes 2018). Specialist teams within BT include a forced entry team specialising in entering with the aid of heat, explosives, hydraulics etc.; maritime teams, who are specialists in entering boats/maritime installations with the use of e.g. divers and boatmen, marksmen, and medics (i.e. specialists in emergency treatment). Roadcraft is also a relevant skill. It has to be assumed that good driving skills are not limited to cars, since a focus on winter conditions must also imply good snow scooter driving skills. In addition to all the practical abilities, teamwork and interpersonal skills are also relevant since fully trained operators will all be team members. Interpersonal and technical skills also assume physical skill, since tools, equipment and weapons have to be transported and operated, often in extremely demanding conditions. In an operational scenario, all these skills - tactical, technical, physical and interpersonal - are combined since operators need to relate to each other, to the equipment they are responsible for and the mission they have to accomplish. One example of the high skill level can be found in an article in Dagbladet following the 22 July attacks which describes BT

operators carrying out ‘war surgery’ on the youth at Utøya (Hansen, Thømt Ruud, and Seglem, 2011). It should be mentioned here that IP3-approved female personnel with medical training have attended courses in war surgery. They have also carried out missions requiring this type of expertise, not on Utøya, but on later occasions (Police Superintendent Bjørn-Kristian Kjus, UEH manager, Oslo Police District, personal communication, email, 17 February 2023)

Stensønes describes the collective skills as follows:

Expensive to maintain and little used, but it is exactly the ability to overcome obstacles and master rarely required skills that constitute a core feature of the special forces. The ability to handle extraordinary events – when we need it most (Stensønes, 2018, p. 111)

The high skill level of all operators is also illustrated by BT being the only unit whose personnel are IP1-approved. Emergency personnel (known in Norway as IP-personnel) are defined as ‘service staff who are regularly on 24-hour watch and emergency preparedness duty, and service staff in close protection service’ (PBS1; Police Directorate, 2020, p. 41). Based on different areas of skill and expertise they are divided into four categories with different requirements for training, certification and maintenance:

Table 5.1 Education period and training hours per IP-category

| Category | Education | Annual training |
|----------|----------------------|--------------------------------------|
| 1 | 13 weeks | 900 hours |
| 2 | 8 weeks ¹ | 200–400 hours, depending on function |
| 3 | 3 weeks + | 103 hours |
| 4 | Bachelor | 48 hours |

¹To be increased to 9 weeks in 2017
Source: Police University College 2016

Table 5.1 taken from NOU, 2017, p.57 ps.57

1. Category 1 (IP1) are service personnel in the Beredskapstroppen (BT) at Oslo Police District.
2. Category 2 (IP2) are service personnel with close protection as their main job.
3. Category 3 (IP3) are service personnel in the police districts' tactical units (UEH).
4. Category 4 (IP4) are all other service personnel authorised to carry firearms. They are required to go through an annual training and authorisation test for service firearms. (PBS1; Police Directorate 2020, p.41)

The table is somewhat outdated in terms of the training period for IP1, but what is important here is that IP1 have an annual training period which is at least 500 hours more than IP2. This implies that skill maintenance, and maintenance or improvement of physical condition, as well as the acquisition of new skills, are on a completely different level in BT from other emergency categories. In this sense, BT represents what can be defined as an operational elite.

3.0 'The Women Inclusion Project'

In November 2020, Police Superintendent Granøien got in touch with the author of this report. She had for a long time wanted to look into the physical admission requirements for BT, and, having recently taken on the responsibility for gender balanced recruitment at NB, she had the opportunity to initiate change since NB were working on an overall inclusion process with the aim of increasing the proportion of women in all sections. In line with guidelines in e.g. the 'Politimeldingen' (Police Report) (Report to the Storting 29 (2019-2020), she wanted a review of the physical admission requirements in order to see whether there was room for adjusting the demands – something which might increase the opportunity for women to be included.

3.1 Project outline

Together we designed an outline for a research project directed at the physical entry requirements and tests demanded by BT. From an equality perspective, the fact that men and women have different physical pre-conditions is a challenge in professions with concrete, physical job assignments. The starting point of the project was that work done in the field of sport could be helpful when looking at other areas of society where physical conditions and skills are important. Ever since sport was organised and institutionalised in the late 1800s there has been an on-going discussion about who should be allowed to compete and on what basis (Andersen and Loland, 2015; 2017). Few other institutions in our society have the same long experience of discussions about what is fair when the starting point is unequal physical performance levels.

Our statement was that the actual physical demands in operational jobs are not sufficiently articulated and science-based, and that a more scientific review would be able to clarify whether the physical admission

tests reflect the actual demands of the job. The reason for choosing BT as the specialist unit for this project to focus on was that BT:

- Can be described as the physical and operational elite in the police – and thereby has a signalling effect on the whole of the operational field of the police force
- Does not have, and has never had, female members
- Has the most comprehensive admission process
- Has equal (not gender-differentiated) physical requirements for men and women

Since only one woman has ever passed the physical admission tests and no woman has so far got through to the actual selection process, it could be said that BT represents the ‘last bastion encountered by women in the police’ (Hitland, 2007).

The project consisted of two parts, where part 1 was a scientific module led by Wivi Andersen, Ph.D., and part 2 was a mentoring section led by Police Superintendent Wenche E. Granøien, gender-balanced recruitment, NB. The mentoring section was not specified in the project outline beyond being defined as a ‘practical recruitment initiative’; however the ambition was to increase the proportion of women who apply to specialist agencies of NB, in particular to BT, both by means of information and follow-up initiatives of potential female applicants. The scientific part of the project was also split into two parts, one on sports science and the other an ethical discussion. The project was structured as follows (Andersen and Granøien, 2020):

- Mapping of concrete physical job demands in BT based on job descriptions from managers and staff. The mapping will result in a set of tests that may serve as a standard. Given that this is an operational elite and the physical requirements for admission are very strict, we propose that this part of the project is linked to NIH, as master’s projects for the design of individual exercises and measurement of job requirements.

- One sub-question will be to establish minimum and median values for the tests. This may provide indications of how the admission requirements are graded.
 - Input from female participants as well as observation of admission to BT (Andersen and Granøien) should also result in proposals for any modifications/adaptations of exercises for women.
2. One possible real objection to the inclusion of women in BT is that they do not satisfy the physical requirements that are necessary in order to be able to do the job. Part 2 of a mapping of job requirements will be an ethical discussion about what equality means in specialist agencies when the starting point is unequal physical performance ability, that is to say what is just and fair in such a situation. Relevant, ethical issues such as combat effectiveness (Bomann-Larsen, 2013) and/or increased risk to colleagues (if women are unable to give an equal performance) will have to be discussed in this context. Such discussions will be able to provide guidelines for relevant considerations that should be made from an inclusion perspective, for example:
- What should be the minimum requirements?
 - Different requirements for men and women?
 - Dedicated female units?
 - The signalling effect/motivation for other women by having role models
 - Is positive discrimination a good approach?

Originally the project also had a qualitative part where the objective was to map what motivates female applicants to specialist agencies, how they are motivated to apply and how they experience the recruitment process and admission. The qualitative part would be able to give those responsible for recruitment and section leaders important knowledge about what hampers or promotes recruitment, and provide an insight into what motivates women to apply as well as

the opportunity to remove or reduce aspects that are a hindrance to motivation/recruitment. Timing issues (a wish to complete the report before the new intake in 2023) caused this part to be left out.

Our aim was for the project to throw some light on *whether*, and if so *how*, the physical admission requirements of BT could be adjusted in order for women to be included. A discussion of the admission requirements would also, because of the BT position as an operational elite, make it easier for other operational units to discuss and establish the *physical* criteria that have to be the basis of their own selection, i.e. choose exercises that cover the needs of their unit based on the review of job demands at BT.

3.2 Operationalisation of the project

The project outline was designed between November 2020 and January 2021. It was hoped to get the project initiated in the spring of 2021 to give us the opportunity to follow parts of the admission and selection processes in the autumn of 2021. Ertzaas Granøien wanted the project to be anchored internally, so the outline was first presented to the management group at the National Police Special Response Centre (PNB). During the subsequent process, Ertzaas Granøien had continuing contact with the management at PNB, both about the process going forward and about funding.

In May 2021, Ertzaas Granøien and the report writer had an initial meeting with the Research Department at PHS in order to get assistance with getting the project off the ground. If we were able to secure funding for the project, the report writer would be able to work with the PHS research department, but PHS did not themselves have the means to fund the project. We were recommended to apply for funding through the Police Directorate. At the same time – May 2021 – the report writer and Ertzaas Granøien also got in touch with Head of Department Klavs Madsen, Department of Physical Performance at NIH, to clarify the possibility of a master's project which would

constitute the first part of the project, that is to say an assessment of physical admissions tests against concrete job requirements. Start for the master's student was planned for the autumn of 2021, so that even if we did not receive funding for the whole of the planned project the master's thesis would still be completed.

Ertzaas Granøien continued the work on anchoring the project internally, which resulted in the report writer being awarded funding in August 2021 for project start-up from the autumn of 2021 from Oslo Police District via NB's budget. Immediately following the news of the funding, we got in touch with the Head of the Department of Physical Performance at NIH to arrange a meeting for the commencement of the master's projects. The meeting took place on 20 August 2021. Attending the meeting were NB leader Ole Vidar Dahl, Police Superintendent Wenche Ertzaas Granøien, researcher Wivi Andersen, Head of Department, NIH Klavs Madsen, Professor Gøran Paulsen and researcher Tormod Skogstad Nilsen. The meeting resulted in agreement from NIH that they would provide 1-2 master's candidates for the project and that we should appoint a working group consisting of the project leaders (Granøien, Andersen), representatives from NIH (Skogstad Nilsen and Paulsen) and representatives from BT.

3.2.1 Autumn 2021

Selection for BT took place during weeks 34-35, 2021. Police Superintendent Granøien and the report writer participated as observers in week 34. The aim of the observation was to get an insight into the possible physical challenges of the selection process so that we would be able to propose possible adjustments to the exercises for women, as per the project outline (Andersen & Granøien, 2020).

First meeting of the working group

The first meeting of the working group was held on Wednesday 8 September 2021 at the National Police Special Response Centre (PNB). Present were course coordinator for physical training at BT

(name omitted for security reasons), leader of basic training at BT, Police Superintendent Espen Halvorsen, Assistant Professor Espen Gjevestad, PHS (Stavern), researchers Wivi Andersen and Police Superintendent Wenche Ertzaas Granøien, Professor Gøran Paulsen, NIH and researcher Tormod Skogstad Nilsen, NIH.

NIH had two possible master's candidates, both keen to write a master's thesis on the topic. The aim of the working group was firstly to prepare the ground for the master's projects since they were to start that same autumn. The working group agreed to carry out a survey of BT operators in order to map the most important physical demands operators are faced with. In addition, we were hoping to be able to establish whether there were any requirements the operators saw as absolute, i.e. non-negotiable, in relation to physical capacity.

Early on in the working group process, researcher Tormod Skogstad Nilsen pointed to possible difficulties with the job task analysis, based on his own experiences with equivalent issues in the Norwegian Armed Forces.

Second meeting of the working group⁴

The second meeting of the working group took place at PNB on 6 October 2021. Those present were the course coordinator for physical training at BT (name omitted for security reasons), leader of basic training at BT, Police Superintendent Espen Halvorsen, Assistant Professor Espen Gjevestad, PHS (Stavern), researcher Wivi Andersen and Police Superintendent Wenche Ertzaas Granøien. Virtually present were Professor Gøran Paulsen, NIH and researcher Tormod Skogstad Nilsen, NIH, who were both to supervise the master's theses at NIH, and the master's students Tora Husum Kristensen and Lasse Fredriksen.

⁴ The minutes of the meeting are based on the project log (Wivi Andersen) and minutes of the meeting (Police Superintendent Wenche Granøien Ertzaas).

NIH, represented by Professor Paulsen, presented an analysis of tests carried out by BT in 2021 in order to give a preliminary illustration of the candidates' levels. Paulsen also received several test results from Police Superintendent Halvorsen for analysis, who would clarify with the management of BT whether any more tests could be sent to NIH. In addition to the analyses, Professor Paulsen presented four project proposals as to how NIH could proceed in order to establish the actual job requirements of a BT operator. The group rejected the idea of an intervention study as not relevant. The three remaining proposals would require different capacity in the shape of direct costs and release of personnel.

The group reviewed the questions in the questionnaire for the survey among BT operators to map the most important physical requirements operators feel they are faced with (see 4.1.2). The group agreed to review the proposed questionnaire and send this out to the operators as soon as possible so that it could be analysed before the start of physical testing. NIH would also carry out a pilot test on BT operators at the end of 2021, and physical testing of the two groups (operators and voluntary female test persons) was set to happen in the spring of 2022, somewhat depending on what the BT's annual cycle would allow in terms of releasing staff for testing.

Following the second meeting, master's student Tora Husum Kristiansen designed a questionnaire containing both quantitative and qualitative elements, i.e. both ranking and degree of difficulty, and descriptions of exercises and situations. The form was made available to the whole working group as well as the management of both NB and BT who contributed suggestions and clarification of the form. The final form was sent for pilot testing to selected operators (who were also able to contribute their ideas) in late autumn 2021.

Meeting between the project leaders and NIH supervisors

In addition to the two meetings of the working group, a meeting was held between the project leaders (Granøien and Andersen) and

the master's supervisors at NIH (Paulsen and Skogstad Nilsen) on 22 October 2021 where the project setup (the structure of the master's degrees as well as the work allocation between the two students) was discussed. The project leaders felt that one possible error source when testing might be that only operators who were already in excellent physical shape would volunteer as test persons. They would not necessarily be representative of the range of physical levels in the unit⁵. (Recruitment in fact proved to be random, see footnote 5). NIH pointed out that the operator level emerging from the tests might involve an over-capacity, but that the testing nevertheless would map the current level of BT operators. Comprehensive tests plus the physiological testing of BT members would provide good reference values, i.e. good information about the physical level of the current operators. Situation-specific tests were discussed (i.e. tests in conditions that to a greater degree reflect the operators' job requirements). Researcher Skogstad Nilsen pointed out that such tests are more expensive, and even if they would give an indication of actual requirements, they would only be snapshots, that is to say not easy to reproduce and not necessarily representative. It was decided that testing of admission requirements for both groups (female test persons and operators) should take place at PNB in conditions as similar as possible to a real admissions procedure (the same guidelines for instructors, same stress level in terms of time for each exercise/time between exercises etc.).

3.2.2 Spring 2022

In the period between December 2021 and spring 2022, BT operators who had volunteered as test persons and female test persons who were specially recruited went through a set of tests, administered and facilitated by Police Superintendent Granøien (NB), and Paulsen and Skogstad Nilsen, as well as Police Superintendent Halvorsen, BT. The

⁵ Selection/recruitment of test persons was completely random. Everyone who was working at the actual time of the testing was included. The aim was to reach the minimum number of 20 individuals, so BT chose those who were available (Police Superintendent E. Halvorsen, basic training manager, BT, personal communication, 15 November 2022)

testing of the physical admission exercises took place at PNB to ensure that the situation would be as close as possible to the real tests, and the physiological tests were done at NIH. This process is more closely described in the master's theses in part 4.

From 1 January 2022 to 20 August 2022 the report writer was not part of the project because of a lack of funding to cover her position.

Police Superintendent Granøien continued the search for funding, and in June 2022 money was granted from the Police Directorate to complete the project. This meant that in addition to the master's theses it would now be possible to carry out the original plan of discussing the theses and summarise the process in a report, as well as completing the mentoring part of the project as mentioned in the project outline, in the form of a pre-camp for female applicants to BT. The mentoring section would also include training guidance for applicants through a further collaboration with the NIH.

3.2.3 Autumn 2022

The master's theses were completed at NIH at the end of October with results announced in December. Following a review at NB (for security reasons; no changes were made) in October, they were handed to the report author.

Mentoring

The autumn of 2022 was dominated by the mentoring part of the project in the shape of a 'theme day' at NB, as well as a pre-camp for female applicants to BT.

Theme day

As part of the mentoring workstream, Police Superintendent Granøien, NB and NIH arranged a theme day on 25 August 2022 at Taraldrud where the theme in question was "Different physical performance ability and actual job tasks'. Information about the theme day was sent out

in June 2022. Those invited included various police departments, the Norwegian Armed Forces, PHS and the Directorate for Civil Protection. The objective of the day was to present the preliminary results of the master's studies, to share experiences and discuss various issues.

Pre-camp and 'The BT-project, physical requirements, part 2'

The project budget also allowed for realisation of the idea of a mentoring exercise in the form of a pre-camp for female applicants. The mentoring part of the project was led by Wenche E. Granøien in collaboration with Professor Gøran Paulsen and researcher Tormod Skogstad Nilsen, both NIH. Descriptions of the pre-camp and the work there are based on the project outline 'The BT-project – physical requirements, part 2' (Paulsen, Nilsen and Granøien, 2022) which was developed by the above-mentioned researchers, as well as on personal communication with Police Superintendent Granøien and the report writer's presence at parts of the pre-camp.

The pre-camp consisted of a gathering followed by a training programme for women who wish to train towards, and, it is hoped, apply for admission to BT in 2023. So, the pre-camp was a part of what was known as 'The BT-project – physical requirements part 2' (Paulsen, Nilsen and Granøien, 2022), which is a research project to 'get closer to knowing whether the physical entry requirements to BT constitute too much of a barrier for the recruitment of women to BT, ...' (Paulsen, Nilsen and Granøien, 2022). The plan was to recruit around 15 policewomen who wanted to apply to BT and make them go through the same set of tests as Kristensen (2022) had done on her test persons – that is to say admission exercises at Taraldrud and physiological tests and performance tests at NIH. Based on the test results, the women would be given an individualised training programme and regular follow-up leading up to the actual admissions procedure (Paulsen, Nilsen and Granøien, 2022). New tests will be carried out following admissions in 2023 to see whether it is possible for the women to train sufficiently to improve their performance in the admissions exercises (Paulsen, Nilsen and Granøien, 2022). The point of the testing and

follow-up is that this study enables testing of the current system by finding out to what extent training can help the women meet the requirements, and the follow-up can 'form the basis of an offer/a standardised preparation process for women who want to apply to BT in the years to come.' (Paulsen, Nilsen and Granøien, 2022). The project outline also recommends that young policewomen who are not actually going to apply, are included if possible. The reason for this recommendation is that it may be important to recruit women at the earliest possible time, since training for admission requirements and subsequent selection implies 'long-term and goal-oriented effort' (Paulsen, Nilsen and Granøien, 2022).

Ertzaas Granøien was responsible for the pre-camp which was held 15 -17 November 2022 at NIH and PNB. The pre-camp was a collaboration between the training department at BT and NIH, with a welcome talk by the head of BT, a talk about BT by their head of training, a short presentation of the Women Inclusion Project by Ertzaas Granøien, as well as a talk about the theory of training, NIH. The women then went through the same set of tests as in the master's projects. In addition to that particular set of tests, BT had their own programme for the women on day 2. The pre-camp thus consisted of physical tests at NB (day 1), BT's own programme (day 2) and a test lab, NIH (day 3).

The women's test results were not shared with BT, even though they were joint organisers. This was the wish of Police Superintendent Granøien, who felt that any women applicants from this pre-camp should be judged on the same basis as other applicants in terms of what BT knew about them. The physical performances at pre-camp should therefore not be available to anyone except the NIH and the person responsible for mentoring, Police Superintendent Granøien (Police Superintendent Granøien, personal communication 17 November 2022).

3.2.4 Spring 2023

At the deadline for applications to BT there were 132 applicants, seven of whom were women. Three of the women had participated in the pre-camp with training follow-up.

4.0 Part 1: Master's theses

The master's theses are independent research pieces and the excerpts presented here are edited and abridged by the students themselves, Tora Husum Kristensen and Lasse Fredriksen. The original font has also been kept. Supervisors for both master's projects were Professor Gøran Paulsen and researcher Tormod Skogstad Nilsen. As seen in Chapter 3, work on both projects were undertaken at the same time in terms of testing, execution and analysis. I have chosen to present the study of BT operators as test persons first (i.e. Lasse Fredriksen's thesis), followed by the study of female test persons, which is Tora Husum Kristensen's master's thesis. The reason for this sequence is that the first study represents the current status in BT and the second represents the potential of women to reach the current level.

4.1 Lasse Fredriksen, Master's dissertation (2022): Physical capacity in the Police Special Intervention Unit

4.1.1 Summary

OBJECTIVE: The purpose of this study was to map the physical capacity of a group of operators from the Police Special Intervention Unit [from here referred to by the translator as BT], and to investigate the physiological and anthropometric variables associated with performance in the current physical admissions tests and situation-specific tests.

METHOD: Twenty-two operators from BT were recruited to measure body composition (DXA), test aerobic capacity (VO_{2max}), anaerobic capacity (30 sec Wingate), countermovement jump, grip strength, bench press, leg press, and two situation-specific tests consisting of climbing a wire rope ladder and an evacuation test (EVAC-test). The operators also had to go through the current BT physical admissions tests.

RESULTS: The results showed that BT operators have a physical capacity consisting of a high VO_{2max} , high anaerobic capacity measured by a Wingate test, and also good maximum strength in both legs and upper body. BT operators also performed better than the minimum requirement in all current admissions tests. There was also moderate to strong correlation between the performance in admissions tests and physiological variables such as VO_{2max} , anaerobic capacity, and strength and power in the upper and lower body, whilst there was moderate to strong correlation between anaerobic capacity, strength of lower body and performance in situation-specific tests. Anthropometric variables such as height, weight and body fat percentage were associated with good performance in the EVAC-test.

CONCLUSION: BT operators have good physical capacity characterised by a high maximum oxygen uptake, good anaerobic capacity and maximum strength and power in the legs and upper body. BT operators performed considerably above the minimum requirements in all of the current BT admissions tests.

4.1.2 Introduction

Operators in police tactical units have a particularly demanding job. A normal working day for operators in tactical police units may involve extreme situations where the operators' physical and mental capacities are put to the test. If we look at the type of assignment carried out by tactical police units and the kind of situations that may arise, it is obvious that operators need to have strong physical capacity.

Defining the job requirements for operators in tactical police units is no simple task, since such units have to be able to deal with a wide range of situations and assignments (Strader, Schram, Irving, Robinson, & Orr, 2020). Previous studies have mapped the capacity of tactical police units, the correlation between physical capacity and performance in situation-specific tests and illustrated the importance of physical capacity (Irving, Orr, & Pope, 2019; Orr et al., 2022;

Strader et al., 2020). These studies show that operators in tactical police units have to handle situations requiring both aerobic and anaerobic capacity, as well as maximum strength. However, the importance of the various physical capacities will vary depending on each situation, and complex situations which require all the physical capacities at the same time may also arise (Irving et al., 2019).

Previous studies have also investigated the correlation between physical capacity and success in the selection process among candidates for tactical police units (Orr, Caust, Hinton, & Pope, 2018; Robinson, Schram, Canetti, & Orr, 2019). The studies showed a moderate to strong correlation between selection success and aerobic capacity and performance in exercises such as push-ups and pull-ups.

Job requirements for operators in tactical police units have been looked into before, however it is challenging to define concrete requirements because of the wide range of assignments and situations operators must be able to deal with (Irving et al., 2019; Silk, Savage, Larsen, & Aisbett, 2018). Based on the findings from previous studies there is nevertheless reason to believe that operators in tactical police units possess strong physical capacity, and that a strong physical capacity is important in order to get through the selection process of such units. However, no equivalent mapping of BT operators has been carried out.

The aim of this study was to map the physical capacity of BT operators as well as to investigate the physiological and anthropometric variables associated with a strong performance in the current admission tests and in two situation-specific tests.

4.1.3 Method

This study consists of two main parts.

- The objective of the first part was to collect information about physical requirements in BT. This was done through a survey of operators in BT as well as field observation during an exercise. On the basis of this, two situation-specific tests were developed.

- In the second part, operators from BT were put through physiological tests, the tests currently used in the admission process to BT and the two situation-specific tests.

The physiological tests consisted of VO_{2max} (maximum oxygen consumption), a Wingate-test, countermovement jump, bench press, leg press and grip strength. In addition, the test persons underwent body composition analysis with dual-energy X-ray absorptiometry (DXA). These measurements were carried out on *test day 1*. The situation-specific tests consisted of climbing a wire rope ladder and an evacuation test (EVAC-test) with a dummy. These were also tested on *test day 1*. The BT test battery consists of 10 tests. They were tested on *test day 2*. A demonstration of the admission tests can be seen here:

<https://www.politihogskolen.no/etter-videreutdanning/operativt-politiarbeid/innsatspersonell-til-politiets-beredskapstropp-del-1-sarskilt-soknadsprosess/>

An overview of the tests that were carried out during the two test days can be seen in Table 1.

Table 1. Overview of the various tests carried out in the study.

| Physiological tests | Admission tests |
|---|-------------------|
| Dual-energy X-ray absorptiometry (DXA) | Cross-country run |
| Maximum oxygen consumption (VO_{2maks}) | Push-ups |
| Wingate-test | Illinois |
| Bench press | Hang-ups |
| Countermovement jump | Spring |
| Grip strength | Grip |
| Leg press | Stair running |
| | Fitness |
| Climbing a wire rope ladder | Swimming |
| EVAC-test | Life-saving |

Test persons

Twenty-two BT operators were recruited through random selection by one of the project collaborators associated with BT. All participants were given written information about the project and gave their written consent to participate in the study. Details about the test persons can be seen in Table 2.

Table 2. The table shows age, height and weight of the test persons.

| Number of operators | Age (years) | Height (cm) | Weight (kg) |
|----------------------------|--------------------|--------------------|--------------------|
| 22 | 34.3 ± 3.0 | 184.6 ± 6.1 | 87.1 ± 7.0 |

4.1.4 Results

The results show that BT operators have a physical capacity consisting of a high VO_{2max} , high anaerobic capacity measured by a Wingate-test, and good maximum strength in both legs and upper body. BT operators also performed better than the minimum requirement in all the current admission tests (see Table 3). There was moderate to strong correlation between the performance of admission tests and physiological variables, such as VO_{2max} , anaerobic capacity and strength and power in the upper and lower body, and moderate to strong correlation between anaerobic capacity, lower body strength and performance in situation-specific tests. Anthropometric variables such as height, weight and body fat percentage were associated with good performance in the admission tests, while height, weight and total fat-free mass were associated with good performance in the EVAC-test.

Table 3. List of operator performance in the admission tests.

| Test | Variable | Result | Minimum requirement | Percent above the requirement |
|--------------------------|---------------------|------------|---------------------|-------------------------------|
| Cross-country run | Time (s) | 555 ± 39 | 630 | 12 % |
| Push-ups | Number | 35 ± 6 | 18 | 94 % |
| Illinois | Time (s) | 17,2 ± 0,6 | 20 | 14 % |
| Hang-ups | Number | 12 ± 3 | 4 | 200 % |
| CMJ jump | Jumping height (cm) | 56 ± 5 | 40 | 40 % |
| Grip | Time (s) | 76 ± 31 | 40 | 90 % |
| Stair running | Time (s) | 23,4 ± 1,5 | 27 | 13 % |
| Fitness | Number | 145 ± 26 | 80 | 81 % |
| Swimming | Time (s) | 246 ± 55 | 300 | 18 % |
| Life saving | Time (s) | 52 ± 10 | 120 | 57 % |

4.1.5 Discussion

Main findings

The aim of this study was to map the physical capacity of BT operators, and to investigate which physiological and anthropometric variables were associated with good performance in the current admission tests and two situation-specific tests.

The main findings of this study were that BT operators have a physical capacity consisting of a high $\text{VO}_{2\text{max}}$, and high anaerobic capacity, in addition to strength and power in both upper and lower body, and also

that the operators performed better than the minimum requirement in all the current admission tests. Further, there was moderate to strong correlation between the performance of admission tests and physiological variables, such as VO_{2max} , anaerobic capacity and strength and power in the upper and lower body, and moderate to strong correlation between anaerobic capacity, lower body strength and performance in situation-specific tests. Anthropometric variables such as height, weight and body fat percentage were associated with good performance in the admission tests, while height, weight and total fat-free mass were associated with good performance in one of the two situation-specific tests.

Admission tests

The current admission tests have only been used in one admission process, and BT has itself identified modifications which will be made in time for the next selection. One of these changes involves lowering the height of the wall ball throw in the fitness test for individuals under 175 cm. It was observed that taller participants had an advantage compared with shorter participants. This is already happening in the 'burpee pull-ups', where participants under 175 cm can do the exercise with a 2.3 m tall bar instead of a 2.4 m tall bar.

This study is unable to say whether the performance of the operators in the admission tests is a result of the training they are doing or whether they have been selected because of their physical capacity. None of the operators who participated in the study had previously been through the admission process such as it is today, but it is a reasonable assumption that a number of the current admission tests have similar features to previous admission tests. The test persons who took part in this study had not been training specifically for the tests, but still performed above the minimum requirements. It is of course possible that a number of the test persons regularly go through training in the actual admission tests or variations of these, since a large part of their working day is set aside for, for example, physical training.

Correlation between physical variables and admission tests

Finding significant correlation between many of the physiological variables and the admission tests was not unexpected since they are meant to assess the physical capacity of the participants. The correlation between cross-country running and VO_{2max} is in line with previous literature based on the fact that VO_{2max} is regarded as the most important factor in endurance sport (Bassett & Howley, 2000). Other studies have also shown a strong correlation between the time spent on a running test and VO_{2max} (McNaughton, Hall, & Cooley, 1998; Mello, Murphy, & Vogel, 1988). However, there are several other factors that determine performance in endurance sport, for example mechanical efficiency and running economy (Bassett & Howley, 2000). This does not necessarily mean that the person with the highest VO_{2max} is the person with the best cross country running performance, even if we see a correlation between VO_{2max} and cross country timing.

There was also correlation between the number of completed push-ups and performance variables in bench press. This is in line with earlier literature where we have seen that the number of completed push-ups has a positive correlation with maximum strength in bench press (Vaara et al., 2012). It is possible that the reason for this correlation is that the movement pattern in both exercises is relatively similar, except that bench press involves pressing an external weight, while push-ups means lifting one's own bodyweight. It could be argued that push-ups are better suited to admission testing since they are time efficient with few requirements for equipment compared to bench press (van den Tillaar & Ball, 2020). On the other hand, in this context the tests are assessing two different qualities, bench press tests maximum strength and energy expenditure while push-ups measure muscular strength and endurance.

Correlation between performance in leaping power and other power-tests such as the Wingate test and Keiser leg press was also observed. This is in line with earlier literature which has investigated the correlation between different power tests (Lindberg et al., 2022).

Lindberg et al. (2022) demonstrated that there was moderate to strong correlation between jumping height and power tests such as sprint running, sprint cycling and energy expenditure in Keiser leg press. One possible explanation for this is the composition of fibre type and the proportion of muscle mass which are proven to be of importance for the development of strength and power (Haugen, Paulsen, Seiler, & Sandbakk, 2018; Raastad, Paulsen, Refsnes, Rønnestad, & Wisnes, 2010). The same is true for the observed correlation between stair running and Wingate, where a correlation was found between performance in stair running and all performance variables in Wingate. This is not surprising since both tests have a relatively similar duration (23 and 30 seconds), and that both tests are meant to test a person's anaerobic capacity. Fitness only showed a correlation with jumping height in countermovement jumps. This correlation can possibly be explained by the fact that the fitness test includes a 'burpee-pull-up', where the participant has to jump up to a bar. A person with better leaping power will thus need to expend a lower proportion of their maximum capacity to jump up to the bar, leaving a greater proportion of their maximum capacity for the next repetition.

There was no correlation between performance in life saving and some physiological variables. This lack of correlation between swimming, life saving and the physiological variables may be a consequence of the fact that the minimum requirement for swimming and life saving is set so low that it was more than manageable for the test persons in this study. It should also be considered that swimming and life saving are two technically demanding exercises where factors such as buoyancy and the length and frequency of (swimming) strokes affect the swimming speed to an even greater degree than physiological factors (Barbosa, Fernandes, Keskinen, & Vilas-Boas, 2008; Ferreira et al., 2015).

Correlation between anthropometric variables and admission tests

The correlation between performance in cross-country running and weight may indicate that body weight affects energy expenditure in the running performance. This has previously been shown by Zwingmann et al. (2021) where higher body weight was seen to correlate with poorer running performance (Zwingmann, Hoppstock, Goldmann, & Wahl, 2021). Higher body weight will result in having to use more energy to move one's own body mass. The same arguments can be used for body fat, where a higher fat mass has been shown to contribute to a decreased running performance (Zwingmann et al., 2021). Time spent on cross country running correlated positively with body fat percentage. This is in line with the findings of Farina et al. (2021), where time spent on a 3.3 km run also correlated positively with body fat percentage, and the number of completed pull-ups correlated negatively with body fat percentage (Farina et al., 2021). That was also the case in this study, where the number of completed hang-ups and body fat percentage showed a negative correlation. Based on the choice of exercises it must be assumed that several of the BT admission tests to a certain extent are inspired by CrossFit. Haugan (2021) points out that superfluous body fat will have a negative effect on performance in CrossFit and other sports where one has to move one's body mass (Haugan, 2021). It can therefore be assumed that a lower body fat percentage up to a point can contribute to better performance in the admission tests. A negative correlation between body weight and the number of completed hang-ups was also observed. A lower body weight will mean that the total weight to be moved in hang-ups is lower. A person with higher body mass must therefore expend more energy to be able to move their own mass, compared to a person with lower body mass. This is supported by previous findings where negative correlation was found between body mass and the number of completed pull-ups (Sanchez-Moreno, Pareja-Blanco, Diaz-Cueli, & González-Badillo, 2016).

4.1.6 Conclusion

BT operators have good physical capacity characterised by high oxygen uptake, big anaerobic capacity and good maximum strength and power in the legs and upper body. They also performed considerably above the minimum levels required in all the current BT admission tests.

Maximum oxygen uptake, anaerobic capacity measured by a Wingate test, and maximum strength and power in the legs and upper body were associated with performance in the current admission tests, while anaerobic capacity and strength in the lower body are associated with performance in situation-specific tests. Weight, height and fat-free mass were associated with performance in the admission tests, while height, weight and fat-free mass were associated with performance in one of two situation-specific tests.

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4.2 Tora Husum Kristensen, master's thesis (2022): Physical requirements in the Police BT. What is the physiological capacity a woman must have in order to pass the initial physical tests?

4.2.1 Summary

OBJECTIVE The objective of this master's dissertation was to investigate how women who are physically fit view their chances of passing the admission tests, and also to describe the physiological characteristics of the women who succeed in getting through.

METHOD 20 women responded to a questionnaire consisting of eight questions about training background, experience of the admission tests and belief in their ability to satisfy the admission requirements. The women were subsequently put through 11 admission tests and a physiological test set consisting of body composition analysis (DEXA), maximum oxygen uptake (VO₂max), 30 s Wingate bike test (WG), bench press, countermovement jump, grip strength, and Keiser leg press. The tests were carried out on two different days. Correlation and regression analysis was used to find correlation between physiological variables and performance in the admission tests and to predict requirements for the women's aerobic capacity, anaerobic capacity and maximum strength.

RESULTS On a scale from 0-100 the women had a moderately strong belief (≥ 64) in their own ability to pass the admission tests, with the exception of hang-ups (46 ± 41) and stair running (50 ± 19). Their belief in their own abilities correlated well with the pass mark proportion in the tests, with the exception of cross country running which was more demanding than anticipated. Two of the 20 women passed all the admission tests. The pass mark proportion was lowest in cross country running, hang-ups, stair running and fitness. Correlation analysis showed a strong link between VO₂max (ml/kg/min) and cross country running and stair running. 1RM in bench press (kg/krvkg)

?? correlated with push-ups and hang-ups. Pmax (W/kg) correlated strongly with Illinois agility, countermovement jumps and stair running. WGmean (W/kg) correlated strongly with Illinois agility and stair running. The absolute measurements of VO₂max (ml/min), Pmax (W) and WGmean (W) correlated with fitness. Of the anthropometric variables, body fat percentage had the strongest correlation to performance in the admission tests. Regression models with the most demanding tests predicted requirements to VO₂max = 54 ± 2 ml/kg/min, 1RM in bench press = 1kg/krvkg, Pmax = 17 ± 1 W/kg and WGmean = 8.0 ± 0.2 w/kg.

CONCLUSION The women had a moderately strong belief in their own ability to pass the admission tests. Two out of the 20 women (10%) met all the admission requirements. Each individual admission test was manageable for physically very fit women, but combined, they demand anthropometry, aerobic capacity (VO₂max), anaerobic capacity (WGmean), and muscular strength in lower and upper extremities that few women possess and that are extremely hard to acquire.

4.2.2 Introduction

The past few decades have seen an increasing number of women in male dominated professions. Despite both genders being represented in almost all professions and positions there are still no women in BT. However, BT have a strong wish to recruit women. The literature describes the positive aspects of both genders being represented in operational jobs, and how men and women think differently around problem-solving based on their own preconditions.

In order to become a member of BT, candidates have to come through a comprehensive admission procedure consisting of both physical and psychological tests. The requirements of the physical tests are the same for both men and women. The reason is that each individual operator must be fit to handle the same physical challenges and that there might

be a risk element in lowering the requirements. There is little doubt that men have a superior physical capacity compared to women with equivalent training. For that reason, the genders cannot be compared, like for like, without limitations.

The most important reason for the gender differences in physical capacity is that men develop a greater proportion of muscle mass than women from puberty (Handelsman et al., 2018). On the other hand, women accumulate a greater body fat mass, and this results in a clear gender difference in terms of body composition. Based on the current literature, it is assumed that nothing can replace the effect of greater muscular strength in general physical and sports performance (Suchomel et al., 2016). This is illustrated by that fact that aerobic capacity, muscular strength and anaerobic capacity to a greater or lesser degree are affected by individual muscle mass. The importance of muscle mass for performance is equivalent in physically demanding jobs, for example in the fire service (Farina et al., 2021; Skinner et al., 2020) and the police (Kukic et al., 2018).

The objective of this study was two-fold. The first was to discover how women who are physically very fit view their ability to pass the BT admission tests. The second was to describe the demands on women's physiological capacity and anthropometry through the minimum requirements of the BT admission tests.

4.2.3 Method

The study consisted of two main parts. The first part involved a questionnaire that sought to classify the women's self-reported training background and their presumed ability to perform in the admission tests. The second part consisted of physical training, where the women worked through the admission tests as well as a standardised physiological test battery. The two parts were completed during two test days with a minimum of three days in-between.

The admission tests were carried out as they would be in a real admission procedure. The admission tests consist of a total of 11 required exercises. A demonstration of all the tests can be seen here:

<https://www.politihogskolen.no/etter-videreutdanning/operativt-politiarbeid/innsatspersonell-til-politiets-beredskapstropp-del-1-sarskilt-soknadsprosess/>

The physiological test set included measurement of body composition with dual-energy X-ray absorptiometry (DEXA), maximum oxygen uptake (VO_{2max}), Wingate-test, bench press, countermovement jump (CMJ), grip strength and Keiser leg press.

Table 4: Admission tests, their requirements and the physiological tests.

| Admission tests | Required | Physiological tests |
|---------------------|-----------|--|
| Cross country run | 630 sec | Dual-energy X-ray absorptiometry (DXA) |
| Push-ups | 18 reps | Maximum oxygen uptake (VO_{2max}) |
| Illinois | 19.5 sec | Wingate-test |
| Hang-ups | 4 reps | Bench press |
| CMJ | 41 cm | Leaping power (CMJ) |
| Grip | 40 sec | Grip strength |
| Stair running | 27 sec | Leg press (Keiser) |
| Fitness | 80 rep | |
| Underwater swimming | 12 metres | |
| Swimming | 300 sec | |
| Life saving | 90 sec | |

Presumed ability was described with qualitative data and visually compared with performance in the admission tests. Correlation and regression analysis was used to find correlation between physiological variables and performance in the admission tests, and to predict requirements for the women's aerobic capacity, anaerobic capacity and maximum strength.

Test persons

Table 2: Characteristics of the test persons. The values are given as means \pm standard deviation. The professional groups also include students.

| | Number | Age | Height | Weight |
|--------------------------|--------|----------------|-----------------|----------------|
| Total | 20 | 29.8 \pm 3.0 | 167.9 \pm 7.2 | 67.2 \pm 7.0 |
| Police | 12 | | | |
| Armed Forces | 1 | | | |
| Fire Service | 1 | | | |
| Ambulance service | 1 | | | |
| Other | 5 | | | |

4.2.4 Results

Over half the women had been doing CrossFit or a combination of sports in the previous six months. Eight women said they had not been training specifically for any of the admission tests. Hang-ups, push-ups and fitness were the tests most of them had specifically trained for, 9, 8 and 7 women respectively. There was considerable variation in presumed ability in all the tests, with a range of 80-100. The women had the least faith in their own abilities in hang-ups, followed by stair running and fitness, and external weight was mentioned as challenging.

A total of 20 women completed the admission tests except for cross country running and life saving. Two (10%) women met the minimum

requirements in all the tests. The women’s presumed ability correlated visually well with the number of women who passed all the tests, with the exception of cross country running.

Table 3: The number of women who passed individual admission tests. 5%, 10% and 15% represent a lowering of the requirement with a given percentage and the additional number of women who would have satisfied the requirement in each case – no indication of any change.

| Test | Passed | 5% | 10% | 15% |
|---------------------------|--------|----|-----|-----|
| Cross country running (s) | 5 | 5 | 8 | 11 |
| Push-ups (reps) | 14 | - | - | 1 |
| Illinois (s) | 17 | 3 | - | - |
| Hang-ups (reps) | 6 | - | - | - |
| CMJ (cm) | 13 | 5 | - | 7 |
| Grip (s) | 18 | 1 | - | - |
| Stair running (s) | 6 | 4 | 5 | 8 |
| Fitness (reps) | 11 | - | - | 1 |
| Underwater (m) | 14 | - | 3 | - |
| 200m (s) | 9 | 4 | 6 | - |
| Lifesaving (s) | 11 | - | 1 | - |

Body composition

The body fat percentage correlated with cross country running, Illinois agility and hang-ups, where a lower fat percentage showed correlation with better performance. The predicted requirement for fat percentage was 21 ± 2 %. FFM (fat-free mass) correlated with fitness, where a higher absolute FFM had a correlation with multiple repetitions. The requirement for FFM was predicted to be 51 ± 2 kg.

Aerobic capacity

VO_{2max} relative to body weight as a measure of aerobic capacity showed a strong correlation with performance in both cross country and stair running. The regression analysis gave a predicted requirement of 54 ± 2 ml/kg/min.

Strength

A bench press one-rep max (1RM) correlated with performance in both push-ups and hang-ups. The predicted 1RM requirement was 1kg/krvkg. Grip strength did not show any correlation with performance in the admission tests.

Leg press P_{max} relative to body weight showed a strong correlation with Illinois agility, CMJ and stair running. Stair running gave the highest predicted requirement of 17 ± 1 W/kg. Absolute leg press P_{max} correlated with fitness and gave a requirement of 1090 ± 64 W.

Anaerobic capacity

WG_{mean} relative to body weight as a measure of anaerobic capacity showed a correlation with Illinois agility and stair running. The predicted requirement was 8.0 ± 0.2 W/kg. Absolute WG_{mean} correlated with performance in the fitness test, with a predicted requirement of 532 ± 23 W.

Swimming

The swimming tests were demanding, but did not show any correlation with any of the relevant physiological tests.

4.2.5 Discussion

Main findings

Despite the fact that the participants had a moderately strong belief that they would satisfy the requirements of the BT admission tests, only two out of 20 women actually met all the requirements. In line with their own expectations of the tests, cross country running,

hang-ups, stair running and fitness were the most demanding tests for the participants. A good performance in these demanding tests was associated with high maximum oxygen uptake, high bench press 1RM, good anaerobic capacity and leg strength, respectively.

Attitudes

Evensen (2017) shows differences in physical capacity among cadets in the armed forces equivalent to what we see in this thesis, however based on gender-adjusted grading scales, the genders gave an equal performance. The female cadets have less faith in their own physical ability and underestimate their capacity. Evensen links this to the masculine culture in the Armed Forces. With the focus on men's capacity as standard, it is not surprising that women will often feel inferior. I assume this is also an important factor in the low number of women attempting to become members of BT. That the women in our selection had moderately strong belief in their own ability in the admission tests may be explained by the fact that they, themselves, chose to participate in the project. The selected group had a large proportion of women from the police, but also a number of women from outside the force. The number of women in operational roles in the police is currently low. The number of actual candidates for BT with the right motivation, high physical capacity and belief in their own ability must therefore be assumed to be minimal.

Physiological capacity

The physiological variables shown to be the most important in order to pass the admission tests were VO_{2max} , WG_{mean} , 1RM/krvkg in bench press, and leg press P_{max} . These are variables that in this context define aerobic capacity, anaerobic capacity and strength in upper and lower extremities. This shows that the admission tests demand a versatile physiological capacity.

Aerobic capacity

The fact that VO_{2max} correlated with several of the admission tests demonstrates that aerobic capacity was a contributing factor in performance, however not always the most important for the outcome. The women measured significantly higher VO_{2max} than police sergeants of the same age in Germany and Abu Dhabi (Leischik et al., 2016; Orr et al., 2019) and female members of the US Air Force (Giovannetti et al., 2012). In a sports comparison we see that the women had mean VO_{2max} on the same level as members of the Norwegian national alpine ski team (Haugan, 2021). Despite this, regression analyses with cross country and stair running, showed a higher requirement for aerobic capacity than what most of the women had.

Strength

The predicted requirement for bench press strength was the same in push-ups and hang-ups, and was equivalent to the average for women at 1 kg/krvkg. Despite this, more women managed the requirement for push-ups than they did for hang-ups. There are weaknesses in the comparison of performance in hang-ups and 1RM in bench press because these tests measure strength in different muscle groups. The requirement for upper body strength linked to hang-ups must therefore be interpreted with caution. On the other hand, it is obvious that hang-ups require a level of upper body strength way above that of the women in this project. The weighted vest used in the test is most probably an important factor here.

Both relative and absolute leg press P_{max} correlated with some of the admission tests. Correlation with absolute leg press P_{max} in fitness can be used to move external resistance, mainly in the part-exercise wall ball. As far as I am aware there are not many studies showing P_{max} on the basis of the strength-speed relation in women. However, a comparison with the women in the study by Haugan (2021) show that both female alpine skiers and CrossFit athletes at an international level have considerably higher P_{max} , both relative and absolute, than

the women in our selection. These athletes would most probably have delivered a better performance in the fitness test, however their capacity level is way above what women in general can achieve.

Since grip strength did not correlate with any of the admission tests, maximum handgrip is not seen as a significant factor in passing the entrance tests.

Anaerobic capacity

The results showed that anaerobic capacity (WG_{mean}) had a correlation with performance in Illinois agility, stair running and fitness. The women's anaerobic capacity can be classified as above average, and some individuals presented an excellent anaerobic capacity (Zupan et al., 2009). The anaerobic capacity was just as high as in women alpine skiers, but significantly lower than international level CrossFit-athletes (Haugan, 2021). Both stair running and the fitness test required an anaerobic capacity higher than the women had. The requirement for anaerobic capacity is linked to a high requirement for FFM. It is likely that women's anthropometry makes this requirement difficult to meet.

Swimming

When we discuss the difference in performance between genders in different sports, we see that swimming stands out. Energy expenditure in swimming is significant lower for women, presumably because of better hydrodynamic characteristics and better buoyancy than men (Sandbakk et al., 2017). Anthropometrics such as body size and body fat percentage may be the reasons for this. Because of a lack of correlation between the physiological parameters and performance, it is difficult to state what the demands are for women in the various swimming tests. It seems plausible to think that sufficient swimming technique training and getting used to the water will suffice in order to satisfy the minimum requirements, and that as far as swimming is concerned, they are better equipped than male candidates. Taking into consideration the fact that the selected group of women in this study

demonstrated an overall good aerobic capacity, it must be assumed that poor swimming technique was the reason for the specific aerobic capacity in swimming not being sufficient.

The test day at NIH consisted of a series of tests, all with the aim of measuring maximum capacity. Several of the tests, e.g. WG, lateral jump and Keiser leg press measured performance based on activation of the same musculature. It is regarded as likely that 60 performance variables in the later tests may have been affected by the tests done earlier. That is also the case for the admission tests. Tiredness may have had a considerable impact on performance on both test days, and the correlation between maximum physiological capacity and test performance must be seen in the light of this.

It can be argued that putting candidates through a long and exhausting set of tests is particularly relevant for admission to BT. Unlike in sport, performance in BT is rarely about one single exercise in a given period. Without a great deal of knowledge about their everyday working life, it is reasonable to believe that their work may consist of lengthy assignments with varied intensity and challenges. Exhaustion is not only a physiological condition, it can also hit the participants psychologically. That is outside the remit of this thesis, but is an important consideration in terms of the mental strength and resilience needed in the work of BT. Even though performance in the last few admission tests may have been affected by those already completed, whether or not this occurred, may be an important factor in the admission.

4.2.6 Conclusion

The results show that on average, physically very fit women in the selection had a moderately strong belief in their own ability to pass the current admission tests. However, there was considerable variation in perceived ability, probably due to the difference in training background and experience of the tests. The women's perception

of their own ability corresponded well with the actual results of the admission tests, with the exception of cross country running which was more challenging than expected.

The results show that two out of the 20 women (10%) in our selection passed all the admission tests. The tests set requirements for aerobic capacity (VO₂max), anaerobic capacity (WGmean), and maximum strength and stamina in the lower and upper extremities which have not previously been shown in operative service women. One international level CrossFit athlete passed all the tests, but with a small margin. Very few women would be able to reach her level, regardless of how hard they trained. Individually, each of the tests are manageable for physically very fit women, however combined they have requirements for anthropometry, aerobic and anaerobic capacity and strength which are difficult to meet.

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5.0 The Master's theses in the light of relevant literature: Review and discussion

The ambition of this project was to map the actual job tasks a BT operator is faced with, and to investigate whether these tasks are reflected in the physical admission tests. This was in order to discover whether, and if so, how the physical requirements might be adjusted to enable women to be able to join BT. The second part of the project would then discuss any 'grey zones' that had been uncovered, i.e. cases where job tasks were not sufficiently well mapped to be able to give a clear answer as to which test would be able to predict that they could be met. In such situations one would have to rely on other resources than the purely scientific in order to decide the outcome, and this involved a discussion of moral philosophy (ethics). The grey zones would therefore be discussed in the light of what is fair in special services when the starting point is different physical performance ability.

The master's theses provide a status report through mapping of the physical fitness of BT operators, as well as describing how doable/difficult it is for physically very fit women to pass the current tests (Fredriksen, 2022; Kristensen, 2022). The original ambition about mapping job tasks has thus not been realised through this project. In the light of relevant literature, I will take a look at why this shift happened and what it implies, as well as identify any new knowledge the master's theses have contributed. Chapter 6 will then account for relevant ethical problems in this situation and discuss what can be regarded as fair.

In what follows, all references to the master's theses will be to the complete theses, since the articles published in this report are abridged versions.

5.1 Clarification of terms

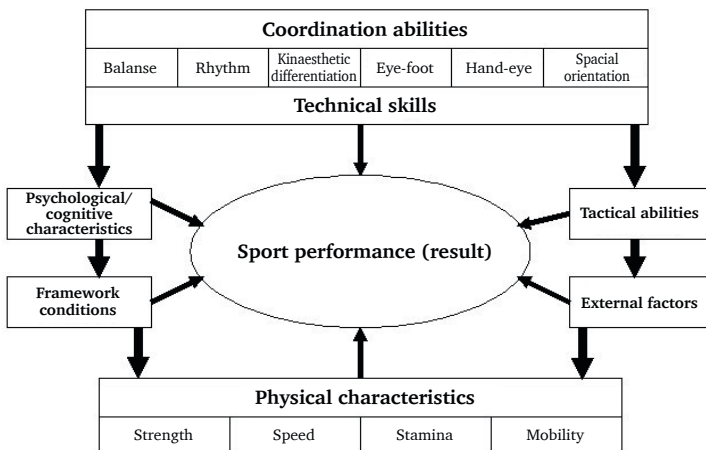
In order to create a common basis of understanding for the reader and report writer it is important that we clarify a few terms. Where the relevant literature has its 'own' definitions these will be explained in the text.

Physical fitness can, according to *Store medisinske leksikon* (sml.no), be understood as physical performance ability or 'an individual's total performance ability where individual effort is decisive for the result. Beyond training, physical fitness will depend on innate characteristics' (Bahr, 2021). Physical fitness consists of both physical and mental components that can be measured by tests, e.g. aerobic capacity, muscle strength, motility, speed, coordination and reaction ability and technical skills (Bahr, 2021). The sum of these characteristics will not only be decisive for how well we perform in sport, but also how well we function in our everyday lives: 'Physical fitness is therefore decisive for a person's capability to function' (Bahr, 2021). This implies that physical fitness obviously has an effect on performance at work. The degree of influence will depend on the role played by the physical components relative to the type of job one does; in other words how important physical fitness is in the performance of one's work.

Job tasks in sport are often called sport specific tasks. These are defined as the characteristics that are central to the performance ability in the relevant sport (Tønnesen, Haugen, Madsen and Staff, s.a.). To map job tasks in a sport, a job task analysis is carried out to uncover the characteristics that are central to performance in the relevant sport. Tønnesen, Enoksen and Tjelta (2004, p. 96) define job task analysis as 'a thorough analysis of the technical, physical, psychological/cognitive, tactical and anthropometric requirements

demanded by the sport in a particular exercise at a given mastering or performance level'. The more complex and multi-faceted the sport is the more difficult it is to carry out such an analysis. Individual sports are easier to analyse than team sports, since factors such as positioning on the field and team play will affect the job tasks. Sports with more complex job tasks, e.g. ball games and sports with an aesthetic element (gymnastics, synchronised swimming etc.) are a greater challenge when it comes to mapping job tasks than analysing a sport with clearer job tasks, e.g. athletics, which involves running at a certain speed, jumping a certain height/length etc.

Figure 1: An athlete's sporting performance ability is dependent on a series of factors (Ehlenz et.al., 1985) (I: Tønnesen, Madsen, Haugen and Staff, s.a.: [Arbeidskrav i idretten \(brik.no\)](http://Arbeidskrav_i_idretten_brik.no))



An individual's performance ability is thus the ability to fulfil the job tasks the relevant sport expects of them.

A test can be defined as a 'standardised and prescribed exercise used to measure bodily or mental characteristics or conditions' (Gjerset and Vilberg 1992, p. 130). The purpose of testing can for example be to

measure whether someone meets the job tasks that emerge following the job task analysis (Tønnesen, Haugen, Madsen and Staff, s.a.). A good test needs to be relevant, valid, reliable and simple, requiring little equipment (Furuly, Ekker, Slapgaard and Bolle, 2020; Tønnesen, Haugen, Madsen and Staff, s.a. **A test battery** is thus a set of tests that collectively assess the characteristics and skills that have been identified following the work demands analysis (Tønnesen, Haugen, Madsen and Staff s.a.).

Job task analyses in sport are also valuable for occupations with a physical dimension. Operational police work constitutes the physical dimension of police work, from which physical job tasks can be defined. In this report we focus on the physical admission tests for BT, and thus the job tasks they are meant to reflect. It can therefore be important to look at why operational occupations have physical tests, the kind of work demands these are meant to reflect, and how operational occupations carry out job task mapping and test design. It is also important to identify whether there is anything that sets BT or similar units apart from the police force in general in terms of work demands.

5.2 Physical fitness testing in operational jobs

The objective of admission tests (initial selection) and subsequent selection processes is to predict or try to predict which of the candidates will succeed in the service they are applying for and to exclude candidates who will not be able to perform well in the job. Employers have a responsibility to identify whether each individual applicant has the physical fitness needed to succeed in the future job. Just satisfying the requirements is not enough, candidates should also have capacity beyond the requirements. This extra capacity could be a physical robustness, or physical surplus (Dillern and Jensen, 2021). Such physical surplus involves managing the ‘transport stage’, and then having surplus energy to carry out the actual assignment.

An example of this type of assignment in BT could for example be in a boat hijack scenario, where divers from BT need to swim a given distance, then board the boat and deal with the situation. Failure to recruit individuals with the required physical robustness may result in injury, disability, high staff turnover, and poor productivity. Together this involves both economic and human costs (Anderson, Gregory, Plecas and Segger, 2001, p. 8). In operational jobs, physical tests are not only accepted, but recommended as an important measure in order to filter candidates during recruitment. That is because the physical tests will assure that the recruited candidates have the physical fitness which is identified as needed in order to be satisfy requirements of the job (Orr, Sakurai, Scott, Movshovich, Dawes, Lockie and Schram,2021; Sax van der Weyden, Black, Larson, Rollberg & Campbell, 2021). For special operational units it is also important to identify the candidates who will be able to cope with the subsequent selection process (Robinson, Schram, Canetti & Orr, 2019; Tomes, Sawyer, Orr & Schram, 2020; Orr et.al, 2021)

As in sport, all training and performance activity involves a certain risk. Where armed forces and emergency services differ from other physical performance or training situations is that this type of work involve a risk of injury not just because of the physical strains or challenges, but also because the context/framework conditions of the assignment can involve risk (Payne & Harvey, 2010; Larsen, Aisbett & Silk, 2016). Special forces are more exposed than other police personnel since their job involves precisely high-risk situations. Their social responsibility also means that such forces have to be operational and available at all times; operational ability thus depends on operators maintaining good health (Larsen, Aisbett and Silk, 2016, p. 2). It is important to employers that candidates are exposed to fitness testing that also reflects this element so that they can be certain that personnel have the necessary physical qualities both in order to do their job and to remain injury-free.

One additional problem of physical testing in a work situation is that selection processes, both initial physical tests and subsequent selection, in themselves involve risk since they pose higher requirements for physical performance than individual applicants are faced with in their everyday work situation. Applicants might be faced with challenges they have never come across before, and in addition these challenges can be more complex, i.e. they combine job tasks in a way the applicants is not familiar with (Orr, Caust, Hinton & Pope, 2018, p. 785). One example of a complex challenge is phobia tests, which often combine a psychological stressor with a physical demand (doing a timed test). A selection process also means less opportunity for catching up. In short, these challenges carry the risk of overtraining and injury (Orr et.al. 2018, p. 785). Because of the risk of injury there is an argument that employers must ensure that physical tests are done in such a way that the risk of injury is minimised as far as possible. This was also one of the ambitions on the introduction of the new BT test battery 2021.

The project baseline was originally that a job task analysis should be carried out for BT, based on which the physical admission tests would be assessed and possibly revised. A job task analysis was carried out (Fredriksen, 2022), however it did not result in a complete overview of all the job tasks an operator is faced with. As will be seen in the following sections 5.2.1 - 5.2.4 which deal with job task analysis and job tasks, one of the reasons may be that in the case of special forces, a complete job task analysis is a very complex process.

5.2.1 How to carry out task analyses in operational jobs?⁶

Job task analyses can be done in different ways, however studies on the armed forces or the police appear on the whole to use qualitative methods to map operational job tasks, which are then

⁶ My thanks to Tormod S. Nilsen for advice in December 2021 about taking a closer look at job tasks in the report. This chapter emerged as a result of me having to delve deeper into the problematics both in sport and in working life with regard to the process around defining job tasks.

given a quantitative expression in a test (Anderson et al., 2001; NATO Research and Technology Organisation, 2009; Larsen and Aisbett, 2012; Silk, Savage, Larsen and Aisbett, 2018). This is because quantitative methods, i.e. the opportunity to measure e.g. the power, spring or endurance/stamina used on an assignment are not necessarily available (Silk et al. 2018, p. 198). Reasons for this may be a lack of relevant equipment to test operators while on a job, or that it is not appropriate to carry out measurements during an assignment for security reasons.

One approach that combines qualitative and quantitative methods in the test design is known as 'mixed methods', however this terminology does not appear to be used in the studies of special forces. The philosophical theory behind mixed methods is pragmatism, where the pragmatic approach recommends choosing the combination of methods and procedures which answers the research question in the best possible way (Johnson & Onwuegbuzie, 2004, p. 14). In practice, the studies of special forces have involved collecting experiences from operative personnel, their leaders and/or other experts in the field through qualitative interviews or questionnaires (NATO Research and Technology Organisation, 2009, R1-22; Larsen and Aisbett, 2012, p. 1269). Operational personnel are asked to characterise how they experience the physical requirements in the various tasks/assignments, and rate the assignments in relation to their importance in the service and how frequently they occur. Personnel are also often asked to state a general opinion of the physical demands required in their job (Larsen and Aisbett, 2012, p. 1275). The interviews/questionnaires are subsequently analysed with a view to identify the most important and demanding tasks. The resulting tasks are defined as critical job tasks and are meant to capture the inherent demands of the role. It is these that, through a collaboration between the researchers and the organisation, will be 'translated' to relevant requirements in a test battery through a collaboration between the researchers and the organisation (Silk et al. 2018, p. 198). However, Larsen and Ainsbett

(2012, p. 1266) give a reminder about the danger of bias: when defining job tasks based on experience-based knowledge, employers must be able to legitimate that the physical requirements represent real requirements for doing the job. Anything else would be discriminatory.

It was precisely the danger of bias that was the starting point for this project. Since BT admission tests and the job tasks they presuppose have been experience-based with information provided solely by men (because BT has never had any female employees), it is difficult to know whether there is bias in the selection process. Physical measurements during exercises or assignments have not been carried out in this project. As previously described, testing in conditions that to a greater degree reflect the operators' physical job tasks was discussed, but not carried through. The reason was one of cost, and also that such testing only provides snapshots, i.e. they are not easily reproduced or actually representative (see 3.2.1). However, a qualitative investigation was carried out by the master's students in the form of a questionnaire that was designed in collaboration with the working group, and completed by both leaders and operators in BT (see 3.2.1).⁷ Based on the questionnaire and observation during a maritime exercise, two situation-specific tests were developed; climbing on a wire rope ladder and an evacuation test with a dummy (EVAC test). These two tests represent critical job tasks of the operator role – i.e. what operators themselves perceive as particularly important physical demands in their job. This means that they constitute *absolute* job tasks for the operators, tasks that cannot be simplified and that anyone who looks to be admitted as an operator must be able to master.

Neither the questionnaire nor the subsequent analysis resulted in a complete mapping of job tasks which can later be translated into a test battery or used to evaluate existing tests. The hope was to map as many physical tasks as possible and quantify them using scientific methods in order to find a kind of 'objective' threshold for minimum

⁷ The questionnaire can be found in Fredriksen (2022), appendix B.

requirements and capacity (I'm using inverted commas here since we are now in a philosophical debate which is not going to be expanded in this report). Seen from a scientific point of view, one could say we are in limbo: the qualitative methods can entail bias, and the quantitative methods may carry the risk that the challenges which operators are actually faced with – and in an emergency operational context **may** be faced with – are not reflected/included. These issues will be further discussed in the section below.

5.2.2 Challenges of task analysis in operational jobs

Fredriksen (2022, p. 9) points out that several studies of police tactical units find that, because of the range and complexity of the assignments carried out, actual job tasks are hard to define. This is confirmed for example in a literature study, which investigates whether physical tests actually are able to predict whether the operator will be able to do the job (Orr et al., 2021). Orr et.al (2021) conclude that there are no standardised physical tests that can predict whether the operator can carry out the job tasks in their special unit, even if aerobic capacity, anaerobic capacity, strength, power and flexibility can be linked to job performance in tactical units (Orr et al., 2021, p. 1). On this basis, a broad selection of physical tests are needed, and they should be in line with the special tasks – both in terms of environment and in relation to the assignment portfolio - that each unit is faced with (Orr et al., 2021, p. 12). Even though there are many concurrent physical requirements in tactical units, each individual unit will have its own, specific challenges which makes it difficult to produce a common, international, job task analysis. It is easy to see that tactical operational units in a big city like New York with skyscrapers and a population of around 22 million with traffic to match will be faced with rather different challenges compared to tactical operational units in the Nordic countries whose challenges are more linked to cold weather and great distances, and access to personnel and equipment in rural areas.

These challenges in the mapping of job tasks are also illustrated in studies from the Norwegian Armed Forces. A working group appointed by NATO, 'Task Group 019', was established to map and discover training methods that can optimise what the report calls 'operational physical fitness' (NATO Research and Technology Organisation, 2009, p. R1-1). The background to the wish to identify and define operational physical fitness was that there had been a change in both the extent and the nature of NATO's assignments. These changes led to a need to look a bit more closely at what in today's context constitute the physical requirements of operational personnel (NATO Research and Technology Organisation, 2009, p. R1-1). The working group resulted in several, parallel studies which are summarised in a bigger report; NATO Research and Technology Organisation. Optimizing Operational Physical Fitness. Final Report of Task Group 019. RTO Technical report (2009). The studies that are summarised in this report were initiated in order to determine the physical requirements of military personnel, both in terms of physical fitness tests (annual and admission) and identification of the most effective and relevant training methods for maintaining operational physical fitness, i.e. operational physical performance ability. One working group identified four physically demanding job tasks that are representative of assignments soldiers from all NATO countries are faced with, i.e. four critical job tasks were identified in relation to operational, physical performance ability. These tasks were digging, movement on foot, lifting and carrying. Based on these (and other tasks), tests were designed. The tests consisted of general tests (running, jumping, lifting of weights) as well as more job specific tests (e.g. lifting and placing boxes from floor height to a given height with a given frequency, over a given time period). The aim of the tests was to predict operational physical performance ability (NATO Research and Technology Organisation, 2009, p. R1-13-R1-18). Performance, in this case, entails that the test persons could satisfy the physical requirements they would have to face at work and that they have

sufficient surplus capacity to avoid the danger of overexertion. An important aim of the identification of physical requirements was just to reduce overexertion and injuries to personnel (NATO Research and Technology Organisation, 2009, p. R1-3).

Other physical job tasks identified in the NATO project were crawling, shooting, movement along an obstacle course, diving, evacuation from water, climbing, fire protection, and more (Aandstad, 2011, p.17). These are military job tasks, which means not all of them will be transferable to the police. Military assignments often have a different duration, and may involve spending time in other countries, which again will involve different weather and temperature conditions as well as topography and infrastructure. Some of this is still relevant in our discussion since BT are involved in exercises along with military special forces. This is an indication that they must be able to interact and possess the same or partly the same skills.

Military special forces are known for having particular requirements for tactical and mental skills as well as an above average requirement for physical capacity. This means that their operational performance ability needs to be higher than that for ordinary soldiers. At the time of the report (2009) no complete overview was available of evidence-based, general physical selection criteria for special forces (NATO Research and Technology Organisation, 2009, p. R1-21). However, one of the studies in the report, a study of Austrian special forces, found the ability to react quickly to be a key skill for personnel in operational forces. Quick reaction can thus be said to be a job task for this group. Other important skills were endurance, staying power and coordination. The method used to define job tasks in the Austrian study also used expert interviews as its starting point – that is interviews with individuals who had been/were experienced special forces soldiers.

In his report on job tasks in the Norwegian Armed Forces, Aandstad (2011, p.14) describes defining job tasks for today's military assignments as a 'big and complex 'task'. The reason is the variation

of physical requirements within the different services, for example between air, sea and land forces as well as between different units (e.g. regular military service versus the Special Operations Command (FSK), or the Naval Special Operations Command (MJK)). As in sport, job tasks are influenced by both external framework factors and internal factors. Internal factors are defined as gender, age, anthropometry (proportions of the human body) and genes, i.e. the qualifications individuals possess for carrying out the job tasks. External framework conditions are, e. g. climate, terrain, sleep and access to nutrition (Aandstad, 2011, p.15). The framework conditions can affect the job task by making it easier or more difficult, for example whether to board a boat in rough seas versus calm water; they can affect a soldier's work capacity in the form of overheating or hypothermia, and have a relationship with the soldier's physical capacity (you need greater upper body strength to haul yourself over a gunwale in rough seas than in calm water). As far as BT is concerned, we see for example that the training requires both knowledge and skills about different winter conditions and what they will mean for the assignment and individual performance ability (PHS, 2023). The large number of possible combinations of factors as well as the lack of a complete overview of all contributing factors together make defining concrete job tasks a challenging commission:

A physical job task can change considerably in a short time and should therefore be understood as a dynamic task and not a task given once and for all and in all situations. Defining job tasks for the unknown must, on the other hand, be said to be more than challenging (Aandstad, 2011, p. 15)

5.2.3 Defining job tasks for 'the unknown'

Operational jobs, e.g. in the police, the armed forces and the fire service, are generally demanding because personnel are expected to carry out tasks that are constantly changing and in unpredictable circumstances (Orr et.al. 2018, p. 785). In the police, the emergency

preparedness element – spending time preparing for the unknown – will be amplified the higher up the tactical personnel scale you climb. Operational specialists must have a response capability not only equivalent to, but surpassing what ordinary operational forces are faced with (Silk et al., 2018, p. 197). The results in Fredriksen's master's thesis (2022) confirm earlier research on special forces about the various elements that are regarded as impacting physical performance ability in tactical units: high VO₂max and anaerobic capacity in addition to strength and power in the upper and lower body (Orr et al, 2018; Maupin, Robinson, Wills, Irving, Schram, & Orr, 2018)

The need for good physical capacity is not just about having to be able to carry out assignments, but to do so in the right way. For the police this means that tasks have to be performed in a way that maximises the safety and security of everyone involved (Anderson et al., 2001, p. 8). It would seem likely that the higher the number of unknown factors, the greater physical 'buffer' individual service persons/operators ought to have. A number of studies show that the better the physical fitness the lower the risk of injury, since persons with excellent physical fitness will have the capacity to perform several activities on a lower level than their own maximum capacity. This means that tasks can be performed over a longer period, they will recover more quickly and will not tire so easily (Orr et al. 2018, p. 786). This particular aspect of policing is discussed by the researchers Dillern and Jensen (2021) in an article in the journal, *Politiforum*. They point out that it is the response element that triggers high intensity in police work, since critical situations often have a tempo that involves high physical demands and in addition may happen in environments or settings that make the situation even more challenging (Dillern and Jensen, 2021). Dillern and Jensen (2021) claim that the two central capacities that will influence individual service persons' ability to carry out assignments are good physical fitness and physical robustness. These capacities are characterised as 'a vital part of an operational

service person's response capability' (Dillern and Jensen, 2021). This is also discussed by Kristensen (2022, p. 61), who points out that performance in sports and performance in BT are very different in terms of the time frame: a sporting performance must take place within a given framework (a competition) limited by time and place. BT do not have the full picture of time or place, and neither of duration and intensity (physical and psychological). Kristensen (2022, p. 61) thus maintains that these factors mean that it is important not only to test the candidates with single tests, but through a prolonged and exhausting test battery (Kristensen, 2022, p. 61).

Preparing for the unknown thus involves having a physical response capability in the shape of good physical fitness and physical robustness. From Dillern and Jensen (2021) and Orr et.al. (2018) I understand physical robustness as a type of surplus capacity for the actual job tasks of the occupation. Preparing for the unknown involves surplus capacity in relation to the job tasks.

5.2.4 Conclusion, physical job tasks

The project outline originally included a 'mapping of the physical job tasks based on task descriptions from leaders and staff' (Andersen and Ertzaas Granøien, 2020). The idea was for the mapping to result in a standardised test battery – i.e. a test battery that used identified job tasks as its starting point. The master's students carried out mapping in the shape of a questionnaire which was designed in collaboration with the working group and tested on BT operators and leaders. The analysis of the questionnaire led to the identification of two concrete job tasks: EVAC-test and climbing a wire rope ladder. The development and use of the questionnaire were in line with what constitutes normal practice for the mapping of job tasks in tactical units/special units, namely through the collection of experiences from operational personnel and leaders (Anderson, Plecas and Segger, 2001; NATO Research and Technology Organisation, 2009; Larsen and Aisbett, 2012; Silk, Savage, Larsen and Aisbett, 2018). However, the project

has not resulted in a complete job task analysis, which means that the significance of the individual elements which constitute operational physical performance ability in BT has not been clarified in this project. On the basis of the challenges outlined in 5.2.2 and 5.2.3, it appears that the project outline was too ambitious in relation to the time aspect of the project. A more comprehensive mapping of actual job tasks in BT will involve both a different time aspect and more thorough knowledge of the character of the service. As illustrated in 5.2.3., it is not possible to reduce mapping of the 'the unknown' to a quantitative dimension and it is therefore impossible to express in a test.

It should still be assumed that Fredriksen's results (2022) provide a good indication of the type of physical capacity that is vital for carrying out assignments in BT. His study is the first to come up with a scientific mapping and testing of BT, based on admission tests and the test battery collated by the Norwegian School of Sports Sciences. As such, the master's study represents something new, because it provides an insight into the physical capacity BT operators actually have. Not only do the BT operators have a higher physical capacity than what previous literature about tactical units have presented, they also perform 'considerably better' than the minimum requirement in the current admission tests for their own unit (Fredriksen, 2022, p. 65). Fredriksen (2022, p. 54) has also mapped anaerobic capacity and its significance, something which has not been emphasised in earlier studies.

One possible danger of the current admission tests (i.e. those designed for the 2021 admission) is that they have an in-built bias. The problem is not unknown in sport, and is illustrated in this quote from the sports philosopher Irena Martínkova:

With respect to the way in which most sports are presently constructed, the best athletes would predominantly be big, strong, able-bodied 20–35-year-old male athletes, while the others, having a disadvantage, remain 'non-comparable' (Martínkova, 2020, p. 463.)

The minimum requirements which came into force in 2021 were set on the basis of testing of BT operators, and as found by Fredriksen (2022), they have a physical capacity which exceeds previous literature on tactical units. The current battery of tests was designed with a view to standardise the physical requirements for admission and to make them more accessible. However, the tests are based on the current operators – who are all men. Also, the men were admitted on a test battery which had not to the same extent been quality assured by external expertise. There is thus a danger that the admission tests still only reflect the reality they are based on, which results in a requirement for a type of surplus capacity which is neither relevant nor necessary for mastering the job.

In line with the tendency seen in research on this type of job task set, the project outline envisaged what can be called a ‘mixed methods study’, which combines qualitative and quantitative understanding in order to come up with practical and usable solutions (Johnson & Onwuegbuzie, 2004, p. 14). The hope was to be able to quantify as many job tasks as possible in order to reduce the risk of bias. The mapping carried out in Fredriksen’s master’s thesis touches on what the operators define as two absolute requirements, but does not give clear answers to which other job tasks, or how much of a surplus capacity, are required for BT’s physical response capacity. As this involves formulating job tasks for the unknown (5.1.5), and a common method for mapping job tasks for tactical units/special forces starts with qualitative interviews or questionnaires aimed at a group of experts in the field (Larsen and Aisbett, 2012, p. 1269), we see that the experience-based knowledge of BT is a central factor in being able to identify or map ‘the unknown’. Since the project did not actually produce a job task analysis which to a great extent would have been able to make several physical requirements measurable, we end up with a form of philosophical-scientific ‘draw’: two types of knowledge come up against each other, because the project has not to a sufficient degree managed to weave them together.

The current test battery has been designed on the basis of experience-based and qualitative knowledge in BT in collaboration with scientific expertise from PHS and an external consultant with a sports science background. The master's degrees did not come up with any suggestions for changes to the test battery. Sports science-based suggestions for changes to the test battery with a background from the master's studies might be well-reasoned suggestions; however, since a complete job task analysis is missing there is nothing to suggest that scientific deductions from the master's degrees ought to have greater weight than the test battery that already exists on the basis of the job task analyses which the BT themselves have carried out. There is a danger that such proposals for change could either be 'ad hoc' solutions, or come in under what Bomann-Larsen describes as 'diversity research', that is applied research where the ambition is change in accordance with political objectives (Bomann-Larsen, 2013, p. 128). It would therefore represent a derailment from the original ambition of the project which was a scientific quantification/measurability of a number of job tasks. From a perspective of legitimacy which will be discussed in 6.2 - BT as a practice - I therefore feel that we need to work with the already existing battery of tests. This should then be discussed from another perspective than the purely scientific – namely from an ethical (moral philosophical) perspective which seeks to illuminate what can be done to make the admission tests as fair as possible from an equality perspective. Such a strategy will also be in line with the original project description.

In terms of the further work on gender balance in BT, one recommendation is to continue the collaboration with relevant scientific contexts in order to enable more job tasks to be measured and thereby reducing the danger of bias in the test battery. However, it may never be possible to achieve a complete job task analysis which can be turned into measurable tests. That is because BT is preparing for 'the unknown' – i.e. something that is neither qualitative nor quantitative. My assumption is that this involves a type of knowledge which cannot

be given a scientific form nor articulated; i.e., a form of tacit knowledge which is ‘acquired through action and demonstrated in use’ (Gilje, 2021). For this type of service (special forces) there will therefore always be parts of the experience-based knowledge that is hard to ‘translate’ into measurable chunks. BT operators are the specialists in their job tasks – external expertise can adjust and balance, but never replace the inherent knowledge deep in the practice.

5.3 Challenges, operational women in special units

5.3.1 Physical challenges

Kristensen (2022) has carried out a qualitative investigation through researching how the female test persons assess their chances of completing the tests, and a quantitative analysis of the physical characteristics and abilities the women actually must possess in order to pass the admission tests as they are today (following the changes in 2021) – in terms of satisfying the minimum requirements of the tests. Such a study on women’s actual chance of passing the minimum requirement of BT has previously never been carried out in Norway. The study therefore gives us real insight into how difficult it actually is for female applicants to pass the current admission tests. Despite the fact that the tests involve great physical challenges, two out of 20 test persons (10%) did manage to pass (Kristensen, 2022, p.1)

Some of the tests were demanding for many of the women, but Kristensen (2022, p. 61) found that it was especially the repetitive, exhausting tests that represented the greatest challenge for the women who struggled to satisfy the minimum requirement in individual exercises - so it was the collective strain that was a problem. If it really is the case that the current battery of tests actually reflects the real job tasks in the force, Kristensen’s findings are an indication that these can be hard to handle. An Israeli study on soldiers found that in operational, military units with the same requirements for women and men, women have a greater risk of overexertion and overburdening

compared with men because of the differences in biologically conditioned performance ability (Epstein, Fleischman, Yanovich and Heled, 2015, p. 109-110). However, Kristensen (2022, p. 61) points out that some of the women had surplus capacity in relation to the minimum requirements. This is an important finding, since it indicates that there are women with a form of surplus capacity or physical robustness when it comes to this battery of tests.

Kristensen (2022, p. 56) found that body fat percentage affects performance in a number of the tests, meaning that a low fat percentage is an advantage. Kristensen also found that the fat percentage that would be advantageous for women who were trying to pass the test was right at the lower end of what is normal for women (Kristensen, 2022, p. 56). A low body fat percentage may lead to health risks in women, including increased risk of hormone disturbances, and in a worst case scenario, loss of bone density (Sundgot-Borgen, 2000, p. 3448). From that point of view the tests could actually constitute a challenge to women's health. It is possible that more long-term training might prevent this from being a problem for female applicants. The pre-camp and the BT project, part 2 will hopefully contribute knowledge about trainability which also addresses this problem.

5.3.2 Experience of admission/test situation in special forces

The original project outline (Andersen and Granøien, 2020) included a qualitative study of what was experienced as supportive and what was perceived as restrictive for operational female applicants. This was cut due to the time aspect; however, in her study Kristensen (2022) carried out a questionnaire-based survey that mapped the female test persons' expectations of performance in the test. This showed that the women had a 'moderately strong belief' in their own ability to perform in the tests (Kristensen, 2022, p. 2). The belief in their own performance ability may seem somewhat surprising given that there is not one single female operator in BT. Even if Kristensen's selection is not necessarily representative of female applicants to BT

(see Kristensen, 2022, p. 44), 12 of the 20 test persons had a police background. Kristensen's findings could therefore indicate that female police personnel regard BT's test battery as manageable, and that is positive in terms of future recruitment.

As previously mentioned, there is no previous research on how female applicants experience application and admission to BT. However, in 2020, Jon carried out a qualitative study of female applicants to police emergency response units (UEH), and the study resulted in the article *Mangel på kvinnelig spesialtrent operativt personell: Hvor «trykker skoene»* (Lack of female specially trained personnel: Where does the shoe pinch? (Jon, 2020). This study provides new and important knowledge of what restricts and promotes applications by female operational personnel to join special units, and it is reasonable to assume that the findings are transferable to the other special forces. Jon (2020) found that even if the women were extremely highly trained, they were still concerned that they were physically weaker than the men (Jon, 2020, p. 15). These notions were raised by the women themselves – it was not a topic among the men who were interviewed (Jon, 2020, p. 16). Jon questions whether old stereotypes may be at the core of the women's focus on this, since the female applicants were over-selected in terms of physical requirements (Jon, 2020, p. 15). However, the women did not experience the physical admission tests as problematic; rather they were surprised that admission was not physically even harder (Jon, 2020, p. 15). Kristensen's findings (2022, p. 2) regarding self-confidence in relation to physical requirements thus coincide with Jon's findings. This may indicate that we are faced with a generation of women who have a physical self-confidence that makes them apply for operational jobs that women have previously not applied for.

It is also likely that these women experience police culture as one of equality (Jon, 2022, p.16). This shapes the women's view on initiatives to promote equality. Jon describes their attitudes as:

... a clear and strong resistance among the female informants to reduced requirements and positive discrimination in job selection. They are determined to have to satisfy the same requirements as men in order to do the same type of job (2022, p. 16).

This issue is also discussed in the final report of the Gender Diversity Working Group (2020, p. 16): One question that was raised in the process was whether the tests ought to be gender neutral given that the job tasks of close protection officers are the same regardless of gender. The report does not take a stand on what ought to be done, but nevertheless highlights the question as one it is important to debate.

5.3.3 Summary

The physical requirements demanded by the current admission tests – even after the revision they underwent in 2021, are so tough that the women who may manage to get through the eye of the needle have a very high physical level. The test battery also requires a physical overcapacity which is very difficult for women to achieve (Kristensen, 2022). In this report, BT operators are defined as an operational elite. Fredriksen's study (2022) defines them as very well-trained men with a higher level than most other special forces, but not as a physical elite. If a woman on the other hand succeeds in being admitted on the basis of these requirements, she will possess a physical elite level where very few women find themselves (Kristensen, 2022). In sport, solutions to big, physical innate differences has been to differentiate the requirements (Loland, 2002). However, Jon's findings (2020) give us important information about what female applicants to special forces want in terms of admission and admission tests: they neither want nor request adjustments or adaptations of requirements because they are *women*. They regard themselves first and foremost as operational personnel who should and must satisfy the requirements demanded by the profession.

6.0 Part 2: Ethical discussion

The discussion of job tasks led to a recommendation to keep the new test battery which had been developed for the 2021 BT intake. As previously mentioned, the recommendation does not entail that the test battery is ‘found not guilty’ of bias, but rather is an acknowledgement that the master’s degrees did not result in increased measurability of physical job tasks beyond two specified tests, that could result in a change to the test battery. Job task analysis of special forces has proved to involve a strongly qualitative element, because this type of mapping is impossible to do without building on the experiential knowledge within the force itself (see conclusion 5.2.4). There is thus little to suggest that the scientific conclusions drawn from the master’s degrees are based on any better foundation than the knowledge which BT itself has about their job tasks. A discussion of the test battery and the master’s degrees must therefore bring in other resources than the purely scientific. This is where philosophy, in the form of moral philosophy, or ethics, come in.

The project outline describes Part 2 as an ethical discussion of what equality means in special forces when the starting point is unequal physical performance ability, i.e. what is fair in such situations. The hypothesis was that philosophical perspectives can contribute to increased insight into these issues, since sport, both as an institution and as practice, has been debating what is fair when the starting point is unequal physical performance ability, for a long time. In terms of the social responsibility of BT and its unique position, such insight needs to be discussed in relation to other ethical issues at the same time as illustrating ethical perspectives in relation to women in operational jobs. Each section will therefore consist of brief explanations of relevant views as well as a discussion.

6.1 Combat effectiveness and inclusivity in the light of BT's social responsibility

The core job of BT is to be the police tactical unit against terror and other serious crime (PBS1; Police Directorate, 2020, p. 39). The police have a mandate to use force in order to protect their own citizens, and in that connection BT finds itself at the 'sharpest end of the state monopoly of violence' (Stensønes, 2018, p.7).

In elite sport as well as in special units, which we can call a form of operational elite (cf. Stensønes, 2018 p. 8) we are talking about a small group with expert knowledge and special skills. Not only do they possess specialised skills, but their performance – and their road to that performance – contribute to the development of a standard for the rest of the practice (methods, training, performance - e.g. world records (sport) or the completion of an assignment (BT)). Both types of elite have access to limited goods. The notion does not imply that these goods are being kept at a minimum level for some reason, rather that these are goods that cannot be available or accessed by everyone at the same time. In sport the limited goods are prizes and status. Operational elites have access to equipment which is not available to other services, they acquire specialist education, training and skills, and the service awards them status. Andersen, Lilleaas and Ellingsen (2017, p. 58) point out that participation in units such as the BT provides status which may aid individuals through their whole career.

The sports philosopher Jane English (1976) emphasises the importance of equal access to limited goods. Even though every member of a community should have an equal right to the fundamental goods of sport, not everyone can have the right to be given a cup or prize money. In order to obtain such benefits, the possession of skills is a relevant factor. In sport, a proportional achievement of limited goods (for women this would be equal representation in elite sports) ought to be normative for their distribution. This view of equality seems to be in line with Lene

Bomann-Larsen's description of Norwegian equality policy. She points out that the aim is equal representation; formal equality in the sense of equal rights is not regarded as sufficient (Bomann-Larsen, 2013 p. 27). Bomann-Larsen points out that when it comes to the armed forces and their social responsibility, diversity is not a goal in itself, but a means to carry out social responsibility (Bomann-Larsen, p. 136). If the focus on social responsibility is lost there is a risk of side-lining operational considerations in order to achieve political aims such as diversity and equality.

Bomann-Larsen's important definition of concepts and the clarification of the difference between objectives and means can be transferred to this project. Sport is significantly different from the world of work. Competitive sport is a closed system, where the framework of the sport is defined by the rules, and the rules *can* be adjusted⁸ to make them more inclusive in relation to what sport defines as performance (Andersen & Loland, 2015, 2017). From a societal perspective, the operational ability of BT overrides all other considerations. Its job tasks are defined by the reality met by operators in their everyday working life. This affects the degree to which requirements can be adjusted or changed in order to comply with demands for diversity and equality. Some requirements must be absolute, that is to say unalterable since they may involve a risk to operators, colleagues or the public if they are not met. In such a scenario, the sports philosopher's perspectives can only throw some light on various issues, not establish ground rules.

Another issue identified by Bomann-Larsen is that by mixing the concepts 'diversity' and 'equality' you end up with implicitly 'linking gender to variables such as social and relational abilities' (Bomann-Larsen, 2013, p. 128). She also criticises what she calls the 'diversity research' which is applied research with the aim of bringing about

⁸ Of course, every adjustment of the rules depends on whether the sporting institutions actually want or desire it, cf. the long process of including women in the sport of ski jumping. But the problem here is the rules, and these can be adapted if the institutions have the will to do it.

change pursuant to expressed political objectives. This type of research identifies e.g. barriers to women's career paths, e. g. selection processes and physical requirements as in the case of the police and the armed forces. This implies that the requirements of the selection process are not vital to the execution of the job, or that they should be subordinate to equality considerations (Bomann-Larsen, 2013, p. 128). Both the concept mixing and this type of research result in a double injustice:

It is unfair to expect that they must represent particular characteristics and values which are traditionally called 'feminine' and it is unfair to them to regard them as representatives of a gender rather than a profession (Bomann-Larsen, 2013, p.130).

I think this understanding of what is fair is also what Jon (2020) captures in female applicants to emergency response units in their wish to first and foremost be seen as professionals and not be given advantages or adaptations because they are women. The eagerness to be inclusive may risk undermining both the combat effectiveness of BT and the women's self-respect as professionals. Being measured and able to measure oneself against the tasks demanded by the job thus looks to be fair and desirable both from a system and an individual perspective.

6.2 BT as a practice

In this report, combat effectiveness is defined as the overall premise from which all initiatives must be assessed. It is thus not only female applicants who represent an individual perspective; the operators working in BT must also be included in a discussion about what is fair. Legitimacy implies that something is accepted because it is regarded as lawful or fair (Fagelund, 2021). A virtue ethics analysis of BT would be able to show how initiatives and change have legitimacy in what the

philosopher Alasdair MacIntyre (1984) defines as a *practice*⁹. *Practice* means a socially established activity based on cooperation between the members and involves striving to reach common goals. For MacIntyre (1984, p.187) practices constitute one of the arenas where human virtues (or positive characteristics; Slåtten Sagdahl, 2022) can be expressed. A practice involves standards of excellence and compliance with internal rules/codes. It is through this common effort that goods internal to the activity are reached. Entering into a practice implies accepting the authority of these standards, working together to achieve them and preferably trying to improve them. In other words, a practice has what could be called a ‘common values horizon’. Individual attitudes, choices and preferences must be subjected to the standards that define the practice – at least for as long as one inhabits the role of practitioner:

By a ‘practice’ I am going to mean any coherent and complex form of socially established cooperative human activity through which goods internal to that form of activity are realized in the course of trying to achieve those standards of excellence which are appropriate to, and partially definitive of, that form of activity, with the result that human powers to achieve excellence, and human conceptions of the ends and goods involved, are systematically extended (MacIntyre, 1984, p. 187).

BT’s hallmark is ‘tough selection, thorough education of specialists, realistic training, cooperation with other special forces both nationally and internationally, strong internal solidarity, dedication to the job and loyalty to its social responsibility’ (Stensønes, 2018 p. 8). This constitutes performance standards that are both appropriate and defining for the activity (counter-terrorism). MacIntyre emphasises that efforts to achieve the best performance are rarely linear; a practice will experience periods of both progress and setbacks (MacIntyre,

9 It is worth noting that MacIntyre’s definition of practice (1984) differs from the common use of the word.

1984, p.190). In times of difficulty the practice participants will try to learn from the setback and work towards a new and better performance standard. This mentality can be seen in a quote from a BT leader following the 22 July attacks:

We learnt a lot from the 22 July attacks and are still learning, but for me the most difficult was the acknowledgement that regardless of whether we did this or that, 77 people lost their lives that day. This is a heavy burden to bear for a force which is specially trained to prevent precisely this from happening ... Nevertheless, we must carry on, and the best way for us to do that is to learn from our mistakes and work even harder to improve (Helge Mehus, NK BT. I: Stensønes, 2018, p. 38)

During selection, participants are tested for characteristics that form part of the ethical principles of BT. It could therefore be said that BT's ethical principles define the traits and characteristics that are wanted from its operators. The ethical principles, or core values, are: readiness to fight, humility, being solution-oriented, solidarity, performance ability, being development-oriented, loyal, reality-oriented, quality-driven and structure-oriented (Manager BT, F. Rotseth, personal communication, 15 December 2022). The core values were the result of an internal process where all operators made contributions and participated in the selection of the values they felt best describe the professional culture in BT (Stensønes, 2018, p. 29). In addition to virtues that emerge through practice, MacIntyre says we have to accept that that virtues such as justice, courage and honesty are necessary components of every practice (MacIntyre, 1984, p.191). These seem to be incorporated, if not specifically expressed, in the core values of BT, as well as in the whole police force.

Internal goods are the goods that can only be achieved by participating in the practice itself¹⁰. If you lack the relevant experience (i.e. have not participated in the practice) you can neither judge nor assess these internal goods (MacIntyre, 1984, p.189). A practice thus involves practical execution and experiential learning to be able to develop good judgement. There is no room in this report for a deeper analysis of the internal goods found in a practice like BT, however the literature indicates that the trust and strong bonds between colleagues is a central internal good (Stensønes, 2018, p. 44). You are trusted because 'you know your profession and are someone the others can have confidence in' (anonymous operator; cited in: Stensønes, 2018, p. 334). The virtues (or the BT core values) are executed in a common effort to realise the goal (the social responsibility) and a constantly improving performance. The internal good which is a result of these common standards and a mutual dependency in order to reach the goal, is trust. Trust in each other and in oneself (own performance) is thus an internal good in the practice here defined as the BT. This trust is significant for what will be experienced as fair by the operators. Stensønes (p. 44) emphasises that the admission test and the subsequent selection are important parts of the basis for building trust between the operators: they have all been through the same selection procedures and the same 'hell' (the selection). Positive discrimination would not only be unfair to women (cf. section above), but also to the other operators since there would be a risk of undermining their trust in a future colleague.

A virtue-ethical analysis of the BT can thus provide a certain insight into the risk of implementing initiatives that are not perceived as fair. Provided that my interpretation of BT as a practice is correct, external clamour for change that has *no* legitimacy among the operators and

10 Two types of goods are available in a practice: internal and external (MacIntyre, 1984, p.188). External goods are equivalent to what we have previously referred to as limited (prestige, status or money). The fact that they are external imply that they are outside the practice; there is no need to participate in the practice to achieve them.

the BT represent a danger that the unit will not be able ‘to achieve those standards of excellence which are appropriate to, and partially definitive of, that form of activity’ (MacIntyre, 1984, p. 187) - i.e. executing their social responsibility in the best possible way. External pressure can, however, also be positive in the sense that it may lead to changes that the practice regard as necessary and desirable. What is important here is that changes that are introduced must not break down the trust-based relationships that are necessary for the operators to perform at the peak of their abilities.

6.3 Inclusivity alternatives

Based on the discussion about job tasks in Chapter 5, it is the BT test battery that was developed for the 2021 admission that is the starting point for an ethical discussion about various proposals for increased inclusivity. Three different alternatives for change: minimum requirement as standard, positive discrimination and system fairness will be discussed and taken a stand on based on relevant literature. There will be a summary of the discussion in 6.5., and it will end with a recommendation of the initiatives that may promote gender balance and are compatible with combat effectiveness.

6.3.1 Minimum requirement as standard

As already mentioned, a minimum requirement for each individual exercise was set by putting all operators through the new test battery. In Chapter 5 on job tasks, we discussed whether this type of testing *could* involve an inherent bias in the test battery: the minimum requirements are set on the basis of operators who had gone through tests that presumably did not have the same form of standardisation as the test battery developed for the 2021 admission. This means that the test battery may require an unnecessary overcapacity. Fredriksen (2022) refers to Chief of Defence Erik Kristoffersen’s statement that he regrets not introducing minimum requirements as standard for admission to the Norwegian Special Operations Forces (FSK), and

points out that the minimum requirements should be used in such a way that they do not select the most well-trained, but the most suitable (Fredriksen, 2022, p. 20).

The objective of the admission tests is to gather knowledge about the candidates' suitability for the job, not first and foremost to measure and rank their physical performance ability, just as a sporting competition would. Stopping the candidates when they have passed the minimum requirement would mean recruiting from a greater diversity. If the change in the assignment portfolio implies that it is now desirable and possible to have greater diversity among applicants, as stated in BT's recruitment plan, the use of minimum standards can be a means to carrying out the social responsibility (Bomann-Larsen, p. 136). In addition to providing for a more diverse recruitment group, minimum requirements as standard could make the test battery more physically manageable for applicants. This would not just be the case for female applicants, but also for some male applicants who today fall by the wayside in a more competitive setting.

Such a change might lead to a legitimacy problem in BT, since the current operators got there by competing through a battery of tests. There would be an additional challenge as far as the aim of the pre-selection is concerned, namely screening a bigger number of applicants so that one is left with a manageable number of applicants who proceed to selection. I am unable to take a stand on the latter problem – this is an economic and logistical challenge which must be considered by BT and PHS. However, I do think that setting the minimum requirement as a standard should not really involve a legitimacy challenge: BT's own operators are the reference group for the minimum standard, and it should therefore suffice for selection. The BT recruitment plan (2020) also points to changes in the assignment portfolio opening up for increased diversity. Minimum requirements as the standard would thus be a forward-looking initiative for facing new challenges, and as such also in line with

MacIntyre's practice notion which includes a constant search for new and better performance standards.

Another possibility is only to stop women after having satisfied a minimum requirement, while men would carry on in a 'competitive setting'. In diversity terms this solution is not as good as using minimum requirements as the general standard, however it can be justified because women's performance has to be particularly good in order to satisfy the minimum requirement compared to men who achieve the same, that it ought to be positively recognised.

6.3.2 Positive discrimination

An initiative such as positive discrimination, i.e. giving advantages to one gender (here: women) at the admission stage could be an option despite the above discussion. From a philosophical sports aspect, English has pointed out that within a perspective where equality is interpreted as an equal, formal right, it would be difficult to produce role models and this might affect the recruitment of women (English, 1976, p. 270). In that light, positive discrimination is a temporary breach of the ideal (formal right) through admitting somebody who does not have all the necessary qualifications or skills, but is only meant as a transitional arrangement to a fairer society (English, 1976, p. 269). Getting women into an elite force which so far has not had any women and not many female applicants could be an effective course of action.

How we define positive discrimination will be decisive for whether it can be used or not. Women who have not passed the physical tests should not be admitted on a quota basis because of the risk that they would not have the necessary physical qualifications to get through a selection process. Precisely what constitutes *necessary physical qualifications* is what the physical tests should be able to predict (cf. Robinson et al., 2019; Tomes et al., 2020; Orr et al., 2021). Admission and selection to BT implies an ability to cope with the challenges and

tasks in the job in the best possible way. Uncertainty about whether the candidate has the required physical standard could lead to risk of injury. Admitting the candidate would then not only breach the prediction base of the test battery, but most probably also Section 1-1 of the Working Environment Act, which secures every individual's right to a healthy and injury-preventing working environment. It could also be argued that positive discrimination would damage important preconditions for internal cooperation and trust in BT. These conditions constitute a relational, operational basis for BT to be able to carry out their work, cf. 6.2 which describes BT as a practice with a common values horizon, with *trust* as the central, relational bond between the operators.

Positive discrimination would have to be defined as follows: if a man and a woman are on exactly the same level following admission tests, the woman could be chosen for further selection on a quota basis. The subsequent selection process would then determine whether the individual demonstrates the necessary characteristics to become an operator. Such an initiative – provided that there are NO changes in the selection – should not weaken/diminish the combat effectiveness of BT. However, Bomann-Larsen emphasises that it would be unfair to women to regard them as representatives of their gender and not of their profession (Bomann-Larsen, 2013, p. 130), and being selected on a quota basis is exactly being selected to be a representative of one's gender. Operational women do not want to be given advantages or to be chosen on a quota basis (Jon, 2020, p. 16), so it could be said that positive discrimination would not be a good thing either for the woman or women themselves or for potential female applicants because this can have a negative effect on the professional pride of applicants who are already very well qualified and professional. An instrument such as positive discrimination thus appears problematic, both in terms of what the women themselves want and their actual performances: women *can* manage the admission requirements of BT, even if it is very difficult. Kristensen's master's thesis (2022) found that

two of the 20 female tests persons could have passed all the admission tests. These were physically very fit women, but they had not been training specifically for admission. In an actual admission scenario this number would have been equivalent to the objective, in percentage terms, of women in operational units.

I do feel, however, that there is an unrealised opportunity in this inclusion initiative which compromises neither the fairness perspective of Bomann-Larsens (2013) nor the findings of Jon on the wishes of operational women (Jon, 2020). If a male and a female applicant are equal in terms of physical tests and other admission tests, the woman ought to take precedence. Not as a positive discrimination initiative, but because with a holistic perspective it would be fairest to include the performance involved for a woman to complete and pass the physical tests and the collective strain represented by the test battery in the calculation. Kristensen points out that:

An international level CrossFit athlete completed and passed all the test, but by a small margin. Very few women will be able to reach her level, regardless of how hard they train. Individually the admission tests are manageable for physically very fit women, however, combined, they require levels of anthropometry, fitness and strength that are hard to attain (Kristensen, 2022, p. 61)

Based on the above you could argue that a woman's performance in passing the tests, given the physical effort required and the motivation she must have to be able to reach this performance, is on a very high level. This is an indication that this 'x-factor' both in terms of performance and motivation ought to count for something in the assessment. It could be seen as a sign of exactly the fighting spirit that BT values, and that such a situation (man and woman on an equal footing) would not constitute positive discrimination if the woman succeeds in advancing to selection. It is then the task of the further selection process to assess suitability and characteristics/skills.

6.3.3 System justice

The physical tests in the BT admission procedure are only a part of a much bigger apparatus which has been put together to assess the candidates in the best way possible. In addition to the physical tests, information has been collected about the candidates via managers etc., they will undergo phobia tests and they must go through an interview. You could say that the physical tests constitute the quantitative variable, and the rest of the tests/assessments are qualitative (except for phobia tests, which also include physical elements). Candidates who go on to selection will have to go through a more comprehensive, qualitative-focused process in order to ascertain whether the applicants have the right qualities that are required to be an operator.

The timing aspect of the admission tests provides little opportunity for the candidates to demonstrate personal qualities (i.e. qualitative characteristics) on which to be assessed. This means that a largely 'cynical' approach, that is to say a quantitative approach, seems to be the one that is most fair to the candidates. A more thorough, qualitative assessment of whether an applicant has the right qualities will be done in the subsequent selection process. With regard to the test battery during admission tests, sports philosophy can show us the fairest conditions in which to measure performance. Loland's Fair Play theory (2002) provides an insight into what constitutes a moral norm system in a sporting competition, and can give us important contributions to how the physical admission tests are conducted.

I will briefly present Loland's theory, and then discuss whether and how the demands of the system can be transferred in relation to the physical admission tests: the structural goal of a sporting competition is to measure, compare and rank athletes according to performance (Loland, 2002a, p. 10). Loland is trying to answer how sporting competitions can be as fair as possible, i.e. that they measure what they are actually supposed to measure, namely athletic performance.

Loland's Fair Play Theory has as its starting point the Aristotelian idea of formal justice (Loland, 2002b, p. 49):

1. Equal cases ought to be treated equally
2. Unequal cases ought to be treated unequally
3. Differential treatment should be proportionate to actual differences between the parties

These are formal norms because they only provide the shape of something, not how they should be actually used, so how can you then 'translate' them into a workable framework? Fraleigh (1984, p. 41) sees sporting competitions as a search for knowledge about performance ability within a framework limited by space and time and a pre-defined set of rules. We could also look at the admission tests and selection procedure in this way: they constitute a framework which will provide BT and PHS with knowledge about the performance ability of potential applicants in relation to the defined requirements which reflect the job tasks of the profession.

Based on Fraleigh, Loland (2002a, p. 45) proposes using scientific experiments as a model for sporting competitions. Competitions represent the pursuit of a particular kind of knowledge where you compare and rank participants based on the 'variable' of athletic performance. This view would be able to precisely define what the principles about formal justice entail in sporting competitions, since scientific experiments have to be conducted under certain conditions: a scientific experiment requires reliability. This means that the tests should measure the same things every time and relatively independently of who is doing the measuring (Loland, 2002a, p. 45).

A scientific experiment also requires validity, that is to say valid measurements, or measurements that measure what they are supposed to measure. Since we are only going to measure that which counts as athletic performance, we must eliminate and/or compensate

for non-relevant factors or sources of error. Loland points out that such elimination and/or compensation procedures are what discussions of equality in sport are all about (Loland, 2002a, p. 45).

The last part of the normative system requires a reasonable accord between unequal treatment and actual inequality. The demand for unequal treatment to *bear reasonable relation* to the actual inequality is in line with the idea of reliability and validity in the experiment (Loland, 2002a, p. 45). Various types of ranking should as precisely as possible reflect the real inequalities of performance.

Loland's moral norms system for fair play in sport (2002a) thus entail that we must compensate for all non-relevant inequalities so that the sporting competition measures the relevant inequality it is meant to measure, namely physical performance. In order to be able to do this, sport must:

1. Compensate for inequalities in external conditions
2. Compensate for inequalities in system strength
3. Compensate for inequalities in person-dependent matters which the athletes themselves cannot control

Even though the admission tests are intended to work as a competition, they are still meant as an instrument to rank or find the candidates who can perform to a given minimum standard. The aim of the test battery is to provide BT and PHS with knowledge of the candidates who deliver a performance that satisfies this minimum standard, and the physical tests and the completion of the test battery should therefore be in line with the norms system for Fair Play (Loland, 2002a). I will give a more thorough account of what the norms system entails, and then show how this can be 'translated' into the completion of the BT test battery, before finally discussing the relationship of the justice norms to the test battery. This, in other words, is a discussion of what constitutes 'system justice' in the completion of the BT test battery.

Equality in external conditions

Point 1, compensate for inequalities in external conditions during competitions, is a norm which mostly concerns outdoor sports, and which implies that external conditions such as wind, sun and precipitation have to be taken into consideration. If they affect the performance in a way which is significant for the outcome, they have to be regulated (Loland, 2002b, p. 51). In ski jumping there are for example rules that regulate the limits of wind intensity. However, this element is also present in speed skating, which now is mainly an indoor sport. Despite stable weather conditions indoors, ice quality represents a challenge for this equality norm, and all speed skating contests have an 'ice commission' which determines the time interval for ice preparation between the skaters, precisely to be able to provide equal conditions for all the competitors (NSF, 2017).

As far as BT's test battery is concerned, the norm about equalities in external conditions appears to be applicable in two areas:

1. the cross-country run
2. Completion of the test

The cross country run

The cross country run is the exercise in the physical performance tests that this norm would apply to. A change in weather conditions, for example if the day starts sunny, but rain develops later this could result in considerable inequalities among individual candidates. Some might be running on dry ground in dry clothes, while others might run in muddy or slippery ground with wet clothes. The track at Taraldrud is hilly and demanding, and this was an issue when testing the women since the cross country run demanded a higher aerobic capacity than most of the female test persons had (Kristensen, 2022, p 46). This means that variations in an already hard test can decide whether a candidate passes or not.

The cross country run is an indirect skills test, i.e. the participants run at different times. Very varied weather conditions on the day of the test can result in large differences in the starting conditions of individual runners. According to Loland, the variation must be within a *defined range of acceptability* (Loland, 2002a, p. 52) to ensure fairness. It is not stated in BT's report/evaluation whether such a range has been defined. If not, this should be done before the next admission procedure. In addition, the most fair in such contexts (outdoor exercises with variable starting times) would be to draw lots about the starting time.

One way to standardise the running test, both in terms of weather conditions and design, would be to run the test on a treadmill. A change in the running test from cross country to treadmill is relatively major, and carries a risk that the test loses its legitimacy; it is no longer recognised by the operators. There is also a danger it can be perceived to be an adjustment with the main aim of including women. If the change is perceived in this way, it would not be fair to the women or wanted by them (Bomann-Larsen, 2013; Jon, 2020).

Another standardising possibility would be to run 3000m on a track or a smooth and fairly flat surface. A somewhat flatter outdoor track with a smooth/stable surface means that body mass would not be such a challenge as on a more hilly track, and that would be the case regardless of gender. In a possible future change to the test battery, this would constitute an opportunity to change the track profile, but still keep the exercise as an outdoor test. This would to a greater degree make it fairer and more inclusive in relation to different body types (but still involve the same time requirement).

There are also arguments for staying with a track profile close to the current one: Fredriksen (2022, p. 15) refers to studies which find that high aerobic capacity gives lower risk of injury, faster catching-up and enables candidates to keep going over a longer period (Orr et.al. 2020; 2022, Canetti et al. 2021). It could also be argued that the

unpredictable element of outdoor exercises means that a certain type of ‘unknown factor’ is present in one quantitative exercise, and that this factor is reflected in having to prepare for the unknown.

It has to be assumed that several of these elements were evaluated before the new test battery was introduced in 2021. The terrain around Taraldrud is a given. If admission tests continue to be held there in the future there is no opportunity to change the track profile, and changing it considerably could also challenge its legitimacy (cf. discussion above). A treadmill test would involve a challenge to its legitimacy since a change would not be in line with the idea of a certain unpredictability. The conclusion is therefore to keep the test as it is, but to define the area of acceptability in terms of weather and ground quality – if this has not already been done – before the annual tests are carried out. Starting times should be decided by drawing lots, or at least in the most practically possible randomised way.

Execution of the tests

The principle behind equality in external conditions is that a competitive setting should be as fair as possible; it must give the athlete the opportunity to demonstrate relevant inequality: the athletic performance. This means that the norms of justice must be arranged for optimal performance. This implies, as the speed skating example showed, an equality or standardisation of execution (prep interval). Transferred to the physical tests in the BT admission tests, where the objective is to select the best in the form of ‘the right ones’, this is a relevant perspective. The execution of the test battery must follow the norms of justice as well as possible, so that all applicants do their very best, i.e. deliver their optimal physical performance. This is happening during execution of the current tests (test battery, 2021), where it is emphasised that the candidates as far as possible will have equal rest periods between the tests (my own observation during admission tests).

However, in his master's thesis Kristensen (2022) demonstrates possible breaches of the justice norm when it comes to the integrity of the measurement, something which could affect the opportunity for equal performance:

Each individual admission test had, in the main, a fixed (the same) test supervisor, but exceptions were made in cases where the actual test supervisor for practical reasons was unable to be there. This may have had an effect. One example is the fitness test, where the wall ball repetitions were disallowed for four of the women, which resulted in a total of zero valid repetitions in the test. Some test supervisors chose to let the women go on to the next exercise, whereas others asked the women to continue throwing until all the throws were approved. All the tests that had guidelines for technical execution may have been assessed with different weighting by the various test supervisors (Kristensen, 2022 p. 45).

Even though the intention behind the changes introduced in the 2021 admission was standardisation of both requirements and execution, it is clear that not all test supervisors work according to the same standards. One objection here would be that the women who achieved zero approved repetitions in any case would not have gone through to the further selection process, and it is therefore irrelevant whether they had any energy left for the subsequent tests or not. The problem illustrated by the quotation is more a matter of principle: Execution of a test battery must be equal regardless of who the test supervisor is – anything else would constitute a system injustice.

Kristensen also points out that both the execution of and the devices used to measure the exercises (stopwatches, measuring tapes and visual estimates) are simple and equipment-effective, but there is a risk that test supervisors execute/use these in different ways and that the devices themselves are not sufficiently accurate (Kristensen, 2022, p. 44). This is most probably a question of both economy and

practicalities. If the devices (stopwatch and measuring tape) are kept, it would seem even more important to work towards making the test supervisors' execution of the measurements as standardised as possible. This was laid down as a condition for the 2021 admission process, but seems to be a bit of a challenge. The reason for this could of course be that both the setting (The National Police Operations Centre (PNB), Taraldrud) and the test battery are new and thus experiencing a few initial issues. However, Kristensen's findings imply that the need to focus on equal execution of the tests and measurements should be implemented to an even greater degree among the operators who function as test supervisors. In order to pursue a 'quantitative' execution of the tests as far as possible, it should be emphasised to the test supervisors that there is little or no room for personal judgement, for example in the validation of wall ball.

One proposal which could strengthen the system justice and reinforce the focus on equal execution of the tests and measurements is the presence of an external observer during the admission period (days). Such a person could function as a neutral observer able to give feedback to the training manager about whether the execution satisfied the standard. Such an observer should have experience of physical testing and admission tests to special units, so it would be natural to use someone with this type of experience from another section of NB.

It is also important to point out that BT is the first special unit at NB that has had its physical test battery reviewed in the way that has been done in this report, with master's theses and a discussion around physical requirements. BT has through participation in the execution of the tests in the master's theses at NIH, been given an insight into what reliability and validity mean as ideals of good research practice. This can serve as an elaboration of the ideals we see in BT's own conditions of execution (see 2.1.2 and 2.2.2). The execution of the 2021 test battery strove to achieve these ideals. BT tests and

their execution have also been evaluated and analysed following admission, both in the master's degrees and in this report. This gives BT knowledge that other special units do not have about how accurate and how standardised measurements ought to be in order to be fair. It would therefore be natural for test supervisors or personnel in the BT training department to be used by other special sections as external observers, precisely because BT now has the greatest experience of how measurements can be made most reliable and valid. Having an external observer ('external' in the sense of another special unit) during admission testing for all special units is an initiative which is recommended in order to guarantee fairness in the system.

Compensate for inequalities in system strength

Another challenge for the equality norm in sport is that there are great differences in the athletes' access to financial and technological resources, i.e. what is known as system strength. The Finnish sociologist, Heinilä, described a totalisation process in modern competitive sport in the 1980s, where the Cold War made itself known in the sporting field (Heinilä, i: Loland 2002b p. 54). Individual performances were to a greater extent expressions of a system's economic, technological and scientific strength than individual skill and performance. Reducing system strength in sport has proved to be difficult, but a good example of an attempt is the proposal of Deputy Head of Winter Sports Helge Bartnes, which was that all nations should have their skis waxed in the same trailer (Helge Bartnes, i: Herrebrøden, 2022).

It is doubtful whether there are such differences between the applicants to BT that we can talk about system strength as defined by Heinilä. However, the intention of the new test battery was to make the exercises accessible through posting videos on the PHS website and going through the exercises to make them easy to complete regardless of where in the country the application was made from (without having to rely on equipment). Access to equipment and gyms

constitute a mild form of system strength, and simplifying the test battery means that applicants do not depend on such access. On the actual day of the test there is also a requirement for a form of system fairness; the equipment is the same for everyone (nobody is allowed goggles or a nose clip in the swimming pool). In this way personal finances of access to training facilities – in this context interpreted as system strength – are neutralised and therefore no threat to justice. I feel, therefore, that this equality norm has been safeguarded in the premises established by BT.

Compensate for inequality in person-dependent matters that the athletes themselves cannot influence

Inequalities in physical conditions that are normally compensated for in sport are gender, age, body size (height/weight) or degree of function. Based on the discussion in 6.1, compensating for inequality in physical conditions because of gender is not a relevant alternative in this context. The age segment is pre-defined by BT, and in order to pass all the tests there will be an underlying presupposition that candidates do not have any functional impairment or injuries. This is the starting point before discussion. However, compensation in relation to body size is gender neutral, and would result in increased fairness for both men and women. If the proposal to stop the candidates once they have achieved the minimum requirement is taken up, this will also be a measure that promotes fairness when it comes to body size: Fredriksen (2022) found negative correlation between body mass and the number of completed pull-ups. Minimum requirements will imply that some applicants with a higher body mass or with different muscle/fat distribution (women) will find it easier to pass the test.

Adjustment for body size, understood as height, was already done in the fitness test (Kristensen, 2022, p.24). The fitness test consists of three different exercises: wall-ball, kettlebell swing and burpee pull-up; all described in more detail by Kristensen (2022). Burpee pull-up has height adjustment of the pull-up bar from 2.4 m down

to ca. 2.3 m for participants under 1.75 m. In addition, at the 2021 admission BT itself identified an adjustment they wanted to implement in the exercise wall-ball (Fredriksen, 2020, p.57). In this exercise participants throw a 15 kg medicine ball above a line 2.75 m high on the wall, which meant that tall applicants had an advantage. For the 2023 admission the height will be lowered for applicants under 1.75 m (Fredriksen, 2020, p. 57)

6.4 Mentoring

The mentoring part of this project is in line with BT's own recruitment initiatives (cf. 2.1.2), the aims of which are to reach more female applicants, have a greater degree of openness around qualifications and requirements and also to confirm that it actually is possible for women to pass the physical tests, since one woman did pass in 2019. 'The Women Inclusion Project' has provided resources to enable a clear focus on recruitment and recruitment work. The theme day and information to the districts about the pre-camp have enabled NB (and BT) to reach a larger number of operational women and female students at PHS and tell them that they would like female applicants. This has given participants the opportunity to be shown around, learn about the type of work carried out and be able to see the training area at Taraldrud. This all contributes to a demystification of BT which could appeal to female applicants, cf. the findings of Jon about female specially trained operational personnel and where the problem lies (Jon, 2020, p. 215). Pre-camp has been an active recruitment project in the form of systematic training preparation for the BT admission tests, and sends a strong signal to all service personnel and service locations about how BT and NB view their future special forces.

From an ethical point of view, this type of active recruitment can be regarded as a form of recognition: (Honneth, 1995). According to the philosopher Axel Honneth, personal identity is dependent on recognition in three different areas of our lives; in personal

relationships, at work, and as citizens (national subjects), and the different types of recognition we receive help us to shape our identity. At work, recognition comes in the form of solidarity from our colleagues. Solidarity can be regarded as a recognition of our abilities and skills as central to the realisation of the common goal everyone is working towards (Honneth, 1995, p.92). The recruitment which has been done by the mentoring part has had a clear focus on NB and BT wanting and needing female applicants. The work already underway in the BT training department on increased openness, accessibility and information on physical entry has been reinforced through the mentoring and been able to reach even more through theme days and pre-camps. What NB and BT are signalling with these initiatives is that they want women as future colleagues provided that they – like all other applicants – have the right qualifications. The mentoring project can therefore be regarded as a form of recognition of female applicants to operational jobs. Looking at the applications to BT for 2023 the mentoring project appears to have created the desired focus. At the deadline for applications there were seven female applicants, and three of them had participated in the mentoring project in the form of a pre-camp with test practice and training follow-up.

In addition to increased visibility, the mentoring project has also created a future knowledge base for NB/BT and other special forces: Follow-up of female applicants is one of the ambitions for future recruitment work in BT (see.2.1.2). Pre-camp has registered female participants who can give feedback on how admission and pre-camp are perceived, what can be improved and what should be pursued. This is knowledge that should be included in the on-going work on gender equality in the special forces. This is also an opportunity for the research environments at PHS, since the experiences of these women should be relevant for research projects on operational women and what promotes and hinders their career choices. Such a project would be in line with the qualitative part of the original project outline.

It could be argued that the special treatment implied in a pre-camp for women, is unfair to male applicants. A pre-camp can signal the importance of recruiting women, seen as representatives of gender rather than of profession. That would be a valid argument if we could declare the physical tests free of bias. However, this project has not managed to achieve that; the tests *may* involve requirements which is above what is necessary in relation to actual job tasks. Given that this is the case, it would seem fair to give potential female applicants help and guidance in advance of the physical admission tests.

Another objection is that gender equality is an issue in other special units too. In that sense it may seem unfair to put the focus on BT which has the toughest physical tests, rather than trying to increase the number of applicants in units with more 'surmountable' physical requirements for women. Both master's theses (Fredriksen, 2022; Kristensen, 2022) state that it is extremely demanding for women to pass the physical admission tests to BT. In terms of the use of resources and attention, this focus on recruitment to BT rather than other special units may seem like something of a waste of resources. However, the symbolic value and influencing power of an elite force both internally in a practice/an organisation or a society is so great that if work on inclusivity is successful there it will have a positive, infectious effect throughout the organisation. If we consider the whole operational force to be a practice field according to MacIntyre's definition (1984, p.187), then it is the privilege, and maybe also the responsibility, of the elite, understood as the top experts in their field, to be those who to the greatest extent makes the values base of the field visible.

6.5 Summary and recommendations

The most important and overall conclusion for this chapter was presented in 6.1, and is that combat effectiveness must be the normative premise for selection if BT is going to be able to fulfil their social responsibility (cf. Bomann-Larsen, 2013, p. 136). Changes to

the assignment portfolio mean that new and different abilities or skills may be relevant to fulfilling the social responsibility, and increased diversity in the recruitment of operators may be an instrument in the solving of new tasks. When it comes to the fulfilment of the social responsibility, sports philosophical perspectives can only throw light on but not be the supplier of conditions since the context of sport is significantly different to that of the world of work.

In 6.2 BT was defined as a *practice* in a virtue-based ethics (MacIntyre, 1984, p. 187). This means a socially established activity which entail that members are working towards a common goal and have a common understanding of the positive characteristics that are vital to reach that goal. A practice implies skills and standards of performance which the practice community all the time strives to improve. Stepping into a practice implies recognising the authority of these standards and all the time striving to demonstrate the positive characteristics that the community regards as important. An important internal good – that is to say a value that benefits both individual operators and the community if the practice is conducted in accordance with the above premises – was identified: trust. The next conclusion in this ethical discussion is therefore that initiatives that may undermine the trust between operators endanger the execution of the social responsibility of BT. Changes that are not considered legitimate by the operators risk not only to undermine the trust in new colleagues, but also the trust in that the selection system works in line with the goals of the practice.

6.3 discussed various alternatives for promoting inclusion. The conclusion here is that BT ought to go for minimum requirements as the standard; not just for women but for everyone. This will entail a better opportunity to recruit from a diversity which has not previously been available because of the very strict physical requirements. The minimum requirements have been set by BT operators and thus imply an internal quality assurance of the necessary physical qualities of new candidates. The fact that the minimum requirements have been set

based on the current operators' physical standard ought to mean that this will be considered legitimate in BT.

Positive discrimination in the shape of women being admitted without having given an equal performance/satisfied the minimum requirement should not be introduced, since it is neither wanted (cf. Jon, 2020) nor fair (Bomann-Larsen, 2013) for female tactical personnel to be representatives of their gender rather than their profession. However, there could be an opportunity for women to pass the admission tests by regarding their performance as an 'overperformance' (cf. Kristensen, 2022). This would mean that if a male and a female applicant are head to head in physical tests and the other admission tests, the woman should be given priority.

The most important sports philosophy contribution in this report is a clarification of what is meant by system justice. BT was already in the middle of a process where the goals of the 2021 test battery was standardisation, accessibility and increased fairness in the test execution. Loland's Fair Play theory discusses the potential for improvement in relation to these principles. Suggestions for change based on these principles are:

- Execution of all physical admission tests should strive for the greatest possible standardisation, both in terms of execution and assessment. Admission tests should be done as 'quantitatively' as possible – i. e. with minimal scope for test supervisors to exercise discretion in the assessment. Even though this looks to have been the original focus, Kristensen's findings (2022) show that the principles of equal execution of the tests and measurements ought to be implemented to an even greater degree in order to ensure system justice.
- Consider measurement instruments (stopwatches etc.). Are other measuring methods available and affordable?
- Cross country running: If there are no set limits for weather and surfaces, this should be done. The start time in outdoor

activities should generally be randomised as far as possible – that is most fair.

- Review the test battery with a view to compensate or designing the tests to be as fair as possible in relation to body size. This will imply greater fairness for both men and women.
- Have an ‘external’ observer, i.e. a test supervisor from another unit, present during the admission tests to get input on the execution of the test battery and whether it satisfies the requirements for system justice.

In 6.4 the mentoring section of the project was discussed on the basis of a theory of recognition (Honneth, 1995). The conclusion is that the mentoring can be viewed as a form of recognition of female applicants. In addition, mentoring, in the form of a pre-camp, constitutes a proactive recruitment project. This gives a strong signal to the police districts and all service personnel that NB and BT see women as part of future special forces. The recommendation here is that the focus should be kept on mentoring, also after the end of the project. The execution of the mentoring project seems to have been very successful and ought to be continued in the form of an annual information day for women, and the development of an offer or a standardised preparation process for women who want to apply for admission to BT, in line with the recommendations in the project outline of Paulsen, Nilsen and Granøien (2022). As recommended in the outline, recruitment should also include PHS students, since a training programme for women must be assumed to span several years.

7.0 Conclusion

This conclusion will apply to the whole of chapters 5 and 6, which are both philosophical discussions accounting for the relevant theory. Chapter 5 mainly deals with method and the philosophy of science, chapter 6 constitute the ethical discussion set out in the original project outline of the ‘Women Inclusion Project’. The account and discussion in Chapter 5 was not considered in the original project structure. The chapter is a result of the fact that the mapping of job tasks in the master’s theses did not end up as comprehensive as the project outline had expected. There are many reasons for this, including that it would probably have been more time and resource demanding than the project framework allowed for, and probably would involve following the milieu over time. Also, some job tasks appear to be based on a type of knowledge which can be difficult to give a scientific form to in the sense that they are based on experiential knowledge that cannot necessarily be articulated or quantified. Preparing ‘for the unknown’ is not easy to define or measure in any shape or form.

For the requirements that actually can be articulated and quantified it is important to use methods that are best suited to dig out this knowledge. The method which seems to dominate mapping of job tasks in this type of unit is consequently based on a mixture of qualitative and quantitative methods, known as mixed methods (Johnson, Onwuegbuzie and Turner, 2007). Both master’s theses used this approach in that they included a qualitative element (questionnaire). Fredriksen’s questionnaire (2022) led to two tests, where one was a more measurable variant of a test that is already done in the BT admission procedure. Given that the current test battery has been developed on the basis of experiential and qualitative knowledge in BT in collaboration with external expertise (PHS and an external consultant with a background in sports science), and the

master's theses do not propose any changes to the existing battery, the conclusion is that the existing test battery should be kept. This does not mean it has been cleared of bias, but that it is the most legitimate starting point for an ethical analysis.

The master's theses are ground-breaking because they carry out a scientific mapping of something which has not previously been done in Norway, namely the physical level of operators in BT and the opportunities for women to pass the physical admission tests. The theses also provided an evaluation of the reliability of some of the measurements in the admission tests and observation of how the test batter was conducted. This has given us important feedback on how the system can be made fairer. The master's theses have led to a systematic, scientific review of the test battery. Even though this has not resulted in proposals for changes in the test battery which could lead to the lowering of requirements, it still provides ideas for possible corrections of the current system which would make it even fairer.

The conclusion to the scientific and ethical part of this project is that the physical tests cannot be substantively changed. The proposals for change are therefore concentrated on the way the tests are carried out: Minimum requirements, priority for women when to applicants are head-to-head, as well as initiatives to increase system justice. Since this part of the project concludes that the presupposition of equal admission requirements for men and women, the mentoring part of the project becomes that more important. Only a small percentage of women will pass muster in the current tests even if they are conducted on the basis of minimum requirements. In order to be able to achieve their own ambitions of an increase in recruitment, BT and PHS must manage to recruit more female applicants. The mentoring part of the project has resulted in NB (and BT) reaching out to various service locations and to operational women and women in PHS with the message that female applicants are wanted. Pre-camp has concretely produced three out of a total of seven applicants to

the 2023 admission. A proactive recruitment project in the shape of a pre-camp is a strong signal to the whole of the police force of how BT and NB view future special forces. In addition, the mentoring project has created a knowledge base which will be important both in the work on gender equality in the special forces themselves and in future research on operational women and their career choices. In a holistic perspective, the mentoring project which originally was intended to be purely practical, has also become a project which has produced new knowledge both about effective and good ways to reach female applicants and about the initiatives that motivate and recruit in an application process. The project has actively recruited applicants – something which is considered an alternative in the Gender Diversity Report (2020), and this is the first active recruitment to a special operations unit.

In a scientific context, the contributions of the ‘Women Inclusion Project’ are:

- A clarification of the fact that special operations unit include experiential knowledge which cannot only be revealed through a quantitative approach, nor completely through qualitative methods since some of this knowledge can be ‘silent knowledge’.
- The discussion in Chapter 5 shows that on the basis of this study it could and should be argued for using ‘mixed methods’ as the research standard for this type of study.
- The master’s degrees have provided scientific knowledge about the current physical performance ability of the operators. This picture of ‘now’ provided in Fredriksen’s master’s thesis (2022) provides a starting point for later investigations of BT, both for scientific and internal testing.
- The possibilities for women to pass the physical admission tests have been mapped in Kristensen’s study (2022).

- The master's theses have provided insight into problems in relation to the reliability and validity of the execution of the test battery.
- The Women Inclusion Project has also enabled a study that was not originally planned: 'The BT- project – physical requirements part 2' (Paulsen, Nilsen and Granøien, 2022), which will provide insight into the precondition women have to pass the physical admission tests.

In terms of practice – understood as the execution of physical tests and of recruitment, the 'Women Inclusion Project' has resulted in the following:

- Through the mentoring project, BT is the first special operations unit that has tested active recruitment and has experience with this kind of approach.
- Pre-camp has led to openness and clarification for female applicants in terms of the physical fitness required to become operators as well as practical and concrete experience of the job tasks they will be faced with in their operator role. This initiative is also unique in a recruitment context, and will be able to contribute important experiences that should be communicated to special operational units.

Applied ethics is a practical field; it seeks to provide guidelines for action. Contributions by the ethical discussion will be able to influence practice if they are taken into account. The aim of the technical discussion has been to discover what is fair in an admission situation provided that combat effectiveness is maintained. In this context, the ethics section pointed out that any changes must be considered legitimate by the operators. Initiatives about inclusivity must also take into consideration both what is fair – and desired, cf. Jon (2020) in terms of female operational personnel, namely that they are first and foremost seen as operational personnel who must, and will, satisfy the demands posed by the job.

- Introduce minimum requirements as standard for all applicants (who will be stopped on achievement of minimum requirements).
- If a man and a woman are head-to-head following admission tests and interview, the woman should take precedence because the performance involved in executing and passing the test battery is on a different level and can be understood as a sign of a fighting spirit.
- Strengthen system justice by reviewing
 - Standardisation of execution– maybe also with an external observer
 - Highest possible quantitative focus on the tests – minimise opportunity for discretion
 - Assess exercises in relation to body size where relevant
- Understand the mentoring project as a form of recognition of female applicants (Honneth, 1995), where NB and BT give clear signs that they want women as future colleagues.

Further work on gender equality

It will be important to map the preconditions women have for being able to train for the minimum requirements as they are today. On completion, ‘The BT project – physical requirements part 2’ (Paulsen, Nilsen and Granøien, 2022) will contribute knowledge about this.

There is also an inherent resource in the increased proportion of female applicants in this year’s admission, since BT now has had more female applicants in the most recent admissions. This means that a qualitative research project will be able to draw on the experiences of these applicants in terms of finding out what hinders and encourages women to apply for admission to special operations units.

It is proposed that the mentoring project is carried on in the form of an information day at NB and pre-camp for BT admission also at the next admission (2025). Training follow-up could possibly be done in a down-scaled version. Continued efforts with mentoring and pre-camp is a strong signal that BT want female applicants. It is also in line with Jon's recommendation to special operations units about a clarification of job tasks as well as a de-mystification (Jon, 2020, p. 215). Further pre-camp effort will also enable to establishment of networks which new, female applicants can benefit from both when it comes to training and other preparations, In line with BT's own recruitment plan.

When it comes to the further work on gender equality in BT, one recommendation would be to continue the collaboration with relevant scientific fields in order to enable further job tasks to be measurable as this would reduce the danger of bias in the test battery.

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