# A Study of the Regular Officer Training Plan Using Gender-Based Analysis Plus: Phase 1 

Grazia Scoppio, PhD<br>Nancy Otis, PhD<br>Yan (Lizzie) Yan, MEd., PhD Candidate<br>DRDC - Director General Military Personnel Research and Analysis

## Defence Research and Development Canada

## Scientific Report

DRDC-RDDC-2018-R166
July 2018

## CAN UNCLASSIFIED

## IMPORTANT INFORMATIVE STATEMENTS

This document was reviewed for Controlled Goods by Defence Research and Development Canada (DRDC) using the Schedule to the Defence Production Act.

Disclaimer: Her Majesty the Queen in right of Canada, as represented by the Minister of National Defence ("Canada"), makes no representations or warranties, express or implied, of any kind whatsoever, and assumes no liability for the accuracy, reliability, completeness, currency or usefulness of any information, product, process or material included in this document. Nothing in this document should be interpreted as an endorsement for the specific use of any tool, technique or process examined in it. Any reliance on, or use of, any information, product, process or material included in this document is at the sole risk of the person so using it or relying on it. Canada does not assume any liability in respect of any damages or losses arising out of or in connection with the use of, or reliance on, any information, product, process or material included in this document.

Endorsement statement: This publication has been peer-reviewed and published by the Editorial Office of Defence Research and Development Canada, an agency of the Department of National Defence of Canada. Inquiries can be sent to: Publications.DRDC-RDDC@drdc-rddc.gc.ca.


#### Abstract

The Royal Military College (RMC) of Canada requested a study to examine whether gender bias exists in the recruiting and selection process for the Regular Officer Training Plan (ROTP), with a focus on recruits destined for the Canadian Military Colleges (CMCs). The research design and analysis were guided by the Gender-Based Analysis Plus (GBA+) framework. This Scientific Report focuses on the Phase 1 of the project, which involved informal consultations and an analysis of secondary data. A total of 18 informal consultations were conducted with identified stakeholders and Subject Matter Experts (SMEs) to gain insights, knowledge, and information to assist in the research project development. Secondary data analysis was conducted to examine female representation in the ROTP and potential gender differences in the following areas: gender differences in enrolment in preferred occupations/programmes, academic performance, and reasons for leaving the ROTP. Gender differences were also examined in relation to other intersecting demographics when possible. Results revealed that female representation among ROTP applicants and recruits has declined from 2003 to 2016. Further, female representation among ROTP applicants is higher than among ROTP recruits. In terms of gender differences, female Officer Cadets enrolled at CMCs are less likely to be assigned to their first choice of occupation and programme than their male counterparts, which suggests that the availability of preferred choice(s) may play a role in women withdrawing from the recruitment process. There was no evidence to support that female Officer Cadets are less likely to succeed academically at the military colleges than male Officer Cadets or that female Officer Cadets are leaving the military colleges for different reasons than their male counterparts. The discussion summarizes the main findings and provides recommendations.


## Significance to defence and security

Using multi-year data, this research documents gender trends in the distribution of Regular Officer Training Plan (ROTP) applicants and recruits, enrolment in preferred programme and occupations, academic success at the Canadian Military Colleges (CMCs), and reasons for leaving the ROTP. This research can inform strategies to increase representation rates of women in the ROTP and in the Canadian Armed Forces (CAF) overall.

## Résumé

Le Collège militaire royal (CMR) du Canada a commandé une étude dans le but d'examiner s'il existe des préjugés sexistes dans le recrutement et le processus de sélection du Programme de formation des officiers de la Force régulière (PFOR), en mettant l'accent sur les recrues des collèges militaires canadiens (CMC). La méthodologie de la recherche et l'étude analytique ont été effectuées selon le cadre de l'analyse comparative entre les sexes plus (ACS+). Ce rapport scientifique porte principalement sur la phase 1 du projet, laquelle comportait des consultations informelles et l'analyse des données secondaires. On a mené en tout 18 consultations informelles auprès d'intervenants et d'experts en la matière désignés afin d'acquérir des connaissances et de recueillir des renseignements utiles à l'élaboration du projet de recherche. On a procédé à l'analyse des données secondaires pour examiner la représentation féminine au sein du PFOR, ainsi que les disparités éventuelles entre les sexes dans les domaines suivants: les préférences dans les choix de professions ou les inscriptions aux programmes, le rendement scolaire et les motifs d'abandon du PFOR. Dans la mesure du possible, les disparités entre les sexes ont également été examinées en fonction d'autres données démographiques qui se recoupent. Les résultats ont révélé que la représentation féminine chez les postulants au PFOR et les recrues a diminué entre 2003 et 2016. Par ailleurs, la représentation féminine est plus élevée chez les postulants au PFOR que chez les recrues. En ce qui a trait aux disparités entre les sexes, les élèves-officiers féminins inscrits aux CMC sont moins susceptibles d'obtenir leur premier choix de profession ou de programme que leurs homologues masculins, ce qui laisse entendre que la disponibilité des préférences pourrait influer sur la décision des femmes de se retirer du processus de recrutement. Rien ne donne à penser que le rendement scolaire des élèves-officiers féminins des collèges militaires est inférieur à celui des élèves-officiers masculins ni que les élèves-officiers féminins quittent les collèges militaires pour des raisons différentes de celles invoquées par leurs homologues masculins. Le rapport contient un résumé des principales constatations, ainsi que des recommandations.

## Importance pour la défense et la sécurité

Cette recherche, fondée sur des données pluriannuelles, décrit les tendances observées dans les domaines suivants: la répartition des postulants au Programme de formation des officiers de la Force régulière (PFOR) et des recrues, les préférences dans les choix de professions et les inscriptions aux programmes, le rendement scolaire dans les collèges militaires canadiens (CMC) et les motifs d'abandon du PFOR. Cette recherche pourra permettre d'élaborer des stratégies visant à accroître le taux de représentation des femmes au sein du PFOR et des Forces armées canadiennes en général

## Table of contents

Abstract ..... i
Significance to defence and security ..... i
Résumé ..... ii
Importance pour la défense et la sécurité ..... ii
Table of contents ..... iii
List of figures ..... vi
List of tables ..... viii
Acknowledgements ..... xi
1 Introduction ..... 1
1.1 Background ..... 1
1.2 Aim ..... 2
1.3 Canadian Military Colleges ..... 2
1.4 Regular Officer Training Plan (ROTP) ..... 3
1.5 GBA+ framework ..... 5
2 Informal consultations. ..... 9
2.1 Occupations and programmes ..... 10
2.2 Marketing ..... 12
2.3 Recruiting ..... 13
2.4 Early offers ..... 14
2.5 Canadian Forces Aptitude Test (CFAT) ..... 14
2.6 Attrition during the ROTP selection process ..... 15
2.7 Application process ..... 15
2.8 Person-job fit interview ..... 15
2.9 Media exposure ..... 16
2.10 Special measures ..... 16
2.11 GBA+ considerations ..... 16
3 Secondary data analysis ..... 17
3.1 Gender trends in ROTP recruits ..... 17
3.1.1 Female representation among ROTP recruits ..... 17
3.1.2 Female representation among ROTP recruits by First Official Language (FOL) ..... 18
3.1.3 Female representation among ROTP recruits by occupational groups ..... 19
3.1.3.1 Land operations by gender ..... 20
3.1.3.2 Sea operations by gender ..... 20
3.1.3.3 Air operations by gender ..... 21
3.1.3.4 Land engineering by gender ..... 22
3.1.3.5 Sea engineering by gender. ..... 23
3.1.3.6 Air engineering by gender ..... 24
3.1.3.7 Communication engineering by gender ..... 25
3.1.3.8 Support occupations by gender ..... 25
3.1.3.9 Support occupation subgroups by gender ..... 26
3.1.3.10 Summary of female representation by occupational groups. ..... 28
3.2 Gender trends in ROTP applicants and recruits at the CMCs ..... 28
3.2.1 Gender representation among ROTP applicants and recruits at the CMCs ..... 28
3.2.2 Gender representation among ROTP recruits in each military college ..... 29
3.2.3 Gender representation among ROTP applicants and recruits at the CMCs who self-identified as a visible minority ..... 30
3.2.4 Gender representation among ROTP applicants and recruits who self-identified as First Nation ..... 31
3.2.5 Gender trends in preferred and enrolled programme. ..... 32
3.2.5.1 Arts programmes ..... 32
3.2.5.2 Engineering programmes ..... 33
3.2.5.3 Science programmes ..... 34
3.2.5.4 Summary of gender trends in preferred and enrolled programme ..... 35
3.2.6 Gender trends in preferred and assigned occupation . ..... 35
3.2.6.1 Land operations by gender ..... 36
3.2.6.2 Sea operations by gender ..... 36
3.2.6.3 Air operations by gender ..... 37
3.2.6.4 Land engineering by gender ..... 38
3.2.6.5 Sea engineering by gender. ..... 39
3.2.6.6 Air engineering by gender . ..... 40
3.2.6.7 Communication engineering by gender ..... 41
3.2.6.8 Support occupations by gender ..... 42
3.2.6.9 Summary of gender trends in preferred and assigned occupation. ..... 43
3.3 Academic performance at RMC ..... 44
3.3.1 Pass ..... 44
3.3.2 On probation ..... 47
3.3.3 Required to withdraw from the programme ..... 49
3.3.4 Summary of gender trends in academic performance ..... 50
3.4 RMC St-Jean data on release reasons ..... 50
3.4.1 Release reasons by gender ..... 51
3.4.2 Release reasons by gender and FOL ..... 52
3.4.3 Summary of gender trends in release reasons ..... 53
4 Summary and Conclusion ..... 54
4.1 Highlights of the consultations ..... 54
4.2 Female representation in ROTP ..... 55
4.2.1 Female representation by occupational group ..... 56
4.2.2 Visible minority and First Nation representation by gender ..... 56
4.3 Preferred and enrolled programmes by gender. ..... 57
4.4 Preferred and assigned occupations by gender ..... 58
4.5 Academic performance ..... 59
4.6 Release reasons ..... 59
4.7 Recent organizational changes ..... 59
4.8 GBA+ implications ..... 60
4.9 Summary and recommendations ..... 60
4.10 Limitations ..... 62
4.11 Conclusions ..... 62
References ..... 63
Annex A List of Tables from Section 3.1 ..... 66
Annex B List of Tables from Section 3.2 ..... 74
Annex C List of Tables from Section 3.3 ..... 90
Annex D List of Tables from Section 3.4. ..... 92
List of symbols/abbreviations/acronyms/initialisms ..... 94

## List of figures

Figure 1: Key questions and tips for GBA+ research. Source: Status of Women Canada, 2016,
Module 4. . . . . . . . . . . . . . . . . . . . . . . . . 6
Figure 2: Distribution of ROTP recruits from 2003 to 2016 by gender. . . . . . . . . . . 18
Figure 3: Distribution of ROTP recruits from 2003 to 2016 by gender and FOL. . . . . . . 19
Figure 4: Percentage of ROTP recruits in land operations from 2003 to 2016 by gender. . . . 20
Figure 5: Percentage of ROTP recruits in sea operations from 2003 to 2016 by gender. . . . . 21
Figure 6: Percentage of ROTP recruits in air operations from 2003 to 2016 by gender. . . . . 22
Figure 7: Percentage of ROTP recruits in land engineering from 2003 to 2016 by gender. . . . 23
Figure 8: Percentage of ROTP recruits in sea engineering from 2003 to 2016 by gender. . . . 24
Figure 9: Percentage of ROTP recruits in air engineering from 2003 to 2016 by gender. . . . 24
Figure 10: Percentage of ROTP recruits in communication engineering from 2003 to 2016 by 125
Figure 11: Percentage of ROTP recruits in support occupations from 2003 to 2016 by gender. . 26
Figure 12: Percentage of ROTP recruits in support occupations (health services subgroup) from $\quad 27$
Figure 13: Percentage of ROTP recruits in support occupations (logistics subgroup) from 2003 to 2016 by gender. . . . . . . . . . . . . . . . . . . . . . . . . . . . . 27
Figure 14: Percentage of ROTP applicants and recruits at the CMCs from 2006 to 2016 by gender.29

Figure 15: Percentage of ROTP recruits in each military college from 2006 to 2016 by gender. . 30
Figure 16: Percentage of ROTP applicants and recruits who self-identified as a visible minority
from 2006 to 2016 by gender. . . . . . . . . . . . . . . . . . . . . . . . 31
Figure 17: Number of ROTP applicants and recruits who self-identified as First Nation from 2006
to 2016 by gender. . . . . . . . . . . . . . . . . . . . . . . . . . . . 32
Figure 18: $\begin{aligned} & \text { Percentage of applicants who selected Arts programmes as their first choice and } \\ & \text { percentage of recruits in Arts programmes within each gender from } 2007 \text { to 2016.. . } 33\end{aligned}$
Figure 19: Percentage of applicants who selected Engineering programmes as their first choice and percentage of recruits in Engineering programmes from 2007 to 2016 within each gender.
$\begin{array}{ll}\text { Figure 20: } & \begin{array}{l}\text { Percentage of applicants who selected Science programmes as their first choice and } \\ \text { percentage of recruits in Science programmes from } 2007 \text { to } 2016 \text { within each gender. }\end{array} 35\end{array}$
Figure 21: $\begin{aligned} & \text { Percentage of applicants who selected land operations as their first choice and } \\ & \text { percentage of recruits in land operations within gender from } 2007 \text { to 2016.. . . . . } 36\end{aligned}$
Figure 22: Percentage of applicants who selected sea operations as their first choice and percentage of recruits in sea operations within each gender from 2007 to 2016 ..... 37
Figure 23: Percentage of applicants who selected air operations as their first choice and percentage of recruits in air operations within each gender from 2007 to 2016 ..... 38
Figure 24: Percentage of applicants who selected land engineering as their first choice and percentage of recruits in land engineering within each gender from 2007 to 2016 ..... 39
Figure 25: Percentage of applicants who selected sea engineering as their first choice and percentage of recruits in sea engineering within each gender from 2007 to 2016 ..... 40
Figure 26: Percentage of applicants who selected air engineering as their first choice and percentage of recruits in engineering within each gender from 2007 to 2016. ..... 41
Figure 27: Percentage of applicants who selected communication engineering as their first choice and percentage of recruits in communication engineering within each gender from 2007 to 2016. ..... 42
Figure 28: Percentage of applicants who selected support occupations as their first choice and percentage of recruits in support occupations within each gender from 2007 to 2016. ..... 43
Figure 29: Percentage of recruits who passed academic requirements in each academic year for the 2006 cohort within each gender. ..... 44
Figure 30: Percentage of recruits who passed academic requirements in each year for the 2007 cohort within each gender. ..... 45
Figure 31: Percentage of recruits who passed academic requirements in each year for the 2008 cohort within each gender. ..... 45
Figure 32: Percentage of recruits who passed academic requirements in each year for the 2009 cohort within each gender. ..... 45
Figure 33: Percentage of recruits who passed academic requirements in each year for the 2010 cohort within each gender. ..... 46
Figure 34: Percentage of recruits who passed academic requirements in each year for the 2011 cohort within each gender. ..... 46
Figure 35: Percentage of recruits who passed academic requirements in each year for the 2012 cohort within each gender. ..... 46
Figure 36: Percentage of recruits who passed academic requirements in each year for the 2013 cohort within each gender. ..... 47
Figure 37: Percentage of recruits who passed academic requirements in each year for the 2014 cohort within each gender. ..... 47
Figure 38: Percentage of recruits being released from RMC St-Jean according to release reason by gender from 2010 to 2016. ..... 51
Figure 39: Percentage of recruits being released from RMC St-Jean according to release reason by gender and FOL from 2010 to 2016. ..... 52

## List of tables

Table 1: Academic programmes and military occupation compatibility. ..... 3
Table 2: Occupational groups. ..... 19
Table 3: $\quad$ Numbers and percentage of recruits who were on probation by cohort and by gender. ..... 48
Table 4: $\quad$ Number and percentage of recruits who were required to withdraw from the programme by cohort and by gender. ..... 49
Table A.1: $\quad$ Number and percentage of ROTP recruits by gender from 2003 to 2016. ..... 67
Table A.2: Number and percentage of ROTP recruits whose official language is English by gender from 2003 to 2016. ..... 67
Table A.3: Number and percentage of ROTP recruits whose official language is French by gender from 2003 to 2016. ..... 68
Table A.4: Number and percentage of ROTP recruits in land operations by gender from 2003 to 2016. ..... 68
Table A.5: Number and percentage of ROTP recruits in sea operations by gender from 2003 to 2016. ..... 69
Table A.6: Number and percentage of ROTP recruits in air operations by gender from 2003 to 2016. ..... 69
Table A.7: Number and percentage of ROTP recruits in land engineering by gender from 2003 to 2016. ..... 70
Table A.8: Number and percentage of ROTP recruits in sea engineering by gender from 2003 to 2016. ..... 70
Table A.9: Number and percentage of ROTP recruits in air engineering by gender from 2003 to 2016. ..... 71
Table A.10: Number and percentage of ROTP recruits in communication engineering by gender from 2003 to 2016. ..... 71
Table A.11: Number and percentage of ROTP recruits in support occupations by gender from 2003 to 2016. ..... 72
Table A.12: Number and percentage of ROTP recruits in support occupations (health services subgroup) by gender from 2003 to 2016. ..... 72
Table A.13: Number and percentage of ROTP recruits in support occupations (logistics subgroup) by gender from 2003 to 2016. ..... 73
Table A.14: Number and percentage of ROTP recruits in support occupations (military police officer and intelligence subgroup) by gender from 2003 to 2016. ..... 73
Table B.1: Number and percentage of ROTP applicants and recruits by gender from 2006 to 2016.74
Table B.2: Number and percentage of ROTP recruits in RMC St-Jean by gender from 2006 to 2016. ..... 75
Table B.3: $\quad$ Number and percentage of ROTP recruits in RMC by gender from 2006 to 2016. ..... 76
Table B.4: Number and percentage of ROTP applicants who self-identified as visible minorities from 2006 to 2016 ..... 77
Table B.5: Number and percentage of ROTP recruits who self-identified as visible minorities from 2006 to 2016. ..... 77
Table B.6: Number and percentage of ROTP applicants and recruits who self-identified as visible minorities within gender from 2006 to 2016 ..... 78
Table B.7: Numbers and percentage of applicants who selected Arts programme as their first preference and percentage of recruits in Arts programme within each gender from 2007 to 2016. ..... 79
Table B.8: Numbers and percentage of applicants who selected Engineering programme as their first preference and percentage of recruits in Engineering programme within each gender from 2007 to 2016. ..... 80
Table B.9: Numbers and percentage of applicants who selected Science programme as their first preference and percentage of recruits in Science programme within each gender from 2007 to 2016. ..... 81
Table B.10: Numbers and percentage of applicants who select land operation occupations as their first preference and percentage of recruits who were offered land operation occupations within gender from 2007 to 2016. ..... 82
Table B.11: Numbers and percentage of applicants who select sea operation occupations as their first preference and percentage of recruits who were offered sea operation occupations within gender from 2007 to 2016. ..... 83
Table B.12: Numbers and percentage of applicants who select air operation occupations as their first preference and percentage of recruits who were offered air operation occupations within gender from 2007 to 2016. ..... 84
Table B.13: Numbers and percentage of applicants who select land engineering occupations as their first preference and percentage of recruits who were offered land engineering occupations within gender from 2007 to 2016. ..... 85
Table B.14: Numbers and percentage of applicants who select sea engineering occupations as their first preference and percentage of recruits who were offered sea engineering occupations within gender from 2007 to 2016. ..... 86
Table B.15: Numbers and percentage of applicants who select air engineering occupations as their first preference and percentage of recruits who were offered air engineering occupations within gender from 2007 to 2016. ..... 87
Table B.16: Numbers and percentage of applicants who select communication engineering occupations as their first preference and percentage of recruits who were offered communication engineering occupations within gender from 2007 to 2016. ..... 88
Table B.17: Numbers and percentage of applicants who select support occupations as their first preference and percentage of recruits who were offered support occupations within gender from 2007 to 2016. ..... 89
Table C.1: Numbers and percentage of recruits who passed academic requirements in each year for the 2006 cohort within gender. ..... 90
Table C.2: Numbers and percentage of recruits who passed academic requirements in each year for the 2007 cohort within gender. ..... 90
Table C.3: Numbers and percentage of recruits who passed academic requirements in each year for the 2008 cohort within gender. ..... 90
Table C.4: Numbers and percentage of recruits who passed academic requirements in each year for the 2009 cohort within gender. ..... 90
Table C.5: Numbers and percentage of recruits who passed academic requirements in each year for the 2010 cohort within gender. ..... 91
Table C.6: Numbers and percentage of recruits who passed academic requirements in each year for the 2011 cohort within gender. ..... 91
Table C.7: Numbers and percentage of recruits who passed academic requirements in each year for the 2012 cohort within gender. ..... 91
Table C.8: Numbers and percentage of recruits who passed academic requirements in each year for the 2013 cohort within gender. ..... 91
Table C.9: Numbers and percentage of recruits who passed academic requirements in each year for the 2014 cohort within gender. ..... 91
Table D.1: Number and percentage of recruits being released from RMC St-Jean according to release reason by gender from 2010 to 2016. ..... 92
Table D.2: Number and percentage of recruits being released from RMC St-Jean according to release reason by gender from 2010 to 2016 (continued). ..... 92
Table D.3: Number and percentage of recruits being released from RMC St-Jean according to release reason by gender intersection and FOL from 2010 to 2016. ..... 92
Table D.4: Number and percentage of recruits being released from RMC St-Jean according to release reason by gender intersection and FOL from 2010 to 2016 (continued). ..... 93

## Acknowledgements

This research project, which was requested by the Royal Military College of Canada, would not have been possible without the sponsorship of the Director General Military Personnel Research and Analysis and the support of the leadership, both military and civilian, of the Royal Military College of Canada, the Royal Military College St-Jean, the Canadian Forces Recruiting Group and Military Personnel Generation. The authors would also like to thank the stakeholders from various organizations who were consulted and were open to share unclassified information and secondary data to inform the study. Lastly, the authors would also like to acknowledge Tabasum Akseer, PhD, a former Research Assistant for the project, who participated in the drafting of earlier versions of this Scientific Report. To everyone who contributed, we offer our sincere appreciations for supporting this project which aims to help further the Canadian Armed Forces diversity efforts.

This page intentionally left blank.

## 1 Introduction

### 1.1 Background

Despite opening all military occupations to women in 1989, the CAF consistently falls short of its Employment Equity (EE) goals with respect to recruiting women, including recruitment of women into the CMCs through the ROTP. The target goal set in the 2015-2020 CAF EE equity plan for women is $25.1 \%$, while the representation rate for women in 2016 was $14.4 \%$ in the Regular Forces, $16.4 \%$ in the Primary Reserve and $16.8 \%$ in the CMCs (National Defence, 2016).

Further, Royal Military College of Canada (RMC) stakeholders have noted a substantial drop in the percentage of women successfully moving through the various stages of selection into either one of the two CMCs, namely the RMC and the Royal Military College St-Jean (RMC St-Jean). These declining ratios have raised a concern of a potential systemic bias affecting women entering the selection process. As such, a study was requested by the RMC, to examine whether gender bias exists in the recruiting and selection process for the ROTP, and specifically for recruits destined for the CMCs, and as an extension, to examine the experience of Officer Cadets attending the CMCs.

The scope of the ROTP study using gender-based analysis plus (GBA+) includes the various stages of ROTP recruitment, selection, and experience, including: application, academic review, testing, interview, offer of enrollment, acceptance, and a comparison of the experiences of ROTP Officer Cadets attending military colleges or civilian universities. The research design and analysis were guided by the GBA+ framework. The study was divided into three phases and adopted a mixed-method approach utilizing both quantitative and qualitative empirical data.

In the first phase of the study, which is the subject of the current report, informal consultations were conducted with key stakeholders and subject matter experts (SMEs) in relevant organizations to better understand the ROTP recruitment and selection process and to identify areas to investigate in the next phases of the study. The first phase also entailed secondary data analysis of data collected by the CMCs and the Canadian Forces Recruiting Group (CFRG) to examine gender trends in ROTP applicants and recruits and to identify whether any gender differences exist in enrolment in recruits' preferred occupation/programme, academic performance, and reasons for leaving the ROTP.

Phases 2 and 3 involved primary data collection through surveys and interviews. Phase 2 of the study examined Officer Cadets' perceptions and experiences of the various steps of the recruitment process (e.g., application, cognitive test, medical test, interview, and interaction with recruiters) as well as their experience at their military college or civilian university. Phase 3 of the study focused on ROTP applicants, both successful and unsuccessful, to assess their perceptions of the recruitment process, choice of occupation, influences on joining the CAF through the ROTP, and reasons for voluntarily withdrawing from the recruitment process.

### 1.2 Aim

The aim of the current report is to present the results from Phase 1 of the ROTP study using GBA+. ${ }^{1}$ The primary objectives of Phase 1 were twofold: First to consult with SMEs and stakeholders to gain knowledge and information on the ROTP, seek their opinions on the challenges and obstacles that ROTP applicants and recruits may encounter during the recruitment process and at CMCs or civilian universities; and second, to conduct secondary data analyses utilizing existing CMCs and CFRG database sources to explore gender trends in applicant and recruit distribution over time. Secondary data analyses were specifically conducted to examine gender trends in ROTP applicants and recruits, as well as to investigate potential gender differences in enrolment in preferred occupation/programme, academic performance, and reasons for leaving the ROTP. The following sections present background information on the CMCs and the ROTP, as well as on the GBA+ framework which was used to guide the research design and analysis.

### 1.3 Canadian Military Colleges

The RMC is over 100 years old. It was first opened in 1876 as a Military College in Kingston "for the purpose of providing a complete education in all branches of military tactics, fortification, engineering, and general scientific knowledge in subjects connected with and necessary to thorough knowledge of the military profession" (Royal Military College of Canada, 2016a, p.1). The "first class of eighteen gentlemen cadets," referred to as "the Old Eighteen," are known by name to all officer cadets today (Royal Military College of Canada, 2016a). In 1878, Queen Victoria granted the College the right to use the prefix "Royal." Since 1959, the RMC has had the authority to confer degrees in Arts, Science, and Engineering. The RMC now offers a wide variety of programmes at undergraduate and graduate levels both on site and by distance learning through the Division of Continuing Studies (Royal Military College of Canada, 2016a).

The RMC St-Jean, formerly known as Collège militaire royal de St-Jean (CMR), opened in 1952 to offer education in French to Officer Cadets. In 1971, through an affiliation with the Université de Sherbrooke, CMR was allowed to award bachelor's degrees from this institution and in 1985, CMR was granted the right to confer university-level diplomas. The CMR was closed by the Liberal government in 1995 and re-opened by the Conservative government in 2008 as RMC St-Jean to provide "college-level and first-year university programmes in Science and Social Science. Each programme is offered in the first official language of the candidate and includes the Preparatory Year and First Year" (Royal Military College St-Jean, 2016, p.2). Upon completion of the preparatory year (i.e., college equivalent courses) ${ }^{2}$ and first year of university, Officer Cadets transfer to RMC to continue their programme of study and to be conferred a degree upon completion. RMC St-Jean students in the Science programme can pursue studies in any Science or Engineering programme at the RMC. Those studying Social Science can pursue their studies in any Arts programme at the RMC (Royal Military College St-Jean, 2016). The current Liberal government has recently announced that they will "return the Royal Military College in Saint-Jean to full university status" (Smith, 2017). This is an important measure to support "Canada's bilingual heritage and for Francophones to have the opportunity to obtain an education in a French-speaking environment" (Smith, 2017, p.3).

[^0]
### 1.4 Regular Officer Training Plan (ROTP)

Through the ROTP, individuals can obtain both an Officer commission in the CAF and an undergraduate degree at the RMC, or any Canadian civilian university of their choice recognized by the CAF. Under the ROTP, individuals are recruited by the CAF as Officer Cadets in a military occupation of their choice and begin their military career by completing an undergraduate university programme at a military or recognized civilian university. Medical and dental care, tuition, uniforms, books, instruments and other essential fees are covered by the Department of National Defence (DND). In addition, Officer Cadets receive a monthly salary (from which fees for housing and meals are deducted). Officer Cadets undergo military occupation training and, where necessary, receive second language training during the summer months (National Defence and the Canadian Armed Forces, 2016a).

The ROTP is open to high school graduates and college/university students. As part of the ROTP application process, applicants are required to submit their academic profile and select three preferred occupations and three preferred programmes. Individuals are not always offered their first choice of preferred occupation or their first choice of academic programme, because there are sometimes more qualified candidates than the military colleges can accommodate, a specific programme is not offered, or a specific occupation is not available. An ROTP applicant can either select which military occupation they prefer and then determine which academic degrees are acceptable for that occupation, or they can choose which programme they prefer and then identify which occupations are compatible with that degree. The RMC offers compatible degrees for 20 military occupations as specified in the table below (Royal Military College of Canada, 2016b).

Table 1: Academic programmes and military occupation compatibility.

| Military Occupation | Arts | Science | Engineering |
| :--- | :---: | :---: | :---: |
| Aerospace Control (ACSO) | Any | Computer Science, <br> Mathematics, <br> Physics, Space <br> Science | Any |
| Aerospace Engineering (AERE) | Nil | Computer Science, <br> Space Science | Any |
| Aerospace Control (AEC) | Any | Computer Science, <br> Mathematics, <br> Physics, Space <br> Science | Any |
| Armour (ARMD) | Any | Chemistry, <br> Computer Science, <br> Mathematics, <br> Physics | Any |
| Artillery (ARTY) | Any | Any <br> Computer Science, <br> Mathematics, <br> Physics, Space <br> Science | Aeronautical, <br> Computer, Electrical, <br> Mechanical |
| Communications and Electronics <br> Engineering - Air (CELE AIR) | Any |  |  |


| Military Occupation | Arts | Science | Engineering |
| :---: | :---: | :---: | :---: |
| Construction Engineering (CONST E) | Nil | Nil | Chemical, Civil, Electrical, Mechanical |
| Electrical and Mechanical Engineering (EME) | Nil | Nil | Chemical, Civil, Electrical, Mechanical |
| Engineering (ENGR) | Nil | Computer Science, Mathematics, Physics, Space Science | Any |
| Health Care Administrator (HCA) | Business Administration | Nil | Nil |
| Infantry (INF) | Any | Any | Any |
| Intelligence (INT) | History, Military and Strategic Studies, Political Science | Computer Science | Computer |
| Logistics (LOG) | Business Administration, Economics | Nil | Nil |
| Maritime Surface and Sub-Surface (MARS) | Business Administration, Military and Strategic Studies, Military Psychology and Leadership, Political Science, | Any | Any |
| Marine Systems Engineering (MS ENG) | Nil | Computer Science, Mathematic s, Physics | Any |
| Military Police (MPO) | Political Science, Military Psychology and Leadership | Nil | Nil |
| Naval Combat Systems Engineer (NCS ENG) | Nil | Computer Science, Mathematics, Physics | Any |
| Personnel Selection (PSEL) | Military Psychology and Leadership | Nil | Nil |
| Pilot (PLT) | Any | Any | Any |
| Signals (SIGS) | Nil | Any | Computer, Electrical |

The RMC does not offer an acceptable degree ${ }^{3}$ for the following military occupations:

- Dental (DENT);
- Legal (LEG);
- Medical (MED);
- Bioscience (BIO);
- Chaplain (CHAP);
- Nursing (NUR);
- Pharmacy (PHARM);
- Physiotherapy (Physio);
- Public Affairs (PAO);
- Social Work (SOCW); and
- Training Development (TDEV).

Candidates selected for the aforementioned occupations are required to attend a Canadian civilian university and it is their responsibility to gain admission to the university they prefer. When individuals apply to join the CAF through the ROTP, they must first meet the basic eligibility requirements: Be a Canadian citizen, be 17 years of age by January 1 of the enrollment year, and meet the minimum education requirements for the ROTP. ROTP applicants are then evaluated by both the CFRG and the RMC. The RMC Registrar's Office assesses applicants' academic performance and military college suitability. Academic performance is assessed by RMC's Admissions Office and is based on the candidates' highest six (recent) marks corresponding to the minimal admission requirements for their programme of choice (Royal Military College of Canada, 2016c). Applicants' military college suitability is decided based on a review of academic performance and the match between the chosen occupations and the programmes offered at the colleges. After a comprehensive evaluation of applicants' academic strengths, pre-suitability offers are sent to successful applicants who are, thus, eligible to proceed through the next steps of the selection process. CFRG staff assesses candidates' suitability for enrolment in the CAF based on a medical examination, an enhanced reliability check, a test of cognitive ability, a personality test, and an interview to determine person-job fit.

### 1.5 GBA+ framework

The GBA+ framework was deemed to be the most appropriate framework of analysis for the this study. GBA+ has been recognized as a robust analytic approach for personnel-related research in the CAF as it considers not only the implication of gender on all stages of research but the implication of gender and a range of other intersecting identity factors (sometimes referred to as identities), such as: age, culture, language, sexual orientation, education, ability, geographic location, migration status, faith, ethnicity, and socio-economic status (Davis \& Laplante, 2013; Hachey, Bryson, \& Davis, 2016; Status of Women Canada, 2016). This section of the report illustrates the key aspects of the GBA+ framework as it relates to research and, more specifically, as it relates to the current study.

[^1]In line with the 1995 United Nations Beijing Platform for Action endorsed at the World Conference on Women, the Canadian federal government has adopted GBA+ as a means of advancing gender equality in Canada (Status of Women Canada, 2016). The government is working towards the implementation of GBA+ across all departments, including the organizations within the DND such as the Director General Military Personnel Research and Analysis (DGMPRA; Davis \& Laplante, 2013). Furthermore, other Canadian institutions have begun to implement GBA+; the CAF uses GBA+ to "consider gender in all stages of operations. These include planning, running operations and evaluating them afterwards" (National Defence and Canadian Armed Forces, 2016b, p. 1). GBA+ can be applied to diverse settings, institutions, situations, and purposes including policy development, programme evaluation, and research (Status of Women Canada, 2016).

In terms of research, the GBA+ framework is a process that is used to challenge thinking throughout the research approach (Hachey, Bryson, \& Davis, 2016). Hachey, Bryson, and Davis (2016) have provided guidelines with regards to applying GBA+ to social science research conducted on CAF members. Specifically, the authors have provided a list of questions for each step of the research process including the review of past research, selection of the methodology, type of analysis conducted, interpretation of results, and the discussion of results (see Hachey, et al. 2016).

In addition, the online GBA+ course developed by the Status of Women Canada (2016) provides some key questions for research tools and design, for the data gathering, and for presenting research findings. Figure 1 illustrates the questions to consider about research tools and design.


Figure 1: Key questions and tips for GBA+ research. Source: Status of Women Canada, 2016, Module 4.

Furthermore, the online GBA+ course provides the following broad research questions to guide the information gathering activities and research design:

1. What kinds of information and data are available?
2. What kinds of disaggregated quantitative or qualitative data would be important in understanding the different ways that diverse groups might experience this issue?
3. How well does the available data correspond to the diverse groups of men and women who may be affected by a policy, programme or initiative?
4. What are the information gaps? How can these gaps be filled?
5. Does anecdotal evidence point to additional research questions? (Status of Women Canada, 2016, Training Module 5, Research).

With regards to information gathering activities, the GBA+ framework highlights the importance of consultations with internal and external stakeholders with relevant knowledge. Important information can also be obtained by consulting with those who have expertise in a wider range of policy fields (Status of Women Canada, 2016).

GBA+ can also be applied to the presentation of findings, regardless of whether the research employs qualitative or quantitative data collection techniques, by asking the following questions:

1. How is the data presented and analyzed?
2. Is disaggregation based solely on gender (i.e., two separate groupings with no attention to differences within each group)?
3. Are gender roles or other identities of subpopulation groups presented in absolute terms?
4. What does the information convey about the positive or negative impact of the policy on different groups of women and men?
5. Are harmful stereotypes perpetuated? Are any particular groups unfairly stigmatized? (Status of Women Canada, 2016, GBA+ Research Guide, p.8).

The above GBA + questions guided all three phases of this study from research design, data collection and analysis. The GBA+ approach recommends to begin a research project by looking at available data and evidence, to consult with relevant internal and external stakeholders, as well as to combine data obtained both through quantitative and qualitative analysis to better understand the issues. GBA+ research produces data disaggregated on the basis of sex as well as on other social variables (Status of Women Canada, 2016, GBA+ Research Guide module). Following the GBA+ approach, in Phase 1 of the study, the researchers captured stakeholders' and SMEs' insights and perspectives through informal consultations, as well as identified trends and patterns by analyzing data sets (from CFRG and RMC) disaggregated by gender, and by other available variables (e.g., language, ethnicity, occupations, and preferred programme versus enrolled programme) from the last several years. In line with the American Psychological Association (APA), the term gender is used throughout the paper. The Publication Manual
of the American Psychological Association defines gender as "cultural and is the term to use when referring to women and men as social groups. Sex is biological; use it when the biological distinction is predominant" (VandenBos, 2010, p.71). Indeed, the topics examined in this paper are more likely to reflect socially determined behaviours and thus justify the use of the term gender (e.g., male/female representation in a military entry plan, occupation preference, and education programme preference).

## 2 Informal consultations

A total of 18 informal consultations were conducted with 28 individuals identified as being stakeholders and/or SMEs in various organizations, including: RMC, RMC St-Jean, CFRG, Military Personnel Generation (MPG), Director General Human Rights and Diversity (DHRD), and Director Personnel Generation Requirements (DPGR). ${ }^{4}$ Initially, the stakeholders and experts were identified by the research team based on their involvement with the ROTP; subsequently, the number of consultations was expanded using the snowball approach. Although GBA+ was not a consideration in selecting individuals for the consultations, but rather their position, a break-down of the demographics shows that, overall, the participants' gender, military or civilian background and official language provided sufficiently diverse perspectives and a wide range of experiences: 19 participants were male, nine were female, 16 were military (of which all were officers, with ranks ranging from Captain to General Officer), 12 were civilian (of which all had several years of experience in their position and six were retired military); 15 consultations were conducted in English and three in French. The locations included: Kingston, Ottawa and Borden, in Ontario; and Saint-Jean-sur-Richelieu, in Quebec. The consultations were conducted with at least one research team member engaging face-to-face with the individual, while the rest of the team joined via teleconference.

The aims of qualitative research can be multiple, including for example, to "describe a phenomenon in some or greater detail" (Flick, 2013, p.5). In addition, when conducting research using a GBA+ framework, it is also important to identify: available quantitative or qualitative data disaggregated by gender and other identity variables when possible; potential information gaps; and anecdotal evidence pointing to additional research questions (Status of Women Canada, 2016, GBA+ Research Guide). With these broad overall aims in mind, the consultations were not formally structured interviews with a set protocol; rather, they were informal conversations conducted as a two-way process of engagement with stakeholders, to gain insights, knowledge and information on the ROTP process from start to finish (online application, testing, interview, medical exam, and selection) and to develop a sense of potential challenges and obstacles that ROTP applicants and recruits may experience, particularly females and other under-represented groups. Furthermore, the researchers were able to identify available secondary data sources through these consultations.

Thematic analysis was the approach used to analyze the qualitative data gathered through the consultations. Thematic analysis is "the process of identifying themes in the data which capture meaning that is relevant to the research question, and perhaps also to making links between such themes" (Willig, 2013, p.16). To accomplish this, the researchers took comprehensive notes during the consultations, which were thoroughly reviewed by the research team to create categories and highlight main themes (McMillan \& Schumacher, 2010).

As explained above, the analysis of the data from the consultations led to the identification of themes, that is, topics or issues relevant to the research that were highlighted by more than one participant. Ten key themes were identified, as listed below in order of importance, starting with the most reoccurring themes:

[^2]1. Occupations and programmes;
2. Marketing;
3. Recruiting;
4. Early offers;
5. Canadian Forces Aptitude Test (CFAT);
6. Attrition during the ROTP selection process;
7. Application process;
8. Person-job fit interview;
9. Media exposure; and
10. Special measures.

A synopsis of each theme is presented below, referring to the stakeholders and SMEs consulted with the general term participants for simplicity of reporting. During the consultations, issues related to gender, women, or diversity were not portrayed as standalone items; rather, they were discussed within the context of the various aspects related to the ROTP. As such, in the section below these issues are woven within each key theme.

### 2.1 Occupations and programmes

Informal consultations with participants shed light on the challenges associated with selecting and assigning occupations to ROTP applicants. While discussing the topic of occupations, participants also briefly touched on the related topic of available degree programmes at the RMC.

Many of the challenges related to occupations are associated with the career options available, the preference of applicants, as well as the selection and assignment criteria for each occupation. In the context of the discussion on occupations, several participants mentioned the Strategic Intake Plan (SIP), which determines which occupations are available and the target intake numbers for each occupation in the CAF:

The Canadian Armed Forces currently uses a five-year long-range planning model that factors in attrition and growth. That model is then analyzed in detail to produce a Strategic Intake Plan for each occupation during the Annual Military Occupational Requirements process. This plan is used to determine the recruiting requirements of each occupation (Office of the Auditor General of Canada, 2016).

In other words, the SIP determines how many members the CAF will recruit each year, for each occupation, and through which entry plans, such as: Direct Entry, ROTP, University Training Plan Non-commissioned Member (UTPNCM), Continuing Education Officer Training Plan (CEOTP), and Commissioning from the Ranks. There is a broad range of military occupations, which fall under three
main categories: operational (e.g., infantry, maritime surface and sub-surface, and pilot); engineering (e.g., combat engineering); and support (e.g., logistics, medical, and nursing).

Several of the stakeholders and SMEs consulted believed that the limited number of military occupations that traditionally attract more women (e.g., nursing, social work) and the fact that RMC does not offer some of the degrees required for those particular occupations (e.g., Bachelor of Nursing), are the main reasons for the low numbers of female recruits at the CMCs, rather than a (perceived) gender-bias. As one participant noted: "if there was a nursing programme at RMC that would bring up the number of females by a few percentages points."

This quote illustrates the challenge of attracting females to the CAF when many of the available occupations are non-traditional jobs for women: "Only about $10 \%$ [to 20\%] of the eligible jobs through ROTP are in the support group where most of the women are applying and also there are many men who also apply for those support occupations (the rest of the occupations are about $50 / 50,45 \%$ operational and $45 \%$ for engineering). So the only solutions are to increase the number of support occupations or you could use EE [Employment Equity] and offer the support occupation positions to women first."

Further, some of the participants believed that more men are accepted into combat arms and operational occupations because they have an advantage when it comes to physical fitness and other military-related skills. However, participants argued that the CAF cannot influence more women to select a specific occupation if that is not what they want to do. Several participants stressed that there is no systemic bias in selection, but rather, it is more about the jobs available and the differences in the occupations that men and women tend to select. According to one participant: "this is a numbers game, not a systemic bias."

In the context of the ROTP, some of the participants suggested that, rather than assigning an occupation at the start of the programme, the CAF should look at the American model of the United States Military Academy at West-Point, in which occupations are assigned during the senior year, based on merit. However, it was also noted that the American model might not necessarily apply to the CMCs, considering that a West Point appointment is very sought-after and consequently students are more willing to accept being assigned their occupation at the end of their academic programme. Other suggestions included assigning occupations at the end of the first year, which was a recommendation of the Wither's report (2003). ${ }^{5}$

Another solution offered through informal consultations was to place great impetus on recruiters to focus on encouraging female candidates to select non-traditional jobs. It was recommended that the manner in which certain occupations are portrayed during the recruitment phase should be more gender-neutral, given that military occupations are at times depicted as masculine occupations.

Further, it was suggested that for every occupation, the practice of holding $50 \%$ of each available positions for women until a certain date to guarantee that their preferred occupation is available, was effective a few years ago and could be reintroduced. Adjusting the CAF degree requirements for

[^3]occupations was another proposed suggestion to help attract more women to male dominated occupation choices. It was noted that, for example, chemistry is a degree that is appealing to women, however, currently only two CAF occupations require chemistry. Consequently, it is possible that some women who wish to undertake a science degree in chemistry may not be able apply to join through the ROTP, given the paucity of occupations that require such a degree. Further, one participant stated that proactively contacting females to offer occupations that are still open after the deadlines have passed, has been effective in the past and should be revisited.

### 2.2 Marketing

The consultations provided insights into issues related to marketing, which falls within the portfolio of Assistant Deputy Minister (Public Affairs), responsible for strategic communication. The participants outlined some of the challenges facing CFRG recruiters and the Liaison Teams at the military colleges. The recruiters and Liaison Teams are involved in various attraction and outreach activities, such as social media, influencers' activities (e.g., inviting teachers, counsellors or aboriginal chiefs on a ship to educate and inform them about the CAF), and high school visits. Participants discussed the following problems which they believed were predominant: the nature of recruiting materials and strategies; the shortcomings of university fairs and high school recruitment approaches; a lack of connection with students and RMC faculty; and issues related to the military lifestyle.

Regarding general CAF recruitment materials, some participants felt that these are too neutral and do not appeal to certain EE groups (women, Aboriginal peoples, and members of visible minorities) that the ROTP is aiming to attract. ${ }^{6}$ A participant explained that CAF advertising is often very "kinetic, combat oriented, that is not friendly to women employment." One participant also mentioned the challenge of selling the RMC as a good academic institution at the same time as selling the CAF employment brand. Budget cuts that affect the ability to connect with youth was also mentioned as a significant barrier. Social media, e.g., YouTube, is perceived as an effective avenue to attract youth; however, CFRG staff faces restrictions in the use of social media for advertising purposes and have limited human resources to dedicate to this activity.

Some participants perceived university recruitment fairs as being ineffective. Participants found that potential applicants have a hard time connecting with recruiters who are mostly older and male. High school outreach activities face similar challenges, with the addition of a restriction on the number of visits recruiters can make. Most high schools only allow recruiters to come once, and often, there is very little time to cover the vast amount of materials.

The lack of interaction between potential students and RMC faculty and staff was also mentioned as a barrier to students understanding and connecting with future professors and mentors. The RMC only reviews applicants' academic files, and determines if the prospect meets academic standards. CFRG is responsible for assessing if the candidate meets CAF requirements. Also, the RMC does not have the authority to proactively contact and recruit candidates, except in the case of varsity athletes. RMC liaison

[^4]officers participated in the Red and White program which was sponsored by ex-cadets to liaise with potential applicants but it no longer exists.

Participants offered rich suggestions on how to mitigate the aforementioned limitations and increase enrollment that should be considered moving forward, including: looking at recruitment strategies done by small colleges; increasing the use of marketing strategies specifically targeted towards designated groups in accordance with the EE Act, namely women, Aboriginal peoples and members of visible minorities; using social media to a greater extent (e.g., YouTube, Periscope) to connect with and recruit good candidates; developing strong relationship with high school guidance counsellors; attending high school graduation ceremonies; promoting military occupations to high school students earlier on, in grades 9 through 10; increasing events held by liaison teams; connecting with students who were unsuccessful in the CAF application process; providing additional early offers; adding a personal touch to recruitment and offers; and increasing the awareness of diverse career paths and career advancement in the CAF. It was also suggested to increase liaisons with other military organizations, including the United States Armed Forces (USTAF), to identify new recruitment strategies and ideas to potentially adapt for the CAF context. Finally, participants thought that exploring military culture would lead to a better understanding of the reasons why many women are not attracted to military life and the military colleges, and, in turn, this understanding would help to inform and shape recruitment strategies moving forward. In the words of one expert consulted: "We did focus groups and some of the participants didn't know anything about RMC and some think that the military is only about shooting people."

### 2.3 Recruiting

Some participants shared concerns over the gender of recruiters, the recruitment experience, and the role of recruiters in attracting ROTP candidates. Based on some participants' opinions, because most recruiters are male, a more equal gender representation among recruiters could potentially attract more female applicants. However, recent findings from a nudge-type intervention study suggest that this assumption may not be valid. This study involved sending email messages inviting prospects who had completed the online application but their file was closed to consider another occupation. Unexpectedly, female prospects who received a generic email message from the recruiting centre, and to a lesser degree an email message from a male CAF member, were more likely to reopen their file than those who received an email message signed by a female member (O'Keefe, Gooch, Kemp, \& Howell, in preparation). While this finding is counterintuitive and replication is needed to confirm its generalizability, it highlights the importance of investigating further the interaction between applicant and recruiter gender in future research.

Further, having recruiters who are more familiar with the military colleges can also help address specific questions applicants may have about life at the colleges. A participant noted that recruiters are sergeants and most have not attended the CMCs. While recruiters are periodically assessed to determine how effectively they interact with the public, respond to questions, and speak in public, according to some participants, some recruiters are not effective at attracting and interacting with female applicants. For example, participants shared anecdotes about recruiters being unresponsive to female applicants, making them feel like the CAF is not a place for them.

One suggestion to potentially increase retention of female candidates during the recruitment process is to assign female role models to female applicants so that they may be able to get advice and support throughout the process.

Participants also suggested that the CAF should collaborate with American and Australian counterparts on increasing female enrollment through more aggressive outreach and recruitment strategies.

Finally, there were inconsistencies among participants' opinions regarding whether there are potential gender differences in the recruitment and selection process for the ROTP. While some participants felt that female applicants may experience more challenges than male applicants, others argued that if there is a gender bias, it is in favour of women. For example, some participants mentioned that while inquiries from both male and female applicants are addressed by recruiters, female applicants receive an extra follow-up, while males do not.

### 2.4 Early offers

Another recurring theme was on the topic of early admission offers to ROTP applicants. For ROTP selection, a new process was initiated in 2015 that entailed making $80 \%$ of the offers by the end of January, rather than making most of the offers during the months of February and March as in previous years. According to participants, the early offer initiative was initially introduced to curb the perception that the CMCs were losing valuable candidates to civilian universities that offer earlier admissions. Participants gave mixed reviews on the effectiveness of this initiative. Some participants noted that encouraging students to accept early offers can be counterproductive, since youth can be deterred from joining the CAF if they feel pressure to make a decision on their post-secondary education. Furthermore, such offers were conditional on CAF medical and security requirements, thus, the CAF may lose candidates to civilian universities in cases where the offers are only conditional to meeting academic requirements. Logistic problems concerning the implementation of the early offers were also mentioned. As one participant explained: "A lot of offers went out later than planned because most high schools don't enter grade 12 marks until after Christmas, so it was more around February and March that the early offers were going out for the most part." In addition, the SMEs consulted shared different opinions about whether the offers were also a means to increase recruitment of women. According to some of the participants, the early offer approach was not initially motivated by an attempt to increase the representation of women in the CAF and the selection standards were the same for men and women. Others felt differently, stating that there were "two objectives of the early admission process: $80 \%$ of the SIP to be filled by January, and $25 \%$ of women in the military colleges" and "we now give women priority in processing." Notwithstanding the goal of this initiative, some participants commented that it was still difficult to meet overall recruiting targets and consequently "there are still some Military Occupation Structure ID (MOSID) that are unfilled."

### 2.5 Canadian Forces Aptitude Test (CFAT)

The CFAT is an important component of the CAF selection process; it is a multiple choice test that assesses a candidate's abilities in verbal skills, spatial ability, and problem solving. Some participants believed that the CFAT is biased against women. While research revealed that males do better than females on the overall test and on the spatial ability and problem solving subtests, the gender differences were not found to cause adverse impact; that is to say, both men and women have an equal chance of being selected in the CAF based on the CFAT scores (Jalbert, 2014; Piasentin, 2009). Jalbert's report concludes that: "the number of female candidates joining the CAF is low because of factors other than gender bias. The problem of the smaller number of female CAF candidates seems to lie with attracting and recruiting female applicants, not with the current selection tools" (Jalbert, 2014, p.8). However, research found that the English version of the CFAT have some amount of adverse impact against Aboriginal members for occupations requiring a high total CFAT cut-off score ( $30^{\text {th }}$ to $50^{\text {th }}$ percentile) for a few items in the English language (Kline, 2013). CFAT performance of Aboriginal members was also
dependent on other factors. For instance, those living in urban centres tended to perform better than those living in rural centres. These findings highlight the importance of examining the intersection of gender and Aboriginal identity in future research.

### 2.6 Attrition during the ROTP selection process

When discussing perceived gender bias, participants highlighted another significant theme: attrition rates during the ROTP application and selection process. Certain participants perceived that women have a higher attrition rate than men because they are less likely to pass the medical exam and less successful in the aptitude test. However, Jalbert (2014) found no evidence that the current selection tools are biased against women. Participants also mentioned that it would be valuable to examine attrition rates in completing the ROTP and basic training [Basic Military Officer Qualification (BMOQ)] and whether attrition differs for males and females. ${ }^{7}$ One participant discussed the importance of exit interviews with Officer Cadets who are voluntarily releasing from the CAF as a means of understanding their experiences and challenges. It was later confirmed that exit interviews are regularly conducted at the RMC, although this data was not available to the researchers.

### 2.7 Application process

Across consultations, a few participants highlighted several challenges regarding the ROTP application process that individuals may experience, such as an online application form that lacks clarity with terminology or acronyms unfamiliar to most applicants. According to participants, the application process is ambiguous and difficult to navigate for young applicants and also lacks a personal touch. The lack of support to guide applicants through the online application process was another challenge mentioned in consultations. In particular, a participant from RMC argued that: "we lose good candidates simply because we don't control the online application. ${ }^{\prime 8}$ At the same time, some participants stated that the challenges within the application process are beneficial. One participant explained: "it screens out applicants because you really need to want to apply."

### 2.8 Person-job fit interview

The important role of the person-job fit interview was another theme revealed through the consultations. The person-job fit interview is a structured interview with a standard process of evaluation. However, as one participant mentioned, the interview entails social interactions and thus different factors such as gender similarity between the applicant and the interviewee, as well as factors like applicant interview anxiety, could have an impact on applicant success. Further, a participant voiced that males may be more comfortable asking questions prior to the interview in particular to male recruiters and thus they may acquire knowledge that can potentially help them succeed at the interview. Some participants also suggested that interview coaching could be beneficial for female candidates. The observation regarding gender differences in asking questions, is supported by existing research such as a study by Hinsley, Sutherland, \& Johnston (2017), which involved observing question and answer sessions at a large

[^5]international conference and which showed that that "even accounting for the gender ratio of the audience, male researchers ask more questions than their female counterparts" (para 1, discussion).

### 2.9 Media exposure

Some discussions briefly underscored the impact of media on recruiting, both positive and negative. On one hand, a number of participants discussed the recent negative media coverage about sexual harassment in the CAF and suggested that there are problems deeply rooted within the military culture; for example, according to one participant, "RMC/CAF are not changing with society." The concerns about sexual harassment and safety of women in the CAF have been documented in particular through the Deschamps report which found an "underlying sexualized culture in the CAF that is hostile to women and LGTBQ members, and conducive to more serious incidents of sexual harassment and assault" (Deschamps, 2015; i). The CAF responded with reinforcing zero-tolerance regarding sexual harassment and misconduct, as well as launching Operation HONOUR to eliminate harmful and inappropriate sexual behaviour in the military (National Defence and the Canadian Armed Forces, 2017).

On the other hand, some participants commented on the positive media coverage of what they called the "Jennie Carignan effect" which had a beneficial outcome in increasing recruitment of females. Jennie Carignan was a former Commandant of RMC St-Jean who made several television appearances and whose positive influence is believed to have boosted the recruitment of women at RMC St-Jean from $10 \%$ to $25 \%$ between 2013 and $2015 .{ }^{9}$

### 2.10 Special measures

Participants expressed different perceptions on using affirmative action-type of interventions in the ROTP selection process of female applicants, such as special measures under the Employment Equity (EE) Act. While some participants were in favour of special measures to give priority to female candidates, others suggested that special measures can at times be counterproductive because women do not necessarily want special treatment. Since there is a perception that EE groups receive preferential treatment, in a broad sense, it is a challenge for some women to accept special measures. As explained by one participant: "I'm not for EE. I'm not in favour of being selected because I'm a woman and a visible minority."

### 2.11 GBA+ considerations

In concluding Section 2, it is important to include some GBA+ considerations. In particular, when looking at the themes that emerged through the analysis of the consultations through the lens of GBA+ we can see how some of the contributions reflect long-held assumptions regarding gender-based differences which at times are supported by existing research, while other comments would require investigation through further research.

[^6]
## 3 Secondary data analysis

Secondary data analysis was conducted to examine gender trends in ROTP applicants and recruits and to identify whether any gender differences exist in enrolment in their preferred occupation/programme, academic performance, and reasons for leaving the ROTP. These analyses also included other factors in addition to gender (language, visible group, and First Nation identity) when these demographics were available in the databases.

Secondary data analysis was performed on four sets of data: 1) CFRG data to examine gender trends in all ROTP recruits i.e., those attending CMCs and those attending civilian universities; 2) data from the Associate Registrar Admissions at the RMC to examine gender trends in ROTP applicants and recruits and gender gaps in preferred versus enrolled occupation/programme; 3) data from the undergraduate Registrar's Office at the RMC to examine gender trends in academic performance; and 4) data from RMC St-Jean to examine gender trends in reasons for release from the ROTP.

### 3.1 Gender trends in ROTP recruits

The data provided by CFRG only included ROTP recruits; no data on ROTP applicants was made available by CFRG. The CFRG dataset covered the years 2003 to 2016 for all ROTP recruits i.e., those attending CMCs and those attending civilian universities. The dataset included information on gender, first official language, and assigned military occupations. Therefore, gender trends in ROTP recruits by gender and the intersection between gender and these variables were examined. The CFRG dataset did not include other demographic variables (i.e., visible minority or Aboriginal identity). ${ }^{10}$ This lack of demographic data prevented the researchers from investigating the various intersections of gender with other demographic features, such as race, as is desired in a GBA+ framework.

### 3.1.1 Female representation among ROTP recruits

Figure 2 presents the proportion of male and female ROTP recruits from 2003 to 2016, showing that the average female representation was $21.3 \%$ while the average male representation was $78.7 \%$. Over time, there was a decrease in female recruits. In 2003, females constituted $28.7 \%$ of the total population of ROTP recruits, however, from 2011, the percentage dropped below $20 \%$. Detailed data distribution can be found in Annex A (Table A.1).

[^7]

Figure 2: Distribution of ROTP recruits from 2003 to $2016^{11}$ by gender.

### 3.1.2 Female representation among ROTP recruits by First Official Language (FOL)

Figure 3 illustrates the percentage of ROTP recruits who selected English or French as their FOL, by gender, from 2003 to 2016. Over this period, similar proportions of male and female recruits reported English as their FOL (over 70\%). One notable exception was in 2015, where more males ( $82.5 \%$ ) reported English as their FOL than females ( $63.8 \%$ ). A similar proportion of male and female recruits (between $14.7 \%$ and $36.2 \%$ ) reported French as FOL. Detailed data distribution can be found in Annex A (Table A. 2 and Table A.3).

[^8]

Figure 3: Distribution of ROTP recruits from 2003 to 2016 by gender and FOL.

### 3.1.3 Female representation among ROTP recruits by occupational groups

Occupations were categorized into eight occupational groups according to the guidelines from the After action report - 2008 ROTP selection by CFRG (National Defence, 2009), as shown in Table 2. For this analysis, data on ROTP recruits attending civilian universities was only available for two years (i.e., 2015 and 2016) and it was not disaggregated by gender. Due to these limitations, the percentages of ROTP recruits attending civilian universities are provided for information only, as no meaningful conclusions can be drawn. Also, for 2008 and 2009, there is no data for military occupation information from CFRG, thus, these two years were excluded from the analysis.

Table 2: Occupational groups.

|  | Occupational groups | Occupations |
| :--- | :--- | :--- |
| 1 | Land operations | Armour, Artillery, Infantry |
| 2 | Sea operations | Maritime Surface and Sub-surface |
| 3 | Air operations | Air Combat Systems, Pilot, Aerospace Control |
| 4 | Land engineering | Engineering, Electrical and Mechanical Engineering |
| 5 | Sea engineering | Marine Systems Engineering, Naval Combat Systems <br> Engineering |
| 6 | Air engineering | Aerospace Engineering, Construction Engineering |
| 7 | Communication engineering | Communications and Electronic Engineering, Signals |
| 8 | Support | Health Care Administration, Military Police, Intelligence, <br> Logistics, Nursing, Pharmacy, Medicine, Dental, <br> Physiotherapy, Personnel Selection (PSEL) |

### 3.1.3.1 Land operations by gender

Figure 4 revealed that from 2003 to 2016, the average female representation in land operations occupations was $7.8 \%$. Female representation in this occupational group hovered around $10 \%$ in earlier years, peaked at $17.7 \%$ in 2007 and then decreased until 2012 where female representation was zero. From 2013 to 2015, female representation slightly increased from $3.2 \%$ to $8.5 \%$ and then dropped back to $4.2 \%$ in 2016.


Figure 4: Percentage of ROTP recruits in land operations from 2003 to 2016 by gender.

### 3.1.3.2 Sea operations by gender

Figure 5 shows that female representation in sea operations occupations fluctuated between 2003 and 2016 with no specific pattern. In earlier years (2003 to 2013), the average female representation in sea operations occupations was $26.3 \%$. In 2014 and 2015, female representation decreased almost by half and then reached a high of $44.4 \%$ in 2016.


Figure 5: Percentage of ROTP recruits in sea operations from 2003 to 2016 by gender.

### 3.1.3.3 Air operations by gender

Figure 6 shows that female representation in air operations occupations steadily increased from a low of $12.5 \%$ in 2003 to a high of $25.5 \%$ in 2007. Then, the representation of females in air operations occupations steadily decreased to a low of $11.6 \%$ in 2016. Of note, in 2014, female representation reached its lowest point of $3.4 \%$.


Figure 6: Percentage of ROTP recruits in air operations from 2003 to 2016 by gender.

### 3.1.3.4 Land engineering by gender

Figure 7 revealed that female representation in land engineering occupations was fairly stable from 2003 to 2016 , oscillating around $10 \%$.


Figure 7: Percentage of ROTP recruits in land engineering from 2003 to 2016 by gender.

### 3.1.3.5 Sea engineering by gender

Figure 8 shows that the representation of females in sea engineering occupations fluctuated over time, with no specific pattern. In earlier years (2003 to 2011), the average female representation in sea engineering occupations was $16.7 \%$. In 2012, the proportion of female recruits in sea engineering occupations reached its highest point at $30.8 \%$. After that, female representation fell from $18.5 \%$ in 2013 to $6.2 \%$ in 2016.


Figure 8: Percentage of ROTP recruits in sea engineering from 2003 to 2016 by gender.

### 3.1.3.6 Air engineering by gender

Figure 9 revealed a marked downward trend in female representation in air engineering occupations from 2003 to 2016. In particular, there was a steep drop from $50.0 \%$ in 2003 to $21.7 \%$ in 2005. In 2013, only $8.8 \%$ of recruits was constituted of females.


Figure 9: Percentage of ROTP recruits in air engineering from 2003 to 2016 by gender.

### 3.1.3.7 Communication engineering by gender

Figure 10 shows female representation in communication engineering occupations fluctuated over time ranging from $7.1 \%$ to $20.5 \%$. Fluctuations in percentages need to be interpreted cautiously because of the low number of women recruited in communication engineering occupations ( $n=58$ ) between 2003 and 2016.


Figure 10: Percentage of ROTP recruits in communication engineering from 2003 to 2016 by gender.

### 3.1.3.8 Support occupations by gender

Figure 11 revealed higher female representation in support occupations compared to other occupational groups, with an average of $55.3 \%$ over the time period examined. However, there was a clear downward trend in the percentage of female recruits in support occupations from $68.7 \%$ in 2003 to $50.0 \%$ in 2016. In earlier years, the majority of the support occupation group was composed of females, while in later years, this occupation group was more evenly divided by gender. In fact, in 2016, the percentage of recruits in support occupations was split evenly among both genders.


Figure 11: Percentage of ROTP recruits in support occupations from 2003 to 2016 by gender.

### 3.1.3.9 Support occupation subgroups by gender

In order to further investigate the gender distribution of recruits in support occupations, three subgroups were created. The first subgroup consists of health services and includes the following occupations: nursing, pharmacy, physiology, medicine, dental, and health care administration. The second subgroup refers to the logistics occupation. The third subgroup includes the military police and intelligence occupations.

### 3.1.3.9.1 Health services subgroup

Figure 12 revealed that female representation in the subgroup of health services was much higher than male representation from 2003 to 2011. In 2012, female representation dipped to its lowest point. From 2013, the percentage of female recruits increased steadily, peaking in 2014 and then decreasing slightly in 2015 and 2016. In 2016, the percentage of female recruits ( $68.4 \%$ ) was double the percentage of male recruits $(34.6 \%)$. The sharp fluctuations may be due to the varied occupations that are grouped together. For more detailed information, please refer to Table A. 15 in Annex A.


Figure 12: Percentage of ROTP recruits in support occupations (health services subgroup) from 2003 to 2016 by gender.

### 3.1.3.9.2 Logistics subgroup

Figure 13 illustrates that female representation in logistics varies over time, with no consistent pattern. In 2012, it reached its highest percentage, $72.3 \%$, before sharply dropping to $28.6 \%$ and increasing to $39.0 \%$ in 2016. For more detailed information, please refer to Table A. 16 in Annex A.


Figure 13: Percentage of ROTP recruits in support occupations (logistics subgroup) from 2003 to 2016 by gender.

### 3.1.3.9.3 Military police and intelligence subgroup

Due to the low number of male and female recruits in military police and intelligence occupations, trends over time are not presented. The number of recruits in these subgroups by gender is presented in Annex A (Table A.17).

### 3.1.3.10 Summary of female representation by occupational groups

Results revealed that among the eight occupational groups (i.e., land operations, sea operations, air operations, land engineering, sea engineering, air engineering, communication engineering, and support), the highest female representation was in support occupations, ranging from $41.7 \%$ to $68.7 \%$. Sea operations occupations ranked second for high female representation, ranging from $11.5 \%$ to $44.4 \%$, followed by sea engineering and air engineering occupations. Land operations and land engineering occupations have the lowest female representation.

In some occupational groups, female representation has declined over time. Specifically, there was a clear decline over the time period examined in female representation in support occupations and in air engineering. Land operations, air operations, and sea engineering occupations showed a less marked decline in female representation. Two occupational groups showed an upward trend in recent years $(2015,2016)$ : sea operations and communication engineering. Female representation in land engineering occupations remained quite stable over the years.

### 3.2 Gender trends in ROTP applicants and recruits at the CMCs

Trends in ROTP applicants and recruits for the CMCs were examined using data obtained from the Associate Registrar Admissions at RMC. In the following analysis, applicants refer to individuals who met pre-suitability. RMC assesses military college suitability based on a review of academic performance and the match between the chosen occupations and programmes offered at the colleges. Pre-suitability offers are given to successful applicants eligible to proceed through the selection process after a comprehensive evaluation of applicants' academic strengths. Recruits refer to individuals who have successfully progressed through the selection tests, interviews, and have accepted their admission offers.

This data set had the advantage of including both ROTP applicant and recruit data, but had the limitation of not including information on civilian universities (no data on ROTP applicants who applied for a civilian university and ROTP recruits attending a civilian university). Therefore, the following analyses focussed on the gender distribution of applicants found suitable for CMCs and on recruits attending CMCs. The gender distribution was also disaggregated by visible minority and First Nation identity. Furthermore, the data was used to examine potential gender differences in preferred and enrolled academic programmes as well as differences in preferred and assigned occupations. The data set covers the years 2006 to 2016, however, due to some missing data, the analysis by occupation and by programme does not include the year 2006.

### 3.2.1 Gender representation among ROTP applicants and recruits at the CMCs

Figure 14 shows that from 2006 to 2016, on average, females constituted $23.8 \%$ of applicants but only $17.7 \%$ of recruits at the CMCs. Further, there was a decrease in the percentages of female applicants from $27.2 \%$ in 2006 to $23.9 \%$ in 2016. A more pronounced declining trend for female recruits can be observed during the same period, dropping from $24.5 \%$ to $16.8 \%$. In particular, the percentage of female recruits
has been below $20 \%$ since 2011. These results suggest that the lower representation in CMCs over the last years is not only explained by a lower number of applicants but also by more female applicants (voluntarily or not) dropping off from the recruiting process. In contrast, males constituted, on average, $75.8 \%$ of the applicants and $82.2 \%$ of the recruits. Detailed distribution can be found in Annex B, Table B.1.


Figure 14: Percentage of ROTP applicants and recruits at the CMCs from 2006 to 2016 by gender.

### 3.2.2 Gender representation among ROTP recruits in each military college

Figure 15 shows the percentage of ROTP recruits in RMC and RMC St-Jean by gender. From 2006 to 2016, a higher proportion of females was enrolled at RMC (average 19.7\%) than at RMC St-Jean (average $15.1 \%$ ). ${ }^{12}$ Detailed distribution of recruits in these two military colleges is presented in Tables B. 2 and B. 3 in Annex B.

[^9]

Figure 15: Percentage of ROTP recruits in each military college from 2006 to 2016 by gender.

### 3.2.3 Gender representation among ROTP applicants and recruits at the CMCs who self-identified as a visible minority

The percentage of applicants who self-identified as members of a visible minority increased over the years, from $1.0 \%$ in 2006 to $23.8 \%$ in 2016. The percentage of recruits who self-identified as a visible minority also increased over time from $0.0 \%$ in 2006 to $17.7 \%$ in 2016. The percentage of recruits who self-identified as a visible minority was consistently lower than the percentage of applicants who self-identified as a visible minority. Tables B. 4 and B. 5 in Annex B present the number and percentage of ROTP applicants and recruits who self-identified as a visible minority from 2006 to 2016.

Within the male population, there were lower percentages of male recruits who self-identified as a visible minority than male applicants from 2006 to 2016. In contrast, higher percentages of female recruits self-identified as a visible minority than female applicants, except in the years 2010, 2014, and 2015. Table B. 6 in Annex B presents the number of applicants and recruits identifying as a visible minority in both genders. The numbers in the female recruit population is particularly small and could contribute to the relatively large fluctuation in percentages for female recruits who identified as a visible minority, as presented in Figure 16.


Figure 16: Percentage of ROTP applicants and recruits who self-identified as a visible minority from 2006 to 2016 by gender.

### 3.2.4 Gender representation among ROTP applicants and recruits who self-identified as First Nation

Figure 17 shows that there is a small number of applicants and recruits in both genders who self-identified as a member of a First Nation. ${ }^{13}$ From 2006 to 2011, the number of applicants who self-identified as a member of a First Nation increased in both genders, then decreased from 2012 to 2015 and sharply increased in 2016. ${ }^{14}$ However, the total number of recruits who self-identified as a member of a First Nation is consistently no more than 10 in both genders from 2006 to 2016. The percentage of female recruits who self-identified as a member of a First Nation are generally fewer than their male counterparts. Due to the small number of recruits who self-identified as members of a First Nation, fluctuations in numbers in Figure 17 should be carefully interpreted.

[^10]

Figure 17: Number of ROTP applicants and recruits who self-identified as First Nation from 2006 to 2016 by gender.

### 3.2.5 Gender trends in preferred and enrolled programme

In the application process, the applicants are required to choose three preferred programmes as part of the selection process. After the applicants successfully go through the selection process (e.g., the CFAT, the interview), they are offered a programme of study. In this section, gender trends in preferred and enrolled programmes are examined. ${ }^{15}$ The gender trends are examined for programmes in Arts, Engineering, and Science respectively.

The following example illustrates the comparison process. For the Arts programmes, for example, the percentage of females who selected Arts programmes as their first choice among all female applicants is first examined. Next, the percentage of the females enrolled in Arts programmes among all female recruits is examined. These two percentages in each academic year within each gender are then compared to investigate whether there are potential gender differences in terms of the preferred programme selected by applicants, and the programme in which they are enrolled when they are recruited. Tables B. 8 to B. 10 (see Annex B) provide the numbers as well as the percentages in each of the programmes by gender.

### 3.2.5.1 Arts programmes

Figure 18 shows that on average $51.9 \%$ of all female applicants chose an Arts programme as their first choice during the last ten years. The percentage of female applicants choosing an Arts programme has been trending downward from $58.9 \%$ in 2007 to $42.8 \%$ in 2016. On average, enrolment in Arts programmes constituted $54.0 \%$ of all female enrolment. In recent years (2014 to 2016), the percentage of female recruits enrolled in Arts ( $60.0 \%$ ) was considerably higher than the percentage of females who selected this programme as their first choice $(40.0 \%)$.

[^11]Male applicants tended to choose Arts less often (28.1\%) than female applicants. Similar to female applicants, the percentage of male applicants who chose Arts programmes declined over the ten-year period, from $47.4 \%$ to $28.7 \%$. On average, enrolment in Arts programmes constituted $37.8 \%$ of all male enrolment. When comparing the proportions of application against enrollment, the same trend as that observed for females was found in the male population, although it was less accentuated. In recent years (2014 to 2016), the percentage of male recruits enrolled in Arts ( $37.8 \%$ ) was slightly higher than the percentage of male applicants who selected this program as their first choice (43.3\%).


Figure 18: Percentage of applicants who selected Arts programmes as their first choice and percentage of recruits in Arts programmes within each gender from 2007 to 2016.

### 3.2.5.2 Engineering programmes

Figure 19 illustrates that the percentage of male applicants who selected Engineering as their first preference was substantially higher than the percentage of female applicants from 2007 to 2016. Specifically, the percentage of female applicants who selected Engineering was relatively stable over time with an average of $22.8 \%$. The percentage of male applicants who chose Engineering as their first choice slightly increased from a low of $37.4 \%$ in 2007 to a high of $50.5 \%$ in 2016 , with an average of $44.5 \%$ over time.

On average, Engineering programmes account for $31.9 \%$ of all female enrolment and $49.8 \%$ of all male enrolment. In terms of comparing gaps between applicants and recruits, the same trend can be observed for both genders. Generally, in earlier years, the percentages of recruits in Engineering was higher than the percentages of applicants who chose this programme. This gap was more salient for the female population. However, in recent years (2014 to 2016), the percentage of recruits in Engineering was similar to the percentages of applicants who selected this programme as their first choice.


Figure 19: Percentage of applicants who selected Engineering programmes as their first choice and percentage of recruits in Engineering programmes from 2007 to 2016 within each gender.

### 3.2.5.3 Science programmes

Figure 20 shows that Science programmes were selected slightly more often among female applicants than among male applicants from 2007 to 2016. Specifically, the percentage of female applicants who selected Science was relatively stable in earlier years (i.e., 2007 to 2013) with an average of $19.5 \%$ but peaked in $2014(35.3 \%)$ and then dropped to $23.6 \%$ in 2016. The percentage of male applicants who chose Science as their first choice was relatively stable over time, with an average of $14.7 \%$. Overall, similar percentages of female and male recruits were enrolled in Science programmes. However, in 2008 and 2014, the percentages of female recruits in Science were notably higher compared to the percentages of male recruits. In terms of the gap between applicants and recruits, the percentages of female applicants who chose Science as their preferred programme was higher than the percentages of female recruits enrolled in this programme. This gap is particularly salient in recent years (2014 to 2016), where an average of $28.2 \%$ of all female applicants selected a Science programme as their first choice, but only an average of $17.0 \%$ of female recruits were enrolled in this programme. Overall, the average of female recruits enrolled in Science was $13.9 \%$ and the average of male recruits enrolled in Science was $11.7 \%$.


Figure 20: Percentage of applicants who selected Science programmes as their first choice and percentage of recruits in Science programmes from 2007 to 2016 within each gender.

### 3.2.5.4 Summary of gender trends in preferred and enrolled programme

Results revealed gender differences in terms of the preferred programme selected by applicants, and the programme in which they were enrolled when they were recruited. Among females, Arts was the most preferred programme, followed by Engineering and Science. In recent years (2014 to 2016), differences in preferred and enrolled programmes were noted among females. Specifically, an average of $28.2 \%$ of female applicants chose a Science programme as their first choice but only an average of $17.0 \%$ of female recruits were enrolled into this programme (an $11.2 \%$ difference) and an average of $60.0 \%$ of female applicants were enrolled in Arts while only an average $40.0 \%$ of female applicants selected this programme as their first choice (a $20.0 \%$ difference). Among males, Engineering was the most preferred programme, followed by Arts and Science. There was relatively good correspondence between preferred and enrolled programmes among males.

### 3.2.6 Gender trends in preferred and assigned occupation

In this section, gender trends in preferred and assigned occupation is examined from 2007 to 2016. The occupations were grouped into eight categories as in Section 4.1.4: land operations, sea operations, air operations, land engineering, sea engineering, air engineering, communication engineering, and support occupation. The distribution of applicants and recruits in both genders in each occupational group was examined to investigate potential gender differences between applicants' first choice of occupation and recruits' assigned occupation. Tables B. 11 to B. 18 (see Annex B) provide the numbers as well as the percentages in each of the occupations by gender.

### 3.2.6.1 Land operations by gender

Figure 21 shows that the percentage of applicants and recruits in land operations occupations was relatively constant over time for both genders. Land operations was selected as the top occupational choice, on average, by $5.5 \%$ of female applicants and $19.0 \%$ of male applicants. The actual average percentage of recruits in land operations occupations was $10.6 \%$ for females and $26.1 \%$ for males. For both genders, the percentage of recruits who were assigned land operations occupations is generally higher than the percentage of applicants who selected land operations occupations as their first choice.


Figure 21: Percentage of applicants who selected land operations as their first choice and percentage of recruits in land operations within gender from 2007 to 2016.

### 3.2.6.2 Sea operations by gender

Figure 22 shows that there were very few applicants who selected sea operations as their first choice of occupation in either gender, with slightly higher percentages of female applicants than males. Specifically, the average percentage of female applicants who selected sea operations occupations was $6.0 \%$, with no consistent pattern, reaching the lowest percentage of $2.2 \%$ in 2015 , then peaking at $10.8 \%$ in 2010. The percentage of male applicants who selected sea operations occupations was stable over time with an average of $3.7 \%$. The actual average percentage of recruits in sea operations occupations was $14.1 \%$ for females and $7.7 \%$ for males.

Similar to land operations occupations, the percentages of recruits who were assigned to sea operations occupations are higher than the percentages of applicants in both genders. The results show that the gap between female applicants and recruits is wider than the one between male applicants and recruits, which suggests that higher percentages of females than males were recruited in sea operations occupations despite not having selected this occupational group as their first choice.

| 30\% |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 25\% |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| 20\% |  |  |  |  |  |  |  |  |  |  |
| 15\% |  |  |  |  |  |  |  |  |  |  |
| 10\% |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| $5 \%-\infty$ |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| 0\% |  |  |  |  |  |  |  |  |  |  |
|  | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| - Applicants ( $\mathrm{M}=338$ ) | 5.2 | 2.6 | 3.9 | 4.8 | 4.2 | 3.2 | 3.8 | 2.8 | 3.5 | 2.0 |
| - Applicants (F=137) | 4.2 | 6.0 | 7.4 | 10.8 | 7.3 | 8.1 | 6.1 | 3.8 | 2.2 | 4.4 |
| $\longrightarrow$ Recruits (M=192) | 9.0 | 10.2 | 5.8 | 5.7 | 11.6 | 10.4 | 8.8 | 5.7 | 7.5 | 4.6 |
| $\longrightarrow$ Recruits (F=69) | 19.6 | 12.3 | 11.9 | 14.8 | 11.9 | 20.9 | 21.1 | 5.8 | 7.8 | 14.0 |

Figure 22: Percentage of applicants who selected sea operations as their first choice and percentage of recruits in sea operations within each gender from 2007 to 2016.

### 3.2.6.3 Air operations by gender

Figure 23 shows that the average percentage of female applicants who selected air operations occupations as their first choice was $29.6 \%$, and has been trending downward from $52.1 \%$ in 2007 to $20.6 \%$ in 2016. The average percentage of male applicants who selected air operations occupations was $38.5 \%$, declining from $42.8 \%$ in 2007 to $36.3 \%$ in 2010 . The percentage of recruits assigned to air operations occupations fluctuated a little across time, with an average of $12.1 \%$ for females and $19.9 \%$ for males.

Different from land and sea operations, the percentages of recruits in air operations occupations were lower than the percentages of applicants in both genders throughout the years. This suggests that, while high percentages of male and female applicants selected air operations, few of them were recruited in this occupational group. The gap between applicants and recruits was larger for females in earlier years, but it was larger for males in more recent years.


Figure 23: Percentage of applicants who selected air operations as their first choice and percentage of recruits in air operations within each gender from 2007 to 2016.

### 3.2.6.4 Land engineering by gender

Figure 24 shows that the percentage of female applicants who selected land engineering occupations as their first choice grew slightly from 2007 to 2016 , going from $6.6 \%$ to $9.3 \%$, with an average of $7.7 \%$. The percentage of female recruits enrolled in land engineering occupations fluctuated across time with an average of $9.5 \%$. The percentage of females selecting land engineering occupations was similar to the percentage of females recruited in land engineering occupations for most years, with the exception of 2010 where $20.4 \%$ of female recruits were assigned to land engineering occupations, while only $4.6 \%$ of them selected this occupational group.

The percentage of male applicants who chose land engineering occupations increased slightly from 11.4\% in 2007 to $16.1 \%$ in 2016, with an average of $14.9 \%$. The percentage of male recruits assigned to land engineering occupations also slightly increased over the same period, with an average of $19.0 \%$. The percentage of male recruits assigned to land engineering occupations was, in most years, higher than the percentage of male applicants who chose this occupational group as their first choice. From 2014 to 2016, the gap between male applicants and recruits was particularly wide (a $7.0 \%$ difference on average).


Figure 24: Percentage of applicants who selected land engineering as their first choice and percentage of recruits in land engineering within each gender from 2007 to 2016.

### 3.2.6.5 Sea engineering by gender

Figure 25 shows that the percentage of applicants in both genders who selected sea engineering occupations as their first choice was very low and rather similar. During the study period, the average percentage of female applicants was $2.5 \%$ and the average percentage of male applicants was $2.4 \%$. The percentage of female recruits fluctuated throughout the years ( $6.0 \%$ on average) with no female recruited in this occupational group in 2015 and 2016. With the exception of a drop in percentage in $2012(2.8 \%)$, the percentage of male recruits was relatively stable over time, with an average of $6.1 \%$. In terms of gaps between applicants and recruits for sea engineering occupations, there was a higher percentage of recruits than applicants in both genders in most years.


Figure 25: Percentage of applicants who selected sea engineering as their first choice and percentage of recruits in sea engineering within each gender from 2007 to 2016.

### 3.2.6.6 Air engineering by gender

Figure 26 shows that few applicants in either gender group selected this occupational group as their first choice, with an average of $6.4 \%$ for females and $7.2 \%$ for males. The percentage of males and females who were recruited in air engineering occupations was also very similar (average for females: $6.5 \%$, average for males: $6.7 \%$ ). As for the gap between male applicants and recruits, the percentages of male recruits are similar to the percentages of male applicants who selected air engineering occupations as their first preference. There are some small fluctuations in the percentages of female applicants and recruits, but overall, the gap between female applicants and recruits was relatively narrow. In some years, the gap was larger for males, while in other years it was larger for females.

| 25\% |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20\% |  |  |  |  |  |  |  |  |  |  |
| 15\% |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| 10\% |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| 5\% |  |  |  |  |  |  |  |  |  |  |
| 0\% |  |  |  |  |  |  |  |  |  |  |
|  | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| - Applicants ( $\mathrm{M}=655$ ) | 8.4 | 5.8 | 7.3 | 8.0 | 6.0 | 6.5 | 6.6 | 8.5 | 8.2 | 6.4 |
| $\cdots$ Applicants ( $\mathrm{F}=148$ ) | 4.8 | 5.5 | 4.9 | 8.2 | 6.7 | 8.4 | 6.6 | 7.1 | 6.7 | 5.3 |
| $\longrightarrow$ Recruits (M=163) | 7.7 | 6.3 | 5.2 | 5.7 | 6.4 | 7.5 | 5.9 | 7.6 | 6.8 | 7.7 |
| $\longrightarrow$ Recruits (F=32) | 5.9 | 5.3 | 8.5 | 7.4 | 11.9 | 4.7 | 7.9 | 3.8 | 5.9 | 3.5 |
|  |  |  |  |  |  |  |  |  |  |  |

Figure 26: Percentage of applicants who selected air engineering as their first choice and percentage of recruits in engineering within each gender from 2007 to 2016.

### 3.2.6.7 Communication engineering by gender

Figure 27 shows that few applicants in either gender group selected communication engineering occupations as their first choice and the average percentage of male applicants who selected communication engineering occupations ( $2.0 \%$ ) is similar to female applicants ( $1.0 \%$ ). The percentage of males recruited in communication engineering occupations remained stable from 2010 to 2016, with an average of $7.1 \%$. On average, the percentage of females recruited in communication engineering occupations was $7.2 \%$, although there were a few fluctuations. For both genders, the percentage of recruits who were assigned to communication engineering occupations was higher than the percentage of applicants who selected this occupational group as their first choice. Due to the low number of female applicants and recruits in communication engineering occupations, fluctuations in percentages need to be interpreted cautiously.


Figure 27: Percentage of applicants who selected communication engineering as their first choice and percentage of recruits in communication engineering within each gender from 2007 to 2016.

### 3.2.6.8 Support occupations by gender

Figure 28 shows that the percentage of female applicants who selected support occupations as their first choice generally increased from $21.0 \%$ in 2007 to $49.0 \%$ in 2013 and, hovered around $50.0 \%$ until 2016. The percentage of female recruits in support occupations ranged from $20.4 \%$ to $49.1 \%$ over the last ten years, with no specific pattern. On average, during the period under study, $41.4 \%$ of female applicants chose support occupations as their first choice, but only $33.2 \%$ of females were recruited in this occupational group (an $8.2 \%$ difference, on average).

The percentage of males who selected support occupations and were recruited in this occupational group was relatively stable over time. On average, during the last ten years, $12.5 \%$ of male applicants chose support occupations as their first choice, but only $7.2 \%$ of males were recruited in this occupational group (a $5.3 \%$ difference, on average). The same trend, characterized by more applicants than recruits, was observed for both genders. However, the gap in female applicants and recruits was wider than the gap between male applicants and recruits.


Figure 28: Percentage of applicants who selected support occupations as their first choice and percentage of recruits in support occupations within each gender from 2007 to 2016.

### 3.2.6.9 Summary of gender trends in preferred and assigned occupation

Results revealed gender differences in terms of the preferred occupations selected by applicants, and the occupations in which they were enrolled when they were recruited. Female ROTP applicants' first choice of occupational group was support, followed by air operations and land engineering, while they were mostly recruited in support occupations, followed by sea operations and air operations. Male ROTP applicants' first choice of occupational group was air operations, followed by land operations and land engineering, while they were mostly recruited in land operations, followed by air operations and land engineering. Differences in preferred and enrolled programmes were noted among both females and males, although the differences were slightly more pronounced among females. The key differences in preferred versus enrolled occupations among females were the following:

- An average of $41.4 \%$ of females selected support occupations while only $33.2 \%$ were enrolled in this occupational group (an $8.2 \%$ difference), but larger gaps (more than a $20.0 \%$ difference) were found for some years (2010, 2011, 2013);
- An average of $29.6 \%$ of females chose air operations occupations while only $12.1 \%$ were enrolled in this occupational group (an 17.5\% difference); and
- An average of $14.1 \%$ of females were enrolled in sea operations occupations, although only $6.0 \%$ chose this occupation as their first choice (an $8.1 \%$ difference).

The key differences in preferred versus enrolled occupations among males were the following:

- An average of $38.5 \%$ of males selected air operations occupations while only $19.9 \%$ were enrolled in this occupational group (a $18.6 \%$ difference);
- An average of $26.1 \%$ of males were enrolled in land operations occupations while only $19.0 \% \mathrm{had}$ selected this occupational group (a $7.1 \%$ difference); and
- An average of $12.5 \%$ of males selected support occupations while only $7.2 \%$ of them were selected into this occupational group (a $5.3 \%$ difference).


### 3.3 Academic performance at RMC

Academic performance was examined through the analysis of a data set provided by the RMC Registrar's Office (Undergraduate). This data set shows the academic standing for each registered recruit by the end of each academic year of their programme of study. In order to investigate gender trends in academic performance, the data were grouped into nine cohorts according to the academic year when their studies started; for example, the recruits who enrolled in 2006 and graduated in 2010 were grouped in cohort 2006. Thus, the following sections present the analysis of academic performance for each of the nine cohorts by gender according to three criteria of academic standing: 1) pass, ${ }^{16} 2$ ) on probation, and $3)$ required to withdraw from the programme.

### 3.3.1 Pass

Figures 29 to 37 present the percentages of male and female recruits who passed each academic year for 2006-2014 cohorts. Across eight of the nine cohorts, the percentage of females who passed the academic requirements was generally higher than that of their male counterparts for all academic years. Only the 2013 cohort presented a different pattern, as fewer females passed the academic requirements than males in two academic years. It is notable that, in the fourth academic year, similar percentages of males and females successfully passed the academic requirements with over $95 \%$ of all recruits passing. See Annex C (Tables C.1-C.9) for the actual numbers of recruits who passed by gender and by academic year.


Figure 29: Percentage of recruits who passed academic requirements in each academic year for the 2006 cohort within each gender.

[^12]

Figure 30: Percentage of recruits who passed academic requirements in each year for the 2007 cohort within each gender.


Figure 31: Percentage of recruits who passed academic requirements in each year for the 2008 cohort within each gender.


Figure 32: Percentage of recruits who passed academic requirements in each year for the 2009 cohort within each gender.


Figure 33: Percentage of recruits who passed academic requirements in each year for the 2010 cohort within each gender.


Figure 34: Percentage of recruits who passed academic requirements in each year for the 2011 cohort within each gender.


Figure 35: Percentage of recruits who passed academic requirements in each year for the 2012 cohort within each gender.


Figure 36: Percentage of recruits who passed academic requirements in each year for the 2013 cohort within each gender.


Figure 37: Percentage of recruits who passed academic requirements in each year for the 2014 cohort within each gender.

### 3.3.2 On probation

According to RMC regulations, a recruit is on probation if they "fail mandatory courses such that the cumulative total credit value of Mandatory Courses failed applicable to their programme of study, and which have not been successfully completed is greater than or equal to two, but less than or equal to four, provided the student's term average is greater than 50 percent" (Royal Military College, 2017a).

Table 3 shows the number and percentage of male and female recruits on probation at the end of each academic year for all cohorts. The percentage of recruits in both genders who ended the academic year on probation was very low for all years and cohorts, at $10.0 \%$ or less. Overall, the percentage of recruits who were on probation was higher in the first two academic years than in the third and fourth years, where it dropped to less than $5.0 \%$. Across cohorts and academic years, the percentage of female recruits who were on probation was generally lower than the percentage of male recruits. One notable exception is in the 2012 cohort where the percentage of females on probation was more than
double that of male recruits in the second academic year (2013-2014), also representing the highest percentage of female recruits who were on probation in any year within the time period examined.

Table 3: Numbers and percentage of recruits who were on probation by cohort and by gender.

| Cohort | Gender | $2006-$ <br> 2007 <br> $n(\%)$ | $2007-$ <br> 2008 <br> $n(\%)$ | $2008-$ <br> 2009 <br> $n(\%)$ | $2009-$ <br> 2010 <br> $n(\%)$ | $2010-$ <br> 2011 <br> $n(\%)$ | $2011-$ <br> 2012 <br> $n(\%)$ | $2012-$ <br> 2013 <br> $n(\%)$ | $2013-$ <br> 2014 <br> $n(\%)$ | 2014 <br> 2015 <br> $n(\%)$ | $2015-$ <br> 2016 <br> $n(\%)$ |
| :---: | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2006 | Male | 17 <br> $(8.8)$ | 10 <br> $(5.4)$ | $7(3.8)$ | $0(0.0)$ | - | - | - | - | - | - |
|  | Female | 6 <br> $(10.2)$ | $2(3.9)$ | $0(0.0)$ | $0(0.0)$ | - | - | - | - | - | - |
| 2007 | Male | - | 17 <br> $(8.5)$ | 10 <br> $(5.7)$ | $1(0.6)$ | $0(0.0)$ | - | - | - | - | - |
|  | Female | - | 6 <br> $(10.5)$ | $2(3.7)$ | $0(0.0)$ | $0(0.0)$ | - | - | - | - | - |
| 2008 | Male | - | - | 19 <br> $(8.8)$ | 14 <br> $(5.6)$ | $7(3.0)$ | $2(0.9)$ | - | - | - | - |
|  | Female | - | - | $3(5.9)$ | $5(8.8)$ | $0(0.0)$ | $0(0.0)$ | - | - | - | - |
| 2009 | Male | - | - | - | 12 | 10 | $5(2.3)$ | $0(0.0)$ | - | - | - |
|  | Female | - | - | - | $4(7.7)$ | $2(3.6)$ | $1(1.7)$ | $0(0.0)$ | - | - | - |
| 2010 | Male | - | - | - | - | 11 | $9(5.1)$ | $1(0.6)$ | $2(1.3)$ | - | - |
|  | Female | - | - | - | - | $2(4.8)$ | $2(4.1)$ | $0(0.0)$ | $0(0.0)$ | - | - |
| 2011 | Male | - | - | - | - | - | 12 | $8(3.4)$ | $7(3.3)$ | $2(1.0)$ | - |
|  | Female | - | - | - | - | - | $1(4.0)$ | $1(3.1)$ | $1(3.3)$ | $0(0.0)$ | - |
| 2012 | Male | - | - | - | - | - | - | 13 | 11 | $5(2.6)$ | $0(0.0)$ |
|  | Female | - | - | - | - | - | - | $2(6.1)$ | 6 | $2(4.5)$ | $0(0.0)$ |
| 2013 | Male | - | - | - | - | - | - | - | $7(4.9)$ | $6(2.7)$ | $9(4.2)$ |
|  | Female | - | - | - | - | - | - | - | $0(0.0)$ | $0(0.0)$ | $3(9.1)$ |
| 2014 | Male | - | - | - | - | - | - | - | - | 11 | 12 |
| $(7.5)$ | $(5.8)$ |  |  |  |  |  |  |  |  |  |  |
|  | Female | - | - | - | - | - | - | - | - | $0(0.0)$ | $0(0.0)$ |

### 3.3.3 Required to withdraw from the programme

According to RMC academic regulations, recruits are required to withdraw from the programme if they meet the following conditions:

1. A Mandatory Course or its equivalency, delivered by RMC is failed for a second time (it does not include exclusions, suitable substitute courses, or courses taken at another institution); or
2. The term average is less than 45 per cent; or
3. The student fails Mandatory Courses applicable to their programme of study totalling more than four (4) credits in any term; or
4. The student has failed courses applicable to their programme of study totalling more than eight (8) credits; or
5. An ROTP or UTPNCM student fails a term having previously failed a term in the same programme (reproduced from Royal Military College, 2017b).

Table 4 presents the number and percentage of male and female recruits who were required to withdraw from the programme for all cohorts. For most cohorts and across years, the percentages of male and female recruits required to withdraw from the programme was low, at less than $5 \%$. A departure from this pattern is the first year of the 2010 cohort, where $13.0 \%$ of male recruits were required to withdraw and the first year for the 2012 cohort, where $12.1 \%$ of female recruits were required to withdraw from the programme. Apart from a few exceptions, the percentage of female recruits who were required to withdraw from the programme was generally lower than the percentage of male recruits for all academic years and cohorts.

Table 4: Number and percentage of recruits who were required to withdraw from
the programme by cohort and by gender.

| Cohort | Gender | $\begin{aligned} & \hline 2006- \\ & 2007 \\ & n(\%) \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 2007- \\ & 2008 \\ & n(\%) \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} \hline 2008- \\ 2009 \\ n(\%) \\ \hline \end{array}$ | $\begin{aligned} & \hline 2009- \\ & 2010 \\ & n(\%) \\ & \hline \end{aligned}$ | $\begin{aligned} & 2010- \\ & 2011 \\ & n(\%) \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} \hline 2011- \\ 2012 \\ n(\%) \\ \hline \end{array}$ | $\begin{aligned} & 2012- \\ & 2013 \\ & n(\%) \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} \hline 2013- \\ 2014 \\ n(\%) \\ \hline \end{array}$ | $\begin{aligned} & 2014 \\ & 2015 \\ & n(\%) \end{aligned}$ | $\begin{aligned} & \hline 2015- \\ & 2016 \\ & n(\%) \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2006 | Male | 3 (1.6) | 5 (2.7) | 8 (4.3) | 5 (3.0) | - | - | - | - | - | - |
|  | Female | 0 (0.0) | 1 (2.0) | 0 (0.0) | 2 (4.4) | - | - | - | - | - | - |
| 2007 | Male | - | $\begin{gathered} 10 \\ (5.0) \\ \hline \end{gathered}$ | $\begin{gathered} 10 \\ (5.7) \\ \hline \end{gathered}$ | 4 (2.5) | 4 (2.6) | - | - | - | - | - |
|  | Female | - | 2 (3.5) | 1 (1.9) | 1 (1.8) | 0 (0.0) | - | - | - | - | - |
| 2008 | Male | - | - | $\begin{gathered} \hline 19 \\ (8.8) \end{gathered}$ | $\begin{gathered} \hline 10 \\ (4.0) \end{gathered}$ | 9 (3.8) | 8 (3.5) | - | - | - | - |
|  | Female | - | - | 2 (3.9) | 1 (1.8) | 0 (0.0) | $0(0.0)$ | - | - | - | - |
| 2009 | Male | - | - | - | 9 (5.9) | $\begin{gathered} 13 \\ (5.6) \\ \hline \end{gathered}$ | 5 (2.3) | 2 (1.0) | - | - | - |
|  | Female | - | - | - | 2 (3.8) | 2 (3.6) | 0 (0.0) | 0 (0.0) | - | - | - |


| Cohort | Gender | $2006-$ <br> 2007 <br> $n(\%)$ | $2007-$ <br> 2008 <br> $n(\%)$ | $2008-$ <br> 2009 <br> $n(\%)$ | $2009-$ <br> 2010 <br> $n(\%)$ | $2010-$ <br> 2011 <br> $n(\%)$ | $2011-$ <br> 2012 <br> $n(\%)$ | $2012-$ <br> 2013 <br> $n(\%)$ | $2013-$ <br> 2014 <br> $n(\%)$ | $2014-$ <br> 2015 <br> $n(\%)$ | $2015-$ <br> 2016 <br> $n(\%)$ |
| :---: | :--- | :---: | :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 2010 | Male | - | - | - | - | 16 <br> $(13.0)$ | $7(4.0)$ | $8(4.7)$ | $1(0.7)$ | - | - |
|  | Female | - | - | - | - | $1(2.4)$ | $0(0.0)$ | $1(2.0)$ | $0(0.0)$ | - | - |
| 2011 | Male | - | - | - | - | - | $7(4.8)$ | 20 <br> $(8.5)$ | $6(2.8)$ | $3(1.5)$ | - |
|  | Female | - | - | - | - | - | $2(8.0)$ | $1(3.0)$ | $0(0.0)$ | $0(0.0)$ | - |
| 2012 | Male | - | - | - | - | - | - | $8(5.7)$ | 16 | $2(2.1)$ | 1 |
| $(0.5)$ |  |  |  |  |  |  |  |  |  |  |  |$|$

### 3.3.4 Summary of gender trends in academic performance

Gender trends in academic performance revealed slight gender differences. Overall the results suggest that female recruits are doing better academically than male recruits.

### 3.4 RMC St-Jean data on release reasons

Data from RMC St-Jean was used to explore recruits' reasons for releasing from the military from 2010 to 2016. Release reasons were the following:

- Voluntary release;
- Academic and military reasons (failure);
- Medical reasons;
- Transfer to RMC;
- Repeater;
- Irregular or erroneous enrolment (e.g., the person was under age);
- Transfer to non-commissioned member (NCM);
- Return to home (foreign); and
- Not available.

The following sections present the analysis of release reasons data of ROTP recruits in RMC St-Jean by gender and by the intersection of gender and first official language.

### 3.4.1 Release reasons by gender

As Figure 38 illustrates, voluntary release is the most common reason for leaving RMC St-Jean for both females and males. However, there were some slight differences between males and females. Specifically, a slightly higher percentage of females ( $66.7 \%$ ) released voluntarily from RMC St-Jean than males $(52.7 \%)$, whereas a higher proportion of males ( $22.1 \%$ ) than females ( $12.2 \%$ ) released for academic or military reasons. Careful interpretation of the results is warranted since there were more missing data (Not available) for males than for females. Further, very few recruits transferred to RMC or released for medical reasons (e.g., one female was medically released); therefore, gender differences with regards to these release categories need to be cautiously interpreted. See Annex D (Tables D.1-D.2) for the numbers and the percentages of recruits released for different reasons by gender.


Figure 38: Percentage of recruits being released from RMC St-Jean according to release reason by gender from 2010 to 2016.

### 3.4.2 Release reasons by gender and FOL

To determine whether the differences found in release reasons between males and females was attributed to gender alone, the intersection between gender and FOL was examined (see Figure 39). Regarding voluntary release, the finding revealed mainly a gender effect with a higher proportion of females than males leaving for this reason among both Francophone recruits (males: 54.5\% versus females: 68.2\%) and Anglophone recruits (males: $49.4 \%$ versus females: $66.7 \%$ ). For some of the other release reasons, findings suggest FOL variations in gender differences. For instance, a higher percentage of Francophone males released for academic reasons ( $26.1 \%$ ) compared to Francophone females (18.2\%) and both Anglophone males ( $17.2 \%$ ) and females ( $0.0 \%$ ). Anglophone females were more likely to transfer to RMC ( $16.7 \%$ ), and to release for medical reasons ( $8.3 \%$ ) compared to the other groups. However, the sample for Anglophone females was particularly small $(n=12)$ which should be taken into account when interpreting the results. See Annex D (Tables D.3-D.4) for the numbers and the percentages of recruits released for different reasons by gender and FOL.


Figure 39: Percentage of recruits being released from RMC St-Jean according to release reason by gender and FOL from 2010 to 2016.

### 3.4.3 Summary of gender trends in release reasons

Results showed that voluntary release was the most common reason for leaving RMC St-Jean for both genders. Female recruits, irrespective of whether their FOL was English or French, were slightly more likely to voluntarily release compared to male recruits. The second common reason for leaving RMC St-Jean was academic or military reasons, with a slightly higher percentage of Francophone males leaving for this reason compared to Francophone females and both Anglophone males and females.

## 4 Summary and Conclusion

This report presented the results from the Phase 1 of ROTP study using GBA+. The aim of Phase 1 was firstly, to gain initial insights about the challenges and obstacles that ROTP applicants and recruits may encounter during the recruitment process and also while at CMCs or civilian universities, through consultations with SMEs and stakeholders. Secondly, Phase 1 included secondary data analysis to examine gender trends among ROTP applicants and recruits and investigate the following areas: gender differences in enrolment in preferred occupations/programmes, academic performance, and reasons for leaving the ROTP.

### 4.1 Highlights of the consultations

When asked about factors that could explain the low representation of women at the CMCs, the most frequent responses were related to the limited number of occupations available each year through the ROTP that are traditionally preferred by women (e.g., logistics). This would imply that women are less likely than men to get an offer in their preferred occupation and, therefore, women may be more likely to refuse their offer. Part of the secondary data analysis conducted in this report aimed at verifying these assumptions using multi-year data. The results are discussed in Sections 4.3 and 4.4. During the discussions on the topic of occupations, participants also touched on the related topic of programmes. Some participants believed that the fact that RMC does not offer some of the degrees required for occupations that traditionally attract more women, such as nursing, contributes to the low numbers of female recruits at the CMCs.

Another set of explanations for the low representation of women at the CMCs was related to the selection tests which, in some participants' opinion, may favour male applicants. For instance, participants mentioned that men tend to score higher on the CFAT compared to women. It was also mentioned that some women applicants may have a hard time connecting with recruiters and military career counsellors (MCC) conducting the interviews, who often are older and male. It was suggested that having recruiters and MCC of the same gender as the candidates could facilitate communication and lead to greater mutual understanding.

However, existing research indicates that CAF selection tests are gender neutral. The CFAT is the cornerstone of the CAF selection process as it has the most weight in the Military Potential Score which is used to rank candidates for selection decisions. Thus, most validation research on CAF selection tests has focused on the CFAT. The results of these studies indicated that the CFAT is legally defensible and gender differences in performance were not found to decrease women's chance of enrolling in the CAF (Jalbert, 2014; Piasentin, 2009; Royan, 2010).

Another related explanation offered by SMEs, with regards to potential reasons why women may be less likely to succeed in the selection process, was the role of recruiters and how they may interact differently with female versus male applicants. Applicants' perceptions of the selection tests and of their interactions with recruiters were examined through surveys with ROTP applicants and recruits in Phases 2 and 3 of the study which will be presented in future reports. Further, in line with another theme that emerged from the consultations, the surveys also examined applicants' experiences with searching for information on the recruiting website and with completing the online application. While SMEs discussed challenges related to the online application in more gender neutral terms, they did highlight that the ROTP
application process can be complicated and unclear for some applicants, and that, there should be follow-ups with select applicants who are identified as strong candidates for the ROTP. These recommendations are in line with the findings from the 2016 Behavioural Insights Project which aimed at identifying ways to increase recruitment of women in the CAF (Hardy, MacLennan, \& Soliman, 2016).

The difficulty of attracting women to the CAF and the ROTP was also identified as a potential cause for the low number of women in the CMCs. Thus several participants made many recommendations on ways to improve marketing and attraction efforts to draw more women into the ROTP, including: looking at recruitment strategies done by small civilian colleges and by allied military organizations such as the United States Armed Forces; increasing marketing strategies targeted towards designated groups under the EE Act; using social media to a greater extent; developing strong relationships with high school guidance counsellors; attending high school graduation ceremonies; promoting military occupations to high school students earlier on, starting in grade 9 ; increasing events by liaison teams; connecting with students who were unsuccessful in the CAF application process; providing additional early offers; and increasing awareness of diverse career paths in the CAF in general, and of military colleges specifically. Given that marketing and attraction efforts are outside the scope of this study, these areas were not explored in depth in the subsequent phases of the research.

The theme of attrition also emerged through the consultations. Some participants believed that attrition rates were higher for women; for example, they thought that women were more likely to fail basic training and consequently were less likely to complete the ROTP. However, first-year attrition rates are very similar between male and female Regular Force members. From 2011 through 2015, the average attrition rate for female officers was $9.5 \%$ versus $9.7 \%$ for male officers while the attrition rate for female NCMs was $14.5 \%$ versus $13.9 \%$ for male NCMs (Serré, Goldenberg, and Otis, 2016).

Gender differences in academic performance and reasons for releasing from the ROTP were examined in this report to provide insights into women's success at the CMCs. The consultations also revealed background information (e.g., trial of early offers, media coverage on sexual harassment in the CAF, members' perception of special measures) which is important to provide context for the study.

### 4.2 Female representation in ROTP

To provide a comprehensive picture of trends in female representation in ROTP over time, multi-year data from different databases was used. First, a close look at female representation among Officer Cadets in the ROTP overall, including those attending CMCs and civilian universities, revealed a downward trend, from $28.7 \%$ in 2003 to $18.2 \%$ in 2016. From 2003 to 2010, female representation in ROTP recruits was above $20 \%$, while it remained under $20 \%$ from 2011 to 2016 . Overall, the average female representation was $21.3 \%$ while the average male representation was $78.7 \%$

Then, female representation in ROTP was examined specifically for the CMCs, comparing applicants and recruits data. From 2006 to 2016, on average, females constituted $23.8 \%$ of applicants but only $17.7 \%$ of recruits at the CMCs. A downward trend was revealed for the representation of female applicants for CMCs which decreased, from $27.2 \%$ in 2006 to $23.9 \%$ in 2016. The same downward pattern was observed for female representation among CMC recruits which decreased from $24.5 \%$ in 2006 to $16.8 \%$ in 2016. Female representation was slightly lower when focusing only on recruits attending CMCs than when considering the combined data of recruits attending CMCs and those attending civilian universities (see Figures 2 and 14 for comparison purposes). This is not surprising because some of the programmes
related to occupations that female recruits tend to select (e.g., nursing) may not be offered at RMC and at RMC St-Jean.

Two important findings need to be highlighted. First, the proportion of female applicants to CMCs was consistently higher across years than the proportions of females who actually enrolled in the CMCs. This suggests that females who were found suitable for ROTP were less likely to actually enrol as compared to their male counterparts. Second, while a downward trend was observed in female representation among both applicants and recruits, this trend was more accentuated among recruits. Thus, the declining proportion of female recruits in CMCs may not be entirely attributable to having less suitable females applying through the ROTP but also to having more female applicants dropping off from the recruiting process, voluntarily or not. These findings are in line with RMC stakeholders' observations about the decline in retention rate of female applicants in the ROTP recruiting process, and provide the justification to further investigate the recruitment and selection process for ROTP with a focus on identifying any challenges/barriers that would impede women's success in receiving and accepting an offer.

### 4.2.1 Female representation by occupational group

Regarding the ROTP overall, results revealed that among the eight occupational groups (i.e., land operations, sea operations, air operations, land engineering, sea engineering, air engineering, communication engineering, and support occupations), the highest female representation was in support occupations, ranging from $41.7 \%$ to $68.7 \%$ between 2003 and 2016. Not surprisingly, when looking at the support occupations sub-groups, we can see that about half of females are recruited in the health services subgroup (see Figure 12). The second highest female representation was in sea operations occupations, ranging from $11.5 \%$ to $44.4 \%$. Low proportions of females were observed for air operations, sea engineering, air engineering, and communication engineering occupations. The lowest levels of female representation were found in land operations and in land engineering occupations.

In some occupational groups, female representation has declined over time. Over the years, there was a clear decline in female representation in support occupations. Female representation fluctuated over time in land operations, air operations, sea engineering, and air engineering occupations. Two occupational groups showed an upward trend in recent years (2015, 2016): sea operations and communication engineering. Female representation in land engineering occupations remained quite stable over the years.

The higher representation of females in support occupations among Officer Cadets is similar to the statistics reported by the report of the Office of the Auditor General of Canada (2016): approximately half of CAF women are concentrated in a small number of traditionally female occupations (i.e., resource management support clerks, supply technicians, logistics officers, medical technicians, nursing officers and cooks).

### 4.2.2 Visible minority and First Nation representation by gender

Results uncovered that the representation of ROTP applicants and recruits who self-identified as members of a visible minority has increased over the last decade. The visible minority representation rates among recruits did not differ by gender. The visible minority representation rates were generally higher among male applicants than female applicants. Further, among males, a greater proportion of applicants self-identified as members of a visible minority, than recruits. Due to the voluntary nature of self-identification, it is difficult to determine whether 1) visible minority representation was indeed the greatest among male applicants, which would suggest that male visible minority applicants are more
likely to withdraw from the recruiting process than female visible minority applicants or that 2 ) male visible minority applicants are more likely to self-identify than female visible minority applicants. It is possible that female applicants are less likely to self-identify given that they are a double minority and thus can be more easily identified.

The number of CMC recruits who self-identified as a member of a First Nation has remained stable and very low over the last decade and did not differ by gender. There was a sharp increase of First Nation applicants in 2016, however this did not result in a great increase of First Nation recruits. For most years, the representation of individuals who self-identified as members of a First Nation was greater among applicants than among recruits. It was also generally greater among male than female applicants. This again suggests that either: a proportion of First Nation applicants drop off from the recruiting process at some point before recruitment, or that applicants are more likely to self-identify as a member of a First Nation than recruits.

A common finding across female, visible minority and First Nation representation is that the representation of these groups is higher among applicants than recruits. This is consistent with past research showing greater diversity in prospects than recruits (Goldenberg, 2007). While attracting diverse applicants to the CAF is an important element to increase the representation of each minority group, our results indicate that the CAF should also consider initiatives to reduce voluntary withdrawal of these applicants and to ensure they do not face any barriers during the selection process.

### 4.3 Preferred and enrolled programmes by gender

Programme preferences were examined separately for the female and male populations for the period from 2007 to 2016. For females, the most preferred academic programme was Arts followed by Engineering and then Science. When looking at the ten-year period, only slight gaps can be observed between preferred and enrolled programmes among females. Specifically, the average percentage of female applicants who choose the different programmes as their first choice were: $51.9 \%$ for Arts, $22.8 \%$ for Engineering and $19.5 \%$ for Science. On the other hand, the average percentages of female recruits enrolled into the three programme were as followed: $54.0 \%$ in Arts, $31.9 \%$ in Engineering, and $13.9 \%$ in Science.

However, significant gaps in preferred and enrolled programmes among females were observed for the Science and Arts programme in recent years (2014 to 2016). Science was preferred by $28.2 \%$ of women but only $17.0 \%$ of women were enrolled into this programme (an $11.2 \%$ difference). On the other hand, $60.0 \%$ of women were enrolled in Arts while only $40.0 \%$ selected this programme as first choice (a $20.0 \%$ difference). This suggests that some women who applied to Science programmes were potentially re-assigned to the Arts programmes. In a similar fashion, but over a different time period (2010 to 2013), $42.2 \%$ of women were enrolled in Engineering while only $24.8 \%$ selected this programme as first choice. In recent years (2014 to 2016), the percentage of female recruits in Engineering was similar to the percentages of applicants who selected this programme as their first choice.

For males, the most popular academic programme was Engineering followed closely by Arts, while Science constituted the least preferred programme. When looking at the entire period of time, there was a relatively good correspondence between preferred and enrolled programmes among males. In particular, the average percentages of male applicants who choose the different programmes as their first choice were: $44.5 \%$ for Engineering, $43.3 \%$ for Arts, and $14.7 \%$ for Science. On the other hand, the average percentages of male recruits enrolled into the three programmes were as follows: $49.8 \%$ in Engineering,
$37.8 \%$ in Arts, and $11.7 \%$ in Science. Overall, there was a relatively good correspondence between preferred and enrolled programmes among males.

Overall, the results suggest that women are slightly less likely than men to be enrolled in their first programme of choice. However, these gaps in preferred programme were not constant across time and changes in the SIP may partly explain this finding. For example, more opening in occupations through the ROTP requiring an engineering degree may result in less women who selected an Arts or Science programme, being admitted in their first choice of programme, and instead being admitted in Engineering.

### 4.4 Preferred and assigned occupations by gender

Occupation preferences were examined separately for the female and male populations for the period from 2007 to 2016. Support was the occupational group most often selected as first choice by female applicants, followed by air operations. Land engineering, sea operations, land operations, and air engineering, occupational groups were selected as first choice by a low percentage of female applicants. The remaining occupational groups, namely sea engineering and communication engineering were selected by very few female applicants as their first choice. Overall, during the last ten years, an average of $41.4 \%$ of female applicants selected support occupations as their first choice, while only $33.2 \%$ were recruited in this occupational group (an $8.2 \%$ difference). However, for some years (e.g., 2010, 2011, 2013), greater gaps (over $20.0 \%$ difference) in preferred and assigned support occupations were revealed among females. In addition, a higher proportion of female applicants chose support occupations as their first choice of occupation in recent years than in earlier years. Thus, the tendency for female applicants to select traditional female occupations (e.g., support occupations) does not show signs of weakening. On average, $29.6 \%$ of females chose air operations as their first choice, while only $12.1 \%$ were recruited in this occupational group (a $17.5 \%$ difference). On average, $14.1 \%$ of females were recruited in sea operations despite that only $6.0 \%$ choosing this occupation as their first choice (an $8.1 \%$ difference). Thus, it appears that many females who selected support occupations or air operations as their first choice were reassigned to sea operations.

Air operations was the occupational group most often selected as first choice by male applicants, followed by land operations, land engineering, and support occupations. Few male applicants selected the remaining occupational groups as their first choice, namely air engineering, sea operations, sea engineering and communication engineering, Overall, during the last ten years, an average of $38.5 \%$ of men selected air operations as their first choice, while only $19.9 \%$ were recruited in this occupational group (a $18.6 \%$ difference). It should be noted that the pilot occupation is part of air operations and is one of the most applied for CAF occupations but has a limited number of openings each year. Further, pilot applicants have to undergo aircrew selection, which has a very high failure rate which provides an additional explanation to why many applicants chose air operation occupations but few of them were recruited. On average, $26.1 \%$ of males were recruited in land operations and $19.0 \%$ in land engineering while only $19.0 \%$ had selected land operations (a $7.1 \%$ difference) and $14.9 \%$ had selected land engineering (a $4.1 \%$ difference) as their first choice. For support occupations, results for men are similar to those of women with more applicants than recruits in these occupations, although the difference for males was more modest. Specifically, an average of $12.5 \%$ of men selected support occupations while $7.2 \%$ of them were selected into this occupational group (a $5.3 \%$ difference). Thus, it seems that many men who selected air operations occupations as their first choice were reassigned to land engineering and land operations occupations.

In sum, results suggest that women are slightly less likely to be recruited in their first choice of occupation than men. As frequently heard during the consultations conducted with SMEs, this is almost inevitable because the majority of CAF occupations available each year through the ROTP are occupations that do not traditionally attract women. Similar trends in occupational preference can be observed in the overall Canadian population, whereby women choose more often the business, health care, and education sectors rather than trades, transport, and equipment operators and related occupations (Statistics Canada, 2011). Thus, it is not surprising that close to the majority of ROTP female candidates chose support occupations such as health care administration and logistics.

The gender differences between preferred and assigned occupation were not as wide as anticipated based on the consultations. Notable gaps between preferred and assigned occupations were found not only among women but also among men such as in air operations. This observation is consistent with the survey results that emerged in Phase 2 of this study showing that a slightly greater proportion of female than male Officer Cadets attending a CMC reported not being assigned to their preferred occupation.

### 4.5 Academic performance

Gender differences in academic performance were examined in nine cohorts of Officer Cadets who started their studies at RMC between 2006 and 2016. Overall, across cohorts and academic years, the results suggest that female Officer Cadets were less likely to fail courses than male recruits. More specifically, the proportion of female Officer Cadets who passed each of the four academic years was generally higher than males. Further, the proportion of females who were on probation at the end of each academic year because of failing a number of courses as well as the proportion of females who were required to withdraw from their programme due to academic failure was generally lower than the proportion of males. Thus, this study does not provide any evidence that female Officer Cadets are less likely to succeed academically at the military colleges than male Officer Cadets.

### 4.6 Release reasons

Gender differences in reasons for leaving RMC St-Jean were examined from 2010 to 2016. Regardless of gender, most departing recruits were leaving by choice. Results suggest that voluntary release is slightly more common among females than males, whereas leaving for academic or military failure is slightly more common among males than females. Thus, this study suggests more similarities than differences in male and female recruits' release reasons. However, careful interpretation of these differences is warranted given that the data set used for the analyses had some missing data.

### 4.7 Recent organizational changes

The study was conducted during a time of organizational change. Since the start of the study, several activities and initiatives were implemented by the CAF to specifically target women. In early 2016, General Jonathan Vance, Chief of the Defence Staff (CDS) directed Lieutenant General Christine Whitecross, Chief of Military Personnel "to boost the number of women in uniform by 1 per cent a year over the coming decade [which] would allow the military to meet its long-standing goal of having women make up 25 per cent of its members" (Campion-Smith, 2016).

In line with the CDS directive that the overall percentage of females in the CAF has to be increased, the latest ROTP Task Order stipulated that the goal was to achieve an ROTP intake of $25.1 \%$ females (National Defence, Office of the Commander Military Personnel Generation, 2016). Based on feedback
from the RMC Registrar's Office, during the admission process for Academic Year 2017-18 intake, women were considered first; hence, priority was given to women, regardless of their overall standing on the merit list when compared to men. In other words, any female candidate who met the selection criteria was selected. These efforts resulted in 22.3\% female recruits in the Academic Year 2017-18 (R. Hau, personal communication, Dec 19, 2017). Hence, it appears that, for the first time, an EE special measure was adopted in the ROTP selection process using a women first approach, whereby all women applicants who met the initial selection requirements were sent admission offers first. It is envisioned that this approach will be used in future years as well. Several other initiatives were implemented in 2017 including: standing up the Recruiting and Diversity Task force and implementing a women's employment opportunity programme (i.e., Women in Force Program) to inform women about the benefits of a career in the CAF. Given all these new initiatives and special measures targeting women, some of the trends reported in this report may not continue in the near future.

### 4.8 GBA+ implications

Overall, adopting the GBA+ as a framework for the study, allowed the researchers to look at the data gathered through the lens of gender and other intersecting identities, and to identify any assumptions and implicit bias within the ROTP application, recruiting, and selection process, such as assumptions or implicit bias regarding female and male preferences of occupations. For example, the finding that women are more likely to be recruited into sea operations occupations even though very few of them select this occupational group as a preference may require further analysis.

### 4.9 Summary and recommendations

In summary, the key gender trends that have emerged regarding the ROTP at the CMCs are that:

- There was a downward trend in the representation of ROTP female applicants and female recruits in the last several years and this trend was more pronounced across recruits.
- The proportion of female applicants to CMCs was consistently higher across years than the proportions of females who actually enrolled in the CMCs.
- This suggests that females who were found suitable for ROTP were less likely to actually enrol as compared to their male counterparts, and that there may be more female applicants dropping off from the recruiting process, voluntarily or not, than male applicants.
- Female ROTP applicants' first choice of academic programme is Arts, followed by Engineering and Science, and similarly, they are mostly enrolled in the Arts, followed by Engineering and Science.
- Male ROTP applicants' first choice of academic programme is Engineering, followed by Arts and Science, and similarly, they are mostly enrolled in Engineering, followed by Arts and Science.
- There were no discrepancies between preferred and enrolled programme among males. However, among females, some discrepancies were found between most preferred and enrolled programme in recent years (2014 to 2016).
- Female ROTP applicants' first choice of occupational group is support, followed by air operations and land engineering, while they are mostly recruited in support occupations, followed by sea operations and air operations.
- Male ROTP applicants' first choice of occupational group is air operations, followed by land operations and land engineering, while they are mostly recruited in land operations, followed by air operations and land engineering.
- There were discrepancies between most preferred and enrolled occupations among both females and males, although the differences were slightly more pronounced among females.
- Once recruited, females are more likely than males to succeed academically and less likely to be required to withdraw for academic reasons than males, while they are slightly more likely to release voluntarily than males.

Based on the work presented in this report, the following recommendations are put forward guided by the GBA+ framework regarding research, and in particular the availability of data disaggregated by gender and other intersecting factors, information gaps, and additional research needed (Status of Women Canada, 2016, Training Module 5, Research):

1. CFRG and the CMCs should consider capturing and storing electronically more comprehensive demographic data (e.g., visible minority and Aboriginal self-identification data) on both ROTP applicants and recruits to allow a more complete investigation of the intersection of gender and other demographic variables across several academic years.
2. CFRG should consider increasing marketing activities directed at attracting women, including visible minority and First Nation women, in non-traditional occupations/programmes of study.
3. CFRG should consider ensuring that recruiters and MCCs receive more training to be better prepared to counsel ROTP candidates on the military colleges and on occupational choices, and to present the whole range of career opportunities in a gender-neutral manner; while at the same time allowing for gender differences when conveying information. For example, female candidates may be less likely to have knowledge of non-traditional career paths, so more elaborate explanations, more information, and greater opportunities to ask questions may be required.
4. CFRG should consider maintaining contact with qualified female applicants who were deterred from joining the CAF when they learned that their preferred occupational choice(s) were not available. These candidates should be contacted again, once their preferred choices become available.
5. The CMCs should consider monitoring the impact of the women's first approach implemented in the academic year 2017-2018 on academic success and retention of female Officer Cadets.
6. The current analysis may have underestimated gender differences in availability of most preferred occupations because the analysis was conducted on applicants. It is possible that female prospects who are considering applying to the CAF may not actually apply upon finding that their preferred occupations are not available. Thus, further investigating women's choice of occupation with a sample of CAF prospects (i.e., women who express an interest in joining the CAF) would be important.

### 4.10 Limitations

The main limitation of Phase 1 of the ROTP study using GBA+ was that the secondary data on ROTP applicants and recruits was at times incomplete or not available. For example, the data set from CFRG included ROTP recruits but not applicants; it included information on gender, first official language and assigned military occupation, but not on ethnicity (i.e., visible minority and Aboriginal self-identification data) and it included data on ROTP recruits attending civilian universities but only for two years and not disaggregated by gender. On the other hand, the data set from RMC Registrar's Office included both ROTP applicant and recruit data, but did not include data on ROTP applicants who applied for a civilian university or on ROTP recruits attending a civilian university. Finally, data on reasons for release was only available from RMC St-Jean. A second limitation was the relatively small number of informal consultations conducted due to time constraints of the study.

### 4.11 Conclusions

This report revealed that: 1) female representation among ROTP applicants and recruits has declined over the last several years, 2) the downward trend in female representation was more marked for ROTP applicants than recruits, and 3) female representation among ROTP applicants is higher than among ROTP recruits. This last finding suggests that suitable female candidates are less likely to actually enrol in the ROTP than their male counterparts. Based on consultations with stakeholders and SMEs, secondary data analysis was performed to provide insights into potential factors that may help explain these results. The findings suggest that 1) female Officer Cadets enrolled at CMCs are less likely to be recruited in their first choice of occupation and programme than their male counterparts, which means that the availability of preferred choice(s) may play a role in women withdrawing from the recruitment process; and 2) female Officer Cadets were not less likely than male Officer Cadets to succeed at the CMCs. In the next phases of the ROTP study, using GBA+, surveys and interviews with ROTP applicants and recruits will help to identify potential differences by gender and other intersecting identities in the perception of the recruitment and selection process and in the experience of Officer Cadets attending the CMCs or civilian universities. The GBA+ analysis of the data presented in this report facilitated, in some cases, the analysis of important intersecting demographics such as male/female, visible minority and aboriginal status. At the same time, GBA+ has also raised observations that will be important to consider in the ensuing phases of this research, including, for example, assumptions and experiences related to discrepancies between preferred and assigned occupation.

## References

Campion-Smith, B. (2016). Canada's top general launches push to recruit women. The Toronto Star. 19 February 2016. Retrieved from: https://www.thestar.com/news/canada/2016/02/19/canadas-top-general-launches-push-to-recruit-women.html (Access date: 10/05/2016).

Davis, K.D., \& Laplante, J. (2013). Implementing gender-based analysis plus in scientific research. Director General Military Personnel Research and Analysis Briefing Note 2013 DTN 6764. Defence Research and Development Canada, Ottawa, ON.

Deschamps, M. (2015). External review into sexual misconduct and sexual harassment in the Canadian Armed Forces. External Review Authority. Retrieved from:
http://www.forces.gc.ca/assets/FORCES Internet/docs/en/caf-community-support-services-harassment/era-final-report-(april-20-2015)-eng.pdf (Access date: 02/05/2016).

Flick, U. (2013). Mapping the Field. In The SAGE handbook of qualitative data analysis. Uwe Flick (Ed.). London, U.K.: SAGE Publications Ltd.

Goldenberg, I. (2007). Canadian Forces Prospect Survey: Analysis by Employment Equity Group. Directorate of Human Rights and Diversity Technical Report 2007-37. Defence Research and Development Canada, Ottawa, ON.

Government of Canada (2018). Canadian Human Rights Act-Exceptions. Retrieved from: http://laws-lois.justice.gc.ca/eng/acts/H-6/page-2.html\#docCont (Access date: 02/02/2018).

Hachey, K., Bryson, R. \& Davis, K. (2016). Defence science research and Gender-Based Analysis+: Shaping the research landscape. Director General Military Personnel Research and Analysis Scientific Poster DRDC 2016. Defence Research and Development Canada.

Hardy, E., MacLennan, M., \& Soliman, M. (2016). Behavioural insights project - increasing recruitment of women into the Canadian Armed Forces. Presentation by the Innovation Hub, Privy Council Office.

Hinsley, A., Sutherland W.J., \& Johnston, A. (2017) Men ask more questions than women at a scientific conference. Retrieved from: http://journals.plos.org/plosone/article?id=10.1371/journal.pone. 0185534 (Access date: 18/12/2017).

Jalbert, A. (2014). The Selection of women into the Canadian Forces. Director General Military Personnel Research and Analysis Letter Report DTN 6740 DRDC 2014-6740. Defence Research and Development Canada.

Kline, T. (2013). Psychometric evaluation of the CFAT. [Director General Military Personnel Research and Analysis Contract Report, RDDC-DRDC-2013-024]. Defence Research and Development Canada, Ottawa, ON.

Laplante, J., Otis, N., \& Goldenberg, I. (2016). Project Horizon: Early career longitudinal retention study. Study design [Director General Military Personnel Research and Analysis Scientific Report, RDDC-DRDC-2016-R010]. Defence Research and Development Canada, Ottawa, ON.

McMillan, J., \& Schumacher, S. (2010). Research in education: Evidence-based inquiry (7th ed.). Boston, MA: Pearson.

National Defence. (2009). After action report - 2008 ROTP selection. (CFRG OP Plan 01/08). Borden, Ontario: Canadian Forces Recruiting Group.

National Defence. (2016). Canadian Armed Forces employment equity report 2015-2016. National Defence, Ottawa, Ontario.

National Defence. Office of the Commander Military Personnel Generation. (2016). Task order 2016-2017. Regular Officer Training Plan production selection and enrolment. National Defence, Kingston, Ontario.

National Defence and the Canadian Armed Forces. (2016a). Paid education. Retrieved from http://www.forces.ca/en/page/paideducation-96 (Access date: 12/09/2016).

National Defence and the Canadian Armed Forces. (2016b). Thinking about gender in military planning and operations. Retrieved from http://www.forces.gc.ca/en/operations-how/perspectives.page (Access date: 11/10/2016).

National Defence and the Canadian Armed Forces. (2016c). Women in the Canadian Armed Forces. Backgrounder. Retrieved from http://www.forces.gc.ca/en/news/article.page?doc=women-in-the-canadian-armed-forces/ildcias0 (Access date: 29/11/2016).

National Defence and the Canadian Armed Forces. (2017). About operation HONOUR. Retrieved from http://www.forces.gc.ca/en/caf-community-support-services/op-honour-about.page (Access date: 29/11/2016).

Office of the Auditor General of Canada. (2016). Report 5 - Canadian Armed Forces recruitment and retention, National Defence. Retrieved from http://www.oag-
bvg.gc.ca/internet/English/parl_oag_201611_05_e_41834.html (Access date: 18/03/2017).
O’Keefe, D., Gooch, S., Kemp. C., \& Howell, G. (in press). Results of a messaging study to encourage CAF prospects to continue with the application process (Nudge 02: File Closed - NFC). Director General Military Personnel Research and Analysis Scientific Letter, L18-0426-00143, Defence Research and Development Canada.

Piasentin, K. (2009). An examination of gender differences in scores on the Canadian Forces aptitude test (CFAT): Evidence of adverse impact? Director General Military Personnel Research and Analysis Technical Note 2009-027. Defence Research and Development Canada, Ottawa, ON.

Royal Military College of Canada. (2016a). About the Royal Military College of Canada. Retrieved from https://www.rmcc-cmrc.ca/en/college-commandants-office/about-royal-military-college-canada (Access date: 01/04/2017).

Royal Military College of Canada. (2016b). Academic programmes and military occupation compatibility. Retrieved from https://www.rmcc-cmrc.ca/en/registrars-office/academic-programmes-and-occupation-compatibility (Access date: 01/04/2017).

Royal Military College of Canada. (2016c). Regular Officer Training Program. Retrieved from https://www.rmcc-cmrc.ca/en/registrars-office/regular-officer-training-plan-rotp (Access date: 01/04/2017).

Royal Military College. (2017a). Academic regulations. Retrieved from https://www.rmcc-cmrc.ca/en/registrars-office/academic-regulations\#pro (Access date: 02/10/2017).

Royal Military College of Canada. (2017b). Academic regulations. Retrieved from https://www.rmcc-cmrc.ca/en/registrars-office/academic-regulations\#wit (Access date: 02/10/2017).

Royal Military College St-Jean. (2016). Backgrounder. Retrieved from http://www.cmrsj-rmcsj.forces.gc.ca/di-b/di-b-eng.asp (Access date: 01/04/2017).

Royan, J. (2010). Gender effects and the Canadian Forces aptitude test: An analysis of group differences and item level DIF. Director General Military Personal Research and Analysis, Technical Memorandum 2010-003. Defence Research and Development Canada, Ottawa, ON.

Serré, L., Goldenberg, I., \& Otis, N. (2016). Annual report on regular force attrition 2014/2015.Director General Military Personnel Research and Analysis RDDC-DRDC-2016-R745. Defence Research and Development Canada..

Scoppio, G., Otis, N., \& Yan, Y. (2018). Looking at recruiting and selection for the Canadian Military Colleges through the lens of gender based analysis plus. Res Militaris, 8,1 , Winter-Spring.

Smith, S. (2017). Collège Militaire Royal de Saint-Jean to be university again. CBC Radio-Canada. Retrieved from http://www.cbc.ca/news/canada/montreal/college-militaire-saint-jean-resumes-university-status-1.3586662 (Access date: 01/10/2018).

Statistic Canada. (2011). National Household Survey, 2011, Retrieved from
http://www12.statcan.gc.ca/nhs-enm/2011/dp-pd/prof/index.cfm?Lang=E (Access date: 29/08/2016).
Status of Women Canada. (2016). Gender-based analysis plus. Retrieved from http://www.swc-cfc.gc.ca/gba-acs/index-en.html (Access date: 20/10/2016).

VandenBos, G. R. (Ed). (2010). Publication manual of the American Psychological Association (6th ed.). Washington, DC: American Psychological Association.

Willig, C. (2013). Interpretation and Analysis 1. In The SAGE handbook of qualitative data analysis. Uwe Flick (Ed.). London, U.K.: SAGE Publications Ltd.

Wither's Study Group. (2003). Report to the RMC board of governors. Review of the Undergraduate Program at RMC.

## Annex A List of tables from Section 3.1

Table A.1: Number and percentage of ROTP recruits by gender from 2003 to 2016.

| Years | Sex | Recruits <br> $\boldsymbol{n}(\%)$ | Years | Gender | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2003 | Male | $266(71.3)$ | 2010 | Male | $349(79.7)$ |
|  | Female | $107(28.7)$ |  | Female | $89(20.3)$ |
| 2004 | Male | $295(75.8)$ | 2011 | Male | $347(81.3)$ |
|  | Female | $94(24.2)$ |  | Female | $80(18.7)$ |
| 2005 | Male | $377(78.5)$ | 2012 | Male | $318(80.7)$ |
|  | Female | $103(21.5)$ |  | Female | $76(19.3)$ |
| 2006 | Male | $538(75.5)$ | 2013 | Male | $320(84.0)$ |
|  | Female | $175(24.5)$ |  | Female | $61(16.0)$ |
| 2007 | Male | $404(73.6)$ | 2014 | Male | $329(81.8)$ |
|  | Female | $145(26.4)$ |  | Female | $73(18.2)$ |
| 2008 | Male | $525(78.1)$ | 2015 | Male | $291(83.4)$ |
|  | Female | $147(21.9)$ |  | Female | $58(16.6)$ |
| 2009 | Male | $452(76.6)$ | 2016 | Male | $374(81.8)$ |
|  | Female | $138(23.4)$ |  | Female | $83(18.2)$ |

Table A.2: Number and percentage of ROTP recruits whose official language is English by gender from 2003 to 2016.

| Years | Gender | Recruits <br> $\boldsymbol{n}(\%)$ | Years | Gender | Recruits <br> $\boldsymbol{n}(\%)$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2003 | Male | $227(85.3)$ | 2010 | Male | $250(71.6)$ |
|  | Female | $86(80.4)$ |  | Female | $66(74.2)$ |
| 2004 | Male | $245(83.1)$ | 2011 | Male | $266(76.7)$ |
|  | Female | $76(80.9)$ |  | Female | $57(71.2)$ |
| 2005 | Male | $288(76.4)$ | 2012 | Male | $230(72.3)$ |
|  | Female | $83(80.6)$ |  | Female | $62(81.6)$ |
| 2006 | Male | $444(82.5)$ | 2013 | Male | $233(72.8)$ |
|  | Female | $140(80.0)$ |  | Female | $48(78.7)$ |
| 2007 | Male | $304(75.2)$ | 2014 | Male | $258(78.4)$ |
|  | Female | $118(81.4)$ |  | Female | $57(78.1)$ |
| 2008 | Male | $425(81.0)$ | 2015 | Male | $240(82.5)$ |
|  | Female | $128(87.1)$ |  | Female | $37(63.8)$ |
| 2009 | Male | $373(82.5)$ | 2016 | Male | $306(81.8)$ |
|  | Female | $113(81.9)$ |  | Female | $61(73.5)$ |

Table A.3: Number and percentage of ROTP recruits whose official language is French by gender from 2003 to 2016.

| Years | Gender | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ | Years | Gender | Recruits <br> $\boldsymbol{n}(\%)$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2003 | Male | $39(65.0)$ | 2010 | Male | $99(81.1)$ |
|  | Female | $21(35.0)$ |  | Female | $23(18.9)$ |
| 2004 | Male | $50(73.5)$ | 2011 | Male | $81(77.9)$ |
|  | Female | $18(26.5)$ |  | Female | $23(22.1)$ |
| 2005 | Male | $89(81.7)$ | 2012 | Male | $88(86.3)$ |
|  | Female | $20(18.3)$ |  | Female | $14(13.7)$ |
| 2006 | Male | $94(72.9)$ | 2013 | Male | $87(87.0)$ |
|  | Female | $35(27.1)$ |  | Female | $13(13.0)$ |
| 2007 | Male | $100(78.7)$ | 2014 | Male | $71(81.6)$ |
|  | Female | $27(21.3)$ |  | Female | $16(18.4)$ |
| 2008 | Male | $100(84.0)$ | 2015 | Male | $51(70.8)$ |
|  | Female | $19(16.0)$ |  | Female | $21(29.2)$ |
| 2009 | Male | $79(76.0)$ | 2016 | Male | $68(75.6)$ |
|  | Female | $25(24.0)$ |  | Female | $22(24.4)$ |

Table A.4: Number and percentage of ROTP recruits in land operations by gender from 2003 to 2016. ${ }^{17}$

| Years | Gender | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ | Years | Gender | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 2003 | Male | $57(90.5)$ | 2011 | Male | $75(93.8)$ |
|  | Female | $6(9.5)$ |  | Female | $5(6.2)$ |
| 2004 | Male | $79(88.8)$ | 2012 | Male | $59(100.0)$ |
|  | Female | $10(11.2)$ |  | Female | $0(0.0)$ |
| 2005 | Male | $99(90.0)$ | 2013 | Male | $61(96.8)$ |
|  | Female | $11(10.0)$ |  | Female | $2(3.2)$ |
| 2006 | Male | $122(89.7)$ | 2014 | Male | $71(93.4)$ |
|  | Female | $14(10.3)$ |  | Female | $5(6.6)$ |
| 2007 | Male | $65(82.3)$ | 2015 | Male | $83(91.2)$ |
|  | Female | $14(17.7)$ |  | Female | $8(8.8)$ |
| 2010 | Male | $73(93.6)$ | 2016 | Male | $114(95.8)$ |
|  | Female | $5(6.4)$ |  | Female | $5(4.2)$ |

[^13]Table A.5: Number and percentage of ROTP recruits in sea operations by gender from 2003 to 2016.

| Years | Gender | Recruits <br> $\mathbf{n ( \% )}$ | Years | Gender | Recruits <br> $\mathbf{n ( \% )}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2003 | Male | $23(71.9)$ | 2011 | Male | $27(77.1)$ |
|  | Female | $9(28.1)$ |  | Female | $8(22.9)$ |
| 2004 | Male | $32(78.0)$ | 2012 | Male | $30(71.4)$ |
|  | Female | $9(22.0)$ |  | Female | $12(28.6)$ |
| 2005 | Male | $39(73.6)$ | 2013 | Male | $27(71.1)$ |
|  | Female | $14(26.4)$ |  | Female | $11(28.9)$ |
| 2006 | Male | $39(69.6)$ | 2014 | Male | $23(82.1)$ |
|  | Female | $17(30.4)$ |  | Female | $5(17.9)$ |
| 2007 | Male | $22(75.9)$ | 2015 | Male | $23(88.5)$ |
|  | Female | $7(24.1)$ |  | Female | $3(11.5)$ |
| 2010 | Male | $25(69.4)$ | 2016 | Male | $15(55.6)$ |
|  | Female | $11(30.6)$ |  | Female | $12(44.4)$ |

Table A.6: Number and percentage of ROTP recruits in air operations by gender from 2003 to 2016.

| Years | Gender | Recruits <br> $\boldsymbol{n ( \% )}$ | Years | Gender | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :--- | :---: | :---: | :--- | :---: | :---: |
| 2003 | Male | $49(87.5)$ | 2011 | Male | $69(88.5)$ |
|  | Female | $7(12.5)$ |  | Female | $9(11.5)$ |
| 2004 | Male | $61(85.9)$ | 2012 | Male | $71(92.2)$ |
|  | Female | $10(14.1)$ |  | Female | $6(7.8)$ |
| 2005 | Male | $90(81.8)$ | 2013 | Male | $63(88.7)$ |
|  | Female | $20(18.2)$ |  | Female | $8(11.3)$ |
| 2006 | Male | $114(82.6)$ | 2014 | Male | $57(96.6)$ |
|  | Female | $24(17.4)$ |  | Female | $2(3.4)$ |
| 2007 | Male | $41(74.5)$ | 2015 | Male | $40(88.9)$ |
|  | Female | $14(25.5)$ |  | Female | $5(11.1)$ |
| 2010 | Male | $55(80.9)$ | 2016 | Male | $61(88.4)$ |
|  | Female | $13(19.1)$ |  | Female | $8(11.6)$ |

Table A.7: Number and percentage of ROTP recruits in land engineering by gender from 2003 to 2016.

| Years | Gender | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ | Years | Gender | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 2003 | Male | $41(89.1)$ | 2011 | Male | $39(90.7)$ |
|  | Female | $5(10.9)$ |  | Female | $4(9.3)$ |
| 2004 | Male | $39(84.8)$ | 2012 | Male | $37(88.1)$ |
|  | Female | $7(15.2)$ |  | Female | $5(11.9)$ |
| 2005 | Male | $57(87.7)$ | 2013 | Male | $54(91.5)$ |
|  | Female | $8(12.3)$ |  | Female | $5(8.5)$ |
| 2006 | Male | $74(93.7)$ | 2014 | Male | $57(90.5)$ |
|  | Female | $5(6.3)$ |  | Female | $6(9.5)$ |
| 2007 | Male | $37(86.0)$ | 2015 | Male | $55(94.8)$ |
|  | Female | $6(14.0)$ |  | Female | $3(5.2)$ |
| 2010 | Male | $56(90.3)$ | 2016 | Male | $67(90.5)$ |
|  | Female | $6(9.7)$ |  | Female | $7(9.5)$ |

Table A.8: Number and percentage of ROTP recruits in sea engineering by gender from 2003 to 2016.

| Years | Gender | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ | Years | Gender | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2003 | Male | $21(77.8)$ | 2011 | Male | $34(87.2)$ |
|  | Female | $6(22.2)$ |  | Female | $5(12.8)$ |
| 2004 | Male | $20(83.3)$ | 2012 | Male | $18(69.2)$ |
|  | Female | $4(16.7)$ |  | Female | $8(30.8)$ |
| 2005 | Male | $21(77.8)$ | 2013 | Male | $22(81.5)$ |
|  | Female | $6(22.2)$ |  | Female | $5(18.5)$ |
| 2006 | Male | $24(82.8)$ | 2014 | Male | $23(79.3)$ |
|  | Female | $5(17.2)$ |  | Female | $6(20.7)$ |
| 2007 | Male | $17(89.5)$ | 2015 | Male | $17(94.4)$ |
|  | Female | $2(10.5)$ |  | Female | $1(5.6)$ |
| 2010 | Male | $47(82.5)$ | 2016 | Male | $28(93.3)$ |
|  | Female | $10(17.5)$ |  | Female | $2(6.7)$ |

Table A.9: Number and percentage of ROTP recruits in air engineering by gender from 2003 to 2016.

| Years | Gender | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ | Years | Gender | Recruits <br> $\boldsymbol{n}(\%)$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 2003 | Male | $13(50.0)$ | 2011 | Male | $32(82.1)$ |
|  | Female | $13(50.0)$ |  | Female | $7(17.9)$ |
| 2004 | Male | $11(61.1)$ | 2012 | Male | $34(87.2)$ |
|  | Female | $7(38.9)$ |  | Female | $5(12.8)$ |
| 2005 | Male | $18(78.3)$ | 2013 | Male | $31(91.2)$ |
|  | Female | $5(21.7)$ |  | Female | $3(8.8)$ |
| 2006 | Male | $35(74.5)$ | 2014 | Male | $26(89.7)$ |
|  | Female | $12(25.5)$ |  | Female | $3(10.3)$ |
| 2007 | Male | $21(84.0)$ | 2015 | Male | $28(84.8)$ |
|  | Female | $4(16.0)$ |  | Female | $5(15.2)$ |
| 2010 | Male | $23(88.5)$ | 2016 | Male | $29(87.9)$ |
|  | Female | $3(11.5)$ |  | Female | $4(12.1)$ |

Table A.10: Number and percentage of ROTP recruits in communication engineering by gender from 2003 to 2016.

| Years | Gender | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ | Years | Gender | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 2003 | Male | $36(90.0)$ | 2011 | Male | $30(88.2)$ |
|  | Female | $4(10.0)$ |  | Female | $4(11.8)$ |
| 2004 | Male | $29(82.9)$ | 2012 | Male | $29(82.9)$ |
|  | Female | $6(17.1)$ |  | Female | $6(17.1)$ |
| 2005 | Male | $26(92.9)$ | 2013 | Male | $26(92.9)$ |
|  | Female | $2(7.1)$ |  | Female | $2(7.1)$ |
| 2006 | Male | $52(89.7)$ | 2014 | Male | $30(88.2)$ |
|  | Female | $6(10.3)$ |  | Female | $4(11.8)$ |
| 2007 | Male | $26(83.9)$ | 2015 | Male | $24(80.0)$ |
|  | Female | $5(16.1)$ |  | Female | $6(20.0)$ |
| 2010 | Male | $31(79.5)$ | 2016 | Male | $20(80.0)$ |
|  | Female | $8(20.5)$ |  | Female | $5(20.0)$ |

Table A.11: Number and percentage of ROTP recruits in support occupations by gender from 2003 to 2016.

| Years | Gender | Recruits <br> $\boldsymbol{n}(\%)$ | Years | Gender | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 2003 | Male | $26(31.3)$ | 2011 | Male | $29(46.9)$ |
|  | Female | $57(68.7)$ |  | Female | $34(54.0)$ |
| 2004 | Male | $23(35.9)$ | 2012 | Male | $29(50.0)$ |
|  | Female | $41(64.1)$ |  | Female | $29(50.0)$ |
| 2005 | Male | $27(42.2)$ | 2013 | Male | $28(58.3)$ |
|  | Female | $37(57.8)$ |  | Female | $20(41.7)$ |
| 2006 | Male | $53(38.4)$ | 2014 | Male | $34(50.7)$ |
|  | Female | $85(61.6)$ |  | Female | $33(49.3)$ |
| 2007 | Male | $40(37.7)$ | 2015 | Male | $21(45.7)$ |
|  | Female | $66(62.3)$ |  | Female | $25(54.3)$ |
| 2010 | Male | $27(50.0)$ | 2016 | Male | $38(50.0)$ |
|  | Female | $27(50.0)$ |  | Female | $38(50.0)$ |

Table A.12: Number and percentage of ROTP recruits in support occupations (health services subgroup) by gender from 2003 to 2016.

| Years | Gender | Recruits <br> $\boldsymbol{n ( \% )}$ | Years | Gender | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 2003 | Male | $8(19.5)$ | 2011 | Male | $14(37.8)$ |
|  | Female | $33(80.5)$ |  | Female | $23(62.2)$ |
| 2004 | Male | $4(14.3)$ | 2012 | Male | $22(62.9)$ |
|  | Female | $24(85.7)$ |  | Female | $13(37.1)$ |
| 2005 | Male | $13(36.1)$ | 2013 | Male | $11(45.8)$ |
|  | Female | $23(63.9)$ |  | Female | $13(54.2)$ |
| 2006 | Male | $7(17.1)$ | 2014 | Male | $2(16.7)$ |
|  | Female | $34(82.9)$ |  | Female | $10(83.3)$ |
| 2007 | Male | $6(16.2)$ | 2015 | Male | $2(28.6)$ |
|  | Female | $31(83.8)$ |  | Female | $5(71.4)$ |
| 2010 | Male | $6(37.5)$ | 2016 | Male | $6(31.6)$ |
|  | Female | $10(62.5)$ |  | Female | $13(68.4)$ |

Table A.13: Number and percentage of ROTP recruits in support occupations
(logistics subgroup) by gender from 2003 to 2016.

| Years | Gender | Recruits <br> $\boldsymbol{n}(\%)$ | Years | Gender | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 2003 | Male | $14(42.4)$ | 2011 | Male | $15(62.5)$ |
|  | Female | $19(57.6)$ |  | Female | $9(37.5)$ |
| 2004 | Male | $14(48.3)$ | 2012 | Male | $6(27.3)$ |
|  | Female | $15(51.7)$ |  | Female | $16(72.7)$ |
| 2005 | Male | $13(50.0)$ | 2013 | Male | $15(71.4)$ |
|  | Female | $13(50.0)$ |  | Female | $6(28.6)$ |
| 2006 | Male | $27(37.0)$ | 2014 | Male | $25(58.1)$ |
|  | Female | $46(63.0)$ |  | Female | $18(41.9)$ |
| 2007 | Male | $26(44.1)$ | 2015 | Male | $16(53.3)$ |
|  | Female | $33(55.9)$ |  | Female | $14(46.7)$ |
| 2010 | Male | $19(54.3)$ | 2016 | Male | $25(61.0)$ |
|  | Female | $16(45.7)$ |  | Female | $16(39.0)$ |

Table A.14: Number and percentage of ROTP recruits in support occupations (military police officer and intelligence subgroup) by gender from 2003 to 2016.

| Years | Gender | Recruits <br> $\mathbf{n ( \% )}$ | Years | Gender | Recruits <br> $\mathbf{n ( \% )}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2003 | Male | $3(42.9)$ | 2011 | Male | $0(0.0)$ |
|  | Female | $4(57.1)$ |  | Female | $1(100.0)$ |
| 2004 | Male | $5(71.4)$ | 2012 | Male | $0(0.0)$ |
|  | Female | $2(28.6)$ |  | Female | $0(0.0)$ |
| 2005 | Male | $0(0.0)$ | 2013 | Male | $0(0.0)$ |
|  | Female | $1(100.0)$ |  | Female | $1(100.0)$ |
| 2006 | Male | $17(81.0)$ | 2014 | Male | $6(60.0)$ |
|  | Female | $4(19.0)$ |  | Female | $4(40.0)$ |
| 2007 | Male | $8(88.9)$ | 2015 | Male | $3(50.0)$ |
|  | Female | $1(11.1)$ |  | Female | $3(50.0)$ |
| 2010 | Male | $2(100.0)$ | 2016 | Male | $6(40.0)$ |
|  | Female | $0(0.0)$ |  | Female | $9(60.0)$ |

## Annex B List of tables from Section 3.2

Table B.1: Number and percentage of ROTP applicants and recruits by gender from 2006 to 2016. ${ }^{18}$

| Years | Gender | Applicants <br> $\boldsymbol{n}(\mathbf{\%})$ | Recruits <br> $\boldsymbol{n}(\%)$ |
| :---: | :---: | :---: | :---: |
| 2006 | Male | $1022(72.2)$ | $197(75.5)$ |
|  | Female | $385(27.2)$ | $64(24.5)$ |
| 2007 | Male | $1119(74.5)$ | $233(80.6)$ |
|  | Female | $383(25.5)$ | $56(19.4)$ |
| 2008 | Male | $1277(75.8)$ | $326(83.0)$ |
|  | Female | $408(24.2)$ | $67(17.0)$ |
| 2009 | Male | $1108(74.4)$ | $239(77.9)$ |
|  | Female | $380(25.5)$ | $68(22.1)$ |
| 2010 | Male | $1451(75.5)$ | $233(79.5)$ |
|  | Female | $467(24.3)$ | $60(20.5)$ |
| 2011 | Male | $2659(75.3)$ | $274(85.1)$ |
|  | Female | $819(23.2)$ | $48(14.9)$ |
| 2012 | Male | $2383(76.2)$ | $263(84.0)$ |
| 2013 | Female | $740(23.7)$ | $50(16.0)$ |
|  | Male | $1293(82.7)$ | $283(87.6)$ |
| 2014 | Female | $268(17.1)$ | $40(12.4)$ |
|  | Male | $1481(75.7)$ | $268(83.8)$ |
| 2015 | Female | $462(23.6)$ | $52(16.3)$ |
|  | Male | $1367(75.9)$ | $274(84.3)$ |
| 2016 | Female | $427(23.7)$ | $51(15.7)$ |
|  | Male | $1862(75.9)$ | $331(83.2)$ |
|  | Female | $585(23.9)$ | $67(16.8)$ |

[^14]Table B.2: Number and percentage of ROTP recruits in RMC St-Jean by gender from 2006 to 2016.

| Years | Gender | Recruits <br> $\mathbf{n}(\%)$ |
| :---: | :---: | :---: |
| 2006 | Male | $73(76.0)$ |
|  | Female | $23(24.0)$ |
| 2007 | Male | $82(84.5)$ |
|  | Female | $15(15.5)$ |
| 2008 | Male | $130(86.1)$ |
|  | Female | $21(13.9)$ |
| 2009 | Male | $100(85.5)$ |
|  | Female | $17(14.5)$ |
| 2010 | Male | $117(85.4)$ |
|  | Female | $20(14.6)$ |
| 2011 | Male | $128(84.8)$ |
|  | Female | $23(15.2)$ |
| 2012 | Male | $124(87.3)$ |
|  | Female | $18(12.7)$ |
| 2013 | Male | $109(89.3)$ |
| 2014 | Female | $13(10.7)$ |
|  | Male | $120(86.3)$ |
| 2015 | Female | $19(13.7)$ |
|  | Male | $111(85.4)$ |
| 2016 | Female | $19(14.6)$ |
|  | Male | $124(85.5)$ |
|  | Female | $21(14.5)$ |

Table B.3: Number and percentage of ROTP recruits in RMC by gender from 2006 to 2016.

| Years | Gender | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :---: | :---: | :---: |
| 2006 | Male | $124(75.2)$ |
|  | Female | $41(24.8)$ |
| 2007 | Male | $151(78.6)$ |
|  | Female | $41(21.4)$ |
| 2008 | Male | $196(81.0)$ |
|  | Female | $46(19.0)$ |
| 2009 | Male | $139(73.2)$ |
|  | Female | $51(26.8)$ |
| 2010 | Male | $116(74.4)$ |
|  | Female | $40(25.6)$ |
| 2011 | Male | $146(85.4)$ |
|  | Female | $25(14.6)$ |
| 2012 | Male | $139(81.3)$ |
|  | Female | $32(18.7)$ |
| 2013 | Male | $174(86.6)$ |
| 2014 | Female | $27(13.4)$ |
|  | Male | $148(81.8)$ |
| 2015 | Female | $33(18.2)$ |
|  | Male | $163(83.6)$ |
| 2016 | Female | $32(16.4)$ |
|  | Male | $207(81.8)$ |
|  | Female | $46(18.2)$ |

Table B.4: Number and percentage of ROTP applicants who self-identified as visible minorities from 2006 to 2016.

| Years | Visible <br> Minorities <br> $\boldsymbol{n}(\%)$ | Not Visible <br> Minorities <br> $\boldsymbol{n}(\%)$ |
| :---: | :---: | :---: |
| 2006 | $14(1.0)$ | $1401(99.0)$ |
| 2007 | $79(5.3)$ | $1424(94.7)$ |
| 2008 | $200(11.9)$ | $1485(88.1)$ |
| 2009 | $191(12.8)$ | $1298(87.2)$ |
| 2010 | $290(15.1)$ | $1633(84.9)$ |
| 2011 | $487(13.8)$ | $3045(86.2)$ |
| 2012 | $300(9.6)$ | $2828(90.4)$ |
| 2013 | $272(17.4)$ | $1291(82.6)$ |
| 2014 | $448(22.9)$ | $1509(77.1)$ |
| 2015 | $423(23.5)$ | $1379(76.5)$ |
| 2016 | $575(23.5)$ | $1877(76.5)$ |

Table B.5: Number and percentage of ROTP recruits who self-identified as visible minorities from 2006 to 2016.

| Years | Visible <br> Minorities <br> $\mathbf{n ~ ( \% ) ~}$ | Not Visible <br> Minorities <br> $\mathbf{n ( \% )}$ |
| :---: | :---: | :---: |
| 2006 | $0(0.0)$ | $261(100.0)$ |
| 2007 | $16(5.5)$ | $273(94.5)$ |
| 2008 | $39(9.9)$ | $354(90.1)$ |
| 2009 | $42(13.7)$ | $265(86.3)$ |
| 2010 | $35(11.9)$ | $258(88.1)$ |
| 2011 | $40(12.4)$ | $282(87.6)$ |
| 2012 | $26(8.3)$ | $287(91.7)$ |
| 2013 | $44(13.6)$ | $279(86.4)$ |
| 2014 | $56(17.5)$ | $264(82.5)$ |
| 2015 | $65(20.0)$ | $260(80.0)$ |
| 2016 | $68(17.1)$ | $330(82.9)$ |

Table B.6: Number and percentage of ROTP applicants and recruits who self-identified as visible minorities within gender from 2006 to 2016.

| Years | Gender | Applicants <br> $\boldsymbol{n}(\mathbf{\%})$ | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :---: | :---: | :---: | :---: |
| 2006 | Male | $11(1.1)$ | $0(0.0)$ |
|  | Female | $3(0.8)$ | $0(0.0)$ |
| 2007 | Male | $63(5.6)$ | $12(5.2)$ |
|  | Female | $16(4.2)$ | $4(7.1)$ |
| 2008 | Male | $164(12.8)$ | $36(11.0)$ |
|  | Female | $36(8.8)$ | $3(4.5)$ |
| 2009 | Male | $158(14.3)$ | $35(14.6)$ |
|  | Female | $33(8.7)$ | $7(10.3)$ |
| 2010 | Male | $236(16.3)$ | $30(12.9)$ |
|  | Female | $54(11.6)$ | $5(8.3)$ |
| 2011 | Male | $409(15.8)$ | $32(11.7)$ |
|  | Female | $78(9.5)$ | $8(16.7)$ |
| 2012 | Male | $242(10.2)$ | $22(8.4)$ |
| 2013 | Female | $58(7.8)$ | $4(8.0)$ |
|  | Male | $236(18.3)$ | $37(13.1)$ |
| 2014 | Female | $36(13.4)$ | $7(17.5)$ |
|  | Male | $359(24.2)$ | $48(18.0)$ |
| 2015 | Female | $89(19.3)$ | $8(15.4)$ |
|  | Male | $336(24.6)$ | $59(21.5)$ |
| 2016 | Female | $87(20.4)$ | $6(11.8)$ |
|  | Male | $440(23.6)$ | $52(15.7)$ |
|  | Female | $135(23.1)$ | $16(23.9)$ |

Table B.7: Numbers and percentage of applicants who selected Arts programme as their first preference and percentage of recruits in Arts programme within each gender from 2007 to 2016.

| Years | Gender | Applicants <br> $\boldsymbol{n} \mathbf{( \% )}$ | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :---: | :---: | :---: | :---: |
| 2007 | Male | $280(47.4)$ | $55(37.2)$ |
|  | Female | $99(58.9)$ | $22(53.7)$ |
| 2008 | Male | $394(49.1)$ | $124(50.8)$ |
|  | Female | $124(61.4)$ | $34(65.4)$ |
| 2009 | Male | $279(43.1)$ | $68(38.9)$ |
|  | Female | $96(56.1)$ | $33(57.9)$ |
| 2010 | Male | $291(43.4)$ | $49(32.5)$ |
|  | Female | $114(62.3)$ | $21(45.7)$ |
| 2011 | Male | $559(42.3)$ | $76(36.0)$ |
|  | Female | $173(56.5)$ | $14(41.2)$ |
| 2012 | Male | $457(40.4)$ | $71(37.8)$ |
|  | Female | $132(48.2)$ | $20(46.5)$ |
| 2013 | Male | $376(40.4)$ | $78(37.5)$ |
| 2014 | Female | $113(56.5)$ | $16(50.0)$ |
|  | Male | $155(24.7)$ | $72(35.5)$ |
| 2015 | Female | $63(33.2)$ | $21(52.5)$ |
|  | Male | $210(31.0)$ | $97(42.2)$ |
| 2016 | Female | $82(42.9)$ | $23(63.9)$ |
|  | Male | $222(28.7)$ | $96(35.6)$ |
|  | Female | $89(42.8)$ | $33(63.5)$ |

Table B.8: Numbers and percentage of applicants who selected Engineering programme as their first preference and percentage of recruits in Engineering programme within each gender from 2007 to 2016.

| Years | Gender | Applicants <br> $\boldsymbol{n}(\mathbf{\%})$ | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :---: | :---: | :---: | :---: |
| 2007 | Male | $221(37.4)$ | $74(50.0)$ |
|  | Female | $35(20.8)$ | $13(31.7)$ |
| 2008 | Male | $300(37.4)$ | $100(41.0)$ |
|  | Female | $38(18.8)$ | $11(21.2)$ |
| 2009 | Male | $284(43.9)$ | $90(51.4)$ |
|  | Female | $35(20.5)$ | $16(28.1)$ |
| 2010 | Male | $288(42.9)$ | $84(55.6)$ |
|  | Female | $37(20.2)$ | $18(39.1)$ |
| 2011 | Male | $565(42.7)$ | $107(50.7)$ |
|  | Female | $67(21.9)$ | $16(47.1)$ |
| 2012 | Male | $512(45.2)$ | $99(52.7)$ |
|  | Female | $93(33.9)$ | $18(41.9)$ |
| 2013 | Male | $413(44.4)$ | $103(49.5)$ |
| 2014 | Female | $46(23.0)$ | $13(40.6)$ |
|  | Male | $319(51.0)$ | $96(47.3)$ |
| 2015 | Female | $47(24.7)$ | $8(20.0)$ |
|  | Male | $335(49.5)$ | $108(47.0)$ |
| 2016 | Female | $39(20.4)$ | $8(22.2)$ |
|  | Male | $390(50.5)$ | $145(53.7)$ |
|  | Female | $49(23.6)$ | $14(26.9)$ |

Table B.9: Numbers and percentage of applicants who selected Science programme as their first preference and percentage of recruits in Science programme within each gender from 2007 to 2016.

| Years | Gender | Applicants <br> $\boldsymbol{n}(\mathbf{\%})$ | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :---: | :---: | :---: | :---: |
| 2007 | Male | $89(15.1)$ | $19(12.8)$ |
|  | Female | $34(20.2)$ | $6(14.6)$ |
| 2008 | Male | $104(13.0)$ | $20(8.2)$ |
|  | Female | $39(19.3)$ | $7(13.5)$ |
| 2009 | Male | $81(12.5)$ | $17(9.7)$ |
|  | Female | $36(21.1)$ | $8(14.0)$ |
| 2010 | Male | $92(13.7)$ | $18(11.9)$ |
|  | Female | $32(17.5)$ | $7(15.2)$ |
| 2011 | Male | $199(15.0)$ | $28(13.3)$ |
|  | Female | $66(21.6)$ | $4(11.8)$ |
| 2012 | Male | $163(14.4)$ | $18(9.6)$ |
|  | Female | $48(17.5)$ | $4(9.3)$ |
| 2013 | Male | $133(14.3)$ | $27(13.0)$ |
| 2014 | Female | $38(19.0)$ | $3(9.3)$ |
|  | Male | $109(17.4)$ | $35(17.2)$ |
| 2015 | Female | $67(35.3)$ | $11(27.5)$ |
|  | Male | $104(15.4)$ | $25(10.9)$ |
| 2016 | Female | $49(25.7)$ | $5(13.9)$ |
|  | Male | $121(15.7)$ | $29(10.7)$ |
|  | Female | $49(23.6)$ | $5(9.6)$ |

Table B.10: Numbers and percentage of applicants who select land operation occupations as their first preference and percentage of recruits who were offered land operation occupations within gender from 2007 to 2016.

| Years | Gender | Applicants <br> $\mathbf{n}(\%)$ | Recruits <br> $\mathbf{n}(\%)$ |
| :---: | :---: | :---: | :---: |
| 2007 | Male | $140(20.3)$ | $59(26.6)$ |
|  | Female | $13(7.8)$ | $5(9.8)$ |
| 2008 | Male | $200(22.0)$ | $74(28.9)$ |
|  | Female | $16(8.0)$ | $5(8.8)$ |
| 2009 | Male | $109(19.5)$ | $58(30.4)$ |
|  | Female | $6(4.9)$ | $9(15.3)$ |
| 2010 | Male | $151(19.0)$ | $57(27.3)$ |
|  | Female | $11(5.7)$ | $6(14.3)$ |
| 2011 | Male | $315(19.6)$ | $62(24.9)$ |
|  | Female | $14(3.9)$ | $6(14.3)$ |
| 2012 | Male | $302(21.3)$ | $45(21.2)$ |
|  | Female | $17(5.3)$ | $2(4.7)$ |
| 2013 | Male | $194(19.7)$ | $60(22.1)$ |
| 2014 | Female | $10(5.1)$ | $3(7.9)$ |
|  | Male | $95(13.4)$ | $61(23.2)$ |
| 2015 | Female | $7(3.3)$ | $4(7.7)$ |
|  | Male | $133(16.5)$ | $80(30.2)$ |
| 2016 | Female | $12(5.4)$ | $8(15.7)$ |
|  | Male | $172(18.6)$ | $74(26.0)$ |
|  | Female | $13(5.3)$ | $6(10.5)$ |

Table B.11: Numbers and percentage of applicants who select sea operation occupations as their first preference and percentage of recruits who were offered sea operation occupations within gender from 2007 to 2016.

| Years | Gender | Applicants <br> $\boldsymbol{n}(\mathbf{\%})$ | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :---: | :---: | :---: | :---: |
| 2007 | Male | $36(5.2)$ | $20(9.0)$ |
|  | Female | $7(4.2)$ | $10(19.6)$ |
| 2008 | Male | $24(2.6)$ | $26(10.2)$ |
|  | Female | $12(6.0)$ | $7(12.3)$ |
| 2009 | Male | $22(3.9)$ | $11(5.8)$ |
|  | Female | $9(7.4)$ | $7(11.9)$ |
| 2010 | Male | $38(4.8)$ | $12(5.7)$ |
|  | Female | $21(10.8)$ | $8(14.8)$ |
| 2011 | Male | $68(4.2)$ | $29(11.6)$ |
|  | Female | $26(7.3)$ | $5(11.9)$ |
| 2012 | Male | $46(3.2)$ | $24(8.8)$ |
|  | Female | $26(8.1)$ | $8(21.1)$ |
| 2013 | Male | $37(3.8)$ | $24(8.8)$ |
| 2014 | Female | $12(6.1)$ | $8(21.1)$ |
|  | Male | $20(2.8)$ | $15(5.7)$ |
| 2015 | Female | $8(3.8)$ | $3(5.8)$ |
|  | Male | $38(4.8)$ | $20(7.5)$ |
| 2016 | Female | $21(10.8)$ | $4(7.8)$ |
|  | Male | $19(2.0)$ | $13(4.6)$ |
|  | Female | $11(4.4)$ | $8(14.0)$ |

Table B.12: Numbers and percentage of applicants who select air operation occupations as their first preference and percentage of recruits who were offered air operation occupations within gender from 2007 to 2016.

| Years | Gender | Applicants <br> $\boldsymbol{n}(\mathbf{\%})$ | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :---: | :---: | :---: | :---: |
| 2007 | Male | $296(42.8)$ | $45(20.3)$ |
|  | Female | $87(52.1)$ | $9(17.6)$ |
| 2008 | Male | $411(45.2)$ | $53(20.7)$ |
|  | Female | $79(39.5)$ | $5(8.8)$ |
| 2009 | Male | $227(40.5)$ | $42(22.0)$ |
|  | Female | $39(32.0)$ | $6(10.2)$ |
| 2010 | Male | $264(33.2)$ | $41(19.6)$ |
|  | Female | $52(26.8)$ | $10(18.5)$ |
| 2011 | Male | $583(36.3)$ | $52(20.9)$ |
|  | Female | $87(24.4)$ | $6(14.3)$ |
| 2012 | Male | $493(34.7)$ | $60(28.3)$ |
|  | Female | $96(30.0)$ | $4(14.3)$ |
| 2013 | Male | $363(36.9)$ | $58(21.3)$ |
| 2014 | Female | $42(21.4)$ | $7(18.4)$ |
|  | Male | $272(38.4)$ | $47(17.9)$ |
| 2015 | Female | $50(23.6)$ | $3(5.8)$ |
|  | Male | $317(39.4)$ | $33(12.5)$ |
| 2016 | Female | $56(25.1)$ | $4(7.8)$ |
|  | Male | $351(37.9)$ | $43(15.1)$ |
|  | Female | $51(20.6)$ | $6(10.5)$ |

Table B.13: Numbers and percentage of applicants who select land engineering occupations as their first preference and percentage of recruits who were offered land engineering occupations within gender from 2007 to 2016.

| Years | Gender | Applicants <br> $\boldsymbol{n}(\mathbf{\%})$ | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :---: | :---: | :---: | :---: |
| 2007 | Male | $79(11.4)$ | $36(16.2)$ |
|  | Female | $11(6.6)$ | $5(9.8)$ |
| 2008 | Male | $99(10.9)$ | $38(14.8)$ |
|  | Female | $5(2.5)$ | $3(5.3)$ |
| 2009 | Male | $77(13.8)$ | $37(19.4)$ |
|  | Female | $11(9.0)$ | $5(8.5)$ |
| 2010 | Male | $108(13.6)$ | $39(18.7)$ |
|  | Female | $9(4.6)$ | $11(20.4)$ |
| 2011 | Male | $238(14.8)$ | $37(14.9)$ |
|  | Female | $28(7.8)$ | $3(7.0)$ |
| 2012 | Male | $258(18.2)$ | $36(17.0)$ |
|  | Female | $32(10.0)$ | $3(5.3)$ |
| 2013 | Male | $172(17.5)$ | $53(19.5)$ |
| 2014 | Female | $17(8.7)$ | $2(5.3)$ |
|  | Male | $127(17.9)$ | $61(23.2)$ |
| 2015 | Female | $22(10.4)$ | $6(11.5)$ |
|  | Male | $118(14.7)$ | $63(23.8)$ |
| 2016 | Female | $19(8.5)$ | $4(7.8)$ |
|  | Male | $149(16.1)$ | $65(22.8)$ |
|  | Female | $23(9.3)$ | $7(12.3)$ |

Table B.14: Numbers and percentage of applicants who select sea engineering occupations as their first preference and percentage of recruits who were offered sea engineering occupations within gender from 2007 to 2016.

| Years | Gender | Applicants <br> $\boldsymbol{n}(\mathbf{\%})$ | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :---: | :---: | :---: | :---: |
| 2007 | Male | $17(2.5)$ | $11(5.0)$ |
|  | Female | $4(2.4)$ | $1(2.0)$ |
| 2008 | Male | $13(1.4)$ | $12(4.7)$ |
|  | Female | $6(3.0)$ | $4(7.0)$ |
| 2009 | Male | $8(1.4)$ | $13(6.8)$ |
|  | Female | $4(3.3)$ | $1(1.7)$ |
| 2010 | Male | $15(1.9)$ | $15(7.2)$ |
|  | Female | $2(1.0)$ | $1(1.9)$ |
| 2011 | Male | $45(2.8)$ | $21(8.4)$ |
|  | Female | $5(1.4)$ | $4(9.5)$ |
| 2012 | Male | $48(3.4)$ | $6(2.8)$ |
|  | Female | $14(4.4)$ | $4(9.3)$ |
| 2013 | Male | $28(2.8)$ | $20(7.4)$ |
| 2014 | Female | $5(2.6)$ | $5(13.5)$ |
|  | Male | $13(1.8)$ | $17(6.5)$ |
| 2015 | Female | $5(2.4)$ | $7(13.5)$ |
|  | Male | $19(2.4)$ | $12(4.5)$ |
| 2016 | Female | $3(1.3)$ | $0(0.0)$ |
|  | Male | $29(3.1)$ | $21(7.4)$ |
|  | Female | $7(2.8)$ | $0(0.0)$ |

Table B.15: Numbers and percentage of applicants who select air engineering occupations as their first preference and percentage of recruits who were offered air engineering occupations within gender from 2007 to 2016.

| Years | Gender | Applicants <br> $\boldsymbol{n}(\mathbf{\%})$ | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :---: | :---: | :---: | :---: |
| 2007 | Male | $75(7.4)$ | $17(7.7)$ |
|  | Female | $11(3.5)$ | $3(5.9)$ |
| 2008 | Male | $65(5.5)$ | $16(6.3)$ |
|  | Female | $15(4.1)$ | $3(5.3)$ |
| 2009 | Male | $53(6.3)$ | $10(5.2)$ |
|  | Female | $10(3.8)$ | $5(8.5)$ |
| 2010 | Male | $90(7.0)$ | $12(5.7)$ |
|  | Female | $19(4.5)$ | $4(7.4)$ |
| 2011 | Male | $129(5.1)$ | $16(7.5)$ |
|  | Female | $24(3.0)$ | $5(11.9)$ |
| 2012 | Male | $134(5.9)$ | $16(7.5)$ |
|  | Female | $29(4.1)$ | $2(4.7)$ |
| 2013 | Male | $73(6.1)$ | $16(5.9)$ |
| 2014 | Female | $15(6.3)$ | $3(7.9)$ |
|  | Male | $83(6.2)$ | $20(7.6)$ |
| 2015 | Female | $20(4.8)$ | $2(3.8)$ |
|  | Male | $77(6.0)$ | $18(6.8)$ |
| 2016 | Female | $18(4.5)$ | $3(5.9)$ |
|  | Male | $94(5.3)$ | $22(7.7)$ |
|  | Female | $20(3.7)$ | $2(3.5)$ |

Table B.16: Numbers and percentage of applicants who select communication engineering occupations as their first preference and percentage of recruits who were offered communication engineering occupations within gender from 2007 to 2016.

| Years | Gender | Applicants <br> $\boldsymbol{n}(\mathbf{\%})$ | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :---: | :---: | :---: | :---: |
| 2007 | Male | $15(2.2)$ | $17(7.7)$ |
|  | Female | $2(1.2)$ | $2(3.9)$ |
| 2008 | Male | $7(0.8)$ | $11(4.3)$ |
|  | Female | $0(0.0)$ | $1(1.8)$ |
| 2009 | Male | $7(1.3)$ | $7(3.7)$ |
|  | Female | $0(0.0)$ | $3(5.1)$ |
| 2010 | Male | $26(3.3)$ | $17(8.1)$ |
|  | Female | $2(1.0)$ | $3(5.6)$ |
| 2011 | Male | $35(2.2)$ | $18(7.2)$ |
|  | Female | $2(0.6)$ | $2(4.8)$ |
| 2012 | Male | $35(2.5)$ | $18(8.5)$ |
|  | Female | $5(1.6)$ | $7(16.3)$ |
| 2013 | Male | $11(1.1)$ | $24(8.8)$ |
| 2014 | Female | $1(0.5)$ | $1(2.6)$ |
|  | Male | $18(2.5)$ | $21(8.0)$ |
| 2015 | Female | $1(0.5)$ | $5(9.6)$ |
|  | Male | $12(1.5)$ | $22(8.3)$ |
| 2016 | Female | $3(1.3)$ | $7(13.7)$ |
|  | Male | $23(2.5)$ | $18(6.3)$ |
|  | Female | $7(2.8)$ | $5(8.8)$ |

Table B.17: Numbers and percentage of applicants who select support occupations as their first preference and percentage of recruits who were offered
support occupations within gender from 2007 to 2016.

| Years | Gender | Applicants <br> $\boldsymbol{n}(\mathbf{\%})$ | Recruits <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :---: | :---: | :---: | :---: |
| 2007 | Male | $50(7.2)$ | $17(7.7)$ |
|  | Female | $35(21.0)$ | $16(31.4)$ |
| 2008 | Male | $102(11.2)$ | $25(9.8)$ |
|  | Female | $72(36.0)$ | $28(49.1)$ |
| 2009 | Male | $69(12.3)$ | $13(6.8)$ |
|  | Female | $47(38.5)$ | $23(39.0)$ |
| 2010 | Male | $130(16.3)$ | $16(7.7)$ |
|  | Female | $81(41.8)$ | $11(20.4)$ |
| 2011 | Male | $225(14.0)$ | $14(5.6)$ |
|  | Female | $171(47.9)$ | $10(23.8)$ |
| 2012 | Male | $145(10.2)$ | $9(4.2)$ |
|  | Female | $103(32.2)$ | $12(27.9)$ |
| 2013 | Male | $115(11.7)$ | $17(6.3)$ |
| 2014 | Female | $96(49.0)$ | $9(23.7)$ |
|  | Male | $104(14.7)$ | $21(8.0)$ |
| 2015 | Female | $104(49.1)$ | $22(42.3)$ |
|  | Male | $111(13.8)$ | $17(6.4)$ |
| 2016 | Female | $110(49.3)$ | $18(35.3)$ |
|  | Male | $125(13.5)$ | $29(10.2)$ |
|  | Female | $122(49.4)$ | $22(38.6)$ |

## Annex C List of tables from Section 3.3

Table C.1: Numbers and percentage of recruits who passed academic requirements in each year for the 2006 cohort within gender.

|  | $\mathbf{2 0 0 6}-\mathbf{2 0 0 7}$ <br> $\boldsymbol{n}(\mathbf{\%})$ | $\mathbf{2 0 0 7 - 2 0 0 8}$ <br> $\boldsymbol{n}(\mathbf{\%})$ | $\mathbf{2 0 0 8}-\mathbf{2 0 0 9}$ <br> $\boldsymbol{n}(\mathbf{\%})$ | $\mathbf{2 0 0 9 - 2 0 1 0}$ <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :--- | :---: | :---: | :---: | :---: |
| Male | $149(77.2)$ | $150(80.6)$ | $149(80.1)$ | $161(95.8)$ |
| Female | $44(74.6)$ | $45(88.2)$ | $41(80.5)$ | $43(95.3)$ |

Table C.2: Numbers and percentage of recruits who passed academic requirements in each year for the 2007 cohort within gender.

|  | $\mathbf{2 0 0 7 - 2 0 0 8}$ <br> $\boldsymbol{n} \mathbf{( \% )}$ | $\mathbf{2 0 0 8}-\mathbf{2 0 0 9}$ <br> $\boldsymbol{n} \mathbf{( \% )}$ | $\mathbf{2 0 0 9 - 2 0 1 0}$ <br> $\boldsymbol{n}(\mathbf{\%})$ | $\mathbf{2 0 1 0 - 2 0 1 1}$ <br> $\boldsymbol{n}(\%)$ |
| :--- | :---: | :---: | :---: | :---: |
| Male | $132(66.0)$ | $122(70.1)$ | $134(84.8)$ | $145(95.9)$ |
| Female | $46(80.7)$ | $43(79.6)$ | $50(89.3)$ | $54(100.0)$ |

Table C.3: Numbers and percentage of recruits who passed academic requirements in each year for the 2008 cohort within gender.

|  | $\mathbf{2 0 0 8}-\mathbf{2 0 0 9}$ <br> $\boldsymbol{n} \mathbf{( \% )}$ | $\mathbf{2 0 0 9 - 2 0 1 0}$ <br> $\boldsymbol{n}(\mathbf{\%})$ | $\mathbf{2 0 1 0}-\mathbf{2 0 1 1}$ <br> $\boldsymbol{n}(\mathbf{\%})$ | $\mathbf{2 0 1 1 - 2 0 1 2}$ <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :--- | :---: | :---: | :---: | :---: |
| Male | $116(53.7)$ | $189(76.2)$ | $193(81.7)$ | $210(92.0)$ |
| Female | $31(60.8)$ | $40(70.2)$ | $49(90.7)$ | $50(98.2)$ |

Table C.4: Numbers and percentage of recruits who passed academic requirements in each year for the 2009 cohort within gender.

|  | $\mathbf{2 0 0 9 - 2 0 1 0}$ <br> $\boldsymbol{n}(\mathbf{\%})$ | $\mathbf{2 0 1 0 - 2 0 1 1}$ <br> $\boldsymbol{n} \mathbf{( \% )}$ | $\mathbf{2 0 1 1 - 2 0 1 2}$ <br> $\boldsymbol{n}(\mathbf{\%})$ | $\mathbf{2 0 1 2 - 2 0 1 3}$ <br> $\boldsymbol{n}(\%)$ |
| :---: | :---: | :---: | :---: | :---: |
| Male | $110(71.9)$ | $163(69.7)$ | $181(84.2)$ | $197(97.1)$ |
| Female | $36(69.2)$ | $44(78.6)$ | $51(87.9)$ | $55(98.2)$ |

Table C.5: Numbers and percentage of recruits who passed academic requirements in each year for the 2010 cohort within gender.

|  | $\mathbf{2 0 1 0}-\mathbf{2 0 1 1}$ <br> $\boldsymbol{n}(\%)$ | $\mathbf{2 0 1 1 - 2 0 1 2}$ <br> $\boldsymbol{n}(\%)$ | $\mathbf{2 0 1 2 - 2 0 1 3}$ <br> $\boldsymbol{n}(\%)$ | $\mathbf{2 0 1 3 - 2 0 1 4}$ <br> $\boldsymbol{n}(\%)$ |
| :---: | :---: | :---: | :---: | :---: |
| Male | $74(60.2)$ | $124(70.9)$ | $128(75.3)$ | $146(96.8)$ |
| Female | $31(73.8)$ | $36(73.5)$ | $38(77.6)$ | $46(97.9)$ |

Table C.6: Numbers and percentage of recruits who passed academic requirements in each year for the 2011 cohort within gender.

|  | $\mathbf{2 0 1 1 - 2 0 1 2}$ <br> $\boldsymbol{n}(\%)$ | $\mathbf{2 0 1 2 - 2 0 1 3}$ <br> $\boldsymbol{n}(\mathbf{\%})$ | $\mathbf{2 0 1 3 - 2 0 1 4}$ <br> $\boldsymbol{n}(\%)$ | $\mathbf{2 0 1 4 - 2 0 1 5}$ <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :---: | :---: | :---: | :---: | :---: |
| Male | $99(68.2)$ | $176(75.5)$ | $174(80.9)$ | $192(93.7)$ |
| Female | $17(68.0)$ | $24(75.0)$ | $22(73.3)$ | $27(93.0)$ |

Table C.7: Numbers and percentage of recruits who passed academic requirements in each year for the 2012 cohort within gender.

|  | $\mathbf{2 0 1 2 - 2 0 1 3}$ <br> $\boldsymbol{n}(\mathbf{\%})$ | $\mathbf{2 0 1 3 - 2 0 1 4}$ <br> $\boldsymbol{n}(\mathbf{\%})$ | $\mathbf{2 0 1 4 - 2 0 1 5}$ <br> $\boldsymbol{n}(\%)$ | $\mathbf{2 0 1 5 - 2 0 1 6}$ <br> $\boldsymbol{n}(\mathbf{\%})$ |
| :---: | :---: | :---: | :---: | :---: |
| Male | $94(66.7)$ | $152(71.0)$ | $161(83.9)$ | $179(96.7)$ |
| Female | $19(57.6)$ | $37(74.0)$ | $40(90.9)$ | $47(97.9)$ |

Table C.8: Numbers and percentage of recruits who passed academic requirements in each year for the 2013 cohort within gender.

|  | $\mathbf{2 0 1 3 - 2 0 1 4}$ <br> $\boldsymbol{n}(\%)$ | $\mathbf{2 0 1 4 - 2 0 1 5}$ <br> $\boldsymbol{n}(\%)$ | $\mathbf{2 0 1 5 - 2 0 1 6}$ <br> $\boldsymbol{n}(\%)$ |
| :--- | :---: | :---: | :---: |
| Male | $107(74.3)$ | $177(78.3)$ | $182(84.3)$ |
| Female | $19(67.9)$ | $30(83.3)$ | $25(75.8)$ |

Table C.9: Numbers and percentage of recruits who passed academic requirements in each year for the 2014 cohort within gender.

|  | $\mathbf{2 0 1 4 - 2 0 1 5}$ <br> $\boldsymbol{n}(\mathbf{\%})$ | $\mathbf{2 0 1 5 - 2 0 1 6}$ <br> $\boldsymbol{n}(\%)$ |
| :---: | :---: | :---: |
| Male | $97(66.4)$ | $152(73.8)$ |
| Female | $23(74.2)$ | $31(83.8)$ |

## Annex D List of tables from Section 3.4

Table D.1: Number and percentage of recruits being released from RMC St-Jean according to release reason by gender from 2010 to 2016.

|  | Voluntary <br> $\boldsymbol{n}(\%)$ | Academic <br> or military <br> failure <br> $\boldsymbol{n}(\%)$ | Medical <br> $\boldsymbol{n}(\%)$ | Transfer <br> to RMCC <br> $\boldsymbol{n}(\%)$ | Repeater <br> $\boldsymbol{n}(\%)$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Male | $119(52.7)$ | $47(23.5)$ | $2(66.7)$ | $4(7.4)$ | $2(0.9)$ |
| Female | $22(53.5)$ | $4(14.8)$ | $1(33.3)$ | $2(2.0)$ | $0(0.0)$ |

Table D.2: Number and percentage of recruits being released from RMC St-Jean according to release reason by gender from 2010 to 2016 (continued).

|  | Irregular <br> enrolment <br> $\boldsymbol{n}(\%)$ | Transfer to <br> non-commission <br> member <br> $\boldsymbol{n}(\%)$ | Return to <br> home <br> (foreign) <br> $\boldsymbol{n}(\%)$ | Not <br> Available <br> $\boldsymbol{n}(\%)$ |
| :---: | :---: | :---: | :---: | :---: |
| Male | $2(0.9)$ | $8(3.5)$ | $1(0.5)$ | $31(13.7)$ |
| Female | $0(0.0)$ | $0(0.0)$ | $0(0.0)$ | $2(6.1)$ |

Table D.3: Number and percentage of recruits being released from RMC St-Jean according to release reason by gender intersection and FOL from 2010 to 2016.

|  | Voluntary <br> $\boldsymbol{n}(\%)$ | Academic <br> or military <br> failure <br> $\boldsymbol{n}(\%)$ | Medical <br> $\boldsymbol{n}(\%)$ | Transfer <br> to RMCC <br> $\boldsymbol{n}(\%)$ | Repeater <br> $\boldsymbol{n}(\%)$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| French male | $73(51.8)$ | $35(26.1)$ | $1(0.7)$ | $3(2.2)$ | $0(0.0)$ |
| French female | $15(68.2)$ | $4(18.2)$ | $0(0.0)$ | $0(0.0)$ | $0(0.0)$ |
| English male | $43(49.4)$ | $14(16.1)$ | $1(1.1)$ | $5(5.7)$ | $2(0.8)$ |
| English female | $8(66.7)$ | $0(0.0)$ | $1(8.3)$ | $2(16.7)$ | $0(0.0)$ |

Table D.4: Number and percentage of recruits being released from RMC St-Jean according to release reason by gender intersection and FOL from 2010 to 2016 (continued).

|  | Irregular <br> enrolment <br> $\boldsymbol{n}(\%)$ | Transfer to <br> non-commission <br> member <br> $\boldsymbol{n}(\%)$ | Return to home <br> (foreign) <br> $\boldsymbol{n}(\%)$ | Not <br> available <br> $\boldsymbol{n}(\%)$ |
| :--- | :---: | :---: | :---: | :---: |
| French male | $2(1.5)$ | $2(1.5)$ | $0(0.0)$ | $16(11.9)$ |
| French female | $0(0.0)$ | $0(0.0)$ | $0(0.0)$ | $1(4.5)$ |
|  | $0(0.0)$ | $6(6.9)$ | $1(1.1)$ | $15(17.2)$ |
| English male |  |  |  |  |
|  | $0(0.0)$ | $0(0.0)$ | $1(8.3)$ |  |

## List of symbols/abbreviations/acronyms/initialisms

| ARA | Associate Registrar Admissions |
| :---: | :---: |
| BMOQ | Basic Military Officer Qualification |
| CAF | Canadian Armed Forces |
| CDS | Chief of Defence Staff |
| CEOTP | Continuing Education Officer Training Plan |
| CFAT | Canadian Forces Aptitude Test |
| CFRG | Canadian Forces Recruiting Group |
| CMC | Canadian Military College |
| CMR | Collège Militaire Royal |
| DGMPRA | Director General Military Personnel Research and Analysis |
| DHRD | Director General Human Rights and Diversity |
| DND | Department of National Defence |
| DPGR | Director Personnel Generation Requirements |
| EE | Employment Equity |
| FOL | First Official Language |
| GBA+ | Gender-Based Analysis Plus |
| MCC | Military Career Counselor |
| MOSID | Military Occupation Structure ID |
| MPG | Military Personnel Generation |
| NCM | Non-Commissioned Member |
| RMC | Royal Military College of Canada |
| RMC St-Jean | Royal Military College St-Jean |
| ROTP | Regular Officer Training Plan |
| SIP | Strategic Intake Plan |
| SMEs | Subject Matter Experts |
| US | United States |
| USTAF | United States Armed Force |
| UTPNCM | University Training Plan Non-commissioned Member |

## DOCUMENT CONTROL DATA

*Security markings for the title, authors, abstract and keywords must be entered when the document is sensitive

1. ORIGINATOR (Name and address of the organization preparing the document. A DRDC Centre sponsoring a contractor's report, or tasking agency, is entered in Section 8.)

## Director General Military Personnel Research and <br> Analysis <br> Defence Research and Development Canada <br> 101 Colonel By Drive <br> Ottawa, Ontario K1A OK2 <br> Canada

2a. $\begin{aligned} & \text { SECURITY MARKING } \\ & \text { (Overall security marking of the document including } \\ & \text { special supplemental markings if applicable.) }\end{aligned}$
CAN UNCLASSIFIED

2b. CONTROLLED GOODS
NON-CONTROLLED GOODS DMC A
3. TITLE (The document title and sub-title as indicated on the title page.)

Gender-Based Analysis Plus of the Regular Officer Training Plan: Phase 1
4. AUTHORS (Last name, followed by initials - ranks, titles, etc., not to be used)

Scoppio, G.; Otis, N.; Yan, Y.

| 5.DATE OF PUBLICATION <br> (Month and year of publication of document.) | 6a.NO. OF PAGES <br> (Total pages, including <br> Annexes, excluding DCD, <br> covering and verso pages.) <br> July 2018$\quad$6b.NO. OF REFS <br> (Total references cited.) |
| :--- | :--- | :--- |

7. DOCUMENT CATEGORY (e.g., Scientific Report, Contract Report, Scientific Letter.)

## Scientific Report

8. SPONSORING CENTRE (The name and address of the department project office or laboratory sponsoring the research and development.)
Director General Military Personnel Research and Analysis
Defence Research and Development Canada
101 Colonel By Drive
Ottawa, Ontario K1A 0K2
Canada

9a. PROJECT OR GRANT NO. (If appropriate, the applicable research and development project or grant number under which the document was written. Please specify whether project or grant.)

04g
10a. DRDC PUBLICATION NUMBER (The official document number by which the document is identified by the originating activity. This number must be unique to this document.)

DRDC-RDDC-2018-R166

11a. FUTURE DISTRIBUTION WITHIN CANADA (Approval for further dissemination of the document. Security classification must also be considered.)

Public release

11b. FUTURE DISTRIBUTION OUTSIDE CANADA (Approval for further dissemination of the document. Security classification must also be considered.)
12. KEYWORDS, DESCRIPTORS or IDENTIFIERS (Use semi-colon as a delimiter.)

Gender-based analysis; Recruiting; military colleges

The Royal Military College (RMC) of Canada requested a study to examine whether gender bias exists in the recruiting and selection process for the Regular Officer Training Plan (ROTP), with a focus on recruits destined for the Canadian Military Colleges (CMCs). The research design and analysis were guided by the Gender-Based Analysis Plus (GBA+) framework. This Scientific Report focuses on the Phase 1 of the project, which involved informal consultations and an analysis of secondary data. A total of 18 informal consultations were conducted with identified stakeholders and Subject Matter Experts (SMEs) to gain insights, knowledge, and information to assist in the research project development. Secondary data analysis was conducted to examine female representation in the ROTP and potential gender differences in the following areas: gender differences in enrolment in preferred occupations/programmes, academic performance, and reasons for leaving the ROTP. Gender differences were also examined in relation to other intersecting demographics when possible. Results revealed that female representation among ROTP applicants and recruits has declined from 2003 to 2016. Further, female representation among ROTP applicants is higher than among ROTP recruits. In terms of gender differences, female Officer Cadets enrolled at CMCs are less likely to be assigned to their first choice of occupation and programme than their male counterparts, which suggests that the availability of preferred choice(s) may play a role in women withdrawing from the recruitment process. There was no evidence to support that female Officer Cadets are less likely to succeed academically at the military colleges than male Officer Cadets or that female Officer Cadets are leaving the military colleges for different reasons than their male counterparts. The discussion summarizes the main findings and provides recommendations.

Le Collège militaire royal (CMR) du Canada a commandé une étude dans le but d'examiner s'il existe des préjugés sexistes dans le recrutement et le processus de sélection du Programme de formation des officiers de la Force régulière (PFOR), en mettant l'accent sur les recrues des collèges militaires canadiens (CMC). La méthodologie de la recherche et l'étude analytique ont été effectuées selon le cadre de l'analyse comparative entre les sexes plus (ACS+). Ce rapport scientifique porte principalement sur la phase 1 du projet, laquelle comportait des consultations informelles et l'analyse des données secondaires. On a mené en tout 18 consultations informelles auprès d'intervenants et d'experts en la matière désignés afin d'acquérir des connaissances et de recueillir des renseignements utiles à l'élaboration du projet de recherche. On a procédé à l'analyse des données secondaires pour examiner la représentation féminine au sein du PFOR, ainsi que les disparités éventuelles entre les sexes dans les domaines suivants : les préférences dans les choix de professions ou les inscriptions aux programmes, le rendement scolaire et les motifs d'abandon du PFOR. Dans la mesure du possible, les disparités entre les sexes ont également été examinées en fonction d'autres données démographiques qui se recoupent. Les résultats ont révélé que la représentation féminine chez les postulants au PFOR et les recrues a diminué entre 2003 et 2016. Par ailleurs, la représentation féminine est plus élevée chez les postulants au PFOR que chez les recrues. En ce qui a trait aux disparités entre les sexes, les élèves-officiers féminins inscrits aux CMC sont moins susceptibles d'obtenir leur premier choix de profession ou de programme que leurs homologues masculins, ce qui laisse entendre que la disponibilité des préférences pourrait influer sur la décision des femmes de se retirer du processus de recrutement. Rien ne donne à penser que le rendement scolaire des élèves-officiers féminins des collèges militaires est inférieur à celui des élèves-officiers masculins ni que les élèves-officiers féminins quittent les collèges militaires pour des raisons différentes de celles invoquées par leurs homologues masculins. Le rapport contient un résumé des principales constatations, ainsi que des recommandations.


[^0]:    ${ }^{1}$ The authors acknowledge they discussed in a previous article some of the content presented in this report, although in a summarized way. Specifically, only select themes emerging from the consultations were presented, as well as data on preferred occupation vs. enrolled occupation, and preferred programme vs. enrolled programme (Scoppio, Otis \& Yan, 2018).
    ${ }^{2}$ The preparatory year is the equivalent of a college level year and its main purpose is to allow Quebec high school students to start their military studies directly after their high school graduation (the equivalent of Grade 11 in Ontario).

[^1]:    ${ }^{3}$ An acceptable degree means a degree in a suitable discipline that is compatible with a specific military occupation.

[^2]:    ${ }^{4}$ As indicated in the Social Science Research Review Board (SSRRB) Standard Operating Procedures (SOP), consultations involving a two-way process of engagement to exchange information between stakeholders and participants, where there is no expectation of anonymity are exempt except from both SSRRB Ethical and Technical Review and Coordination.

[^3]:    ${ }^{5}$ At the request of the Board of Governors of RMC, General (Retired) Ramsey Muir Withers former Chief of the Defence Staff, chaired a pivotal study on the future of RMC in 1998. The resulting recommendations from the Wither's report was largely implemented. As part of the recommendations, a trial was started in 2008, whereby Officer Cadets were assigned an occupation at the end of their first year of study. Overall, this trial process was not successful and was not recommended for the future, based, in part, by the additional resources it required (National Defence, 2009).

[^4]:    ${ }^{6}$ Since 2002, the CAF has fallen under the Employment Equity Act, although there are specific regulations to adapt the provisions of the Act to account for the operational effectiveness of the CAF. As such, the CAF does not actively recruit persons with disabilities due to the clause of Universality of Service under which "members of the Canadian Forces must at all times and under any circumstances perform any functions that they may be required to perform" (Government of Canada, 2018). In the case of serving CAF members, some accommodation can be made, such as for members injured on duty.

[^5]:    ${ }^{7}$ Attrition during basic training was deemed outside the scope of the Gender-Based Analysis of the ROTP study but constitutes a research area that is being examined through Project Horizon, a longitudinal study which follows recruits during their first year of service (Laplante, Otis, \& Goldenberg, 2016).
    ${ }^{8}$ It should be noted that the CAF recruitment website falls under the authority of the Assistant Deputy Minister (Public Affairs), Department of National Defence but the online application form is under the authority of CFRG.

[^6]:    ${ }^{9}$ Jennie Carignan is also the first Canadian woman in a combat arms occupation to rise to the rank of Brigadier-General and the first woman to hold the position of Chief of Staff of Army Operations. For more information on how Carignan's achievements in the military have influenced recruitment of women into combat roles see Campbell, M. "Meet the world's first female combat general - The many ways Col. Jennie Carignan is detonating the glass ceiling," MacLean's, Retrieved from http://www.macleans.ca/news/canada/jennie-carignan-will-be-the-first-female-general-from-the-combat-arms-trades/.

[^7]:    ${ }^{10}$ Self-identification data is gathered only upon enrollment in the CAF.

[^8]:    ${ }^{11}$ The total number of male recruits $(M=5,185)$ was calculated by adding the number of male recruits from 2003 to 2016. The total number of the female recruits $(F=1,429)$ was calculated the same way.

[^9]:    ${ }^{12}$ As noted previously, RMC St-Jean closed its doors as a university in 1995 and re-opened only in 2008; however, preparatory year cadets continued to be educated at RMC St-Jean as a satellite campus of the RMC. Therefore, data for recruits in RMC St-Jean were available for the entire time period under study (2006 to 2016).

[^10]:    ${ }^{13}$ The term First Nation is used here instead of Aboriginals when referring to the data set that was provided by the RMC, where the variable is identified as First Nation. The authors acknowledge that the Employment Equity Act of Canada of 1995 utilizes the term Aboriginal peoples, which includes persons who are Indians, Inuit or Métis; whereas the term First Nation refers only to North American Indian.
    ${ }^{14}$ It should be noted that students in the Aboriginal Leadership Opportunity Year (ALOY) at the RMC are not included in the numbers of ROTP applicants or recruits who identified as First Nation, due to the fact that the ALOY is a special program under Employment Equity, distinct from the ROTP, which is one of the entry programs to recruit officers in the CAF.

[^11]:    ${ }^{15}$ To make the applicant and recruit data more comparable, the following applicant cases were deleted: applicants not admissible, applicants placed to civilian universities, and applicants with missing information in the pre-suitability stage.

[^12]:    ${ }^{16}$ To simplify the original 60 listed end reasons, the end reason "advanced awarded degree" in different programmes (Arts, Science, and Engineering) were combined with "pass" in the analysis.

[^13]:    ${ }^{17}$ Table 9 to Table 19 exclude the analysis in 2008 and 2009 due to the unavailability of the data.

[^14]:    ${ }^{18}$ The data does not include the recruits enrolled in civilian universities.

