



Chapter 13 – CONCEPTUAL MODEL OF MILITARY-CIVILIAN PERSONNEL COLLABORATION: CROSS-NATIONAL CORRELATIONAL RESULTS OF THE MILITARY-CIVILIAN PERSONNEL SURVEY (MCPS)

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13.1 INTRODUCTION

In this section, two proposed conceptual models related to military-civilian personnel collaboration in defence organisations are examined: the Organisational Factors Model and the Work Culture and Relations Model of



military-civilian personnel integration. In particular, this section presents the results of correlational analyses examining how aspects of military-civilian work culture and relations, as well as unique aspects of working in a military-civilian environment, relate to selected personnel and organisational outcomes of interest. This section is organised into three subsections¹:

- Correlational results between the military-civilian predictor variables in the Organisational Factors Model of Military-Civilian Personnel Integration and the proposed mediators and the proposed outcomes, respectively.
- Correlational results between the military-civilian predictor variables in the Work Culture and Relations Model of Military-Civilian Personnel Integration and the proposed mediators and the proposed outcomes, respectively.
- 3) Correlations between the mediator and outcome variables (these are common across both models).

The magnitude of these correlations may be interpreted as follows: r = 0.10 is a small correlation; r = 0.30 is a medium correlation; and r = 0.50 is considered a large correlation [2]. In cases where correlations for some nations are not presented, this is because these items/variables were not included in the surveys within those nations.

13.2 ORGANISATIONAL FACTORS MODEL OF MILITARY-CIVILIAN PERSONNEL INTEGRATION

The *Organisational Factors Model of Military-Civilian Personnel Integration* proposes that organisational factors, including leadership support of military-civilian relations, intergroup supervision (of civilians by military supervisors and vice-versa), and the effects of working in a mixed military-civilian context on civilians (including effects on training and professional development opportunities and effects of the military rotational cycle) affect outcomes both directly and indirectly (through the mediating variables). The model is presented in Table 13-1 below.

Table 13-1: Organisational Factors Model of Military-Civilian Personnel Integration.

Predictors: Organisational Factors	Mediating Factors	Outcomes
Senior leadership support of military-civilian collaboration	Perceived organisational fairness	Job satisfaction
Intergroup leadership and supervision	Perceived organisational support	Affective commitment
Working in a military context: Career development	Perceived importance of civilians	Retention intentions

¹ This organisation of the analyses is based on Baron and Kenny's [1] well-recognized pre-conditions for testing mediational analyses. As such, although the mediation analyses are beyond the scope of this report given the number of variables and potential paths assessed, the preconditions for mediation will be presented. In particular, Baron and Kenny proposed three significant relationships that must exist for mediation to occur: (1) the predictor variable (PV) is significantly related to the dependent variable (DV); (2) the PV is significantly related to the mediating variable (MV); and (3) the MV is significantly related to the DV. To assess these relationships, the zero-order correlations between variables are analyzed.

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Predictors: Organisational Factors	Mediating Factors	Outcomes
Working in a military context: Training opportunities		
Working in a military context: Effects of rotational cycle		

13.2.1 Correlations Between Predictors and Mediators from the Organisational Factors Model

This section includes information regarding correlations between predictor and mediator variables found in the Organisational Factors Model of Military-Civilian Personnel Integration.

13.2.1.1 Senior Leadership Support of Military-Civilian Personnel Collaboration and Overall Organisational Fairness

Table 13-2 demonstrates that greater perceptions of support toward military-civilian personnel collaboration by senior leaders are related to greater perceptions of overall organisational fairness for both military and civilian respondents. The magnitude of the correlations varies a great deal but tends to be in the medium to large range for both military and civilian personnel across most nations (with the exception of the US military). Correlations tend to be larger for civilian respondents than for military respondents (except in Bosnia and Herzegovina and Estonia).

Table 13-2: Correlations Between Senior Leadership Support and Overall Organisational Fairness.

Nation	Mil	Civ
Belgium	0.35	0.52
Bosnia and Herzegovina	0.56	0.45
Canada	0.50	0.64
Estonia	0.51	0.31
Netherlands	0.40	0.49
New Zealand	0.45	0.55
Sweden	0.33	0.43
United Kingdom	0.46	0.46
United States	0.10	0.70

13.2.1.2 Senior Leadership Support of Military-Civilian Personnel Collaboration and Perceived Organisational Support

Table 13-3 shows that the degree to which senior leaders are perceived to support military-civilian personnel collaboration is related to perceptions of organisational support for both military and civilian respondents. More specifically, greater perceptions of leader endorsement of military-civilian personnel collaboration



correspond with greater perceptions of support from the organisation in general. The correlations for military and civilian respondents are similar to one another, and tend to be in the medium to large range (with the exception of the US military, which is near zero).

Table 13-3: Correlations Between Senior Leader Support and Perceived Organisational Support.

Nation	Mil	Civ
Belgium	0.45	0.54
Bosnia and Herzegovina	0.75	0.49
Canada	0.53	0.66
Estonia	0.63	0.48
Netherlands	0.39	0.60
New Zealand	0.45	0.58
Sweden	0.32	0.43
United States	-0.01	0.70

13.2.1.3 Senior Leadership Support of Military-Civilian Collaboration and the Perceived Importance of Civilians

As shown in Table 13-4, the more senior leaders are perceived to support military-civilian collaboration, the more important military personnel believe civilians to be to the defence organisation and its mission (with correlations generally ranging in the medium range across the nations). However, civilians' perceptions of their importance to the defence organisation do not seem to be particularly related to support of military-civilian collaboration communicated by leaders. As such, it seems that civilians recognize their importance independent of senior leadership messages, whereas senior leadership messages may be important for communicating the importance of civilians and the roles they play to their military co-workers.

Table 13-4: Correlations Between Senior Leadership Support of Military-Civilian Collaboration and the Perceived Importance of Civilians.

Nation	Mil	Civ
Belgium	0.41	0.19
Bosnia and Herzegovina	0.47	-0.05
Canada	0.44	0.11
Estonia	0.30	0.19
Netherlands	0.33	-0.02
New Zealand	0.39	0.04
Sweden	0.10	0.02
United Kingdom	0.40	0.10
United States	0.01	0.00

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13.2.1.4 Intergroup Supervision and Overall Organisational Fairness²

Table 13-5 demonstrates that for military respondents who were supervised by civilian managers, the more positive the perceptions of the quality of this supervision, the more fair they perceived the organisation to be overall. Similarly, for civilian respondents supervised by military managers, the more positive their perceptions of the quality of this supervision, the more fair they perceived the organisation to be overall.

Table 13-5: Correlations Between Intergroup Supervision and Overall Organisational Fairness.

Nation	Mil	Civ
Belgium	0.37	0.64
Bosnia and Herzegovina	0.57	0.38
Canada	0.46	0.77
Estonia	0.72	0.54
Germany	0.33	0.52
Netherlands	0.38	0.52
New Zealand	0.25	0.71
Sweden	0.28	0.51
United Kingdom	0.75	0.63
United States	0.08	0.57

Correlations varied a great deal for military respondents (likely in part due to the smaller number of respondents in these cells); the magnitude of the correlations tended to be large for civilian respondents (again, with the exception of Bosnian and Herzegovinian civilians with a very small n). As such, it is clear that for civilians supervised by military managers/supervisors, the perceived quality of that supervision is strongly related to their perceptions of organisational fairness overall. This is also the case for military respondents, albeit generally to a lesser extent.

13.2.1.5 Intergroup Supervision and Perceived Organisational Support

As shown in Table 13-6, for military respondents who were supervised by civilian managers, the more positive the perception of the quality of this supervision, the more support they perceived receiving from the organisation (expect for Belgian military personnel, although the size of this subgroup is very small). Similarly, for civilian respondents supervised by military managers, the more positive the perceptions of the quality of this supervision, the more support they perceived receiving from the organisation. Correlations for military personnel varied a great deal, but tended to be in the medium and large range; correlations for civilian personnel were consistently large.

² Please note that for all correlations that include the intergroup supervision variable, the number of military respondents who were supervised by a civilian was very small for Bosnia (n = 8), Estonia (n = 8), and the US (n = 5), as was the number of Bosnian civilians who were supervised by military personnel (n = 8).



Table 13-6: Correlations Between Intergroup Supervision and Perceived Organisational Support.

Nation	Mil	Civ
Belgium	-0.06	0.59
Bosnia and Herzegovina	0.83	0.56
Canada	0.46	0.76
Estonia	0.72	0.65
Germany	0.40	0.53
Netherlands	0.48	0.62
New Zealand	0.29	0.71
Sweden	0.28	0.54
Switzerland	0.52	0.64
United States	0.11	0.58

13.2.1.6 Intergroup Supervision and the Perceived Importance of Civilians

Table 13-7 demonstrates that for military personnel supervised by civilian managers or supervisors, the quality of this supervision is related to their perceptions of the importance of civilians in general (with most correlations in the small to medium range). As such, the more satisfied military members are with the supervision received by their civilian supervisors, the more likely they are to believe that civilians are important to the defence organisation and its mission (expect for New Zealand and Bosnian and Herzegovinian civilians, although the size of the latter group was very small). For civilian personnel supervised by military managers, the quality of this supervision is only slightly related to their overall perception of the importance of civilians to the defence organisation (with most correlations in the small range, except Estonia).

Table 13-7: Correlations Between Intergroup Supervision and the Perceived Importance of Civilians.

Nation	Mil	Civ
Belgium	0.48	0.10
Bosnia and Herzegovina	0.13	-0.47
Canada	0.40	0.13
Estonia	0.46	0.30
Germany	0.60	0.18
Netherlands	0.44	0.05
New Zealand	0.12	0.12
Sweden	0.58	06
Switzerland	0.30	0.27
United Kingdom	0.51	0.04
United States	0.67	0.11

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13.2.1.7 Effects of Working in a Military Context on Career Development: Relations with Perceived Organisational Support and Organisational Fairness

The following analysis examined the potential effects of working in a military context on civilians' career development – as related to perceptions of organisational fairness and of organisational support. This scale was administered only to civilian personnel within the surveys. As shown in Table 13-8, the less working in a military context affected civilians' career development, the more fair they perceived the organisation to be and the greater support they reported receiving from the organisation. With only a few exceptions, the magnitude of these correlations tended to be large.

Table 13-8: Correlations Between Working in a Military Context on Career Development and Perceived Organisational Fairness and Organisational Support (Civilians Only).

Nation	Organisational Fairness	Perceived Organisational Support
Belgium	0.43	0.39
Bosnia and Herzegovina	0.52	0.60
Canada	0.60	0.57
Estonia	0.40	0.58
Germany	0.39	0.34
Netherlands	0.42	0.44
New Zealand	0.47	0.49
Sweden	0.51	0.54
Switzerland	-	0.45
United Kingdom	0.54	-
United States	0.65	0.57

13.2.1.8 Effects of Working in a Military Context on Training Opportunities: Relations with Perceived Organisational Fairness and Perceived Organisational Support

The following analysis examined the potential effects of working in a military context on the training opportunities available to civilian personnel — as related to perceptions of organisational fairness and organisational support. This scale was administered only to civilian personnel within the surveys. As shown in Table 13-9, the less working in a military context affected civilians' training opportunities, the more fair they perceived the organisation to be and the greater support they reported receiving from the organisation. The magnitudes of these correlations were medium or large.



Table 13-9: Correlations Between Working in a Military Context on Training Opportunities and Perceived Organisational Fairness and Perceived Organisational Support (Civilians Only).

Nation	Organisational Fairness	Perceived Organisational Support
Belgium	0.48	0.49
Bosnia and Herzegovina	0.31	0.57
Canada	0.60	0.61
Estonia	0.47	0.46
Germany	0.31	0.27
Netherlands	0.43	0.40
New Zealand	0.58	0.59
Sweden	0.41	0.45
Switzerland	_	0.33
United Kingdom	0.51	_
United States	0.74	0.63

13.2.1.9 Effects of the Military Rotational Cycle: Relations with Perceived Organisational Fairness and Perceived Organisational Support

As shown in Table 13-10, the more positive (or less negative) the perceived effects of the military rotational cycle, the more fair and the more supportive the organisation was perceived to be, with correlations in the small to medium range (with the exception of Bosnia and Herzegovina). As such, although there may be challenges associated with the effects of the military rotational cycle, these only have moderate potential effects on perceptions of organisational fairness and organisational support – perhaps because this is understood to be a natural and necessary component of employment in a military context and therefore the resulting effects are not perceived as being strongly unfair or strongly unsupportive.

Table 13-10: Correlations Between Effects of the Military Rotational Cycle and Perceived Organisational Fairness and Perceived Organisational Support (Civilians Only).

Nation	Organisational Fairness	Perceived Organisational Support
Belgium	0.34	0.35
Bosnia and Herzegovina	0.62	0.54
Canada	0.27	0.30
Estonia	0.28	0.37
Germany	0.17	0.19
Netherlands	0.29	0.37

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Nation	Organisational Fairness	Perceived Organisational Support
New Zealand	0.21	0.24
Sweden	0.31	0.30
Switzerland	-	0.24
United Kingdom	0.30	ı
United States	0.26	0.27

13.2.1.10 Effects of Working in a Military Context for Civilians and the Perceived Importance of Civilians

Table 13-11 includes information about the correlations between the impact of working in a military context on civilians' work and careers and perceptions of the perceived importance of civilians to the defence organisation and its mission. As shown there, these three potential effects of working in a military context were generally unrelated to how important civilians perceive themselves to be to the success of the defence organisation and its mission.

Table 13-11: Correlations Between Effects of Working in a Military Context (Civilians Only) and the Perceived Importance of Civilians.

Nation	Career Development	Training Opportunities	Rotational Cycle
Belgium	-0.01	0.05	-0.02
Bosnia and Herzegovina	0.15	0.25	-0.07
Canada	0.02	0.04	0.03
Estonia	0.21	0.14	0.09
Germany	0.13	0.14	0.07
Netherlands	0.05	0.03	-0.03
New Zealand	0.04	0.04	0.09
Sweden	-0.06	0.12	0.00
Switzerland	0.06	0.13	0.00
United Kingdom	0.03	0.08	-0.04
United States	-0.16	-0.10	-0.08

13.2.2 Correlations Between Predictors and Outcomes from the Organisational Factors Model of Military-Civilian Personnel Integration

The following section presents the results of the correlational analyses between predictor and outcome variables found in the Organisational Factors Model of Military-Civilian Personnel Integration.



13.2.2.1 Senior Leadership Support of Military-Civilian Collaboration and Job Satisfaction

Table 13-12 shows that the more that senior leaders are perceived to support military-civilian personnel collaboration, the greater the job satisfaction, for both military and civilian respondents. The correlations are larger for civilians (generally in the medium range) than for military respondents (generally in the small range).

Table 13-12: Correlations Between Senior Leadership Support of Military-Civilian Collaboration and Job Satisfaction.

Nation	Mil	Civ
Belgium	0.30	0.25
Bosnia and Herzegovina	-0.11	0.46
Canada	0.39	0.42
Estonia	0.22	0.22
Netherlands	0.20	0.34
New Zealand	0.31	0.33
Sweden	0.19	0.20
United Kingdom	0.22	0.36
United States	0.18	0.25

13.2.2.2 Senior Leadership Support of Military-Civilian Collaboration and Affective Commitment

Table 13-13 demonstrates that the more senior leaders are perceived to support military-civilian personnel collaboration, the greater the affective commitment to the organisation, for both military and civilian respondents. However, this relation between senior leader support and affective commitment is stronger for civilians (ranging in the medium to large range for most nations) as compared to for military personnel (in which the correlations are generally in the small to medium range). Notable exceptions include the correlation for Bosnian and Herzegovinian military personnel, which is small and negative.

Table 13-13: Correlations Between Senior Leadership Support of Military-Civilian Collaboration and Affective Commitment.

Nation	Mil	Civ
Belgium	0.28	0.36
Bosnia and Herzegovina	-0.13	0.36
Canada	0.44	0.55
Estonia	0.24	0.30
Netherlands	0.22	0.34
New Zealand	0.31	0.49
Sweden	0.29	0.31

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Nation	Mil	Civ
United Kingdom	0.39	0.35
United States	0.10	0.60

13.2.2.3 Senior Leadership Support and Retention Intentions

As shown in Table 13-14, the more that senior leaders are perceived to support military-civilian personnel collaboration, the greater the retention intentions for both military and civilian respondents. The magnitude of the correlations is quite variable across nations, but tends to be similar for military and civilian respondents within most nations.

Table 13-14: Correlations Between Senior Leadership Support and Retention Intentions.

Nation	Mil	Civ
Belgium	0.04	0.27
Bosnia and Herzegovina	0.55	0.21
Canada	0.33	0.37
Estonia	0.28	0.35
Netherlands	0.22	0.23
New Zealand	0.26	0.35
Sweden	0.15	0.32
United Kingdom	0.26	0.27
United States	0.29	0.12

13.2.2.4 Intergroup Supervision and Job Satisfaction

Table 13-15 presents the correlations between perceived quality of supervision of civilian personnel by military supervisors (and vice versa) and job satisfaction. For military personnel, the results are mixed and difficult to interpret – in part likely stemming from the small numbers of military supervised by civilians, and perhaps also from spurious effects related to potentially different roles that military reporting to civilians may be performing – this requires further inquiry. For civilians supervised by military managers, generally the more satisfied they are with supervision by their military supervisors, the more satisfied they are with their jobs in general, although the magnitude of these correlations varies a great deal.

Table 13-15: Correlations Between Intergroup Supervision and Job Satisfaction.

Nation	Mil	Civ
Belgium	0.15	0.22
Bosnia and Herzegovina	0.06	0.98
Canada	0.24	0.50



Nation	Mil	Civ
Estonia	0.30	0.29
Germany	0.36	0.46
Netherlands	0.33	0.05
New Zealand	0.20	0.39
Sweden	-0.41	0.48
Switzerland	0.39	0.37
United Kingdom	0.56	0.49
United States	-0.13	0.19

13.2.2.5 Intergroup Supervision and Affective Commitment

Table 13-16 demonstrates that perceived quality of supervision of civilian personnel by military supervisors (and vice versa) is related to levels of affective commitment toward the organisation for both military and civilian respondents. For civilian respondents the pattern is quite clear – the more satisfied they are with supervision by their military supervisors, the more committed they are to the organisation – with correlations generally in the medium to large range (except for German civilians). However, the pattern of correlations is extremely variable and inconsistent for military respondents, and 5 out of 9 correlations are negative (though three of these are very small). This requires greater inquiry, but may be related to the small numbers of respondents (given that only a minority of military are supervised by civilians), and perhaps to other factors that coincide with military being supervised by civilians, related to their particular roles in the organisation.

Table 13-16: Correlations Between Intergroup Supervision and Affective Commitment.

Nation	Mil	Civ
Belgium	0.32	0.38
Bosnia and Herzegovina	0.37	0.97
Canada	0.07	0.59
Estonia	-0.02	0.40
Germany	0.23	0.15
Netherlands	0.22	0.29
New Zealand	-0.03	0.51
Sweden	-0.46	0.29
Switzerland	-0.17	0.28
United Kingdom	0 .46	0.45
United States	-0.09	0.30

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13.2.2.6 Intergroup Supervision and Retention Intentions

As shown in Table 13-17, the more satisfied civilians are with supervision by their military supervisors, the more likely they are to intend to remain in the organisation, although the magnitude of the correlations varies a great deal across nations. As with job satisfaction, the pattern is not clear for military personnel and may require follow-up analyses or investigation.

 Table 13-17: Correlations Between Intergroup Supervision and Retention Intentions.

Nation	Mil	Civ
Belgium	0.12	0.17
Bosnia and Herzegovina	0.31	0.63
Canada	-0.01	0.42
Estonia	0.15	0.32
Germany	0.22	0.30
Netherlands	0.32	0.11
New Zealand	0.24	0.42
Sweden	-0.64	0.35
Switzerland	0.12	0.28
United Kingdom	0.33	0.56
United States	0.06	-0.01

13.2.2.7 Effects of Working in a Military Context on Career Development: Relations with Affective Commitment, Job Satisfaction, and Retention Intentions

The following analysis examined the potential effects of working in a military context on civilians' career development – as related to the outcome variables of job satisfaction, affective commitment, and retention intentions. This scale was administered only to civilian personnel within the surveys. As shown in Table 13-18, the more positive the respondents' perceptions regarding effects of working in a military context on their career development, the more satisfied they are with their jobs, the more affectively committed they are to the organisation, and the more they indicate that they intend to remain in the organisation. Generally speaking, correlations between satisfaction with effects on career development stemming from working in a military environment and the three outcome variables tend to be medium, with some exceptions.

Table 13-18: Correlations Between Working in a Military Context on Career Development and Affective Commitment, Job Satisfaction, and Retention Intentions (Civilians Only).

Nation	Job Satisfaction	Affective Commitment	Retention Intentions
Belgium	0.21	0.21	0.15
Bosnia and Herzegovina	0.29	0.41	0.33



Nation	Job Satisfaction	Affective Commitment	Retention Intentions
Canada	0.34	0.48	0.32
Estonia	0.19	0.35	0.33
Germany	0.28	0.21	0.22
Netherlands	0.22	0.20	0.25
New Zealand	0.31	0.37	0.36
Sweden	0.38	0.28	0.30
Switzerland	0.26	0.10	0.14
United Kingdom	0.36	0.36	0.36
United States	0.22	0.59	-0.03

13.2.2.8 Effects of Working in a Military Context on Training Opportunities: Relations with Job Satisfaction, Affective Commitment, and Retention Intentions

As shown in Table 13-19, the more positive the respondents' perceptions regarding effects of working in a military context on their training opportunities, the more satisfied they are with their jobs, the more affectively committed they are to the organisation, and the more they indicate that they intend to remain in the organisation. As with satisfaction on career development, generally speaking, correlations between satisfaction with effects on training opportunities stemming from working in a military environment and the three outcome variables tend to be medium, with some exceptions.

Table 13-19: Correlations Between Working in a Military Context on Training Opportunities and Job Satisfaction, Affective Commitment, and Retention Intentions (Civilians Only).

Nation	Job Satisfaction	Affective Commitment	Retention Intentions
Belgium	0.23	0.22	0.21
Bosnia and Herzegovina	0.12	0.52	0.47
Canada	0.36	0.49	0.34
Estonia	0.20	0.14	0.11
Germany	0.22	0.21	0.16
Netherlands	0.20	0.14	0.11
New Zealand	0.38	0.43	0.37
Sweden	0.36	0.11	0.13
Switzerland	0.19	0.15	0.15
United Kingdom	0.38	0.35	0.29
United States	0.22	0.52	0.06

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13.2.2.9 Effects of the Military Rotational Cycle: Relations with Job Satisfaction, Affective Commitment, and Retention Intentions

Table 13-20 shows that the more positive (or less negative) the perceived effects of the military rotational cycle, the more satisfied civilians tend to be with their jobs, affectively committed to the organisation, and likely to remain in their respective organisations. Correlations across all three outcomes tend to be in the small range, perhaps indicating that civilians expect and accept these effects. As such, attitudes along the key outcome variables do not relate to the potential effect of the military cycle to the same degree of other effects when working in a military context (e.g., potential effects on career development or training opportunities).

Table 13-20: Correlations Between Effects of the Military Rotational Cycle and Job Satisfaction, Affective Commitment, and Retention Intentions (Civilians Only).

Nation	Job Satisfaction	Affective Commitment	Retention Intentions
Belgium	0.22	0.17	0.13
Bosnia and Herzegovina	0.09	0.19	0.17
Canada	0.19	0.26	0.17
Estonia	0.24	0.14	0.17
Germany	0.15	0.12	0.09
Netherlands	0.24	0.14	0.17
New Zealand	0.11	0.19	0.20
Sweden	0.26	0.07	0.07
Switzerland	0.19	0.00	0.08
United Kingdom	0.27	0.25	0.27
United States	-0.06	0.21	-0.35

13.3 WORK CULTURE AND RELATIONS MODEL OF MILITARY-CIVILIAN PERSONNEL INTEGRATION

The Work Culture and Relations Model of Military-Civilian Personnel Integration proposes that the quality of working relations between military and civilian personnel (e.g., relationship quality and communication quality) affect outcomes both directly and indirectly (through mediating variables). The model is presented in Table 13-21 below. Note that the mediating and outcome variables are the same as those specified in the Organisational Factors Model.

Table 13-21: Work Culture and Relations Model of Military-Civilian Personnel Integration.

Predictors	Mediators	Outcomes
Relationship quality	Organisational fairness	Job satisfaction
Communication quality	Perceived organisational support	Affective commitment
	Perceived importance of civilians	Retention intentions



13.3.1 Correlations Between Predictors and Mediators from the Work Culture and Relations Model of Military-Civilian Personnel Integration

This section includes information regarding correlations between predictor and mediator variables in the Work Culture and Relations Model of Military-Civilian Personnel Integration.

13.3.1.1 Military-Civilian Personnel Relationship Quality and Overall Organisational Fairness

As shown in Table 13-22, the better the perceived quality of relations between military and civilian personnel, the more fair the organisation is perceived to be, for both military and civilian personnel. Correlations between these variables tend to be in the medium to large range for military personnel and in the large range for civilian personnel (with the exception of Estonian and German civilians).

Table 13-22: Correlations Between Relationship Quality and Overall Organisational Fairness.

Nation	Mil	Civ
Belgium	0.29	0.46
Bosnia and Herzegovina	0.68	0.42
Canada	0.52	0.69
Estonia	0.38	0.14
Germany	0.27	0.37
Netherlands	0.31	0.49
New Zealand	0.41	0.53
Sweden	0.28	0.66
United Kingdom	0.50	0.52
United States	0.39	0.53

13.3.1.2 Relationship Quality and Perceived Organisational Support

As shown in Table 13-23, the better the perceived quality of relations between military and civilian personnel, the greater the perceived organisational support received from the organisation, for both military and civilian respondents. The correlations vary to a fair degree, but tend to be larger for civilian than for military personnel.

Table 13-23: Correlation Between Relationship Quality and Perceived Organisational Support.

Nation	Mil	Civ
Belgium	0.23	0.35
Bosnia and Herzegovina	0.65	0.66
Canada	0.44	0.65
Estonia	0.30	0.31
Germany	0.30	0.40

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Nation	Mil	Civ
Netherlands	0.30	0.44
New Zealand	0.38	0.47
Sweden	0.15	0.61
Switzerland	0.36	0.55
United States	0.17	0.49

13.3.1.3 Military-Civilian Relationship Quality and the Perceived Importance of Civilians

Table 13-24 shows that the better the quality of relations between military and civilian personnel, the more important to the organisation civilians are perceived to be. This is particularly the case for the perceptions held by military personnel (for whom correlations between military-civilian relationship quality and perceptions of importance of civilians tend to be in the medium to large range) than for civilian personnel (for whom correlations tend to be small). These results indicate that quality of relations with their civilian counterparts may influence the extent to which military personnel value civilians' contribution in the defence organisation and its mission, and/or the more they value civilians' contributions the more positive the quality of their relations with civilians. In contrast, civilians' perceptions of their value is more independent of the quality of relations with their military counterparts.

Table 13-24: Correlations Between the Perceived Importance of Civilians and Military-Civilian Relationship Quality.

Nation	Mil	Civ
Belgium	0.50	0.15
Bosnia and Herzegovina	0.16	0.07
Canada	0.67	0.20
Estonia	0.25	0.19
Germany	0.57	0.29
Netherlands	0.38	0.17
New Zealand	0.49	0.19
Sweden	0.47	0.21
Switzerland	0.69	0.30
United Kingdom	0.50	0.13
United States	0.23	0.22

13.3.1.4 Military-Civilian Communication Quality and Overall Organisational Fairness

Table 13-25 shows that the better the perceived quality of communication between military and civilian personnel, the more fair the organisation is perceived to be by both military and civilian respondents, with medium to strong correlations for both groups across most nations. Although the magnitude of these



correlations is notable for both military and civilian personnel, it is generally larger for the civilians (with the exception of Estonia).

Table 13-25: Correlations Between Communication Quality and Overall Organisational Fairness.

Nation	Mil	Civ
Belgium	0.22	0.45
Bosnia and Herzegovina	0.43	0.43
Canada	0.49	0.62
Estonia	0.43	0.22
Germany	0.23	0.35
Netherlands	0.32	0.50
New Zealand	0.33	0.43
Sweden	0.37	0.39
United Kingdom	0.40	0.49
United States	0.19	0.69

13.3.1.5 Communication Quality and Perceived Organisational Support

As shown in Table 13-26, the better the perceived quality of communication between military and civilian personnel, the greater the perceived organisational support, for both military and civilian respondents. The correlations between these variables vary a great deal for military respondents, ranging from small to large, but tend to be in the medium or large range for civilians.

Table 13-26: Correlations Between Communication Quality and Perceived Organisational Support.

Nation	Mil	Civ
Belgium	0.12	0.39
Bosnia and Herzegovina	0.56	0.51
Canada	0.44	0.60
Estonia	0.37	0.38
Germany	0.25	0.35
Netherlands	0.31	0.39
New Zealand	0.29	0.48
Sweden	0.26	0.39
Switzerland	0.35	0.47
United States	0.02	0.61

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13.3.1.6 Military-Civilian Communication Quality and the Perceived Importance of Civilians

Table 13-27 shows that the better the quality of communication between military and civilian personnel, the more important to the organisation civilians are perceived to be. This is particularly the case for the perceptions held by military personnel (for whom correlations between military-civilian communication quality and perceptions of importance of civilians tend to be in the medium to large range) than for civilian personnel (for whom correlations tend to be small). These results indicate that military-civilian communication quality may influence the extent to which military personnel value civilians' contribution to the defence organisation and its mission, and/or that the extent to which they value civilians' contributions may influence the quality of their communications with civilians. In contrast, civilians' perception of their importance is more independent of the quality of communication with their military counterparts.

Table 13-27: Correlations Between the Perceived Importance of Civilians and Military-Civilian Communication Quality.

Nation	Mil	Civ
Belgium	0.12	0.13
Bosnia and Herzegovina	0.41	0.28
Canada	0.60	0.14
Estonia	0.19	0.15
Germany	0.53	0.20
Netherlands	0.37	0.18
New Zealand	0.40	0.15
Sweden	0.48	0.20
Switzerland	0.64	0.25
United Kingdom	0.46	0.13
United States	0.09	0.09

13.3.2 Correlations Between Predictors and Outcomes from the Work Culture and Relations Model of Military-Civilian Personnel Integration

The following section presents the correlations between predictor and outcome variables in the Work Culture and Relations Model of Military-Civilian Personnel Integration (see Table 13-21 above).

13.3.2.1 Military-Civilian Relations Quality and Job Satisfaction

Table 13-28 shows that the better the perceived quality of relations between military and civilian personnel, the more satisfied the personnel tend to be with their jobs – for both military and civilians. This relation is stronger for civilian personnel (with correlations generally in the medium and large range) than for military personnel (where the correlations tend to range from small to medium).



Table 13-28: Correlations Between Military-Civilian Relationship Quality and Job Satisfaction.

Nation	Mil	Civ
Belgium	0.14	0.37
Bosnia and Herzegovina	-0.13	0.38
Canada	0.36	0.45
Estonia	0.23	0.13
Germany	0.29	0.36
Netherlands	0.18	0.30
New Zealand	0.29	0.36
Sweden	0.24	0.47
Switzerland	0.26	0.40
United Kingdom	0.33	0.52
United States	0.14	0.25

13.3.2.2 Military-Civilian Relationship Quality and Affective Organisational Commitment

As shown in Table 13-29, the better the reported quality of relations between military and civilian personnel, the more affectively committed to the organisation personnel tend to be. This is the case for both military and civilian personnel, although the relation is stronger for civilians (with correlations ranging from medium to large) than for military personnel (for whom the magnitude of the correlations tends to be in the small range). These results indicate that the better the relations among military and civilian co-workers, the more likely personnel are to be affectively committed to the organisation; this is particularly the case for civilian personnel.

Table 13-29: Correlations Between Military-Civilian Relationship Quality and Affective Organisational Commitment.

Nation	Mil	Civ
Belgium	0.18	0.32
Bosnia and Herzegovina	0.23	0.35
Canada	0.32	0.61
Estonia	0.17	0.22
Germany	0.12	0.31
Netherlands	0.18	0.28
New Zealand	0.20	0.53
Sweden	0.13	0.36
Switzerland	0.15	0.28
United Kingdom	0.33	0.40
United States	0.23	0.37

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13.3.2.3 Military-Civilian Relationship Quality and Retention Intentions

Table 13-30 demonstrates that the quality of relationships between military and civilian personnel is related to retention intentions for both military and civilian respondents. Once again, the magnitude of the correlations is larger for civilian respondents (and tends to be in the medium range) as compared to military respondents (for whom the correlations tend to be small). These results indicate that the better the relations among military and civilian co-workers, the more likely personnel are to remain in the organisation; this is particularly the case for civilian personnel.

Table 13-30: Correlations Between Military-Civilian Relationship Quality and Retention Intentions.

Nation	Mil	Civ
Belgium	0.09	0.25
Bosnia and Herzegovina	-0.10	0.12
Canada	0.22	0.39
Estonia	0.31	0.16
Germany	0.19	0.26
Netherlands	0.10	0.16
New Zealand	0.09	0.41
Sweden	0.12	0.36
Switzerland	0.22	0.27
United Kingdom	0.19	0.32
United States	0.31	0.09

13.3.2.4 Military-Civilian Communication Quality and Job Satisfaction

As shown in Table 13-31, the better the perceived quality of communication between military and civilian personnel, the more likely personnel are to be satisfied with their jobs. This is the case for both military and civilians, but is again stronger for civilian personnel. In particular, the magnitude of the correlation between communication quality and job satisfaction is in the medium range for civilians, and tends to be in the small range for military personnel (although quite variable for military, in particular).

Table 13-31: Correlations Between Communication Quality and Job Satisfaction.

Nation	Mil	Civ
Belgium	0.09	0.29
Bosnia and Herzegovina	-0.01	0.42
Canada	0.35	0.44
Estonia	0.23	0.22
Germany	0.25	0.33



Nation	Mil	Civ
Netherlands	0.17	0.31
New Zealand	0.23	0.37
Sweden	0.26	0.40
Switzerland	0.24	0.31
United Kingdom	0.26	0.42
United States	0.07	0.24

13.3.2.5 Military-Civilian Communication Quality and Affective Commitment

Table 13-32 shows that the better the perceived quality of communication between military and civilian personnel, the stronger the affective commitment to the organisation. This is the case for both military and civilian respondents, but again is higher for civilians (for whom the magnitude of the correlations tends to be medium to large across most of the nations) than for military (for whom the magnitude of the correlation tends to be small to medium, with negligible correlations for the US military).

Table 13-32: Correlations Between Military-Civilian Communication Quality and Affective Commitment.

Nation	Mil	Civ
Belgium	0.14	0.31
Bosnia and Herzegovina	0.30	0.40
Canada	0.29	0.53
Estonia	0.17	0.21
Germany	0.13	0.27
Netherlands	0.10	0.35
New Zealand	0.12	0.47
Sweden	0.16	0.24
Switzerland	0.13	0.24
United Kingdom	0.29	0.38
United States	0.09	0.63

13.3.2.6 Military-Civilian Communication Quality and Retention Intentions

Table 13-33 demonstrates that the better the reported quality of communication between military and civilian personnel, the more personnel are likely to intend to remain with the organisation. Again, the magnitude of the correlation is somewhat higher for civilians as compared to the military (and is in the small to medium range across most nations), whereas the magnitude of the correlation is fairly small or non-existent for most military samples. The correlations for Bosnian and Herzegovinian, New Zealand, and Swedish military personnel, and for US civilians, are negligible.

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Nation	Mil	Civ
Belgium	0.12	0.21
Bosnia and Herzegovina	0.03	0.25
Canada	0.22	0.33
Estonia	0.24	0.12
Germany	0.19	0.20
Netherlands	0.12	0.25
New Zealand	0.06	0.36
Sweden	0.06	0.34
Switzerland	0.17	0.22
United Kingdom	0.20	0.28
United States	0.27	0.04

Table 13-33: Correlations Between Communication Quality and Retention Intentions.

13.4 CORRELATIONS BETWEEN MEDIATOR AND OUTCOME VARIABLES ACROSS BOTH THE ORGANISATIONAL FACTOR MODELS AND THE WORK CULTURE AND RELATIONS MODEL OF MILITARY-CIVILIAN PERSONNEL INTEGRATION

The following section presents the correlations between mediator and outcome variables used in the two conceptual models of military-civilian personnel integration (see Table 13-1 for the Organisational Factors Model and Table 13-21 for the Work Culture and Relations Model). In particular, in both models, perceptions of organisational fairness, perceptions of organisational support, and perceptions of the importance of civilians are considered to be mediators, or intermediate outcomes, and job satisfaction, affective organisational commitment, and retention retentions are considered to be outcomes.

13.4.1 Overall Organisational Fairness and Job Satisfaction

Table 13-34 demonstrates that the more fair the organisation is perceived to be, the more satisfied personnel are with their jobs. This is the case for both military and civilian personnel across the nations, with generally medium to large correlations between perceptions of fairness and job satisfaction for most nations.

Table 13-34: Correlations Between Overall Fairness and Job Satisfaction.

Nation	Mil	Civ
Belgium	0.28	0.44
Bosnia and Herzegovina	0.02	0.54
Canada	0.59	0.59
Estonia	0.25	0.26



Nation	Mil	Civ
Germany	0.35	0.42
Netherlands	0.38	0.53
New Zealand	0.58	0.51
Sweden	0.48	0.47
United Kingdom	0.45	0.51
United States	0.13	0.27

13.4.2 Overall Organisational Fairness and Affective Organisational Commitment

As shown in Table 13-35, the more fair the organisation is perceived to be, the stronger the reported affective commitment to the organisation. This is the case for both military and civilian personnel across nations. The correlations are in the medium to large range, with some exceptions.

Table 13-35: Correlations Between Overall Fairness and Affective Organisational Commitment.

Nation	Mil	Civ
Belgium	0.42	0.44
Bosnia and Herzegovina	-0.14	0.47
Canada	0.60	0.65
Estonia	0.32	0.25
Germany	0.41	0.42
Netherlands	0.38	0.48
New Zealand	0.61	0.57
Sweden	0.53	0.43
United Kingdom	0.50	0.56
United States	0.27	0.75

13.4.3 Overall Organisational Fairness and Retention Intentions

Table 13-36 shows that the more fair the organisation is perceived to be, the more likely personnel are to intend to stay employed in the organisation. Correlations for both military and civilian personnel across nations tend to be in the medium to large range.

Table 13-36: Correlations Between Overall Fairness and Retention Intentions.

Nation	Mil	Civ
Belgium	0.16	0.26
Bosnia and Herzegovina	0.04	0.30

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Nation	Mil	Civ
Canada	0.45	0.44
Estonia	0.36	0.30
Germany	0.39	0.31
Netherlands	0.26	0.37
New Zealand	0.41	0.50
Sweden	0.42	0.37
United Kingdom	0.36	0.48
United States	0.18	0.16

13.4.4 Perceived Organisational Support and Job Satisfaction

Table 13-37 shows that the more supportive the organisation is perceived to be, the more satisfied personnel are with their jobs. This is the case for both military and civilian personnel, with correlations generally in the medium to large range for both groups.

Table 13-37: Correlations Between Perceived Organisational Support and Job Satisfaction.

Nation	Mil	Civ
Belgium	0.26	0.41
Bosnia and Herzegovina	0.15	0.27
Canada	0.60	0.54
Estonia	0.33	0.39
Germany	0.37	0.44
Netherlands	0.33	0.44
New Zealand	0.53	0.51
Sweden	0.49	0.52
Switzerland	0.51	0.53
United States	0.13	0.18

13.4.5 Perceived Organisational Support and Affective Commitment

Table 13-38 demonstrates that the more supportive the organisation is perceived to be, the greater the affective commitment to the organisation, for both military and civilian personnel. Correlations vary a great deal, but tend to be medium or large in most nations across both military and civilian workforces.



Table 13-38: Correlations Between Perceived Organisational Support and Affective Commitment.

Nation	Mil	Civ
Belgium	0.35	0.51
Bosnia and Herzegovina	0.14	0.58
Canada	0.64	0.65
Estonia	0.30	0.54
Germany	0.45	0.44
Netherlands	0.35	0.41
New Zealand	0.55	0.56
Sweden	0.53	0.30
Switzerland	0.43	0.38
United States	0.45	0.77

13.4.6 Perceived Organisational Support and Retention Intentions

Table 13-39 shows that the more supportive the organisation is perceived to be, the greater the intentions to stay with the defence organisation, for both military and civilian personnel. The magnitude of the correlations varies a great deal, but tends to be in the medium range for both military and civilian respondents.

Table 13-39: Correlations Between Perceived Organisational Support and Retention Intentions.

Nation	Mil	Civ
Belgium	0.16	0.26
Bosnia and Herzegovina	0.31	0.40
Canada	0.48	0.42
Estonia	0.23	0.49
Germany	0.40	0.39
Netherlands	0.27	0.24
New Zealand	0.42	0.49
Sweden	0.38	0.41
Switzerland	0.40	0.33
United States	-0.03	0.20

13.4.7 Perceived Importance of Civilians and Job Satisfaction

Table 13-40 demonstrates that the perception of the importance of civilians is related to civilians' job satisfaction.³ However, the magnitude of the correlations is small, indicating only a weak relationship between these factors.

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³ This correlation was only assessed for civilians as there was no theoretical rationale for assessing perceptions of civilian personnel importance and military members' job satisfaction.



Table 13-40: Correlations Between Perceptions of the Importance of Civilians and Job Satisfaction.

Nation	Civ
Belgium	0.00
Bosnia and Herzegovina	0.15
Canada	0.17
Estonia	0.04
Germany	0.22
Netherlands	0.15
New Zealand	0.11
Sweden	0.10
Switzerland	0.26
United Kingdom	0.17
United States	0.26

13.4.8 Perceived Importance of Civilians and Affective Commitment

Table 13-41 demonstrates that the perception of the importance of civilians is unrelated or only weakly related to civilians' affective commitment to the organisation.⁴

Table 13-41: Correlations Between the Perceived Importance of Civilians and Affective Commitment.

Nation	Civ
Belgium	0.15
Bosnia and Herzegovina	0.04
Canada	0.15
Estonia	0.12
Germany	0.20
Netherlands	0.15
New Zealand	0.08
Sweden	0.08
Switzerland	0.23
United Kingdom	0.13

⁴ This correlation was only assessed for civilians as there was no theoretical rationale for assessing perceptions of civilian personnel importance and military members' organisational commitment.



13.4.9 Perceived Importance of Civilians and Retention Intentions

Table 13-42 demonstrates that the perception of the importance of civilians is unrelated or only weakly related to civilians' retention intentions.⁵

Table 13-42: Correlations Between the Perceived Importance of Civilians and Retention Intentions.

Nation	Civ
Belgium	-0.04
Bosnia and Herzegovina	-0.13
Canada	0.17
Estonia	0.09
Germany	0.02
Netherlands	0.14
New Zealand	0.10
Sweden	0.03
Switzerland	0.19
United Kingdom	0.11
United States	0.07

13.5 SUMMARY OF CORRELATIONAL ANALYSES

Although strength of relations varies across nations, overall, the correlational results reported in this section are consistent with the proposed conceptual models of military-civilian integration. In particular, these results indicate that the military-civilian organisational factors (i.e., senior leader support of military-civilian personnel collaboration, effects of working in a military context for civilians, and quality of intergroup supervision) proposed in the Organisational Factors Model of Military-Civilian Personnel Integration, are related to the proposed mediators (i.e., perceived organisational fairness and support; perceived importance of civilians) and the proposed outcomes (i.e., job satisfaction, organisational affective commitment, and retention intentions) as expected.

Similarly, these results are consistent with the proposed Work Culture and Relations Model of Military-Civilian Personnel Integration, in that the proposed military civilian work culture and relations factors (i.e., military-civilian relationship and communication quality) are related to the proposed mediators (i.e., perceived organisational fairness and support; perceived importance of civilians) and the proposed outcomes (i.e., job satisfaction, organisational affective commitment, and retention intentions), as expected.

Overall, personnel who view military-civilian personnel integration and collaboration in defence organisations more positively are more likely to be satisfied with their jobs and committed to the organisation as compared to those who have less positive views. Of note, these findings are correlational, meaning that the variables are

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⁵ This correlation was only assessed for civilians as there was no theoretical rationale for assessing perceptions of civilian personnel importance and military members' retention intentions.



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related, but the findings do not necessarily imply that these relations are causal in nature. Initial conceptualization regarding potential mechanisms by which the nature of military-civilian relations may affect employee and organisational outcomes is suggested herein, consistent with Baron and Kenny's [1] conditions for mediation, with inferential analyses to be conducted in the future.

Of note, although the military-civilian integration and collaboration variables across both models were interrelated with key personnel and organisational outcomes such as affective commitment for both military and civilian personnel, these correlations were consistently stronger for civilian personnel. This is not particularly surprising given that civilian personnel are the "minority" in all the defence organisations and that the role of civilian personnel is often understood as *supporting* the military or armed forces organisation. Moreover, a much greater proportion of civilian personnel are directly supervised by military personnel as compared to the proportion of military personnel who are supervised by civilian supervisors, which may also increase the importance of positive military-civilian work culture and relations for the civilian group. Nevertheless, optimal military-civilian interactions, work culture, and relations appear to be related to important employee outcomes for both workforces, and are therefore important considerations for the optimal personnel management of both military and civilian personnel.

13.6 REFERENCES

- [1] Baron, R.M. and Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of Personality and Social Psychology, 51, 1173-1182.
- [2] Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd Ed.). Hillsdale, NJ: Lawrence Earlbaum Associates.