UNIVERSITY OF TWENTE.

Military Deployment and its Effects on Moral Development over the Course of

Deployment

Author: Erwin de Wildt

Bachelor thesis Psychology

University of Twente

Department of Psychology of Conflict, Risk and Safety

Supervisors:

1st. Prof. dr. E. Giebels

2nd. M.C. de Graaff, MSc

Abstract

Two groups of soldiers are followed for the duration of a deployment. One of these groups actually goes on deployment and the other stays at home. Both groups are subjected to a questionnaire at the same moments: before the first group is sent on deployment, during the deployment and lastly after the deployed group returns. The questionnaire is used to compare the groups for changes in their moral development over the course of deployment. The answers are scored by two raters according the theory of moral development. The results show no changes in moral development between moments of measurement and no change comparing the deployed group with the non-deployed group.

Contents

Military Deployment and its Effects on Moral Development over the Course of

Deployment

Military deployments to countries like Afghanistan and Iraq can subject soldiers to various extreme conditions. Conditions like combat experience may have serious effects on the soldiers' physical and mental state (Weeks, McAuliffe, DuRussel, & Pasquina, 2010). Particularly, when a person has a temporary low of mental capacities, the person may be more prone to engage in unethical behaviour (Gino, Schweitzer, Mead & Ariely, 2011).

An example of how devastating it can be if a soldier loses its perspective on morality can be seen to what happened with the American sergeant Robert Bales. Sgt Bales was stationed in Camp Belambay of the Kandahar province (Afghanistan). Sgt Bales went heavily armed on a rampage through two villages killing most of their inhabitants. After his return and arrest he was accused of murdering sixteen innocent Afghan civilians (Dao, 2012). Even though deployment abroad is often under high stress (Cabarkapa, Korica & Rodjenkov, 2011) it is still unclear what could change a person to develop a moral view where it is right to take the life of an innocent person. This study aims to explore what effects military deployment has on moral development.

Moral development occurs throughout everyday life and is sequenced in stages (Colby, Kohlberg, Gibbs & Lieberman 1983). The term moral development is defined by Kohlberg (Trevino, 1992) as in what way a person morally understands everyday situations and which principle is dominant in reasoning of moral dilemmas. On the one hand, research shows that deployed soldiers are more at risk for developing mental health problems (Hoge, Castro, Messer, McGurk, Cotting, & Koffman, 2004) which may negatively influence their moral reasoning. On the other hand it is possible that soldiers benefit from military deployment. Through experiencing life threatening situations a soldier can develop a way to process such events and put them behind (Magerøy, Riise, Johnsen, & Moen, 2008). It is

however still unclear in what way military deployment influences the moral development of a person. This study examines the moral development of approximately 150 soldiers before, during and after deployment. This enables us to examine whether and how moral development changes as a result of military deployment.

Theory of Moral Development

This study is based on and uses the Theory of Moral Development as defined by Kohlberg (Trevino, 1992). Kohlberg's Theory of Moral Development is based on the Theory of Moral Development first developed by Piaget. In the twentieth century, Piaget (1965) researched moral judgements of children. The theory identifies two stages of moral development that children go through during childhood. The first is named heteronomous morality. This stage is between the fifth and tenth year of age. Throughout this stage rules that are given by authorities (parents, teachers) are not to be questioned and cannot be changed. After the first stage, the child progresses into the second stage which is called autonomous morality. It ranges from the age of ten to thirteen years. In this stage rules like 'always tell the truth' are no longer seen as unchangeable in the minds of children. The child learns that these rules can be changed to suit the majority of the people. The ideal reciprocity comes in to play from this stage. Reciprocity entails the golden rule: "Do unto others as you would have them do unto you."

The theory presented by Piaget was aimed at children up to an age of thirteen. Kohlberg took up where Piaget left and extended it to the moral development theory (Trevino, 1992). Kohlberg's research did not only aim at children. In his research, children of ten, thirteen and sixteen were followed for a period of twenty years. Each three to four years he would come back and interview the same persons again (Colby et al., 1983). Kohlberg revolutionized the study of moral development in two major ways. First, Kohlberg created a

set of moral dilemmas that could be presented to individuals. Through the coding of the responses, Kohlberg was able to quantify moral development in children and adults (Kohlberg, 1969). Secondly, Kohlberg expanded the two stages of Piaget into six stages (Colby et al., 1983). The first two stages are known as the pre-conventional level and can be seen as the two stages offered by Piaget. In stage one 'the punishment and obedience orientation', individuals focus on behaving good in order to avoid punishment. The second pre-conventional stage is called the instrumental purpose orientation. In this stage, the person realizes that people can have different viewpoints. The idea of reciprocity arises, meaning that if you do something for another, the person will do something for you in return. This reasoning is mainly guided by self-interest. The third and fourth stages are stacked under 'The Conventional Level'. This level focuses on the positive belief of maintaining the current societal system. The third stage is called the "good boy- good girl" orientation. At this stage the person desires to obey to the rules because it creates social harmony and as by behaving accordingly, will be positively evaluated by one's direct environment. During the fourth stage a person takes into account the laws and order of society. The law must be obeyed and it is each person's duty to do the same in order for society to thrive. The last two stages are reared under the name ´The Post-conventional Level´. The largest difference with the previous two is the ability to move past the rules of the law and society and use abstract principles in reasoning. At the fifth stage, the 'social contract orientation', a person regards the law as non-absolute. The person can think of ways in which laws should be changed when they are not consistent with the individual rights of the majority. Kohlberg's sixth and final stage is called 'the universal ethical principle orientation'. At this last stage, a person defines the right actions through self-chosen principles. A principle like respect for life is more important than respect for property and other laws. The principle applies for the whole of humanity separate from the bounds of society and law (see for a summary of the stages, Table 1).

Table 1 Kohlberg's stages summary

	Kohlberg's stages of moral development
Pre-conventional level	
Stage 1 'the punishment and obedience orientation'	Focus on behaving good in order to avoid punishment
Stage 2'the instrumental purpose orientation'	The idea of reciprocity used for self interest
The conventional level	
Stage 3 'good boy- good girl" orientation'	The person desires to obey to the rules and doing so will be seen as a good boy or girl
Stage 4 'The social- order- maintaining orientation'	The law must be obeyed and it is a person's duty to, in order for society to thrive
The post-conventional level	
Stage 5 'the social contract orientation'	Laws are not seen as absolute and are open to change if not consistent with the individual rights of the majority
Stage 6 'The universal ethical principle orientation'	Reasons in abstract universal principles that are valid for all humanity

Each person would start at the first stage and would progress unto the sixth stage in life. At what level a person's moral development resides reflects in the way a person reasons about moral dilemmas. The moral reasoning a person uses to explain will be according their moral development stage. It is however not an absolute, when a person is in stage four it is possible to reason about problems with reasoning more accustomed to lower or higher stages. Generally, while the moral development stages of 1 to 4 are often observed, the fifth and sixth stages are rarely seen in any population (Snarey, 1985; see for a visual representation Figure 1).

Figure 1 Stages of moral development by Kohlberg, From bottom 1to 6 at the top
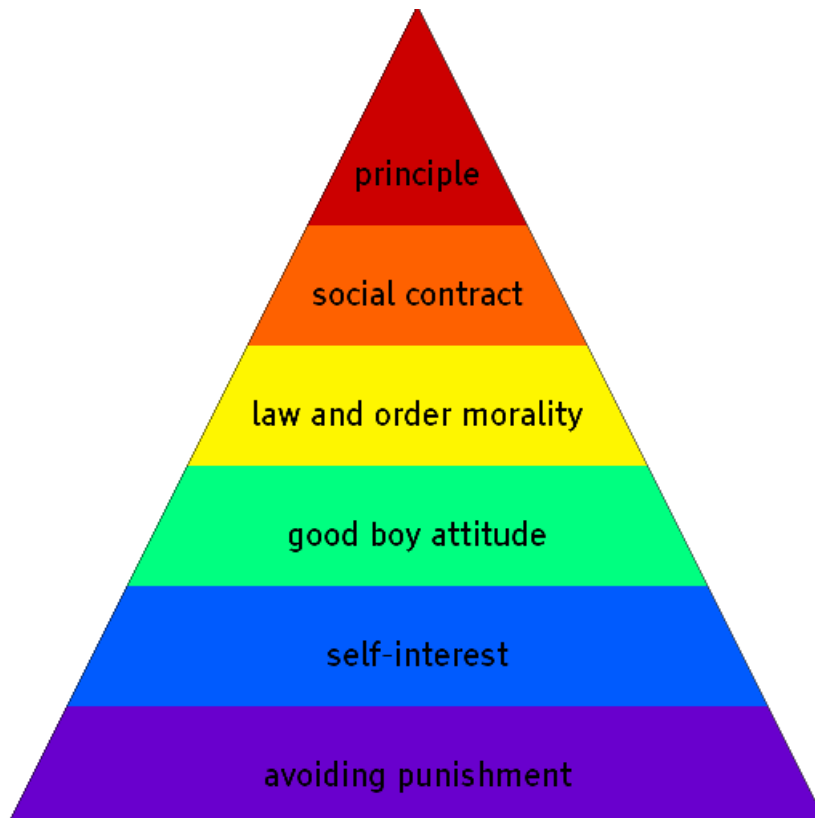
Aims of this study

The main aim of the current study is to explore the effects of military deployment on changes in moral development. This will be done according to Kohlberg's stage theory of moral development. For this purpose, a questionnaire was filled in by two groups of soldiers. The first group was sent on deployment in Afghanistan. This group was followed and asked to fill in the questionnaire at three moments: before the deployment, during deployment and after deployment. The three intervals will make it possible to report any change between the moments of deployment and the scoring of the questionnaire. To provide a baseline for comparison, a control group is also asked to fill in the questionnaire at the same three intervals as the deployed group. With the baseline provided by the control group it is possible to examine the specific effects of deployment on moral development.

The most notable change for the deployed group will be expected between the 'pre-deployment' and 'during deployment' measurements. Between these two moments the soldier is deployed on the mission. According to Horowitz, Wilner and Alvarez (1979), events like deployment can cause significant amounts of stress. Other research has suggested experiencing stressful situations in a meaningful way can enhance personality (Britt, Adler, & Bartone, 2001). Because of the contradicting findings from previous (and limited) research no specific positive or negative outcomes are predicted. The results aim at granting further insight in the relation of military deployment with moral development of soldiers.

Method

Participants

This study used questionnaires that were part of a broader research project among the military. Included in the primary survey was an adapted version of a moral development questionnaire to the Dutch culture (Hornsveld, Vermeulen, & Veldhuizen, 2009). The questionnaires were given to two groups. One group which was deployed to Afghanistan and the other group that was not. The deployed group existed of a reconnaissance platoon, an infantry platoon and a marines platoon. At the first measurement the group consisted of 52 participants. At the second measurement the 'during deployment' group was made up from 94 participants. The 'after deployment' had 70 participants. The deployed group had an average age of 24 years during the three measurements (range 18 to 46 years). The group that was not deployed consisted of an infantry platoon, which was comparable in terms of demographics. The first measurement 'the pre deployment' included 76 participants. The second 'during deployment' measurement consisted of 56 participants. The 'after deployment' included 79 participants. The average age for the three measurements of the

non-deployed group was 22 years (range 17 to 37 years). See for an overview of the included

datasets, Table 2.

Table 2 *Data overview*

	Before	During	After
Deployed			
Number of participants	63	94	70
Average age	23,93 (N= 61)	24,84 (N= 89)	24,55 (N= 66)
Minimum age	18	18	19
Maximum age	38	44	46
Not deployed			
Number of participants	76	56	79
Average age	21,68 (N= 75)	21,91 (N= 53)	22,37 (N= 75)
Minimum age	17	18	18
Maximum age	33	30	37

Only 1.67 % of all participants from both deployed and non-deployed groups were

female. Because of this low number any implications to effects of gender cannot be made.

Both groups were given the questionnaire at the same three time intervals. Before, during and

after deployment. The 'before deployment' questionnaire was taken in February 2010, the

'during deployment' in May 2010 and the final 'after deployment' questionnaire was taken in

September 2010. The questionnaires were taken each time in groups. A short introduction

introduced the questionnaire and the reason why it was taken. After this the participants were

given a week time to complete the questionnaire.

Instruments

In this research the Sociomoral Reflection Measure-Adapted Version (SRM-AV) was

used. The precursor of the SRM-AV was the moral judgment interview used by Kohlberg in

his initial research. In the interviews, participants were asked to respond to a large variety of moral dilemmas. The moral judgement interview was a time consuming measurement. To make moral measurement easier, several researchers developed the Sociomoral Reflection Measure-Short Form (SRM-SF; Gibbs, Basinger & Fuller, 1992). In a short questionnaire of eleven questions, the participants were asked to rate different moral dilemmas, ratings range from very unimportant to very important. Each questions choice of importance was asked to be elaborated and the elaboration could then be interpreted for the corresponding stage of moral development.

The SRM-AV is a version of the SRM-SF, tailored to the Dutch language. In total, it comprises of twenty questions (Hornsveld et al, 2009). The SRM-AV questionnaire entails questions about moral dilemmas or situations in daily life. The first part of the questionnaire has the twenty questions that have to be rated in terms of importance and a follow-up question asking for an explanation of the choice. The ratings range from (1) "*very unimportant*", (2) "*not important*", (3) "*neutral*", (4) "*important*" to (5) "*really important*". For example, questions might be 'How important is it that you keep your promises to friends?' or 'How important is it that the law will be obeyed?'.

The ratings to each question are not analysed. This is because Kohlberg emphasizes that it is the way an individual reasons about the dilemma, not the content of the response that determines the moral maturity. The most important part to the scale is therefore the explanation provided.

Coding of the explanations

Every question can be awarded a score ranging from 1 up to a score of 7. The score 1 would correspond with the first stage of Kohlberg's moral development. The score 2 correspond with a transition from stage 1 to stage 2 of moral development. Score 3 correspond with stage 2 of moral development. Score 4 means a transition between stage 2 and 3 and so on to score

7. Score 7 stands for stage 4 of moral development. The moral development stages 5 and 6 of Kohlberg are not included in the scoring form. The reason for the exclusion is that these stages are rarely encountered (Snarey, 1985).

For example, if a person would answer to the question 'How important is it that you keep your promises to friends?' with: 'This is the most important way for a person to build on a relationship and trust each other', this would be scored as a 5. Namely, the explanation gives values of mutual pro social interest in a relationship. The rating 5 would correspond with phase 3 'Mutual and pro-social'. Or if a person would answer to the second example question 'How important is it that the law will be obeyed?' with: 'If it was not important it would not be there' the answer would be scored as a 1. The rating 1 would represent phase 1. The first phase stands for simple reasoning in abstract terms.

The explanations that the participants give for each question were rated by two raters. Each rating corresponds with a stage of moral development. (See Appendix 1&2 for more detail of the scoring). The first scorer was the author of this thesis, who rated the complete dataset, the second rater, was the second supervisor of this thesis, Miriam de Graaff. Both were extensively trained in the use of the scoring-form through scoring samples and discussing the results. The second rater scored random samples for calculating the reliability.

An interrater reliability analysis using the Kappa statistic was performed to determine consistency among two raters. At the first comparison of ratings a sample of participants was taken from the deployed 'during deployment' group (N =20) the two raters did have insufficient consensus (Kappa = 0,204). After that the raters discussed their differences and performed new ratings in the same group (N= 13). In the second instance the consensus had improved to an agreeable level (Kappa = 0,770). To be certain the agreement was consistently sufficient, two other sample were compared between the same two raters for

Cohen's kappa. The first sample from the deployed 'before deployment' group had a kappa of 0.718 (N= 27) and the second sample from the deployed 'after deployment' group 0.694 (N= 40).

Analyses

First, to assess how the items correlated with each other an inter-item reliability test was performed on all data. Secondly, a factor analysis was done to explore any underling construct that could explain patterns in scores. On the basis of this analysis, we composed one scale for moral development, calculating a mean score for each group. To measure any significant differences, an independent T-test was used to test differences in average scores of the three intervals of both groups. An independent T-test was utilized to compare the scores of the deployed group with the non-deployed group at each of the three intervals.

The groups were planned to be the same at each of the three measurements of the deployed and non-deployed group. Unfortunately most participants did not enter each questionnaire or did not fill in their registration number. As a consequence it was impossible to make the assumption of similarity between the groups. Therefore the before, during and after measurements are treated as independent groups. A small group did participate at each of the three measurements. Seven from the deployed and fourteen participants from non-deployed had entered all three measurements. For the 21 participants a repeated measures test was used to analyse difference between deployed or not and the three moments of measurements. Results of the repeated measures could be compared to the results of de independent t-tests. A significance level of $p < .05$ will be used to interpret all results.

Results

Inter-item consistency

To determine the internal consistency of the coding's of questions of the SMR-AV a reliability analysis was done. Overall, the twenty questions show a Cronbach's alpha of .51. The reliability could be raised by deleting three questions from the questionnaire data. The first question that by deletion raises the alpha is number 8 'How important is it that the law is obeyed?'. The alpha will be raised to .546. After deleting question 8, the alpha could still be raised to .570 by deleting question number 9 'How important is it that judges punish those who violate the law?'. The third question that by deletion could raise the alpha is number 18 'Imagine, your friend deals in hard drugs, how important is it that dealing in drugs is prohibited?', the alpha would be raised to .586.

Ultimately, we decided not to delete specific questions from the set because the questionnaire was designed as a complete set of questions and even by deleting three items the reliability could not be much improved.

Factor analysis

An explorative factor analysis was used to identify why the alpha was relatively low. The analysis used the twenty items of the questionnaire. Factors were extracted on the basis of Eigenvalue > 1. The analysis yielded seven possible factors. One factor had an eigenvalue of 2,478. The other six factors had eigenvalues between 1,790 and 1.122. The questions that build the factors have relatively high loadings to other factors. With the results of the factor analysis it can be concluded that there are no underlying factors that influence the results of the questionnaire.

Tabel 1 *Exploratory factor analysis with eigenvalue an explained variance per factor*

	Factor						
	1	**2**	**3**	**4**	**5**	**6**	**7**
Hoe belangrijk is het dat je beloften aan je vrienden nakomt?	**,48**	-,07	,10	**-,42**	,02	**-,36**	-,21
Wat vind je van het nakomen van beloften aan mensen in het algemeen? Hoe belangrijk is het dat mensen beloften nakomen aan iemand die ze nauwelijks kennen?	**,59**	-,02	-,13	-,28	,30	-,27	,05
Wat vind je van het nakomen van een belofte aan kinderen? Hoe belangrijk is het dat ouders beloften aan hun kinderen nakomen?	**,59**	-,11	-,24	-,18	,02	,05	-,02
Hoe belangrijk is het dat mensen in het algemeen eerlijk zijn?	,30	-,04	**-,37**	-,15	-,140	**,37**	**,33**
Hoe belangrijk is dat kinderen hun ouder(s) soms helpen?	,26	**,32**	-,06	,03	-,29	**,48**	-,13
Hoe belangrijk is het dat iemand blijft leven, zelfs als die persoon dat zelf niet wil?	,19	**-,31**	**,39**	,21	,19	**,47**	-,18
Hoe belangrijk is het dat mensen niet stelen?	,21	,29	**,52**	-,06	**-,36**	-,09	-,02
Hoe belangrijk is het dat men de wet gehoorzaamt?	-,06	**,59**	,25	-,10	,28	,30	-,11
Hoe belangrijk is het dat rechters mensen die de wet overtreden een straf opleggen?	-,09	**,35**	**,40**	,02	,01	-,17	-,25

Hoe belangrijk vind je het dat anderen je met respect behandelen?	**,42**	,09	,27	,02	,11	,30	,29
Stel dat twee kinderen een ander kind pesten. Hoe belangrijk is het ervoor te zorgen dat die kinderen leren respect voor elkaar te hebben?	**,37**	,022	,04	-,30	,30	,21	**,31**
Hoe belangrijk vind je het dat anderen niet over je roddelen?	,08	**-,46**	,29	,12	,16	-,14	**,38**
Hoe belangrijk is het dat mensen hun mening op een directe manier geven?	**,41**	**-,32**	-,20	-,11	-,15	,03	**-,45**
Stel dat iemand met een handicap de straat niet over durft te steken. Hoe belangrijk is het die persoon met oversteken te helpen?	**,41**	**,33**	-,19	**,66**	,13	-,09	,06
Hoe belangrijk is het mensen met een lichamelijke handicap te helpen als dat nodig is?	**,38**	**,32**	-,23	**,59**	,27	-,28	,03
Stel dat je vriend zijn vriendin in het bijzijn van anderen uitscheldt voor 'kutwijf'. Hoe belangrijk is het dat die anderen hem daarop aanspreken?	,23	-,15	,19	**,33**	**-,61**	-,06	,26
Stel dat twee mannen een andere man mishandelen terwijl omstanders toekijken. Hoe belangrijk is het dat de omstanders die twee mannen aanspreken op hun gedrag?	,28	,28	**,37**	-,25	-,22	-,26	**,32**

Stel: je merkt dat een vriend van je in harddrugs dealt. Hoe belangrijk is het dat dealen verboden is?	-,06	**-,58**	**,42**	,25	,22	,02	,00
Stel: twee lesbische vrouwen zoenen elkaar op straat. Hoe belangrijk is het dat lesbische vrouwen niet gediscrimineerd worden?	**,46**	-,23	-,03	,22	**-,31**	,04	-,26
Stel dat een kind dagelijks geconfronteerd wordt met ruziemakende ouders. Hoe belangrijk is het dat ouders rekening met hun kinderen houden door hen niet bij die ruzies te betrekken?	**,40**	,01	**,35**	,06	,21	,03	-,27
Eigenvalue	2,48	1,79	1,63	1,55	1,28	1,23	1,12
Explained variance per factor (%)	12,39	8,94	8,15	7,74	6,39	6,13	5,61

Independent T-test analysis

To test between the groups and moments of measurements seven independent T-tests were performed. For more detailed information about mean and Standard deviation from all groups see table 2. The first three will be to compare effects of time between the measurements of the deployed group. The first was done for the deployed group, comparing the 'before deployment' to the 'during deployment' group measurements. The result was not significant, $t(140) = -.196$, $p = .845$, before deployment ($M = 2.07$, $SD = 0.58$) and during deployment ($M = 2.10$, $SD = 0.60$). The second test was between the 'before deployment' and 'after deployment' measurements of the deployed group. The results was not significant, $t(109) = -1.783$, $p = .28$, before deployment ($M = 2.08$, $SD = 0.58$) and after deployment ($M = 2.29$, $SD = 1.48$). The third test was done for the deployed group, between the 'during deployment' and 'after deployment' measurements. The result was not significant, $t(153) = -$

1,094, $p = .276$, during deployment ($M = 2.10$, $SD = 0.60$) and after deployment ($M = 2.29$, $SD = 1.48$).

The following three analyses will be between the deployed and non-deployed group on each moment of measurement. The first test is between the 'before deployment' measurements of both groups. The test results of the before measurements yield no significant difference, t (123) = -0.085, $p = 0.933$, before deployment ($M= 2.0795$, $SD= 0.58169$) and before deployment control group ($M= 2.0873$, $SD= 0.44809$). The second test is of the 'during measurements' between deployed and non-deployed groups. Results show no significant difference of means. $t(140) = -0.945$, $p = 0.346$, before deployment ($M= 2.1000$, $SD= 0.60391$) and before deployment control group ($M= 2.2112$, $SD= 0.77698$). The last of between group measurements is the test between the after measurements of the deployed and non-deployed groups. The outcome shows no significant difference between both groups. t (130) = 0.949, $p = 0.344$, after deployment ($M= 2.2880$, $SD= 1.47967$) and after deployment control group ($M= 2.1111$, $SD= 0.43728$).

Tabel 2 *Analysis results independent t-test*

	Before	During	After
Deployed			
Mean of scores (*SD*)	2,08(0,58)	2,10 (0,60)	2,29 (1,48)
	N = 50	N = 92	N = 63
Not deployed			
Mean of scores (*SD*)	2,09 (0,45)	2,21(0,78)	2,11(0,44)
	N = 75	N = 50	N = 69

Repeated measures

A repeated measures ANOVA was used to compare the scores of seven participants from the deployed group in all three measurements. The data did not violate the assumption of sphericity. The results show no significant difference in moments of the measurements in deployed group (F (2, 12) = 1.612, p = 0,240).

In the control group fourteen participants had taken the test at all three measurements. The test result conclude no significant changes (F (2, 26) = 0.748, p = 0.483).

Tabel 3 *Results of the repeated measures analysis*

	Before	During	After
Deployed			
Repeated measures *Mean* and *SD*	1,86 (0,65) N = 7	2,27 (0,33) N = 7	1,96 (0,46) N = 7
Not deployed			
Repeated measures *Mean* and *SD*	2,28(0,36) N = 14	2,17(0,72) N = 14	2,13 (0,41) N = 14

Discussion

Military deployments are cases where people are sent into extreme situations. There is limited research done to explore the effects of extreme situations and more specifically military deployment on Moral development. This research has attempted to fill this gap by using a questionnaire based on the theory of Moral development by Kohlberg. To explore effect of deployment two groups were followed. The first one was deployment and the second was not. Both groups were also followed for eleven months. In this time the groups had taken three questionnaires. One measurement was before the group was deployed, one

during deployment and one after the group was finished with their deployment. The group that was not deployed also took the test at the three moments.

Results show that moral development does not change significantly over the course of deployment. Between the three group measurements no changes in moral development occur. In addition, comparing the deployed group with the non-deployed group shows no significant differences. However the results of the deployed group show a small increase in moral development over the course of deployment. This small increase could be in line with the research of Magerøy, Riise, Johnsen, & Moen (2008). Dealing with life threatening situations could have had a small but positive effect on moral development. In contrast with the small increase the analysis of the repeated measure show an increase during the deployment followed by a decrease to a similar level of before deployment, when deployment is completed. An explanation why the results are not significant could be that approximately sixty percent had been on a previous deployment. According to Martinez, Huffman, Adler, & Castro (2000), previous deployments that are not particularity stressful might make soldiers more resistant to stress during the next deployment and therefore the next deployment might have less impact on their moral development. This may be the case for the participants who have had a previous deployment. Also the lack of change in moral development might be explained through research done by Greene & Haidt (2002). Greene & Haidt suggest that moral judgement is more a matter of emotional rather than deliberate reasoning. The current research was aimed at changes in moral development through deliberate reasoning. It might be possible that deliberate reasoning does not change over the course of deployment, but emotional reasoning does change.

For future research some points should be carefully considered. The most important task is to produce a group of participants that has not been deployed before. By creating such a group, effects of previous deployment on moral development will be erased. To make data

more reliable it is imperative that all participants enter each planned moment of

measurement. Doing so will make analysis of the data better and trends in development

among participants might be followed more accurately in future research.

References

Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.

Basinger, K. S., Gibbs, J.C., & Fuller, D.(1995). Context and the measurement of moral judgment. *International Journal of Behavioural Development, 18*, 537-556.

Britt, T.W., Adler, A.B., & Bartone, P.T. (2001). Deriving Benefits From Stressful Events: The Role of Engagement in Meaningful Work and Hardiness. *Journal of Occupational Health Psychology, 6* (1), 53-63.

Cabarkapa, M., Korica, V., & Rodjenkov, S.(2011) Personal traits and a sense of job-related stress in a military aviation crew. *Vojnosanitetski Pregled, 68* (2), 143-149.

Colby, A., Kohlberg, L., Gibbs, J.C., & Lieberman, M.(1983). A longitudinal study of moral judgment. *Monographs of the Society for Research in Child Development, 48* (1-2, Serial No. 200) .

Dao, J., (2012) 'U.S. Identifies Army Sergeant in Killing of 16 in Afghanistan'. The New York Times, March 16, 2012, accessed March 15, 2013, http://www.nytimes.com/2012/03/17/world/asia/afghan-shooting-suspect-identified-as-army-staff-sgt-robert-bales.html?pagewanted=all.

Greene, J., & Haidt J. (2002) How (and where) does moral judgment work? *TRENDS in Cognitive Sciences, 6* (12), 515-523.

Gibbs, J.C., Basinger, K.S., & Fuller, D. (1992). *Moral maturity: Measuring the development of sociomoral reflection.* New Jersey: Erlbaum.

Gino, F., Schweitzer, M.E., Mead, N.L., & Ariely, D. (2011). Unable to resist temptation: How self-control depletion promotes unethical behaviour. *Organizational Behavior and Human Decision Processes, 115* (2), 191–203.

Haskuka, M., Sunar, D., & Alp, I.E. (2008). War Exposure, Attachment Style, and Moral Reasoning, *Journal of Cross-Cultural Psychology, 39*, 381-401.

Huffman, A.H., Adler, A.B., & Castro, C.A. (2000). The Impact of Deployment Length and Deployment Experience on the Well-being of Male and Female Military Personnel. *U.S. Army Medical Research Unit-Europe.*

Hoge, C.W., Castro, C.A., Messer, S.C., McGurk, D., Cotting, D.I., & Koffman, R.L. (2004). Combat Duty in Iraq and Afghanistan, Mental Health Problems, and Barriers to Care. *The New England Journal of Medicine, 351*, 13-22.

Horowitz, M., Wilner, N., & Alvarez, W. (1979). Impact of Event Scale: a measure of subjective stress. *Psychosomatic Medicine, 41* (3), 209-218.

Hornsveld R.H.J.,Vermeulen, L., & Veldhuizen, G.v. (2009). De ontwikkeling van de aangepaste versie van het Sociomorele Reflectie Meetinstrument (srm-av), *Gedragstherapie, 42,* 109-128.

Kohlberg, L., (1969). Stage and Sequence: The Cognitive-Developmental Approach to Socialization. *The Handbook of Socialization Theory and Research,* ed. D. A. Goslin, 347-480. Chicago: Rand McNally.

Magerøy N., Riise T., Johnsen B.H., & Moen B.E. (2008). Coping with life-threatening events was associated with better self-perceived health in a naval cross-sectional study. *Journal of Psychosomatic Research, 65*, 611–618.

Piaget, J. (1965). The moral judgment of the child. New York: Free Press (original work published 1932).

Snarey, J. (1985). The cross-cultural universality of socio-moral development: A critical review of Kohlbergian research. *Psychological Bulletin, 97*, 202-232.

Trevino, L.K. (1992). Moral reasoning and business ethics: Implications for research, education, and management. *Journal of Business Ethics, 11* (5-6), 445-459.

Weeks, S.R., McAuliffe, C.L., DuRussel, D., & Pasquina, P.F. (2010). Physiological and

Psychological Fatigue in Extreme Conditions: The Military Example. *American

Academy of Physical Medicine and Rehabilitation, 2* (5), 438-441.

Appendix

Dutch scoring form of the SRM-AV.(English translated version on the next page)

Score	Fase	
1	Fase 1: unilateraal en fysicalistisch	Rechtvaardiging vanwege een autoriteitsfiguur Rechtvaardiging vanwege de meest kenmerkende rol van de betreffendepersoon of personen Stellige beweringen in absolute termen Zwart-wit redeneringen Rechtvaardiging vanwege straf
2	Overgangsfase 1-2	
3	Fase 2: Uitwisselend en instrumenteel, moraliteit door interactie met anderen	Quid Pro Quo Volstrekte gelijkheid of ongelijkheid in relaties Hantering van verworven vrijheden als concrete rechten Rechtvaardiging op grond van eigen voorkeuren Beroep op pragmatische behoeften Rekenen op praktische voordelen of verplichtingen in de toekomst
4	Overgangsfase 2-3	
5	Fase 3: Wederzijds en prosociaal	Besef van de betekenis van interpersoonlijke relaties Sterke betrokkenheid met het emotionele welbevinden van anderen Besef van consequenties bij schending van normatieve verwachtingen Besef van prosociale bedoelingen als kenmerk van normaal sociaalgedrag Normatieve en prosociale waarden voor relaties in het algemeen Hanteren van waarden die refereren aan het geweten
6	Overgangsfase 3-4	
7	Fase 4: Systematisch en standaard	Beroep op waarde als vereiste van het functioneren van de maatschappij of van maatschappelijke instellingen Beroep op basale maatschappelijke rechten en waarden Beroep op overwegingen als reputatie en integriteit Rechtvaardiging van normatieve waarden omdat alternatieven schadelijk zijn voor de maatschappij Rechten en plichten die de maatschappij het individu verschuldigd is Maatschappelijke normen ten aanzien van het individuele geweten

English scoring form of the SRM-AV

Score	Phase	
1	Phase 1: unilateral and fyscalistic	Justified because of an authority figure Justification because of the most distinctive role of the involved person or persons Assertions in absolute terms Black and white reasoning Justification because of punishment
2	Transitionphase 1-2	
3	Phase 2: Exchanging and instrumental, morality through interaction with others	Quid Pro Quo Absolute equality or inequality in relationships Handling of acquired freedoms as concrete rights Justification based on their own preferences Appeal of pragmatic needs Rely on practical benefits or obligations in the future
4	Transitionphase 2-3	
5	Phase 3: Mutual and prosocial	Awareness of the importance of interpersonal relationships Strong commitment to the emotional well-being of others Awareness of consequences for violation of normative expectations Awareness of pro-social intentions as characteristic of normal social behaviour Normative and pro-social values for relationships in general Handling of values that refer to the conscience
6	Transitionphase 3-4	
7	Phase 4: Systematic and standard	Claiming value as required by the functioning of society or of social institutions Appeal to basic social rights and values Appeal to considerations such as reputation and integrity Justification of normative values because alternatives are harmful to society Rights and obligations that society owes the individual Social norms with respect to the individual conscience