The relevance of resources for resilience at different organizational levels within the military deployment cycle[1]

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Abstract. In the current study, the relative importance of different resources for psychological resilience of service members is investigated. The study employs a model of psychological resilience developed for the Netherlands Armed Forces, which identifies 25 resources for resilience at 5 different levels (individual, home front, team, leader, organization). To assess the relative importance of 5 of these resources (one for each of the levels), measured pre and during military deployment, in predicting psychological resilience post deployment, regression analyses were conducted on data collected from three Dutch Task Forces part of the NATO mission ISAF. Results indicated that the relative importance of the resources differed pre and during deployment. The most important pre deployment resources for post-deployment resilience (operationalized as the absence of fatigue complaints) were self-efficacy, home front support, leadership, and information provision by the organization. During deployment group cohesion became the most important resource whereas information provision did no longer predict post-deployment resilience. These analyses illustrate that the relative importance of resources at different organizational levels varies with the phases of the operational cycle. This knowledge can be used to decide which resources should be targeted at what moment to get the maximum return on investment.

1 INTRODUCTION

Psychological resilience of service members is an important prerequisite for the success of military operations. Current deployments are characterized by a wide diversity of tasks and a broad range of stressors (Bartone, 2006; Boermans et al., in press). Military personnel must be able to cope with these demands in order to

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maintain optimal performance during operations, and also stay healthy and motivated post deployments. Therefore, it is important for military organisations to have an understanding of the factors that contribute to and affect psychological resilience. Organisations can use this knowledge to monitor the psychological resilience of their personnel and, where necessary, implement interventions specifically designed to enhance it.

Research has shown that different types of factors (on individual, team, and organizational level) may help a person deal with stressful circumstances. Traditionally, most research focuses on individual resources (Boermans, Delahaij, Korteling, & Euwema, 2012). Recently, the importance of environmental resources and thus the multidimensional nature of resilience has been acknowledged (Meredith et al., 2011; Zautra, Hall, & Murray, 2010). The multidimensional nature of resilience has also been acknowledged by the military (cf. the United States' Comprehensive Soldier Fitness and Total Force Fitness programs). In the Netherlands, a model of psychological resilience has been developed for the Armed Forces (NLD-AF), that defines 5 levels at which resources for resilience can be found (individual, team, leader, home-front, organisation; see Figure 1; Kamphuis et al., 2012). Although, the multidimensional nature of resilience is acknowledged in the military by developing programs that address resources from multiple domains, studies that combine resources from multiple domains are still scarce.

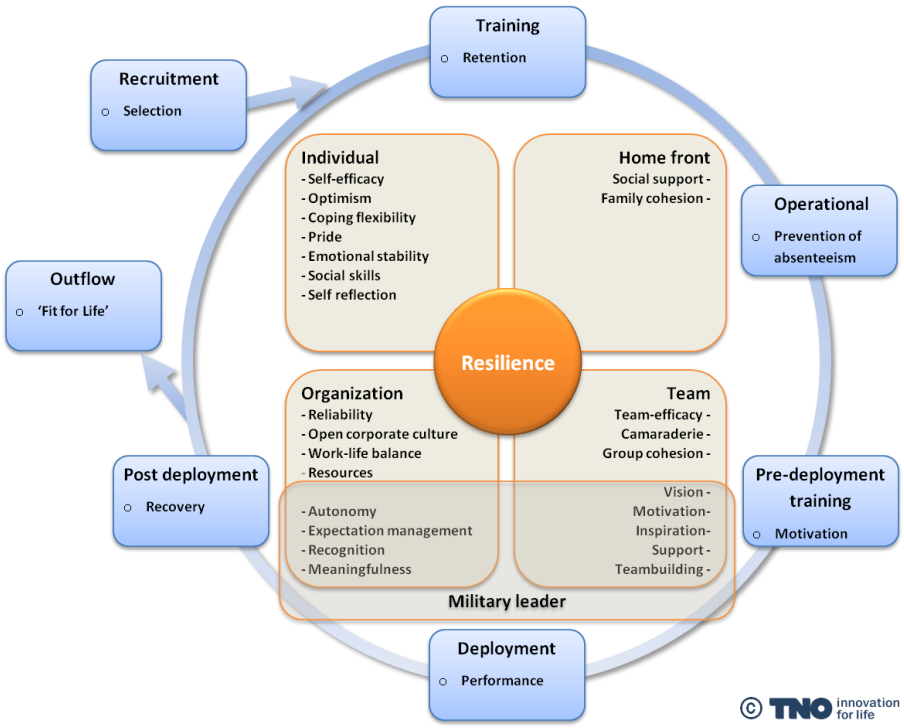

Fig. 1. Psychological Resilience Model of the Netherlands Armed Forces

Many studies investigating military resilience focus on one (or sometimes two) level(s) of resources only. In this way, no knowledge base can be developed to assess which resources, at which levels, have the largest relative importance for military resilience. Moreover, the relative importance of resources on these different levels will change as the characteristics of military operations change due to differences in missions (i.e. peace keeping or peace enforcing) but also due to the specific readiness phase a unit is in. Military deployments for example distinguish a preparatory phase pre deployment, and a mission phase during deployment phase. These two phases are both characterized by high demands, but also differ in the nature of these demands. The pre-deployment phase is often characterized by high workload and uncertainty about mission goals and timing. During deployment, main demands are threat and separation from home. In the model, the importance of distinguishing the different phases in the operational cycle is stressed by placing each of these phases around the 5 levels with resources. Not many studies have addressed the changing contribution of resources on military resilience over time. This study aims to address these gaps by a) investigating the relative importance of resources for military resilience at different levels and b) investigating changes in relative importance of these resources in different phases of the deployment cycle.

Resources included in this study were self-efficacy, group cohesion, social support from the family, leadership efficacy and provision of information by the organisation (one for each of the levels defined in the model). These resources have all been shown to contribute to service members' resilience.

Self-efficacy has been shown to buffer against the negative effects of stressful circumstances during military training (Delahaij, Gaillard, & van Dam, 2010) and military deployment (Benotsch et al., 2000). People who are highly self-efficacious have a strong belief in their ability to manage life's challenges, and consequently experience less distress and act more pro-actively (e.g., Skodol, 2010; Bandura, 1997; Pietrzak et al., 2010).

Group cohesion is a resource for resilience for service members because it provides them with a shared reality, enabling them to make sense of their experiences and sustain meaningful engagements (Mouthaan, Euwema, & Weerts, 2005). Cohesive teams are characterized by trust and teamwork, which provides soldiers with confidence in their personal capabilities and joint team efforts to successfully deal with situational demands, in turn enhancing team performance (Stetz, Stetz, & Bliese, 2006) and well-being (Griffith, 2002).

Social support from the family promotes service members' resilience before, during and after deployment because it provides them with emotional (i.e., understanding and comforting) and instrumental (i.e., helping out) support that enables them to perceive the experience as less threatening and pro-actively cope with the situation. Social support from the family has been shown to sustain combat motivation during, and facilitate recovery in the aftermath of deployment (e.g., Andres, Moelker, & Soeters, 2012).

The importance of leadership for psychological resilience of service members is multifaceted. Leaders provide in physical needs such as good equipment and living conditions (Boermans et al., 2012). In addition, leaders facilitate team processes (e.g., Griffith, 2002) and have a strong influence on the way stressful experiences are appraised (Bartone, 2006; Britt, Davison, Bliese, & Castro, 2004). As such the efficacy of the leader contributes to resilience of service members before and during deployment.

In the pre-deployment phase and during deployment service members' lives are largely determined by the goals of the mission and the ways the mission is organized. As such, knowing what to expect from the mission (i.e., job description, duration, threat levels, R&R possibilities) is important to reduce levels of uncertainty and associated distress (Bliese & Castro, 2000; Lazarus & Folkman, 1984). The amount and quality of information that is provided by the organization to reduce uncertainty and prepare for stressful circumstances can therefore be seen as a resource for resilience (e.g., Paton & Burke, 2007).

All in all, previous research shows that each of these resources affect resilience of service members in their own way. However, not much is known about how these resources affect resilience of service members together. The goal of this study was to investigate the combined effect and relative importance of these resources for military resilience and to determine when (at what point in time in the operational cycle) which resources are most important.

In the present study, the effect of these resources was examined on the recovery after deployment. The rate of recovery or adaptation after deployment is considered an important indicator for military resilience. Most service members who return from deployment will experience some adaptation difficulties, including somatic complaints or problems adapting to family life. However, only a small percentage develops more enduring complaints or problems (Dickstein, Suvak, Litz, & Adler, 2010). Therefore, the absence of somatic complaints after deployment is used as indicator of psychological resilience in this study.

2 METHOD

To assess the relative importance of the resources in the different phases of the deployment cycle, secondary analyses were conducted on data collected from three Dutch Task Forces that were part of the NATO mission ISAF in 2009-2010 (1576 participants nested in 87 units), assessing resources for resilience pre and during deployment, and somatic complaints post deployment. The data had been collected by DienstenCentrum Gedragswetenschappen (GW) (the Behavioural Sciences Services Centre of the Support Command of the Dutch Ministry of Defence) using the Morale Questionnaire (Boxmeer, Verwijs, De Bruin, & Duel, 2007) during pre-deployment training (T1) and during deployment (T2), and the Post-Deployment Questionnaire six months after deployment (T3).

The Morale Questionnaire (T1 and T2) includes measures of self-efficacy, group cohesion, home front support, leadership efficacy, and information provision by the organization. For all these measures, scales have been specifically developed

for the NLD-AF (Boxmeer et al., 2007). The reliabilities (Cronbach's alpha) of these scales varied between .70 and .98. The Post-Deployment Questionnaire (T3) assesses measures of stress-related symptoms, including fatigue, a common symptom experienced by service members after deployment. Recovery after deployment was operationalized as the absence of fatigue. Fatigue was measured using a short-form of the Checklist Individual Strength (CIS9; Dittner, Wessely, & Brown, 2004) validated for the NLD Armed Forces (Gedragswetenschappen, 2008). The reliability (Cronbach's alpha) of this scale was .88.

3 RESULTS

Two regression analyses were performed to examine the extent to which the recovery after deployment can be predicted by the resources present during the pre-deployment training phase and the deployment phase. The results of these analyses are shown in Figure 1 and 2. The pie-chart pieces are based on the standardised regression coefficients produced by the regression analyses.

As can be seen in Figure 2, the most important pre-deployment resources for post-deployment recovery were self-efficacy, social support, leadership efficacy, and provision of information by the organisation. Together these resources accounted for 14,7% (adjusted R^2) in the variance of recovery after deployment. During deployment group cohesion became the most important resource for post-deployment recovery whereas provision of information by the organisation was no longer significantly related to post-deployment recovery (see Figure 3). Together, the resources with a significant contribution, measured during deployment, accounted for 15,6% (adjusted R^2) in the variance of recovery after deployment.

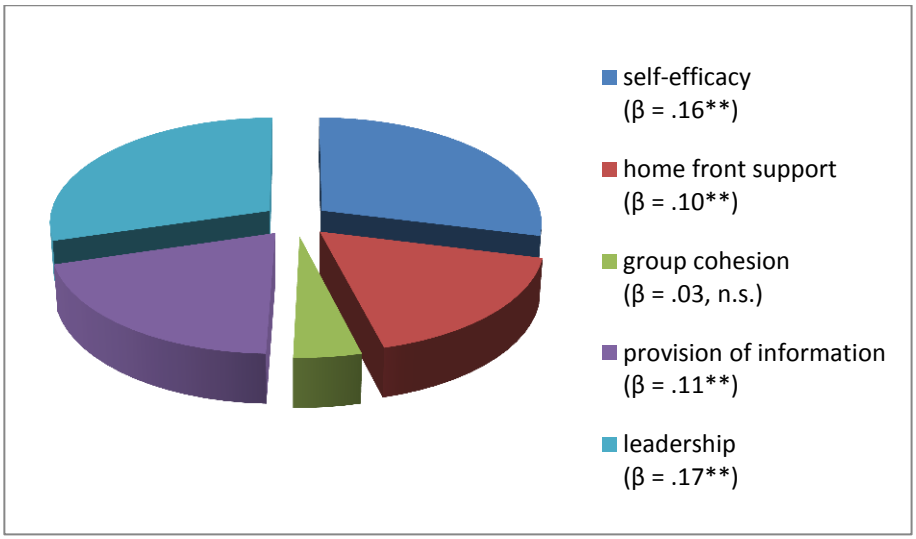

Fig. 2. Relative contribution of determinants measured *before* deployment in accounting for post-deployment recovery (**p < .001)

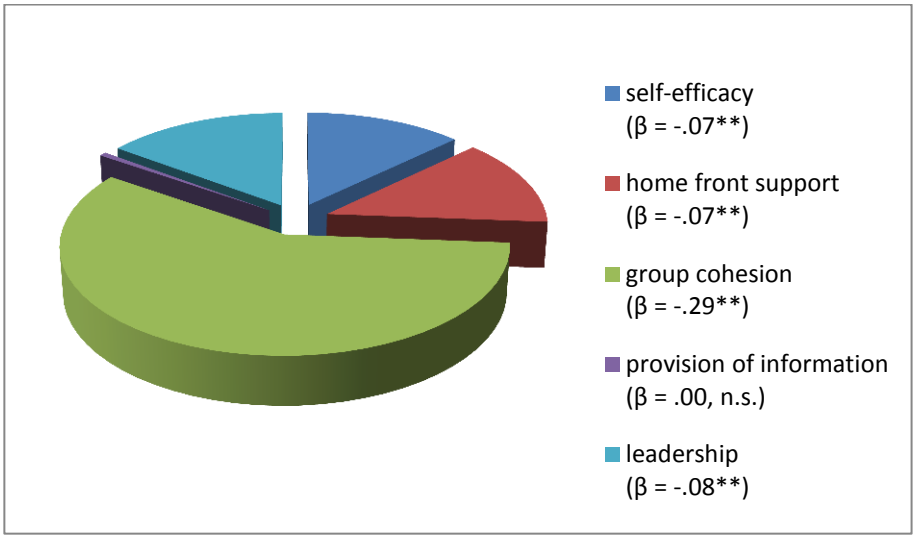

Fig. 3. Relative contribution of determinants measured *during* deployment in accounting for post-deployment recovery (**p < .001)

4 DISCUSSION

The findings of this study underline the multidimensional and dynamic nature of resilience. Resilience is the result of the dynamic interplay between individual and environmental resources. This study shows that the relative importance of resources from different domains changes over time. This change is dependent on the characteristics of the situation.

One conspicuous result is the difference between the importance of provision of information by the organization before and during deployment. In the pre-deployment phase this forms a substantial resource whereas the effect of this resource is absent during deployment. This can be explained by the uncertainty and unpredictability of the pre-deployment phase. Team composition and tasks of military units can change during the pre-deployment phase and therefore it seems that in this phase service members have a stronger need for information provision by the organisation. When deployment starts this uncertainty decreases and this need becomes less important.

Like provision of information by the organisation, self-efficacy, home front support and leadership efficacy are all more important before deployment than during deployment, especially in comparison to group cohesion. The importance of these resources does not diminish during deployment, but the results show these resources have a smaller contribution to recovery after deployment. The relative importance of group cohesion increases from the pre deployment phase to the deployment phase. This is probably related to the increased dependence on the group for safety, social support and well-being during deployment. Before deployment, service members will not encounter threatening situations and will be

able to fall back on their family for social support. During deployment, the group plays a central role in dealing with potentially life-threatening situations and serves as the sole social support system for a service member. The group becomes so important that it seems to partially overshadow the function of self-efficacy, social support and leadership efficacy in dealing with stressful situations.

These result provide practical implications for the military, but also illustrate the importance of using a multidimensional and longitudinal approach when studying resilience. Organizations, such as the military, that are highly dependent on individual resilience of their employees to sustain operational effectiveness are constantly looking for ways to enhance the resilience of their employees. At the same time, these organisations need to be cost-efficient and ensure that investments in resilience pay off in the longer term. Knowledge about the relative importance of resilience resources at different organizational levels and in different phases of the operational cycle can be used to decide which resources should be targeted at what moment to get the maximum return on investment.

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