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RESEARCH ARTICLE

A Qualitative Study of Swedish Specialized Boarding Element Members' Human Actions in Situations Perceived as New and/or Stressful after Participating in Long-Term Naval Hostile Deployment

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Background: Sweden has been part of Operation Atalanta four times since 2009. Being part of an international naval deployment means acting in a substantially different context and environment. The Swedish Armed Forces leadership training includes the use of Wheelan's IMGD model, whereby trust is a significant part of group dynamics.
Materials and Methods: Interviews took place after deployment when the respondents had been back in Sweden for 8 months. The constant comparative analysis method according to Glaser was used to answer the aim of the study.
Results: Trust was seen as the core of the interviews and was based on three categories: leadership, preparedness and endurance.
Discussion: The core category trust, and the lack of trust, may be a result of poor preparedness. The respondents expressed that they felt safe and secure within their own group. The "us and them" mentality was an important finding, and the cause should be examined more closely to increase trust and team spirit.
Conclusion: The Swedish Navy could benefit from improvement in education, team building and pre-deployment training to increase trust and the level of readiness and to reduce stress.

Keywords: Qualitative research; naval duty; mental preparedness; trust

Introduction

Since the beginning of 2000, pirate activities have been a huge threat to boats and ships around the Gulf of Aden. For that reason, the European Union (EU) naval force (NAVFOR) implemented Operation Atalanta, and on 24 November 2016, the Council of the EU extended the mandate of Operation Atalanta until December 2018. To protect ships of importance, EUNAVFOR has authorization to place special security forces onboard naval military vessels (EU NAVFOR 2017).

Sweden has been part of Operation Atalanta four times since 2009 (Swedish Armed Forces 2019), and in 2013, Sweden cooperated with the North Atlantic Treaty Organization's (NATO) Antipiracy Operation Ocean Shield. The Swedish Naval Warfare Centre was asked to accomplish national self-evaluation (nSEL) before being part of Operation Atalanta (HQ 2012-09-11 01 800:63919 Order of production to make plans and preparations for participation in EUNAVFOR Operation Atalanta 2013). The ship has to follow parts of the NATO Allied Maritime Interdiction Operations (ATP-71). During the latter part of 2012, the need for education before deployment was demonstrated with support from NATO checklists (Hällje 2012). Pre-deployment training was accomplished before transit to overseas duty, with the aim of achieving an effective and cohesive combat unit, using combined exercises for all functions and commands onboard as well as training on methodology for internal battle (Filipsson 2013). When the crew of the vessel had gone through training on basic ship knowledge, additional exercises were carried out with regard to a higher level of internal and external battle (Hällje 2013).

To be able to handle different kinds of challenges, the Swedish Defence University educates employees in "leadership during stressful situations" whereby course members learn how to be a leader in situations not experienced before and be aware of how to act under pressure against the clock and during uncertainty or under threats (Swedish Defence University 2019). The Swedish Armed Forces educates leadership through different settings, and Wheelan's model (Larsson, Lundin & Zander 2018; Wheelan 2009) is presented among other theories involving group dynamics, group developments and what characteristics are required as a leader. For example, cadets are educated in leadership using Wheelan's Integrative Model of Group Development (IMGD) (Larsson, Lundin & Zander 2018; Wheelan 2009), which includes 'the four stages model'. The first stage is dependency and inclusion whereby members expect the leader to take the initiative and provide the members with structure. Focus is accepted, and the members seek others who are just like them. At this stage, the members are dependent on their designated leader, and levels of productivity tend to be low. The second stage is a period of counter dependency and fights where members feel safe and secure; they take risks and dare to have different opinions. At this stage, trust and commitment to the group increases and conformity decreases. The third stage is trust and structure whereby members take mutual decisions based on the goals set for the task that has to be accomplished. The fourth stage is work and productivity whereby the group turns into a high-performance team. One theory emphasized by Wheelan (2009, 2016) in the IMGD model is that trust is a significant part of group dynamics and leadership, and that it is crucial for team members to have trust in their leader as well as in the team itself. Previous research shows that the importance of trust within teams is two-fold; trust has a positive effect on identified task performance, relationship commitment, job satisfaction and satisfaction within the team, and is negatively related to stress (Costa, Roe & Taillieu 2010; Guinot, Chiva & Roca-Puig 2014). Stress can be explained as a physical response that appears when the body believes an attack is imminent and 'fight or flight' mode is switched on. The body is getting ready for physical action by releasing hormones and chemicals that lead to a number of reactions, such as increased heart rate or increased blood flow to the most important muscles. This boost of energy helps us focus and respond quickly to the situation. But when the body gets into stress mode in situations that are not dangerous, the body is affected in negative ways and this can lead to serious health issues (Stress Management Society 2019). Stressors, both physiological (hot or cold temperature, injury, chronic illness, pain) and psychological (events, situations, individuals, comments), cause the release of stress hormones (Ahlborg et al. 2013; Centre for Studies on Human Stress 2019; Hyman 2001; Zautra 2003).

The effects of working in an uncertain environment, in a different terrain and weather circumstances, affects personnel in ways similar to those experienced by emergency service personnel when they are working under conditions of acute stress (Regehr et al. 2008). Being part of an international naval deployment means acting in a substantially different context and environment. Different events not related to combat can be experienced as traumatic, such as going through hostile areas, being afraid of threats from chemical, biological, radiological, nuclear or explosive agents or even fear of being attacked (Ikin et al. 2005).

We could not find previous research in the literature on human actions in situations perceived as new and/or stressful after participating in a naval hostile context. The research on hostile naval deployment showed that being prepared for naval duty is vital: how to cope with the naval environment of the deployment; having the ability to handle both physical and mental strain onboard the ship; having the ability to master various situations; finding balance between action and non-action; handling incidents (Hindorf, Jonsson & Lundberg 2018). However, there is research on military personnel dealing with problems from deployment in Afghanistan or Iraq, including mental health problems (Hoge, Auchterlonie & Milliken 2004, 2006; Seal et al. 2007) and posttraumatic stress disorder (Erbes et al. 2007; Schnurr et al. 2009; Smith et al. 2008).

Aim

The aim of this study was to get a deeper understanding of human actions in situations perceived as new and/or stressful during participation in long-term naval hostile deployment.

Materials and Methods

Data collection

The chief of the boarding element was contacted to decide on suitable dates to perform the interviews in person, except for one interview which was conducted via Skype. According to Stewart and Williams (2005) and Sullivan (2012), interactive communication with a web camera is comparable with onsite interviewing. All the other interviews were conducted in an office where the element members have their home base. When the interviews took place, the participants had been on duty overseas for a period of 4 months and had been

back in Sweden for 8 months after completing the long-term duty. All interviews were conducted in Swedish. The interviews lasted for 45 to 120 minutes and were tape-recorded with permission from the participants.

Data were collected through qualitative in-depth interviews (Boyce & Neale 2006) to get a deeper understanding of human actions in situations perceived as new and/or stressful during participation in long-term naval hostile deployment for the team members of the Swedish boarding element after returning home.

The in-depth interview is one of the main methods used in qualitative research (Snape et al. 2003). The method is also called unstructured interviews where the process of interviewing is flexible (Bryman 2002; David and Sutton 2016; Gill et al. 2008). As a response to the opening question 'tell me about your experiences from your international duty during Operation Atalanta from the beginning until today', the interviewees began to tell their story. The participants were requested to talk freely, and follow-up questions such as 'What happened then?' or 'How did you feel?' were asked (Kvale 1997; Mishler 1991).

Method

A qualitative method and constant comparative analysis (CCA) (Glaser 1978; Glaser & Strauss 1967) appeared to be suitable for acquiring deeper understanding of human actions in situations perceived as new and/or stressful in a naval hostile context. CCA allowed the authors to include everything important; the transcribed text from the in-depth interviews was constantly compared. As all the interviews were important and as the target group consisted of 11 team members, the choice of method enabled each incident to be studied and compared thoroughly.

Analysis of data

All interviews were transcribed verbatim. The names of the interviewees as well as other persons, names and places have been changed to ensure confidentiality (Kvale & Brinkmann 2014; Trost 2010). The transcribed interviews were analysed with CCA according to Glaser (1978) and explained by Kolb (2012). CCA is associated with Grounded Theory (GT) but according to Fram (2013), the method can be used for analysing qualitative data without generating a theory or doing a full-scale GT study. As Glaser and Strauss (1967) explain, the benefit of CCA is that the research starts with 'raw data', an expression normally used in quantitative research. However, Glaser and Strauss (1967) use the term to explain the advantage of collected data before the analysis process starts. In this research, raw data refers to the in-depth interviews and the participants' human actions in situations perceived as new and/or stressful during participation in long-term hostile naval deployment. Their statements, as well as how research is done and if the data is sufficient, are important. The benefit of using raw data is to ensure that the quality of data is accurate and solid, because the variation in the interviews can be immense.

The CCA method

Analysis of the data was performed by the first author and then compared and discussed with the other members of the research team. First, the transcribed interviews were coded using open coding (Glaser 1978). The first researcher analysed the transcribed text by asking questions such as who is doing what and why, and incidents were identified and compared thoroughly. Then, the data were analysed line by line, by constantly coding each sentence and the analysis process became easier. From the initial comparison of incidents, categories were developed, compared and interpreted. Glaser (1978: 58) points out 'the analyst must do his own coding' and at this level, fewer characteristics appeared as categories were developed. Reduction was used at this stage of the analysis. The mass of data became easier to grasp as the list of categories was reduced. A core category was developed from the categories. The content behind the categories is presented later. The transcribed interviews were read, one at a time, as the analysis process continued, with constant comparison and sorting into the different categories and codes. When the open coding was done, the researcher had in-depth understanding of the data, discovering that nothing was a surprise anymore after constantly comparing, analysing, generating codes, and finally realizing that the data fit. Some codes emerged quickly and others had to be corrected to fit. Codes that appeared repeatedly in the material were investigated more closely during the process of selective coding. The analysis process was now guided by the core variable found in the patterns of codes that captured something relevant in the material, just as Glaser (1978: 95) points out 'the core category must be proven over and over again'. The selective coding formed main themes or substantive codes that described the main features and processes. At this stage of the analysis, the material was delimited. This process was ongoing throughout the analysis procedure during the constant comparison of the data. New data were processed and compared with previous data found while searching for similarities and differences (Glaser 1978).

The quality and applicability of the findings

In this study, the researchers followed the inductive approach in CCA as described by Glaser (1978). To be able to discover new things in the data and to avoid being influenced by existing concepts, the researchers were not trying to find predetermined categories in the material and had not done much research on the existing literature or knowledge in the field (Glaser 1978).

Among the research group, experience and knowledge of the research method as well as having been on naval duty overseas varied, which was a good starting point for the analysis. The primary findings from the first researcher were discussed repeatedly in the research group. By using CCA, the findings were considered credible and trustworthy because they were grounded in the constant comparison of data from the transcribed interviews.

Participants

The participants consisted of 11 team members of the Swedish naval specialized boarding element (referred to as element members) recruited from the Swedish Naval Warfare Centre by the first author. The target group represented a homogeneous group because they were in the same age group, the same sex, they had been working together for several years and they socialized with each other within the profession as well as outside. All participants gave their consent to take part in the study.

Validity and reliability

All participants were given the same information about the study. Data that emerged from the interviews were trustworthy because they were depicted by the homogeneous participants, which gave the researchers increased possibility to make statements supported by the whole group. The results found were applicable to the aim of the study.

All the researchers have been employed by the Swedish Armed Forces for many years, with long-term duty within health care. The second and the third researcher had personal experience of deployment abroad in a hostile environment so the first researcher did the initial analysis so that the other researchers could not include preconceived opinions in the material. Cooperation among the researchers was good even though they live in different parts of Sweden.

Ethical considerations

The study was approved by the Ethics Committee of Linköping (Dnr 2013/163–31). Participation in the study was voluntary, and participants could withdraw from the study at any time without any explanation. Tapes and transcripts were anonymized and coded. Personal data and other information were protected in the study under the Personal Data Act (1998: 204).

Before the interviews, the first author reflected on how to assist participants if symptoms of stress should arise during or after the interview. After contact with the Swedish Naval Base Medical Centre, assurance was given that a team especially trained in this field would always be available to assist.

The researchers did their best to embrace the stories sincerely revealed by the participants and tried to follow the ethical principles called Prima Facie, which is defined as 'at first sight' (Cambridge Dictionary) based on autonomy, doing good, do no harm, and justice (Gillon 1994). During the interviews, the first researcher tried to acknowledge the individual journey in every situation told, as well as be humble to the confidences given by the participants when they narrated their human actions in situations perceived as new and/or stressful during participation in long-term naval hostile deployment.

Results

The connection between the core category, categories, and codes found in the interviews is presented in **Figure 1**. The results are presented first with the core category 'trust', followed by the categories of 'leadership, preparedness and endurance'. The codes within the separate categories are presented together.

Trust

Based on the data, the core category was found to be trust, trust in one's own ability as well the ability of others, and the lack of trust for the tasks given or not being able to handle the tasks. The respondents referred to trust and tasks as seen below:

> We were well trained in the team, and had good knowledge about our tasks... and also very well united in our own group; we trust each other, we all trust each member's ability to solve their tasks given.
>
> I don't have trust in the others... the crew onboard the vessel, I don't.

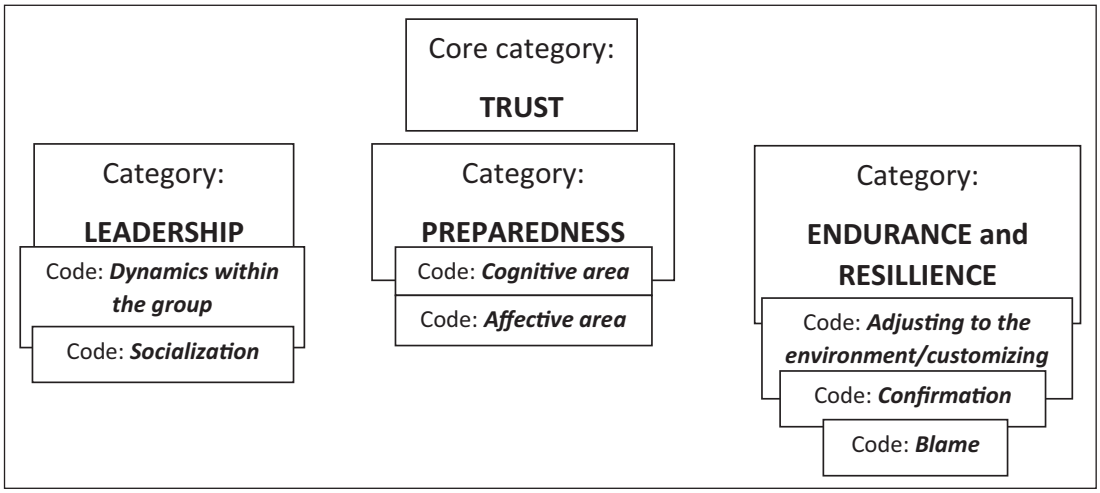

Figure 1: The core category, categories, and codes.

Data showed that all element members had great trust within their own group and their immediate chief, which the respondents referred to as

> You know, it's like having your family with you, always there for you, always listening, you can always trust your own unit.
>
> We take care of each other, we are a good team with a solid band of brothers, but if someone doesn't feel good... we take care of each other...

The element members had less trust in the equipment onboard, intended to be used in a maritime context, and the quote below demonstrates the frustration that arose:

> The equipment we have is not fully maritime adapted and cannot withstand water so well.
>
> When we have been encumbered with water, then it is, then it is 100% cleaning on every little piece of equipment we have, and it needs to be rinsed with fresh water; it should be dried, it should be lubricated, which means everything, everything, everything we have onboard.

The lack of trust in the ship perceived as a whole was stated by the respondents as

> The ship seemed not to be a coordinated well-trained organization.
>
> So, of course, it would have been much better if the ship had worked together as a whole...

The lack of trust affected the members in a stressful way and was handled using different methods, as presented in the category 'endurance' and coded as 'adjusting to the environment'. The element members' view of their position onboard was that they 'were a solid part of a vague unit'. Trust was seen as the core of the interviews and was based on the three categories: 'leadership, preparedness and endurance', which are presented below in that order.

Leadership

The importance of 'good' leadership emerged early in the analysis of the data, and the respondents referred to the lack of leadership onboard as

> I had no trust... in some of... the leadership onboard the ship...

The category leadership highlighted both the dynamics within the group and socialization as codes.

Dynamics within the group refers to the group dynamics and subgroups that were discussed in all the interviews; the respondents talked about the cultural clash that occurred on board as a result of different social systems. The respondents called it the 'us and them mentality' and emphasized that the biggest clash was the hierarchy onboard the ship. How to jointly approach a task was also a breeding ground for feelings of frustration and misunderstandings between the different subgroups onboard because the mindset varied among them. The respondents referred to the problems as

> Well, it is like, the Navy has the strongest hierarchy system… if you are at the bottom and… well it is class distinctions on the ship… and… when we were embarking… it's like "they know best"… it's like that…
>
> I think the others have a lack of ambition, I miss their… eh… miss their passion, being on their toes, their willingness to solve their tasks.

Socialization was about the lack of leadership onboard with reduced confidence as a result. The analysis of the data showed that, when the line organization did not function as intended and order paths were not followed, socialization between subgroups appeared to be impossible to accomplish. Instead, the element members thought that the bond and the trust within the subgroup became stronger. Trying to socialize with other subgroups was perceived by the respondents as having an equal approach to the tasks in the operation and seemed to be uncomplicated, but socialization among subgroups with a different attitude towards the operation was experienced as almost impossible to achieve. Feelings of affinity with another external resource and socialization with others were referred to as

> But you felt like the helicopter guys. I think it was easier to work with them… Eh… I think it was their experience too… Very calm and stable guys there.
>
> So, I think that the boarding team and the vessel Carlskrona were not really compatible, eh… we were by ourselves pretty much, even though I tried… I think I contacted the others onboard many times. But for most of the group that wasn't the case. It was more like, we…we kept to ourselves…

Preparedness

The ability to be prepared to take part in an international operation was about preparedness before, during and after the tasks. Gathering the element members for a hot wash up (HWU) after every task was completed proved to be valuable, based on the critical moments (lessons) identified that were then used as lessons learned before the next task was carried out. This way of using the lessons identified and learning from them increased the preparedness of the element members, because they felt strengthened during subsequent assignments. Below are reflections from the respondents concerning the HWU:

> So, a hot wash up… the first thing to do when onboard the vessel again so we talk about what happened… And we had that as a routine even if nothing had happened when on an operation… So we just gathered and asked what happened? What went well? What do we have to improve?'

The cognitive area was described by the element members as the drill onboard as well as pre-deployment training or the lack of pre-deployment training. Much of the pre-deployment training was about finding one's way around the ship, internal battle, how to handle fires onboard and having knowledge about the nomenclature onboard. The respondents also talked about the lack of Standard Operating Procedure (SOP) and checklists that had to be carried out during the operation, which they wanted to be completed before transit. The element members also thought that the pre-deployment training could be more efficient with regard to time and substance. The lack of SOPs was referred to as

> Em… I think that eh… the vessel lacked SOPs.
>
> Eh… it didn't feel very comfortable to… well, at the same time you could be part of building… designing a foundation for that, with manuals and all for our way of working with the RHIB [rigid hull inflatable boat] and that we had to do… but that's what we should have been doing during the pre-deployment training, during the three months before, putting everything in place, so you can feel prepared when going to deployment.

The affective area (related to moods, feelings and attitude) was highlighted by the respondents in that pre-deployment training was not focused on pulling the ship together as a whole with equal attitudes to the tasks given during long-term international duty on the Somalian coastline. They thought they were missing out on mental preparedness for long-term deployment; how to handle the naval environment; how to deal with feelings of idleness and boredom onboard. The element members with no or modest experience of long-term international naval deployment referred to the naval environment as

> I had been on a rowing boat sometimes but otherwise, I had like barely been on a boat before… a ferry once but…

The respondent's reflections concerning the pre-deployment training and pulling the ship together as a whole were referred to as

> ...and then, we hadn't met a single person from the crew onboard Carlskrona, and to come onboard where there are 130 people you will work with and all of them knew who we were, but I didn't know a single name at the beginning and there were all kinds of abbreviations and...
>
> Yeah, so it was, just such a thing, if we had been onboard, for only a week, just to recognize one face and let it sink in a bit, I think that would have helped.

Endurance and resilience

Endurance refers to how to put up with the environment; resilience refers to how to recover quickly and to build toughness.

This category was about the ability to endure in a naval hostile environment, and how to cope with the special environment of a naval context. It is an environment with permanent movement, because the ship is continuously surrounded by waves, sometimes with a heavy pitch and roll especially during the monsoon period. The mental strain of being inside the ship's hull for weeks or even months put the crews' determination to the test. With limited space onboard, the respondents referred to the environment as 'doing time' or 'being in prison' where the meals were served at specific times; they had to ask for permission to stay outside the ship, routines became a way of living and they met the same faces every day.

> I think that being onboard is like being in prison... almost... the spaces that you share with others are quite confined and you share sanitary facilities, and... then when it's dark, you are not allowed to be outside; you are allowed to be outside during the day, when you are off duty and when it isn't dark; then you have to stay inside again and, at a certain time you eat...
>
> Well, you have the same faces around you 24/7 at a distance of one meter.

The category on endurance and resilience was divided into the following three codes: adjusting to the environment/customizing; confirmation; blame.

Adjusting to the environment/customizing was about having the ability to relax onboard, how to handle being homesick or the mental strain of being onboard with limited space. The naval environment affected the respondent's sometimes in a negative way as quoted below:

> You get used to being seasick, but there are days with heavy pitch and roll, and then you just want to lay down...

The code adjusting to the environment was about finding ways to adjust to the physical and psychological environment, and how to accept being onboard in the special context of long-term international duty in a hostile naval environment. One of the element members expressed 'you just need to find your way to go with the flow' or as quoted below:

> It was a mental strain to be able to handle this... boredom... most of the days was like rolling my thumbs... trying to find something to do, so that, gloominess became ... eh ... noticeable, really... and I think that most people felt like that. So that was probably the most mentally straining part, then when you got out to work again... then you were alert and on your toes ... then you go down into a ... a hibernation again ... you exercise, you eat, watch movies, sleep.

The respondents exercised almost every day, sometimes twice a day, and they referred to the fitness training as an outlet for the mental strain they were exposed to, as well as the fact that they had to stay fit for operational duties onboard. Other ways of coping with the environment included studying to obtain certain certificates, meeting with others in a baking club onboard, reading books, sunbathing, playing a game of cards or TV games, listening to music, playing the guitar or just being in the bin, relaxing or sleeping. The attitude towards the gloominess can be interpreted as responsibility for your own well-being:

> Well, the key is to be active, you can't just lay down and die.
>
> You have to learn how to handle the boredom as well.

> You do what you can do; you want to do as much as you can, so there was a lot of fitness training and… that's what you have onboard.

Many of the respondents took a nap in the afternoon because they did not have any task to occupy themselves with; as a result, they had trouble sleeping during the night and they referred to the situation as 'intolerable' and that it had a 'negative effect on their mental health'.

Confirmation was about being acknowledged by the crew, getting approval from the commander onboard and being appreciated for the job done. The importance of getting your voice heard became obvious as the hierarchy onboard sometimes did not allow that. The respondents talked about how hard it was sometimes to be in a command huddle without getting any authorization. They thought it was very frustrating not to be seen and not to be heard.

> Yeah, it is a totally different way of thinking than what we have … we can talk about everything and I can be heard if something doesn't work… But they got used to it because I didn't give up. I can imagine they thought I was a pain in the ass… but…

Blame was about handling different incidents or problems onboard. When the respondents talked about the issues they experienced onboard, they sometimes blamed it on 'the uncooperative crew', or the fact that they misunderstood each other's requests. Instead of feelings of responsibility in various situations where communication was missing, an easy way out was to blame others. When the respondents had been out in the rigid hull inflatable boat (RHIB), they were keen to get back onboard as quickly as possible to avoid having the equipment encumbered by water, with many hours of equipment maintenance ahead or the fact that there was an increased risk of damaging the equipment, but above all a huge risk for personal injuries. The respondents blamed some of the crew and the SOP not being good enough, because it took too much time before the element members were onboard with the RHIB on the vessel again. The respondents referred to the high risk of personal injuries as

> It's calm when going out on a friendly approach but when we return, we can barely get back up… on the vessel because of the rough sea… so that… had effect too and then some of the team members got hurt by riding the RHIB. Well, … yeah, there are compressions… you sit… and then especially when you go far, a long distance, and you relax for … a second, then it just hit you.

Discussion

Expected findings

The aim of the study was to get a deeper understanding of human actions in situations perceived as new and/or stressful during participation in long-term naval hostile deployment for the team members of the Swedish boarding element after returning home.

The results showed that there was both trust and lack of trust onboard, experiences of the ship as the inner enemy, formation of subgroups and a lack of cooperation and team building. The respondents' apprehension concerning the pre-deployment training was focused on inner conflict, finding one's way around the ship or producing SOPs, but not how to handle conflicts or what mindset should be applied to the different upcoming tasks onboard the ship. The main stressor expressed by all respondents was the 'them and us mentality'. The findings surprised the researchers to a large extent.

Trust

The core category trust, and the lack of trust, may be a result of poor preparedness with symptoms of idleness, not feeling comfortable in the naval environment or feelings of stress. Even though the task for Operation Atalanta was clear, the ship was not conceived as a whole from the element members' point of view. From their perspective, it was an unlucky ship with no mutual goals, no respect for each other and above all, no trust. The subgroup of element members trusted each other because they had been working together for many years. They expressed that they felt safe and secure within their own group. The element members felt that they should be prepared to handle pirates in a worst case scenario, but instead they experienced that the challenge became a question of dealing with the idleness and the gloominess onboard. The 'us and them mentality' is an important finding, and the cause needs to be examined more closely to increase the possibilities for gaining trust and team spirit. The respondents had several suggestions on how to achieve just that; for example, making sure that everyone onboard has the same mindset

before deployment starts and have team-building activities during pre-deployment training that cross over the different subgroups.

Group dynamics and leadership

The respondents highlighted the importance of knowledge about group dynamics, what happens when small subgroups are placed into a bigger group where it is unacceptable to be 'unfaithful' to your own subgroup, and how to prevent subgroups having feelings of being within the ship as the mutual enemy. These experiences raise the question of how we can provide important knowledge, especially how we educate before deployment and how we prepare the crew mentally for long-term naval hostile deployment.

The Swedish Armed Forces educates leadership and group dynamics throughout different levels of education, but the lack of using the knowledge in the real world appears obvious, and it seems difficult to turn theory into practice; it is overlooked during pre-deployment training and deployment.

There seem to be a leadership challenge in getting the crew onboard to act together, to make them see their part in the bigger whole, to get them to strive towards a mutual goal, to have the same point of view during approaches, and to make the crew understand the different tasks during deployment. It also appears to be important for the commander onboard to have the same attitude or mindset among the crew towards the assignments and/or tasks before participating in long-term international naval hostile duty.

The results show that the element members were loyal to their immediate chief, and their attitude towards their position onboard was that they 'were a solid part of a vague unit'; which also seems to be a leadership challenge.

There are several theories concerning leadership and group development, including Fundamental Interpersonal Relations Orientation (FIRO 2019; MySourcingLeader.com 2015) and the Wheelan model (Larsson, Lundin, & Zander 2018; Wheelan 2009). It is clear that these established theories and methods are used in theory but, as the findings show, may not have the expected impact in reality.

Trust is pointed out by Wheelan (2009) as an important factor for group development. The importance of leadership emerged early in the analysis, and trust was found to be the core category from the interviews. Questions arise concerning the use of this IMGD model, and if the lack of trust is caused by being stuck in the first stage of the model. If so, the group would have needed support to get through the first stage. There seems to be a gap between education and reality, because the use of this knowledge concerning IMGD during pre-deployment training, transit and operations seems to be overlooked. The element members did not think they were heard during command huddles onboard due to hierarchy systems, and in the first stage of the model, the members strived to be seen and heard. During the first stage of the IMGD, the group also needs support to gain safety, and a mutual structure of communication is necessary. A lack of structure may result in activities that are not beneficial to the tasks given for the operation onboard.

Lack of preparedness

As the results show, the element members have to be able to both act and not act, to be ready for combat as well as no combat, to have the capability to endure naval duty, finding balance and ways to go with the flow. The lack of preparedness becomes evident when they are put to the test while living in the naval context, sometimes hostile. The crew must be able to act in the different contexts that can occur during an operation, at times in an environment they have never experienced before or for which they have not undergone training.

The experience of idleness onboard seems to be one of the hardest issues to deal with, and one easy way out for the element members was to stay in bed for part of the deployment. The respondents also strongly reflected on the lack of SOPs and checklists, which affected them in a negative way, as did equipment problems as well as time-consuming non-effective pre-deployment training.

Together

The Supreme Commander of the Swedish Armed Forces, Micael Bydén, emphasizes the word 'together' when visualizing the abilities of the Swedish Armed Forces: 'We must work together based on unique competencies to increase our overall ability and fulfil our mission' (Swedish Armed Forces 2019). However, the findings in this study show that we have not yet reached that goal during naval deployment. General Bydén initiated a cultural change, which is described in the Swedish Armed Forces as 'core values' and 'code of conduct'. But it is not about the amount of papers being written on this issue; it is more about how we use this knowledge in the Navy and in reality. The written words are just words as long as we lack the ability to put words into practice.

Endurance

The importance of physical training became obvious as the element members exercised almost every day during the operation. Previous research has found that physical fitness can actually increase military stress (Taylor et al. 2008). The need for fitness training onboard seemed to be two-fold; on the one hand, being fit was required for the sometimes physically tough tasks assigned; and on the other hand, daily fitness training could be seen as part of a coping strategy to handle feelings of gloominess and being frustrated. As early as 1966, Lazarus (1966) described stress as the connection between a person and an environment, and the need for coping. Lazarus and Folkman (1984) presented two ways of coping. As early as 1969, the Kübler-Ross model was developed to describe a five-stage model of coping (Kübler-Ross 1969). Some 30 years later, 400 ways of coping were presented (Skinner et al. 2003).

Mindfulness

In addition to fitness training, there are other ways of trying to be mindful onboard during long-term duty. The US Army (Hindu Human Rights, 2013; NBC News 2008; Veterans Families United 2017) and the Defence Institute of Psychology and Allied Sciences (DIPAS) in India practice yoga (DRDO, 2019). Since 2014, mental training has been part of basic military training in the Swedish Armed Forces, aiming to reduce stress and help recruits during demanding tasks or examinations (Swedish Armed Forces 2017). However, this does not continue throughout education within the Swedish Armed Forces. Nevertheless, the Swedish Naval Base offers yoga for employees on a voluntary basis.

Lessons learned

There are several reports on lessons learned after completion of deployment. The final report from Operation Atalanta (ME03) stated that there were shortcomings concerning both material and training (Åkesson and Källström 2013; Sandberg 2014; SWECON 2013) but the emotional effects or how to handle the shortcomings were not mentioned. This has not been evaluated or reported to our knowledge. During pre-deployment training, the lack of routines and checklists became evident and had to be created, with the consequence that the training before the operation started was not effective. The shortage of mutual exercises, including solving tasks such as boarding and approaches, between the boarding element and the vessel in between operations were clearly noticed. Due to equipment problems and long delivery times, both training and exercises were carried out without the right equipment onboard, which led to several limitations (SWECON 2013).

Implications for Swedish Navy pre-deployment training

As expressed by the respondents, there are challenges, both physical and psychological, when material is not working or is missing. There is nothing in the final report from Operation Atalanta about the ability to adapt to the situation (Åkesson & Källström 2013; Sandberg 2014; SWECON 2013). As the respondents pointed out, they had to adapt to these circumstances because they could not do anything about it. From their point of view, they really tried to do their best to maintain operational ability and demands. The respondents reflected over the lack of a mutual effort within the ship to adjust to the situations that arose. Again, it appears that the lack of the ship behaving as a whole became clear for the element members. They believed that their immediate chief presented problems to the commander onboard but the respondents perceived that he was not heard.

Further questions arise concerning how prepared the crews actually are to participate in deployment overseas. Perhaps the Swedish Navy have to change the pre-deployment training and add leadership, knowledge about group dynamics, team building and how to handle conflicts to increase the basics before deployment.

Ability to respond to action

In 2017, The Swedish Armed Forces was exposed twice to large-scale cyber-attacks (Dagens Nyheter 2017a, 2017b; SvD Näringsliv 2017). The importance of having the ability to respond to action is clear, and it is a responsibility as a researcher to act when problems are raised. As researchers, we suggest that the education programme adds Eriksson's (1985) model, described by Hult (2007), to increase ability to respond to action and give the crew support before taking part in deployment.

Method Discussion

A CCA method was chosen to answer the aim 'to get a deeper understanding of human actions in situations perceived as new and/or stressful during participation in long-term naval hostile deployment'. The method is applicable in such a setting. In this particular study, the constant comparison of data helped the research-

ers find the essence, and the core category was proven repeatedly so there was no doubt that the core was found. The human actions were revealed by using CCA.

Reflexivity (Finlay & Gough 2003) was used as a tool to be able to understand the participants' experiences, to fill in the gap between the participants' perspectives of attending Operation Atalanta and the researchers' understanding of it (Baarts, Tulinius & Reventlow 2000).

Truth and validity

The core category trust was revealed by the different incidents explained by the respondents. Furthermore, this study has relevance because it deals with sincere concerns of the participants, and the findings may support employees not only in the Navy but also in the Armed Forces. In addition, the findings had workability because the problem of how to solve the lack of trust was explained by the respondents themselves. Lastly, if new relevant data emerge in the future, they can be compared with the findings in this article, which make modifiability possible (Glaser & Strauss 1967; Hartman 2001; Lomborg 2017).

Strengths and weaknesses

The research is important because it increases knowledge on aspects of naval duty, sometimes hostile, and may support both decision makers and health providers in the Navy worldwide. There are two theories supporting the findings: the IMGD model by Wheelan (2009, 2016), and the model of level of readiness by Eriksson (1985) and described by Hult (2007).

The weakness is that the interviews could have been held somewhere outside the military base because that may have influenced the participants in a negative way. However, the material was generous, which indicates that the interview situations were good after all. The homogeneous material also strengthens the study.

Conclusions

The main discovery was that trust is important. The experiences of the respondents showed that this was missing in many ways. The results showed that the respondents were deployed in a presumed unhappy ship where trust was absent. The operational effect of the Swedish Navy may be undermined if we do not have trust in each other, if we are unable to cooperate and if we do not find time to recover. The Swedish Navy could benefit from improved education, team building and pre-deployment training to increase trust and the level of readiness as well as reduce stress. Another area for improvement could be to overlook the process of handling lessons learned, and evaluate human actions associated with deployment, not just the hard facts. However, further research is needed on training before deployment to enable the Navy to make improvements for the next generation of sailors.

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Competing Interests

The authors have no competing interests to declare.

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