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Correlations between occupational self-efficacy and conflict management training

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Abstract

In this study the purpose was to examine whether participating in a conflict management training program called No Power No Lose for employees in a state run institution for compulsory treatment of drug abusers correlated with *occupational self-efficacy* (OSE). OSE was measured using self-reported scores on two different scales purporting to measure occupational aspects of the self-efficacy constructs. The hypothesis was that the number of completed training sessions would co-vary with at least one of the two occupational-efficacy scores. Statistical analysis failed to discover any significant correlations between the selected variables, with the exception of one subscale, self-oriented emotional occupational self-efficacy, which was found to have a significant correlation with the number of training sessions, and thus, four out of five of the study's hypotheses were rejected. The results may be related to problems arising from the design and the data gathering process, with a high amount of drop-outs (approximately 66%) resulting in few respondents, and possible validity problems in the questionnaire due to aspects of social desirability. The potential implications of the results are discussed, and suggestions for further studies are given.

Keywords: self-efficacy, occupational self-efficacy, compulsory treatment, low-arousal approach, conflict management

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Introduction

Preface

In Sweden personnel working at institutions run by SiS (Statens Institutionsstyrelse, translated as *the National Board of Institutional Care*) are required to undergo mandatory training in conflict management (Hedman-Lindgren & Taylor, 2011). These institutions provide, among other things, coercive care for youths and drug abusers, and its staff is at heightened risk for being subject to violence (Pelto-Piri et al., 2017). This study aims to evaluate the conflict management training program used by SiS by measuring the reported levels of OSE of its staff and correlating this with the number of completed training sessions.

The NPNL program

The NPNL (No Power No Lose) program was developed in 2003 by Bernard Taylor in order to educate SiS personnel in handling conflict oriented situations, with a focus on avoiding violence, and seeking to maintain an empathic and engaged position (Pelto-Piri et al., 2017). SiS, being an organization providing coercive care, has a high incidence of serious incidents of violence (Björck, Nötesjö, Moen, Malmberg, & Glifberg, 2015), which created a need within the organization for providing conflict management training for its staff, which in turn led to the development of NPNL.

NPNL was developed to focus on staff behavior in emergency situations and also contained theoretical knowledge on conflict management. The program also contained training in several physical techniques with the purpose to overpower and incapacitate violent inpatients in a safe and controlled manner. (Pelto-Piri et al., 2017). The program is based on both a theoretical component, containing discussions on ethics and conflict management, and a practical component containing exercises (Hedman-Lindgren & Taylor, 2011). The program is directed and developed by the SiS central organization, who also takes responsibility for training the NPNL instructors (Hedman-Lindgren & Taylor, 2011).

NPNL-R. NPNL was implemented widely through SiS and personnel with direct contact with in-patients were required to partake in regular training sessions. As the program grew, there emerged an ambition within SiS to develop NPNL further and keep it up to date with modern, evidence based practice (Björck et al., 2015). Examinations of violence at SiS run institutes showed systematic patterns in which situations were more likely to result in conflict (such as medication and correction of behavior) (Björck et al., 2015). It was thus decided that NPNL should be revised and that this new version should be more focused on

early signs of violence and more long-term strategies aiming to prevent violent incidents from arising. And thus NPNL was updated accordingly.

A revision was undertaken between 2012 and 2015 in order to bring the NPNL up to date with modern evidence based techniques (Björck et al., 2015). The new version of the program, dubbed NPNL-R (R for revised), was presented at The 9th European Congress on Violence in Clinical Psychiatry (Björck et al., 2015). While similar to the previous version, NPNL-R deemphasized physical interventions and coercive techniques and focused on mental, communicative and tactical skills instead, with the express goal of minimizing actual conflict (Björck et al., 2015). Another thing that was new in NPNL- R was the organization of the educative material, highlighting role playing exercises and practical training, and introducing a module based training where staff was recommended to attend a total of five different training modules over the year (Björck et al., 2015).

The module-based version of the NPNL training program is fairly new, and it was implemented in its present form beginning in 2017, therefore there has been no systematic research conducted concerning its effectiveness. While the NPNL program rests on foundations (such a low arousal approach principle (Björck et al., 2015), that have been well researched, the current program (NPNL-R) has in itself as a whole not been subject to scientific evaluation.

Background of the self-efficacy term

In the first half of the 20th century, influential psychologists were working on models of the mind within a scientific framework, with notable examples being Watson (Watson, 1913), B.F. Skinner (Chiesa, 1994) and Hull (Hull, 1952; Scriven, 1961). Inspired by such researchers, Bandura was striving to combine the frameworks of behaviorism and cognitive learning theories into a holistic whole, working under the social learning theory umbrella (Bandura, 1967). Of particular interest in this context is the development of a keystone in Bandura's theoretical models, namely self-efficacy (Bandura, 1977).

Self-efficacy. Self-efficacy was introduced as a research term in the 70s by psychologist Albert Bandura working within the field of social cognitive psychology (Bandura, 1977). The self-efficacy construct is firmly connected with the larger theoretical framework of social cognitive theory (SCT) presented by Bandura in 1986 (Bandura, 1986). SCT posits that watching others perform action and then attempting to mimic these actions lies at the core of the acquisition of new skills (Bandura, 1989). Self-efficacy is a central

concept in the SCT theoretical framework, as it explains how one through observing the actions of others is influenced in how one perceives his or her own likeliness to succeed at certain tasks, and therefor how likely one is to attempt to perform said task (Bandura, 1986). Bandura defined the concept as an individual's own belief in his or her ability to perform a distinct action. Central to the concept is what Bandura calls the perceived self-efficacy, meaning the internalized preconceived notion an individual possesses concerning his or her capabilities of performing certain tasks at a defined level, such notions are called self-efficacy beliefs by Bandura, and was used in his theoretical framework to explain why some people are more or less likely to succeed at certain tasks; and also why some people are more prone to giving up (Bandura 1994). Bandura proposed that his self-efficacy construct could be used to explain parts of the mechanism behind performance accomplishments (Bandura, 1982) and since this had implications for the well-being and success of an individual, there also followed naturally a desire to establish a working theory about how a person's self-efficacy could be strengthened (Bandura 1994). Throughout his research, Bandura had mainly measured self-efficacy in specific task-oriented scales. In his standard methodology for self-efficacy measurement the participants was asked to estimate his or her belief in succeeding with a presented task (Bandura, 2006).

Bandura did not believe that a generalized self-efficacy scale would be terribly useful, and instead warned against it, saying that a one-measure approach risked being of little predictive and explanatory value (Bandura, 2006). This didn't stop people from trying, however, and shortly after the breakthrough of the self-efficacy term, generalized self-efficacy scales started to be designed (Sherer et al., 1982). Within a couple of years, self-efficacy had become a well-researched subject, with applications across several fields with their own scales and measurements (Sherer & Adams, 1983). It was therefore natural that the construct started to be utilized by organizationally interested researchers who saw a potential in the self-efficacy construct to help with a deeper understanding for traits like job performance.

The occupational self-efficacy construct and previous research

Self-efficacy had attracted the attention from organizational researchers already in the 70's (Barling & Beattie, 1983). While this interest was relatively cautious through the early 80s (Gist, 1987), the movement started to pick up speed, and over the next two decades, hundreds of studies was performed on self-efficacy and its correlations to organizational traits and implications for organizational theory (Luthans & Stajkovic, 1998).

This also led to the development of specialized measurement instruments, aiming to outline and examine the self-efficacy construct in an occupational context. One of these efforts was the one undertaken by Schyns and Collani, who presented an occupational self-efficacy scale, and in the same paper showed the scale to be a reliable, one-dimensional construct with significant correlations with relevant traits such as task demands and job satisfaction (Schyns & Collani, 2002). Schyns and Collani later developed a short version of this scale together with another researcher, which has been used in a wide array of occupational studies (Fülleman et al., 2015; Gregersen et al., 2014; Hirschi & Jaensch, 2015; Merwe & BCom, 2012). Having been developed in order to assess self-efficacy beliefs in direct connection with certain job tasks, being well tested, and easy to adapt to specific settings, this instrument had many attributes making it appear suitable for examining the NPNL program.

Development of measuring instruments. As more and more studies were conducted on OSE, attempts were made to validate it, and the measurement was found to have correlations with other relevant constructs. The study presenting the short form of the above mentioned OSE scale developed by Schyns, Collani and Rigotti also presented material assessing the scale over results from five different European countries (Germany, Sweden, Belgium, United Kingdom and Spain) and examined its characteristics. The authors found high reliability coefficients and good internal consistency over all language versions (Schyns et al., 2008). Further proving its potential usefulness for this study.

As the interest for a use of self-efficacy in a work related context increased, researchers started adapting the construct for this purpose (Luthans & Stajkovic, 1998). It was in this milieu that the first explicitly organizational self-efficacy scales emerged, (Schyns & Collani, 2002) and Schyns' scale was among the first proper OSE scales to be presented and used measurement instruments with similar methodology as the older generalized self-efficacy scales, but adapted to a workplace environment and organizational needs. The Schyns scale was designed using selected parts of earlier questionnaires which had been created to measure different iterations of self-efficacy and related concepts, (namely generalized self-efficacy subscale, generalized self-efficacy scale, the hope scale, the heuristic competence scale (Schyns & Collani, 2002) according to the specific needs of an organizational context and transformed them into a new instrument (Schyns & Collani, 2002). Schyns' OSE was validated in later studies and was shown to have significant correlations

with several relevant constructs such as general self-efficacy, self-esteem, internal control beliefs, and job satisfaction and with commitment (Mohr, Rigotti & Schyns, 2008). These correlations are of importance to this study, as they appear to be appropriate considering the goal of the study; to evaluate the effects of a training program purporting to teach an ability to handle potentially dangerous situations and to make staff more self-assured and non-stressed in such situations.

Carina Loeb. Another researcher who has made important work in the field, which has also been important for this study, is Carina Loeb. Loeb was interested in widening the scope of the OSE construct, going beyond the task-oriented approach of many previous researchers, and introducing more generalized and multi-faceted measurements (Loeb 2016).

Acting on the assumption that self-efficacy is an especially important trait in an organizational context, she set out to explore social and emotional aspects (rather than cognitive or task focused) of occupational self-efficacy (Loeb, 2016). She thusly developed a new set of scales for measuring these constructs, one for occupational emotional self-efficacy based on Bandura's guide for constructing self-efficacy scales and an existing emotional self-efficacy scale (Kirk, Schutte, & Hine, 2008) and one for occupational social self-efficacy based on a scale called perceived social self-efficacy (PSEE) (Smith & Betz, 2000), she also used the previously mentioned short version of the Schyns scale by Schyns and Rigotti (Schyns et al. 2008) to measure OSE. This wider array of measurements, while not as focused as Schyns' scale, provides for a more multi-faceted analysis, the social and emotional dimensions of Loeb's scales would prove important to this study. Especially considering how emotive and socially weighted the underpinnings of conflict management are, it would be prudent using an instrument oriented to measuring such aspects in such a study. Loeb's scales are showed to have a significant positive correlation with the construct team climate, and a negative correlation with emotional irritation and emotional exhaustion (Loeb, 2016).

Correlates of the OSE construct. Hirschi and Jaensch (2015) conducted a study in 2014 to investigate how the personality trait narcissism coincides with different measurements of success in working life. They used the measurement instrument to estimate OSE developed by Schyns, Collani and Rigotti 2008, and found that OSE had a significant impact on salary levels, and also that there was a significant connection between narcissism and OSE. Another study on the correlates of the Schyns and Rigotti OSE scale was performed by Merwe and BCom (2012). In their study they examined relations between OSE and different leadership

styles and other characteristics. They also used the shortened version of the previously mentioned scale, and found significant positive relationships between OSE and the degree of autonomy and quality of relationships with colleagues. Fülleman et al. (2015) examined participants at stress management courses, they also used the same shortened scale by Schyns, Collani and Rigotti (Schyns et al., 2008) as the two previous studies and Fülleman wanted to investigate whether the courses caused any change for participants' OSE. He found significant relationships, but only in cases where the individual participants took part in the course together with a large proportion of their regular working team. This is interesting seeing as the training program being evaluated in this study is given in a group setting in the staff's regular workplace, matching the condition in Fülleman's study, with the possible assumption emerging that a efficacious conflict management program also should reduce stress.

Other researchers have been doing work on self-efficacy in a workplace context, without using the scales explicitly named occupational self-efficacy. For example, Federici & Skaalvik (2010) who used a self-developed measurement tool specifically developed for use in the Norwegian school system (NPSES), finding significant correlations between NPSES and work engagement as defined by the author as a modified version of the Utrecht Work Engagement Scale (Schaufeli, 2002). Heuven et al. (2006) investigated the self-efficacy (SE) of airline personnel, and found that the construct mediated the connection between demands from work and emotional dissonance, as well as the relationship between emotional dissonance and well-being. Heuven's study also did not use any of the scales that is explicitly designed to measure occupational self-efficacy (OSE), but a special scale that the authors call emotion work-related self-efficacy, which they have developed based on The Work-related Self -efficacy scale (Scholz, Gutiérrez-Doña, Sud & Schwarzer, 2002).. Meaning that their scale is closely related to the OSE scales, even if it is somewhat different in construction. This also suggests that this type of measurement indeed is relevant for evaluating positive outcomes of a conflict management program, as this family of constructs appear to have a correlation with emotional well-being in a workplace setting.

Conclusion.

Mandatory conflict management training for staff at SiS run institutions utilizes the NPNL-R program. The NPNL-R program has not been subject to systematic evaluation before this study, wherefore it is proposed that it might be beneficial to examine the potential correlation of the NPNL-R program with a construct relating to task performance. OSE was

shown to be a useful measurement tool for describing staff's confidence in their abilities at performing job tasks, it also has been proven to have good consistency and reliability and predictive qualities across a wide array of different sectors and workplaces. Because of this it was assumed to be relevant to the organizational goals of the SiS, and was selected to serve as outcome variable in this study.

Aim of the study

Seeing as considerable public funds are spent on the NPNL training program, and that thousands of state employees working with coercive care of youths and drug abusers depend on the program for managing conflict situations, there is a general interest and relevance in evaluating the utility and efficiency of the program. The potential merits of such a project is twofold; first, evaluating any potential benefits of the program is pertinent in itself, second, analyzing the possible effects of the training program could provide valuable insights towards determining if the program has specific effects concerning the confidence and certainty of staff members, which could be useful both when continuing work on developing the program, and when designing further studies in related areas.

Hypotheses

The current study aims to investigate if the amount of training sessions in the conflict management program NPNL-R correlates with measured occupational self-efficacy scores (ie if there is a practice effect). Hypotheses are as follows:

H1) the participants of the study will display a value on Loeb's occupational self-efficacy scales that will correlate positively and significantly with how many NPNL training sessions they have participated in.

H2) the participants of the study will display a value on Schyns' scale for occupational self-efficacy that will correlate positively and significantly with how many NPNL training sessions they have participated in.

H3a) the participants of the study will display a value on Loeb's subscale for social occupational self-efficacy that will correlate positively and significantly with how many NPNL training sessions they have participated in.

H3b) the participants of the study will display a value on Loeb's self-oriented emotional occupational self-efficacy sub-subscale that will correlate positively and significantly with how many NPNL training sessions they have participated in.

H3c) the participants of the study will display a value on Loeb's other-oriented emotional occupational self-efficacy sub-subscale that will correlate positively and significantly with how many NPNL training sessions they have participated in.

Method

Design

The above mentioned research question was answered by a correlational design. The aim was to examine the NPNL training program's (independent variable) effect on self-reported occupational self-efficacy scores (dependent variable).

Participants

All of the study's respondents were employees at an inpatient institution for drug abusers receiving compulsory treatment. The institution is called Lunden ("SiS LVM-hem Lunden" in full in Swedish, with LVM being an acronym for Lagen om Vård av Missbrukare, "the law of mandatory treatment for abusers and alcoholics" in English, indicating it is a state-run institution for substance abusers receiving coercive care as mandated by a court) and is run by the Swedish National Board of Institutional Care. Questionnaires were handed out to all employees undergoing the No Power No Lose (NPNL) training sessions. According to SiS guidelines, all employees who worked with direct contact with patients were to take the NPNL training program. This meant that treatment assistants (the largest group of employees at the institution), treatment secretaries, kitchen staff, managers and psychologists were all asked to participate, while economical assistants, administrators and the like were not asked to take part in the study (this was due to them not undergoing the NPNL training program). All in all, approximately 180 unique individuals were employed at Lunden at the time of the study, of these; about 160 were estimated to be subject to the NPNL training program. Of these 160, it can be assumed that somewhere around 130 were working at Lunden in an active capacity at the time of the study, meaning that they were working at Lunden at such regular intervals that they would be subject to the NPNL training.

Participants were between 23 and 68 years old with $M=38.3$ and $SD=12.7$ for age. 28 (52.8%) of the respondents identified as women, 24 as men (45.2%), and one (1.9%) as "other". More than half of the respondents had a university degree (see Table 1). More than half of the respondents had worked at Lunden for less than two years (see Table 2). 42 of the study's participants (79.2%) stated that they worked as treatment assistants, 1 (1.9%) was

employed as a treatment secretary, 2 (3.8%) answered manager and 8 (15%) answered “other”.

Participants also provided information on how many of the full day NPNL courses they had taken. These are the basic education components of the NPNL program, and have been mandatory for employees at Lunden (and all National Board of Institutional Care units) many years prior. Participants reported having taken between 0 and 8 of these full day trainings with $M=2.1$ and $SD=1.7$.

Table 1

Distribution of the education levels for respondents

Education ¹	N (%)
Bachelor	22 (41.5)
University <2 years	11 (20.8)
Upper secondary	12 (22.6)
Compulsory school	2 (3.8)

¹indicating highest completed level of education in all cases

Table 2

Distribution of the length of employment at Lunden for respondents

Employment length	N (%)
>2 years	29 (54.7)
2-5 years	16 (30.2)
3-8 years	3 (5.7)
8< years	5 (9.4)

Material

A questionnaire was constructed, divided into three parts. The first part consisted of demographic data (age, professional position, length of employment at the institution and gender) and report on the data relevant to the study’s hypothesis (how many of the NPNL courses and full day trainings taken). The second part consisted of the OSE measurement instrument developed by Schyns, and the third part of the instrument developed by Loeb.

Schyns’ occupational self-efficacy scale (OSES). This questionnaire developed by Schyns and Collani was published in 2002, and consisted of 20 questions taken from other measurements, purporting to assess a range of traits that could be used as a way to measure

occupational self-efficacy (OSES) (Schyns, 2002). The wordings of the questions taken from these previous scales were changed in such a way that they explicitly addressed work related experiences (Schyns, 2002). Of the 20 questions, questions 1-10 were adapted from a self-efficacy subscale (Sherer et al., 1982), questions 11-17 were adapted from a generalized self-efficacy scale (Schwarzer, 1994), questions 18-19 were adapted from a hope scale (Snyder et al 1991) and question 20 was adapted from a heuristic competence scale (Stäudel, 1988). The scale has been shown in reliability analysis to have an internal consistency to a value of .92 for Cronbach's alpha, after removing item 2, which left the scale with 19 items (Schyns & Collani, 2002). The scale was also shown to have positive correlations with other scales, for example $r=.568$ for general self-efficacy (Sherer et al. 1982) and $r=.674$ for work-related self-efficacy (Speier & Frese, 1997; Schyns, 2002).

These questions were presented as a self-report inventory consisting of statements (such as “when I set goals for myself in my job I rarely achieve them”), the original design used a 6 category Likert-type scale (Schyns, 2002). This was changed to a standardized 7 category Likert-type scale for this study to allow the respondent a neutral alternative, with the instructions for the respondent to state how much he or she agrees with the statement on a scale from 1 to 7, where 1 is “strongly disagree”, 4 is “undecided” and 7 is “strongly agree”. The questionnaire was presented untranslated in English.

Loebs emotional and social occupational self-efficacy scale (ESOSSES). This part of the questionnaire consisted of the short version of the instrument developed by Loeb, Stempel and Isaksson in 2016 (Loeb et al., 2016) aiming to measure three specific sub-scales of occupational self-efficacy; namely occupational social self-efficacy and occupational emotional self-efficacy, with the last one further divided into a self-oriented and an other-oriented sub-sub-scale (Loeb's basic occupational self-efficacy scale was not included as this was already covered by Schyns' scale, which purports to measure the same trait and are both based on the same material).

This third part (Loeb's scales of occupational social self-efficacy, other-oriented occupational emotional self-efficacy and self-oriented occupational emotional self-efficacy) is a self-report inventory consisting of statements (such as “...tackle your negative emotions at work”) where the respondents were asked to “state to what extent you have confidence in your ability to” on a Likert-type scale from 0 to 4, where 0 is no confidence at all, and 4 is complete confidence (Loeb 2016). The different scales were shown to be distinct (although

correlated) constructs as well as clearly differentiated from the traditional task-oriented occupational scale (developed by Schyns which is also used in this study) it was compared with (Loeb, 2016). The questionnaire was presented untranslated in English.

Procedure

The questionnaires were handed out at the same time as the NPNL-training courses were given at Lunden, at eight different occasions during 2017. The participants (and all participants) were given standardized verbal information about the study, and were then asked to fill out the questionnaires.

The NPNL training sessions were held during the entire year of 2017. The sessions were the shorter two hour courses, totaling four different modules, each containing a separate material. The sessions were given during staff days (taking place every two weeks) during which these NPNL courses were given. The expressed goal, as decided by the National Board of Institutional Care, was that every employee at the institution should have taken all four sessions (plus one longer full day course) at the end of the year. For these purpose each of the shorter four training modules were given at least two times each at Lunden. The questionnaires were handed out to employees in conjunction with these training sessions, the participants were then given a standardized verbal information material introducing the study and detailing how to fill in the questionnaire. The questionnaires were then collected and stored in a safe in a locked room.

Of approximately 150 questionnaires handed out, 53 respondents handed in filled in questionnaires. Of these three were excluded due to the respondents not having responded to more than three questions. Two respondents had handed in questionnaires with one item not answered, in these cases the answer was approximated from the median of the scale in question. This left 50 usable questionnaires.

In order to conduct the study as specified in the experimental design, the questions about demographic data and the two above mentioned questionnaires containing the measurement scales were printed on paper, the participants were also provided with ball pens, graciously donated by the stationary supply cabinet at Lunden. The verbal information was memorized by the researcher and given to each group of participants at the same time as the paper form questionnaires were handed out.

Statistical analysis

This study uses an analysis of variance (ANOVA) test to analyze difference between selected group means and a Pearson correlation coefficient test to determine whether there can be find any systematic covariance between the factor and outcome variables. The purpose of this being to test the research hypothesis that factor and outcome variables correlate significantly. The purpose of the ANOVA test was to potentially back up the implicit claim that the different groups of outcome variables differed significantly from each other. The data would also be subject to a Shapiro-Wilk normality test, as both the Pearson correlation coefficient test and ANOVA assume normality (see below). All of the above tests were performed with IBM SPSS Statistics 25.

The Pearson correlation coefficient makes a number of assumptions; the variables must be either interval or ratio scale, they must follow a normal distribution curve and outliers need to be considered, there is a linear relationship between variables and data are homoscedastically distributed. A significance level of 0.01 was decided upon, with the test being one-tailed. The ANOVA test makes a number of assumptions; that cases are independent, that the distributions approximate a normal distribution curve, and that data are homoscedastically distributed. These assumptions needed to be satisfied before the tests could be performed.

The factor or independent variable was defined as the number of NPNL training sessions participants had taken and the outcome or dependent variable was defined as the participants' scores on the different OSE-related scales. The participants' scores on the OSE scales were examined both as total score on the Schyns' scale as well as total score on the Loeb scale, and for each of the separate sub-scales introduced by Loeb.

The participants were divided into groups based on the amount of NPNL training sessions undertaken, with one group defined as "no sessions" containing those who hadn't partaken in any of the training sessions, the second group defined as "few sessions", containing those who had taken part of one (1) or two (2) training sessions, and the third group defined as "many sessions", containing those who had taken part in three (3) or four (4) sessions. The mean of these three groups were then compared using ANOVA.

Data characteristics for Loeb's scale. The mean for each participant was calculated using SPSS, the mean of means gave $M=3.16$ with $SD=0.412$. The means were subjected to a Shapiro-Wilk normality test in SPSS, the p-value was 0.1 and thus any alternative hypothesis

could be rejected and the sample was assumed to come from a normal distribution. Analysing a scatter plot showed what appeared to be consistent with a shape showing a homoscedastic distribution. The scale was further divided into its three sub-scales, and the mean for each subscale was calculated using SPSS, these were found to be: for occupational social self-efficacy, $M=3.3$, $SD=0.5$, for occupational self-oriented emotional self-efficacy, $M=3.2$, $SD=0.4$, for occupational other-oriented emotional self-efficacy, $M=3$, $SD=0.6$.

Data characteristics for Schyns' scale. The mean for each participant was calculated using SPSS, the mean of means gave $M=5.8$ with $SD=0.6$. The means were subjected to a Shapiro-Wilk normality test in SPSS, the p-value was 0.9 and thus any alternative hypothesis could be rejected and the sample was assumed to come from a normal distribution. Analyzing a scatter plot showed what appeared to be consistent with a shape showing a homoscedastic distribution.

Ethics. During the design of the study and its administration a number of ethical points were considered. The ethical dimensions were primarily influenced by the APA ethics code and the five principles for research ethics laid forth by the APA (Smith, 2016). The design of the study was made considering the safety and integrity of the staff, making sure that the research in no way affected the staff training program, that the questionnaires weren't potentially upsetting and that the data collection methodology could be assumed to not be distressing to the participants. Special care was also taken to make sure that all participants were contributing voluntarily and with full informed consent, with all potential participants being verbally and expressly informed about the framework of the study, what participation would entail and that participation was completely discretionary. The questionnaires were wholly anonymous and were stored safely in a locked cabinet in a locked room when they weren't used. They were maculated as soon as the data in them was digitalized. All results are furthermore presented on group level, providing additional anonymization.

Results

Hypothesis 3b

In this hypothesis it was posited that participants would display a value on Loeb's self-oriented emotional occupational self-efficacy sub-subscale that would correlate positively and significantly with how many NPNL training sessions they have participated in. A Pearson correlation coefficient test was performed and reported a significant correlation between the

self-oriented emotional scale and amount of training sessions at the .01 level. Results from the Pearson correlation coefficient test are presented in Table 4.

Hypothesis 1, 3a & 3c

These hypotheses posited that participants of the study would display a value on Loeb’s occupational self-efficacy scales and its subscales social occupational self-efficacy and other-oriented emotional occupational self-efficacy that would correlate positively and significantly with how many NPNL training sessions they have participated in.

A Pearson correlation coefficient test was performed on Loeb’s scale as a whole, and on each of the discrete sub-scales, finding no significant covariance between the amount of NPNL training sessions taken by the participants and their scores on Loeb’s occupational self-efficacy as a whole scale, nor for the occupational social self-efficacy or for the occupational other-oriented emotional self-efficacy.

Hypothesis 2

The second hypothesis posited that the participants of the study would display a value on Schyns’ scale for occupational self-efficacy correlating positively and significantly with how many NPNL training sessions they have participated in.

A Pearson correlation coefficient test was performed on the sample, finding no significant correlation between the number of training sessions taken by the participants and their scores on Schyns’ scale for occupational self-efficacy.

Table 3

Results of the Pearson correlation coefficient test

Training sessions	Loeb’s self-oriented emotional OSE	Loeb’s social OSE	Loeb’s other-oriented emotional OSE	Schyns’ OSE total	Loeb’s OSE total
Pearson Correlation	.332 ¹	.121	.119	.003	.155
Significance (1-tailed)	.009	.201	.206	.493	.141

¹ Correlation is significant at the 0.01 level (1-tailed).

ANOVA

The participants were grouped according to how many of the scheduled NPNL training sessions they had taken part in during 2017 (0-4), with the participants spreading out relatively evenly over the different amounts, see Table 3. A One-Way ANOVA performed on the same grouping using SPSS found no significant change in the reported values for the participants' values in Loeb's occupational social and emotional self-efficacy scale dependent on how many NPNL training sessions they had partaken in (see Table 4), this was true for all of Loeb's scales as well as for Schyns' scale.

Table 4

Results of the ANOVA test

		Sum of squares	df	Mean square	F	Significance
Schyns' OSE total	Between groups	8.829	2	4.4415	0.35	.966
	Within groups	5969.991	47	127.021		
	Total	5978.820	49			
Loeb's OSE total	Between groups	70.507	2	35.253	1.239	.299
	Within groups	1337.173	47	28.450		
	Total	1407.680	49			

Table 5

Distribution of participation in NPNL training for respondents

Completed sessions	N (%)
0	14 (26.4)
1	12 (22.6)
2	14 (26.4)
3	4 (7.6)
4	9 (17)

Discussion

In this study an attempt to was made to examine an eventual correlation between several variations on a specific sub scale to the self-efficacy measurement called occupational self-efficacy, as reported by the participants, and the number of training sessions in the conflict management program NPNL taken by the participants. None of these variations were able to provide any significant result, with the exception of one of the sub-subscales, namely Loeb's self-oriented emotional scale (SOE-OSE), where a Pearson correlation coefficient test found a significant correlation between the self-efficacy construct and amount of NPBL training sessions undertaken. Thus, it was shown that the participants reported a higher reported value on the SOE-OSE scale after having taken part of more NPNL training sessions.

Hypothesis H1, H2 and H3a and H3c (positing correlations between all the different scales, with the exception of the SOE-OSE scale mentioned above, and the number of training sessions) were not supported and the null hypothesis cannot be rejected for these. However, H3b, the hypothesis that suggested a correlation between the SOE-OSE scale and number of training sessions, is supported by one of the two statistical procedures, which satisfies our conditions, and the null hypothesis is rejected for this item.

Determining to what extent any further inferences can be made on the basis of these results lies partly beyond the scope of the study. Limiting factors such as number of participants and reliability issues makes it prudent to remain cautious when interpreting results. It can be said, however, that there does appear to be some sort of correlation between participating in the NPNL-R training program and reporting high on the subscales for self-oriented emotional occupational self-efficacy (SOE-OSE). Seeing as the NPNL-R material is primarily concerned with understanding, avoiding and de-escalating conflict situations, while SOE-OSE is built upon questions that to a large extent concern coping with negative emotions and mood, it isn't farfetched to assume that the former would have a measurable effect on the latter. This being the case, it would be interesting to explore the notion that conflict management training has a predominantly emotional effect on staff, and if this sort of results could be replicated in further research, might have implications for the further development of NPNL and similar conflict management programs.

This study is relatively unusual, with previous OSE research, while abundant, being more focused on correlations between OSE and OSE related constructs and more traditional workplace relevant constructs such as job satisfaction and task demands. The study is also

naturalistic at its core, as the intervention of the study (the NPBL training program) was to be implanted at the workplace regardless of whether there had been a study or not, the researcher also interfered very little with the staff during the training occasions. Fülleman et al. (2015) did research on the participants in a stress management program, while categorically distanced from a conflict management program focused on the behavior of other people, it did give the interesting observation that significant results seemed to be dependent on an interaction effect between participants both having a high attendance and participating together with a large amount of their regular coworkers (Fülleman et al. 2015).

Another issue with previous research on OSE is that most studies lack an intervention, mostly using OSE as an independent variable. Also, few studies have been focused on the healthcare sector and related areas. Both of these are factors making this study stand out in the OSE research setting, and provides an example on how the construct can be applied on a broader front. However, seeing as important as self-efficacy is, for example when viewed as one of the components of the PsyCap trait (Luthans, 2007), further examining what sorts of interventions might strengthen the reported self-efficacy of staff could be useful to a wide array of different occupations. Especially in high-risk sectors such as coercive and emergency care, being able to pinpoint especially dangerous and challenging aspects of tasks, assessing how self-efficacious staff reports themselves to be while performing these tasks, and finding out how this task specific self-efficacy with for example training programs, might enable targeted training or similar that would be beneficial to both the well-being of the staff and the quality of task completion.

Methodological problems

The first point that needs to be addressed is that the base assumptions underlying the research hypothesis might very well be wrong. There might actually be no effect on the occupational self-efficacy from taking the NPBL training program. And this would not necessarily say anything negative about the NPBL program. The NPBL training program might very well be a useful and effective method for its expressed purposes (i.e. teaching people working in an inpatient setting how to handle conflicts and potential conflicts) without having a measurable effect on the self-reported self-efficacy on its subjects. This is based on the second order nature of the relationship between OSE and conflict management, i.e. it is assumed that staff will report to be more self-efficacious if they feel more self-assured and competent when it comes to the prospect of handling conflict situations, however, this relies

on the notion that staff have a correct assessment of their conflict management ability. The bottom line being that NPNL might very well have a positive effect on the staff's conflict management ability, without this being properly recorded in the self-report questionnaires about self-efficacy (as the staff has increased ability without having this affect their views on the topics addressed by the questions in the OSE scales), or might lack a positive effect on the actual skill of staff, while still making the staff feel more self-assured in aspects of work coinciding with the questions in the OSE scales.

Third variable. Another potential problem with making any inferences from the study's findings is the very real possibility of a third variable problem, wherein a confounding third variable would influence both the dependent and independent variables of the study. This has not been controlled for, and the study lacks typical strengthening factors such as randomized control groups and strict controls that are normally viewed as minimizing third variable problems.

Research design. The main problem with the design of the study is that it is not a proper repeated measures-study. Given the time and resources, this study would, in the opinion of the author, be very much benefited from a proper repeated measures design. Where staff would be followed on an individual level and given specifically designed questionnaires after every training session. Another weakness of the study is that it is not a true experiment, lacking both proper randomization and a control group, both of these faults also being ascribed to a lack of time and resources. Seeing as the study is executed in a real-life setting with staff being told their participating in the training program will positively benefit their ability in handling conflict situation and thus avoiding harmful situations, having participants taking part of a training program with assumed no effect, might very well be too unethical to be passable.

Participants. The study was plagued by a low amount of participants. In the end, just above 50 questionnaires were handed in useful condition. This is explained primarily by a lack of resources on the researcher side. Several steps could have been taken to generate a larger number of useful questionnaires; first and foremost would a version of the measurement instruments translated to Swedish perhaps allow for more participants, especially considering the varying levels of education among the respondents. Furthermore could there have been a discussion with the institution management to provide especially designated time slots for the participants of the study to fill out the questionnaires. While there are 34 institutions run by

SiS at which the NPNL-program was implemented, this study had respondents from one (1) of these. The author and sole researcher of this study didn't have the ability to be present in connection with all of the training sessions of this one SiS institution. With more resources, several hundreds, or even thousands, of SiS staff could have been mustered for research, and would thus have provided a completely different level of data and research options.

Measuring instruments. While the OSE scales developed by Loeb and Schyns have been well tested and proven to have good validity, internal consistency and correlations with relevant traits, it still remains that one of the strengths in the self-efficacy construct is its versatility in being used to measure respondents views on their ability to perform very specific tasks. While the OSE scales used in this paper well approximated the stated objectives of the author, it might very well have been more effective to develop a new self-efficacy scale, following the guidelines laid out by Bandura, in which he recommended to construct specific self-efficacy scales rather than generalized (Bandura, 1997). This could have been a scale targeted at handling conflict situations specifically, or a more general scale for use in coercive care environments, despite which, having a clearer view on the staffs notions on their own ability to handle the type of situations addressed by the training program, would have been more useful when regarding the research question, than the more general scales used in this paper.

Social desirability. Another problem with the self-efficacy construct and related traits is that it is very socially desirable. Many of the questions in the survey are formulated in a way that makes it easy to view them as having a "bad" and a "good" answer. Consider for example the statement "no matter what comes my way in my job, I'm usually able to handle it", which is an actual Likert-type statement used in the questionnaire. It should be rather obvious that having a strong belief in one's own ability to handle what "comes my way in my job", is a good trait for an employee. While the questionnaires were anonymous, there is still no way to rule out that the concept of social desirability didn't influence the responses of the study's participants. If further research is performed in the area (for example while utilizing a specialised scale as suggested above) it might be prudent to consider wording the Likert statements in such a way as to make it less obvious to the respondents which answers are desirable.

Further research

As discussed above, self-efficacy, being the staff's own belief in their abilities to perform their tasks, is an excellent metric for predicting and evaluating staff competency. What might be especially interesting is how few studies having been performed on staff experiences concerning tasks being performed in dangerous settings. Obtaining information on what makes for example military personnel, rescue workers or emergency room staff feel more self-efficacious at performing their tasks, and thus how this could be trained, has potential for being very valuable for many types of work handling high risk situations. It is the author's view that further specialized studies on OSE has a very high potential of being useful in a wide array of work. It is, however, especially interesting to considering these high risk jobs specifically, seeing as the sorts of tasks performed in these settings have a whole different set of stakes involved than for example traditional businesses.

Summary. In this study an attempt was made to contribute potential insights concerning the effectiveness of the internal training program used in Swedish state run coercive facilities. While the project failed to get as many participants as would have been optimal and was limited in scope, it still provided some potentially useful data. The main hypotheses of the study were not assumed, the study did however show one statistical correlation potentially indicating a relationship between one of the measurement scales and the training program. While the general limitations of the study would advise against making any larger inferences, the statistical correlation suggests a link between the conflict management training in question and certain iterations of the self-efficacy construct. Furthermore, it implies that the study of self-efficacy and related constructs could provide further insights concerning how staff handles job demands in high risk settings such as coercive care, and that a design similar to the one used in this paper, but with a more focused experimental design, could be very useful in examining and understanding dangerous or especially demanding job tasks.

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