# Exploring cyberbullying and face-to-face bullying in working life — Prevalence, targets and expressions

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ABSTRACT

While cyberbullying among children and adolescents is a well-investigated phenomenon, few studies have centred on adults' exposure to cyberbullying in working life. Drawing on a large sample of 3371 respondents, this study investigates the prevalence of cyberbullying and face-to-face bullying in Swedish working life and its relation to gender and organisational position. Using a cyberbullying behaviour questionnaire (CBQ), the result shows that 9.7% of the respondents can be labelled as cyberbullied in accordance with Leymann's cut-off criterion. Fewer respondents, .7%, labelled themselves as cyberbullied and 3.5% labelled themselves as bullied face-to-face. While no significant relationships with gender or organisational position was found for individuals exposed to face-to-face bullying, this study showed that men to a higher degree than women were exposed to cyberbullying. Moreover, individuals with a supervisory position were more exposed to cyberbullying than individuals with no managerial responsibility.

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## 1. Introduction

More and more of today's communication at workplaces is conducted via electronic devices. Information is mediated via email and text messages, or on social network sites such as Facebook, Twitter, Instagram and LinkedIn. With Facebook being used by more than half of the Swedish population, social network sites have become a part of everyday life and are primarily used for private purposes (Findahl, 2013). Nonetheless, 18% of the Swedish employees who are members of Facebook include work relations in their social network (Findahl, 2012). By sharing photos, videos and texts on digital platforms, a new way of distributing insights into the private realm among individuals belonging to the professional sphere arises. While social network sites illustrate the blurred boundaries between work and private life, the predominant online communication tool of today is email, which two of three Swedish employees use on a daily basis (Findahl, 2012). With the use of digital communication technologies, previous assumptions about time and space are challenged as information can be received and shared from other places than the workplace and at other times than during working hours.

With increasing online communication it is reasonable to assume that dysfunctional behaviour such as workplace bullying also is expressed via digital channels. Cyberbullying, i.e. bullying via electronic devices, has attracted considerable media attention during the last decade (Brack & Caltabiano, 2014). As an emerging field, research on cyberbullying has centred on children and adolescents' exposure to that type of negative behaviour. Yet few studies have focused on cyberbullying among adults in working life (Brack & Caltabiano, 2014). Research on cyberbullying among children and adolescents has enriched the understanding of the phenomenon on a general level. Knowledge of cyberbullying that is produced in these empirical contexts, however, might not be fully informative regarding cyberbullying in working life, where other types of power structures and social relations have to be taken into account.

### 1.1. Research on cyberbullying

Smith et al. (2008 p. 376) define cyberbullying as "an aggressive, intentional act carried out by a group or individual using electronic forms of contact, repeatedly, and over time against a victim who cannot easily defend him or herself'". Based on Olweus' (1993) theorisation on bullying between school children, the definition involves three fundamental components. Bullying is defined as behaviours that are (1) aggressive, (2) involving an imbalance of power between the target and the perpetrator, and (3) conducted

repeatedly and over time. As cyberbullying is a relatively new phenomenon conceptual issues exist. On the one hand, cyberbullying can be understood as merely an extension of face-to-face bullying. Studies on cyberbullying among school children have shown that cyberbullying often coincides with face-to-face bullying (Hinduja & Patchin, 2008; Li, 2007; Privitera & Campbell, 2009). In other words, face-to-face bullies tend also to bully online and cyberbullying victims tend to be victims also of face-to-face bullying. Hence, some researchers argue that cyberbullying merely adds an extra element to face-to-face bullying (Li, 2007). On the other hand, the overlap is not so large (Ybarra, Diener-West, & Leaf, 2007). Moreover, cyberbullying has characteristics distinctively different from face-to-face bullying (Greene, 2006; Kowalski, Limber, Limber, & Agatston, 2012; Slonje & Smith, 2008; Tokunaga, 2010).

First, the use of digital devices in cyberbullying gives the perpetrator several advantages. By using pseudonyms or creating temporary accounts perpetrators can deliberately hide their true identity. Anonymous interaction online has been suggested to have a disinhibiting effect on the perpetrator, involving behaviour s/he would not practise in real life (Kowalski et al., 2012). Furthermore, the geographic distance and the inability to see the responses of the target make the perpetrator less aware of the consequences of his or her negative behaviour. Not seeing facial and bodily responses may result in decreased feelings of empathy for the targeted individual (Slonje & Smith, 2008). Second, lack of supervision in electronic media makes cyberbullying conceptually distinct from face-to-face bullying (Patchin & Hinduja, 2006; Slonje & Smith, 2008; Tokunaga, 2010). Since Web 2.0 is user-generated, the content of the platforms is not published or created by certain individuals. Instead the content is continuously produced and modified by all users in a participatory manner (Kaplan & Haenlein, 2010). Hence, there are no clear individuals or groups who regulate deviant behaviours on the Internet (Tokunaga, 2010). Apart from anonymity and lack of supervision, a third feature of cyberbullying is that increased accessibility makes it more difficult for the targeted individual to escape the negative behaviour (Patchin & Hinduja, 2006; Slonje & Smith, 2008; Tokunaga, 2010). When bullying behaviour is conducted via digital devices the target can be reached at other places than the workplace, such as the home, traditionally seen as a "safe haven" by targets of bullying. Moreover, by communicating via digital devices the target can be reached at other times than during work hours. Since work-related cyberbullying can take place outside traditional work related spaces, the negative acts can become visible for a large audience. Hence, cyberbullying becomes a public form of bullying.

In addition to the three features of cyberbullying often referred to in the cyberbullying literature, questions have been raised as to whether definitions derived from traditional perspectives are suitable for understanding cyberbullying (Patchin & Hinduja, 2006; Slonje & Smith, 2008). For instance, what is repetition when one uploaded clip or web-post can be clicked on and shared several time by its audience? Similarly, new dimensions are brought into the conceptualisation of power imbalance as technical skills and anonymity can create new power advantages (Campbell, 2005; DeHue, Bolman, & Völlink, 2008; Li, 2007; Patchin & Hinduja, 2006; Schenk & Fremouw, 2012; Ybarra, Mitchell, Wolak, & Finkelhor, 2006).

### 1.2. Power imbalance, gender structures and organisational position

Power is a central element in the conceptualisation of workplace bullying (Einarsen & Skogstad, 1996; Hoel & Cooper, 2000; Vartia, 1996). Power imbalance derives from formal position and

informal status in the work organisation (Rayner, Hoel, & Cooper, 2001) as well as in the number of individuals involved in the bullying behaviour (Einarsen, Hoel, Zapf, & Cooper, 2011). Hence, bullying is most often a downward process (Einarsen & Skogstad, 1996; Rayner, 1997; Zapf & Einarsen, 2011). Those in low-power positions, such as subordinates, entry-level employees and women, are more likely to become victims of bullying (Keashly & Jagatic, 2011). In contrast, those in high-power positions are hypothesised as more likely to engage in hostile workplace behaviour. The Scandinavian countries and Finland deviate from this pattern. Studies from these countries show colleagues as often as supervisors being reported as perpetrators (Einarsen & Skogstad, 1996).

As women often have lower organisational positions than men (Barreto, Ryan, & Schmitt, 2009; SCB, 2014; SOU, 2014:80) it is reasonable to assume that women to a higher extent than men are victims of bullying. While large-scale studies have shown no significant difference between gender and victimisation (Hoel & Cooper, 2000), some studies have identified higher prevalence rates for women's exposure to bullying (Björkqvist, Österman, & Lagerspetz, 1994a; O'Connell, Calvert, & Watson, 2007; Salin, 2003; Simpson & Cohen, 2004). Comparing gender with hierarchical position, a large-scale nationwide survey in Great Britain found that women in middle management or senior management positions were more often bullied than their male counterparts (Hoel, Cooper, & Faragher, 2001).

### 1.3. Prevalence of work-life bullying

If cyberbullying exists also in working life, how large can the phenomenon be expected to be? Previous research shows extensive variation in the prevalence of workplace bullying both between and within countries (Agervold, 2007; Nielsen et al., 2009). While Scandinavian countries show a prevalence rate for workplace bullying between 3.5% and 16% (Einarsen & Skogstad, 1996; Mikkelsen & Einarsen, 2001) a Turkish study reported the prevalence of bullying among white-collar workers as 51% (Bilgel, Aytac, & Bayram, 2006). These protruding variations have been explained with references to cultural differences within countries such as power distance, egalitarianism and masculine/female values (Agervold, 2007; Hofstede, 2001) as well as methodological differences (Nielsen et al., 2009). Variations in measuring bullying contribute to an inconsistency in prevalence rates between studies (Ybarra, Boyd, Korchmaros, & Oppenheim, 2012). Conservative methods of measuring exposure to workplace bullying include asking the respondent directly if he or she has been exposed to bullying and/or measuring perceived exposure to specific bullying behaviour listed by the researcher (Nielsen, Matthiesen, & Einarsen, 2010).

The first approach, often referred to as self-labelling, is occasionally supplemented with a definition. Presenting a definition and including the word bullying tends to impact the prevalence rate negatively (Ybarra et al., 2012). Bullying victimisation is often associated with feelings of shame, creating a resistance to recognising the label (Felblinger, 2008; Lewis, 2004). The label bullied may threaten self-esteem as it can show signs of weakness (Van Beest & Williams, 2006). Hence, women are more likely than men to label their negative experience as bullying (Salin, 2003; Salin & Hoel, 2013). Workplace bullying is emotional and psychological in nature (Keashly, 2001) rather than physical or explicit. While workplace bullying is connected to risk taking, most bullying acts in the workplace are verbal, indirect and passive (Baron & Neuman, 1996; Björkqvist, Österman, & Hjelt-Bäck, 1994b; Keashly & Jagatic, 2011). This means that the harm is most often caused indirectly, by words rather than physical violence, and by

withholding of actions (Baron & Neuman, 1996). Given this, workplace bullying includes negative behaviours such as social isolation (not communicating with someone or excluding someone from social events), ignoring, spreading rumours and lies (Einarsen, Hoel, & Notelaers, 2009), where the intention of the negative behaviours is often covered.

The second approach, operationalised by giving the respondents an inventory of negative behaviour identified with bullying, shows variety in defining criteria for when an individual is regarded as bullied. Conservative approaches suggest at least one negative act on a weekly basis with a reporting period over 6 months in order to label the negative behaviour as bullying (Leymann, 1996). The rationale of the criterion is to differentiate bullying from short-term personal conflicts (Agervold, 2007). However, frequency varies among studies from weekly to monthly or even occasional exposure, while the period of exposure can range from 6 or 12 months to anytime in the respondents' working life (Agervold, 2007).

The handful of studies investigating cyberbullying in working life indicate a variety in prevalence rates, ranging from 9 to 21% (Baruch, 2005; Brack & Caltabiano, 2014; Privitera & Campbell, 2009; Sprigg, Axtell, Coyne, & Farley, 2012), and a methodological inconsistency in measuring the exposure. The studies differ in reporting periods (6–12 months), and the defining criteria for when a person is being bullied (from weekly exposure to at least 2–3 times during the previous year). The studies also vary in what electronic channels are included. While some studies include a variety of technological media such as text messaging, phone calls, chat rooms, instant messaging, websites, social network sites (Brack & Caltabiano, 2014; Privitera & Campbell, 2009; Sprigg et al., 2012), other studies concentrate on a specific medium such as email (Baruch, 2005). Further, variations concerning the demographic characteristics, e.g. gender, occupation and/or age, limit comparisons across studies.

### 1.4. Research aims of this study

Since little research has concerned cyberbullying among adults in working life, there is a need to assess its existence. The aim of this study is to explore how cyberbullying is expressed in Swedish working life. I argue that gender and organisational position are central elements in studying the phenomenon as it encapsulates matters of power. It is important to understand power relations in face-to-face bullying (Einarsen, Raknes, Matthiesen, & Hellesøy, 1994; Leymann, 1996; Zapf, Knorz, & Kulla, 1996). Of equal importance are the new dimensions of power brought to life by digital elements (Campbell, 2005; DeHue et al., 2008; Li, 2007; Schenk & Fremouw, 2012; Ybarra et al., 2006). Moreover, I argue that the novelty of the phenomenon urges for a comparison with face-to-face bullying to reflect upon its (in) dependence on traditional forms and expressions. The following questions are examined in the article: How prevalent is cyberbullying and face-to-face bullying in working life? How are cyberbullying and face-to-face bullying related to gender and organisational position?

## 2. Method

### 2.1. Procedure/questionnaire

To answer the questions of this study an online questionnaire was developed. Methodological inconsistency in the past calls for a comprehensive approach to the study object. In this study, three levels of bullying have been measured using two methodological approaches. Perceived victimisation of face-to-face bullying and perceived victimisation of cyberbullying have been investigated using a self-labelling method, while exposure to cyberbullying behaviour has been measured using a questionnaire.

### 2.2. Selection of respondents

TNS Sifo, a public poll and market research company, was consulted to collect respondents for this study. TNS Sifo has access to an online web panel consisting of a nationally representative random sample of 140,000 people aged 16 years or older. As the aim of this study was to investigate cyberbullying in working life, the sample was restricted to involve individuals between the ages of 25 and 65. The higher figure is related to the likelihood that individuals over 65 have retired. The lower figure was set in relation to the obstacles many young people experience when entering the labour market and/or in relation to the years some spend in university studies. Since there was a plan to follow up the result of the questionnaire later with some in-depth interviews, restrictions were also made regarding location. The questionnaire was distributed to a random sample of individuals resident in Scania, Southern Sweden.

Having access to a large online web panel, a decision was made that the data collection was completed when 3885 individuals had responded the questionnaire. As the aim was to study cyberbullying behaviour in working life, respondents that had been unemployed during the last six months (n = 514) were excluded from the sample. The total number of respondents was therefore 3,371, which gives the study a response rate on 42%.

### 2.3. Sample

The final sample of 3371 respondents consisted of 49% women and 51% men. The sample had a mean age of 49.9 (SD = 9.63). In total, 60% of the respondents had a university degree and 32% had a supervisory position at their workplace. A majority, 73%, reported a use of digital devices such as computer, mobile phone, iPad very often or always in their daily work.

### 2.4. Measures

#### 2.4.1. Exposure to cyberbullying behaviour (CBQ)

To investigate the prevalence and also how cyberbullying in working life is expressed, a cyberbullying behaviour questionnaire (CBQ) developed by Jönsson et al. (submitted) was used.

The CBQ is influenced by the negative act questionnaire (NAQ-R) developed by Einarsen et al. (2009) and a preliminary questionnaire of cyberbullying called the Cyber Negative Acts Questionnaire developed by Sprigg et al. (2012), together with the results of a study on cyberbullying by Forssell (2014). The CBQ consists of 20 items related to bullying, covering a variety of digital channels such as email, text messages, social media sites and the Internet in general (see Table 1 for full description of items). The inventory refers to work-related negative acts occurring in the last six months, including behaviours such as: not having email responded to, receiving aggressively worded messages, being excluded from the social community online, having false statements spread on the Internet. A 5-point Likert scale was applied to assess the frequency with which the respondents experienced the cyberbullying behaviour, ranging from "never" to "now and then", "monthly", "weekly" or "daily" exposure. The respondents were given instructions to report exposure to each of the items in their working life during the last six months. The following instructions were given the respondents:

"The statements below exemplify behaviours that can be aimed at workers via digital media such as email, instant messaging, text messages or on social media such as Facebook, Twitter, YouTube. Specify how often you experienced the following situations in the

**Table 1**
Cyberbullying behaviour experienced by the participants (N = 3291–3363).

| How often during the last six months have you experienced:<br>0 = never, 1 = now and then, 2 = monthly, 3 = weekly, 4 = daily | M | SD |
|---|---|---|
| 1. Your supervisor/colleagues are not responding to your emails or text messages | .57 | .98 |
| 2. Your work performance has been commented on in negative terms on the Internet | .08 | .36 |
| 3. Rude messages have been sent to you via digital media | .09 | .37 |
| 4. Persistent criticism of your work or performance has been made against you via digital media | .06 | .31 |
| 5. Necessary information has been withheld making your work more difficult (e.g. being excluded from email lists) | .17 | .46 |
| 6. Aggressively worded messages (e.g. capital letters, bold style or multiple exclamation marks) have been sent to you via email, text messages or the like | .14 | .41 |
| 7. Threatening personal messages have been sent to you via digital media | .03 | .21 |
| 8. Allegations have been made about you on the Internet | .03 | .20 |
| 9. Threatening messages about your friends/your family have been sent to you via digital media | .02 | .18 |
| 10. Others have commented on the Internet that you should quit your work | .02 | .16 |
| 11. Assaults on digital media have been made of you as a person, your values or your personal life | .05 | .28 |
| 12. Your computer identity has been hijacked | .02 | .16 |
| 13. Gossip or rumours about you have been spread on the Internet | .03 | .20 |
| 14. Extracts from your messages have been copied so that the meaning of the original message is distorted | .03 | .19 |
| 15. Offensive photos/videos of you have been posted on the Internet | .01 | .15 |
| 16. Jokes about you have been spread on the Internet or via email to several recipients | .01 | .11 |
| 17. Viruses have intentionally been sent to your email address | .16 | .48 |
| 18. Your mistakes or errors at work are repeatedly commented about in emails, text messages, or the like | .05 | .24 |
| 19. False statements about you have been spread on the Internet | .03 | .20 |
| 20. Colleagues have excluded you from the social community online (e.g. Facebook, Twitter, Instagram) | .03 | .18 |

last six months."

The CBQ has been distributed both to a Swedish sample (n = 3371) and an American sample (n = 238) in order to analyse the inventory's reliability and validity. Psychometric properties of the CBQ are discussed in Jönsson et al. (submitted), and the authors conclude that the CBQ is a reliable and valid measure for assessing cyberbullying behaviour in working life. The results of the confirmatory factor analyses showed that the one-factor CFA model had an excellent fit to data; $chi^2$ (170) = 986.7, CFI = .97 and RMSEA00.37. The internal consistency reliability of the CBQ, measured by Cronbach's alpha was .76 in the Swedish sample and .95 in the American sample.

### 2.4.2. Self-labelled victimisation of cyberbullying

The prevalence of cyberbullying was also assessed using a self-labelling method. The self-labelling method singles out whether or not respondents perceive themselves as cyberbullied. The respondents were requested to report if they had been cyberbullied in accordance with the following definition:

"Negative acts carried out by a group or an individual using digital media. The acts are carried out repeatedly and over time against a victim who cannot easily defend him or herself. Online harassment can be expressed by offensive or rude text messages, email, or someone posting unpleasant and offensive information (picture, videos, or text) on the Internet."

Based on this definition the respondents were requested to answer the following question:

– Have you been exposed to cyberbullying in relation to your work during the last six months? (yes/no).

### 2.4.3. Self-labelled victimisation of face-to-face bullying

A self-labelling method was also used when investigating the prevalence of face-to-face bullying. The respondents were requested to report whether or not they had been exposed to face-to-face bullying according to the following definition:

"Bullying occurs when a person repeatedly becomes a target for unpleasant, disparaging, or hurtful acts in the workplace. In order to label an activity as bullying, the acts need to occur over a period of time, and the target is having difficulties in defending him or herself."

Based on the definition the respondents were requested to answer the following question:

– Have you been exposed to bullying in relation to your work during the last six months? (yes/no).

### 2.5. Data analysis

Bullying experiences were separated in this study into four different groups – individuals who (1) were exposed to cyberbullying behaviour; (2) were exposed to cyberbullying in accordance to Leymann's criteria; (3) labelled themselves as victims of cyberbullying; (4) labelled themselves as victims of face-to-face bullying. Descriptive statistics were used to investigate the prevalence of bullying within each group.

A multivariate analysis (MANOVA) was used to analyse differences regarding gender and organisational position while controlling for age and educational level. The MANOVA contains three dependent variables (1) exposure to cyberbullying behaviour; (2) self-labelled cyberbullying; (3) self-labelled face-to-face bullying.

In order to estimate the magnitude of the effect size, Cohen's d was performed. A standardised interpretation of effect size offered by Cohen (1988) has been applied to the results suggesting d = .2 as a small effect, d = .5 as a medium effect and d = .8 as large effect.

Moreover, a t-test was performed to examine the use of digital devices between supervisors and non-supervisors.

## 3. Results

### 3.1. Expressions and prevalence of cyberbullying and face-to-face bullying

The most frequently reported cyberbullying behaviour was not receiving responses to emails or text messages sent to supervisors/colleagues, followed by being withheld necessary work-related information. The latter act was exemplified in the survey as being excluded from email lists. In general, excluding and passive acts (e.g. items 1 and 5) where the targeted individual was ignored were more frequently reported than active and direct acts (e.g. items 12, 15, 16) where the individual was actively targeted by its perpetrator/s. Nonetheless, active and direct forms of cyberbullying

behaviour were reported. Having a virus intentionally sent to one's email address and receiving aggressively worded messages (e.g. items 17, 6) were reported as the third and fourth most common negative acts online.

The four most reported cyberbullying behaviours (items 1, 5, 17, 6) all refer to email. Therefore, email was the most common digital channel for work-life cyberbullying in this study.

Applying Leymann's cut-off criterion of workplace bullying, that is, at least weekly exposure to negative acts during the last six months, 9.7% (n = 306) of the respondents in the current study can be regarded as victims of cyberbullying. Of these 56.9% (n = 174) were men, 43.1% (n = 132) were women and 39.9% (n = 122) had a supervisory position. The prevalence rate departs from the result of the inquiry based on the self-labelling method. .7% (n = 24) respondents labelled themselves as cyberbullied in accordance with the definition given, while 3.5% (n = 116) respondents labelled themselves as face-to-face bullied in accordance with the definition. Of the respondents that labelled themselves as cyberbullied 54.2% (n = 13) were men, 45.8% (n = 11) were women and 70.8% (n = 17) had a supervisory position. Of the respondents that labelled themselves as face-to-face bullied 41.4% (n = 48) were men, 58.6% (n = 68) were women and 33.6% (n = 39) had a supervisory position in their workplaces.

### 3.2. Variations in result regarding gender and organisational position

Experience of cyberbullying behaviour measured by CBQ was non-normally distributed, with a skewness 4.26 (SE = .04) and kurtosis of 30.69 (SE = .09). As often in studies on bullying, the last two categories, weekly and daily exposure, are seldom reported (Einarsen et al., 2009). Consequently, statistics on bullying are often non-normally distributed. In order to compensate for the skewness, the three categories monthly, weekly and daily exposure of cyberbullying behaviour has been collapsed into one variable when comparing differences regarding gender and organisational position. While Table 1 shows the descriptive statistics for different expressions of cyberbullying behaviour related to working life, Table 2 presents differences between men and women, supervisors and non-supervisors exposure to cyberbullying and face-to-face

**Table 2**
Differences related to gender and position regarding exposure to bullying behaviours.

|  | M | SD | Cohen's d |
|---|---|---|---|
| **Exposure to cyberbullying behaviour measured by CBQ** | | | |
| *Gender:* | | | .16 |
| Male (n = 1616) | .08 | .14 | |
| Female (n = 1533) | .06 | .11 | |
| *Supervisory position:* | | | .23 |
| Supervisors (n = 1011) | .09 | .14 | |
| Non-supervisors (n = 2135) | .06 | .12 | |
| **Self-labelled cyberbullying** | | | |
| *Gender:* | | | 0 |
| Male (n = 1710) | .03 | .17 | |
| Female (n = 1648) | .04 | .20 | |
| *Supervisory position:* | | | .20 |
| Supervisors (n = 1068) | .02 | .13 | |
| Non-supervisors (n = 2286) | .00 | .06 | |
| **Self-labelled face-to-face bullying** | | | |
| *Gender:* | | | −.05 |
| Male (n = 1710) | .03 | .17 | |
| Female (n = 1644) | .04 | .20 | |
| *Supervisory position:* | | | .05 |
| Supervisors (n = 1069) | .04 | .19 | |
| Non-supervisors (n = 2281) | .03 | .18 | |

Note. d = .2 small effect, d = .5 medium effect, d = .8 large effect.

bullying, expressed by means, standard deviations and effect sizes.

A multivariate analysis of variance (MANOVA) was conducted and the results revealed a significant multivariate main effect for gender, Wilks' lambda $\Lambda$ = .995, $F_{(3, 3103,00)}$ = 2,47, p < .022 and for supervisory position, Wilks' lambda $\Lambda$ = .989, $F_{(3, 3103,00)}$ = 11,60, p < .001 when controlling for the covariates age and educational level.

Given the significance of the overall test, the univariate main effects were examined. While no significant difference regarding gender was observed for face-to-face bullying, $F_{(3, 3103)}$ = 1.19, p = .306, significant gender differences were observed among targets of cyberbullying behaviour, $F_{(3,3103)}$ = 4.08, p < .017. The results showed men being more exposed to cyberbullying behaviour than women. A similar significant difference between men and women was not observed among the respondents who labelled themselves cyberbullied, $F_{(3,3103)}$ = .22, p = .806.

While no significant difference regarding supervisory position was observed for face-to-face bullying, $F_{(3, 3103)}$ = .074, p = .786, a significant effect for supervisory position was obtained for individuals exposed to cyberbullying behaviour $F_{(3, 3103)}$ = 26.50, p < .001. The difference remained significant when using the self-labelling method on cyberbullying $F_{(3, 3103)}$ = 14.16, p < .001. The result shows supervisors were being more exposed to cyberbullying than non-supervisors. In the total sample, more men than women reported having a supervisory position in the workplace. However, the MANOVA shows no interaction between gender and supervisory position, $F_{(3,3103)}$ = 8,05, p = 37. Hence, men and supervisors' vulnerability to cyberbullying are independent of each other. Nonetheless, a t-test shows that there is significant difference between supervisors and non-supervisors use of digital devices in their daily work (t = 7.660, df = 3357, p = .00) indicating that supervisors use digital devices to a higher degree than non-supervisors.

Although the MANOVA shows a significant difference between men and women, supervisors and non-supervisors exposure to cyberbullying, the effect size can be categorised as small. Cohen's d shows the effect size for gender to be .16 and for supervisory position to range between .20 and .23.

## 4. Discussion and conclusion

While research on cyberbullying among children and adolescents has grown during the last decade, cyberbullying in working life has remained a relatively unexplored field. The aim of this study has been to explore cyberbullying in working life by investigating its expressions, prevalence and relation to face-to-face bullying. Moreover, this study has examined how cyberbullying and face-to-face bullying are related to gender and organisational position.

While earlier research on workplace bullying often emphasised bullying as a downward process (Einarsen & Skogstad, 1996; Rayner, 1997; Zapf & Einarsen, 2011) the results of this study shows that individuals in supervisory positions are more often victims of cyberbullying than other employee groups. Moreover, in contrast to studies that highlight women's vulnerability to face-to-face workplace bullying (Björkqvist et al., 1994a; O'Connell et al., 2007; Salin, 2003), this current study shows that men were exposed to cyberbullying, as measured by the CBQ, to a higher degree than women. Important to note is that a similar gender disparity was not observed among the respondents who labelled themselves as cyberbullied. However, since previous studies have reported that men are less likely than women to label themselves as bullied (Salin, 2003; Salin & Hoel, 2013) this result was not unexpected. An interesting result of this study is that men and supervisors' vulnerability was only observed when the bullying behaviour took place online. The same vulnerability was not

observed among the group being face-to-face bullied. This discrepancy between organisational position and gender among victims of face-to-face bullying and cyberbullying suggests that electronic devices in cyberbullying challenge traditional power relations. Earlier studies support this notion of power, advocating that online anonymity can help formally weaker individuals to get revenge on more powerful aggressors (Campbell, 2005; DeHue et al., 2008; Li, 2007; Schenk & Fremouw, 2012; Ybarra et al., 2006). However, it is important to note that supervisors reported a more frequent use of digital devices in their daily work than non-supervisors, which can contribute to supervisors' higher vulnerability to cyberbullying. Power has been investigated in this study using the concepts of gender and organisational position. Along with ethnicity, this is a conventional operationalisation of power in the literature on workplace aggression and abuse (Keashly & Jagatic, 2011). Nonetheless, power in workplaces can be more than a hierarchical source of power (French & Raven, 1959) such as for instance social power and social networks (Lamertz & Aquino, 2004).

In contrast to studies on cyberbullying among school children (Slonje & Smith, 2008), email was the most reported medium for cyberbullying behaviour. The most frequently reported online negative act was systematically and over time not receiving responses to emails or text messages sent to supervisors/colleagues, followed by being withheld necessary work-related information, for instance being excluded from email lists. The preponderance of passive and excluding behaviour over active and direct aggressions observed in this study is in line with earlier studies suggesting that workplace bullying rather is passive and indirect (Baron & Neuman, 1996; Keashly & Jagatic, 2011). Moreover, the dominance of email as a medium of cyberbullying questions the importance of anonymity often highlighted in cyberbullying literature, as email correspondence in most cases reveals the sender's identity. Still, emailing encapsulates elements of faceless communication that can decrease the perpetrator's awareness of the victim's emotional reactions (Kowalski et al., 2012). Not seeing the facial and bodily responses can decrease feelings of empathy for the victim. Although email was the most frequently reported medium of cyberbullying in working life, single negative acts on social media sites should not be underestimated as they can have far-reaching consequences (Slonje & Smith, 2008). As cyberbullying challenges notions of time, one status update on a social network site or information uploaded on a blog or website can be clicked on and viewed several times by its public.

This study shows that the relation between cyberbullying and face-to-face bullying is multifaceted. It still remains unclear whether cyberbullying should be viewed as only an extension of face-to-face bullying or as a new and unique phenomenon. One the one hand, this study shows that the expressions of cyberbullying in working life do not differ much from face-to-face bullying. Passive and excluding strategies were the most reported negative behaviour also in cyberbullying. Moreover, the preponderance of email in cyberbullying indicates that anonymity does not play an essential role in the interaction. On the other hand, men and supervisor's higher vulnerability to cyberbullying implies that the digital media do have an impact on social relations and traditional power structures.

By using the cut-off criterion for bullying behaviour suggested by Leymann (1996), 9.7% of the respondents in this study could be regarded as cyberbullied. .7% of the respondents claimed to have been victimized of cyberbullying in agreement with the provided definition. Is this to be considered as high or low prevalence? The gap observed between the two methods of measuring cyberbullying is in line with previous research, showing lower prevalence rates for bullying when using a self-labelling method compared to the use of inventories (Nielsen et al., 2010; Ybarra et al., 2012). Comparing the result of this study regarding self-labelled victimisation of cyberbullying and face-to-face bullying, the latter still appears to be a more common phenomenon in Swedish working life, with a prevalence rate of 3.5%.

One of the strengths of this study is the relatively large sample and that it consists of ordinary people and not only students. Like most studies, this study has limitations. There is a need to conceptually define the phenomenon of cyberbullying. The operationalisation of cyberbullying derives in this study from the established literature on workplace bullying. While traditional approaches originate in face-to-face relations, they can be criticised for not capturing the unique nature of cyberbullying (Patchin & Hinduja, 2006). Using the criterion of repetition in the definition that was provided to the respondents in this study may have created an understanding of cyberbullying in a traditional way.

It is also important to underline that some of the examples of cyberbullying behaviour of can be questioned for being commonplace. Items such as "your supervisors/colleagues are not responding to your emails", and "viruses have intentionally been sent to your email address", are examples of negative acts that most people have experienced. However, repeatedly and over time not receiving responses to one's email can create a feeling of being bullied. For the latter item, the word intention indicates that the sender deliberately sent virus to the receiver, thereby an intention to cause harm to the person targeted. Moreover, the study was carried out in a Swedish working environment, which limits the generalisation of the results to other cultural contexts.

Since cyberbullying in working life is a new research field, more studies are needed for a comprehensive understanding of the phenomenon. The finding in this study, that men more often than women and supervisors more often than other employee groups are victims of cyberbullying behaviour, calls for more research investigating the impact of electronic devices on power relations in working life. Also, more studies are needed to understand the predictors of cyberbullying and whether they differ with gender and formal positions in the workplace. Moreover, similar studies in other countries would increase the generalisability of the results. Finally, qualitative studies are required for a deeper understanding on how employees become targets of cyberbullying and what coping strategies that are at hand, as well as what impact it has on the targets health and everyday life.

**Ethical consent**

The study was approved by the Regional Ethical Review Board, Lund, Southern Sweden (2012/619).

**Disclosure statement**

No competing financial interests exist.

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