

An Operative Measure of Workplace Bullying: The Negative Acts Questionnaire Across Italian Companies

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Abstract: Workplace bullying has been a topic of increasing interest since the 90s. Several studies have contributed to a better understanding of the antecedents and consequences of being exposed to negative acts at work during a prolonged period of time. However, there is a lack of validated instruments in Italian to map workplace bullying. Consequently, the goal of the present study is twofold. First, the authors aim to validate the Italian version of the *Negative Acts Questionnaire-Revised* (NAQ-R: Einarsen and Hoel, 2001; Einarsen, *et al.*, 2009). Second, the authors aim to establish the prevalence of workplace bullying. Results from 3,112 employees nested within 25 Italian organizations revealed that a reduced version of 17 items with a two-factor structure provided the best fit. Moreover, the prevalence of bullying was 15.2 per cent according to the criteria proposed by Mikkelsen and Einarsen (2001). Furthermore, significant correlations between bullying dimensions and organizational climate were found, which provided additional support for using the NAQ-Italian reduced version. Implications to prevent bullying and improve employees' well-being using this method are discussed.

Key words: Workplace bullying, Negative acts questionnaire, Confirmatory factor analysis, Validity, Organizational climate

Introduction

Workplace bullying has widely been studied since the early work of Heinz Leymann¹⁾ (1990) and refers to a situation in which someone is systematically (e.g. weekly) subject to undesirable social negative acts at work over a prolonged period of time (e.g. about six months). As a consequence, the target of these bullying behaviors holds an inferior position compared to the perpetrator and is unable to defend him/herself from such situation.

Several authors have found that bullying can lead to severe consequences for the victims' health and well-being, including low self-esteem, several psychosomatic complaints, anger, concentration difficulties, chronic fatigue, sleep problems, anxiety, depression, symptoms

analogue to post-traumatic stress disorder and even suicide (e.g., ^{2, 3)}). Furthermore, some studies have also shown that bullying witnesses reported higher stress and less job satisfaction than non-observers (e.g., ⁴⁾). In addition, workplace bullying has also severe negative effects on the organization since it reduces productivity and increases counterproductive behaviors of the employees such as absenteeism, intent to leave the organization, turnover, earlier retirements and work-related accidents (e.g., ⁵⁻⁷⁾).

Consequently, the severe negative consequences of workplace bullying at different levels of analysis has led researchers to study its antecedents in order to achieve better understanding of the underlying mechanisms of bullying⁸⁾. In that sense, researchers agree on considering workplace bullying as a complex phenomenon which results from the interaction of work environment variables (e.g., organizational culture, leadership, work

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climate, and working conditions^{9, 10}) and individual factors (e.g. having particular personality characteristics such as neuroticism and negative affectivity^{11, 12}).

Even though there is some consensus on which are the antecedents and consequences of workplace bullying, controversial findings arise when the prevalence of bullying is addressed^{13, 14}. For that reason, the present paper aims to validate an Italian version of the *Negative Acts Questionnaire*¹⁵. Therefore, the prevalence of bullying will be estimated in a large sample of Italian organizations from different sectors.

Workplace bullying prevalence

Workplace bullying seems to be quite widespread around the world; however, several studies have indicated that the prevalence of bullying fluctuates from 2% to 17% (e.g.,¹⁴). Taking into consideration the Fourth European Survey on Working Conditions¹⁶ approximately between 4–5% of South European employees suffered from bullying. On the other hand, the prevalence of workplace bullying oscillates between 12–15% in several Nordic and Western European countries. In that sense, different theoretical and methodological shortcomings have been argued to explain these vast differences on bullying prevalence.

Regarding theoretical issues, some authors considered that different concepts have been applied to the same phenomenon during the last few years¹³. Therefore, controversial findings on bullying prevalence may be consequence of conceptual differences among these concepts and the level of awareness of them in the general population. This seems to be a common problem across different countries. For example, in Japan *Ijime* seems a cognate term for bullying since *Ijime* refers to violence situations in which there is social manipulation and indirect types of aggressive behavior¹⁷. However, *Ijime* has been related to research on bullying in school-aged, whereas other specific problems related to death or suicide due to overwork such as *Karōshi* and *Karōjisatsu* have been traditionally explored in organizational settings in Japan and other Asian countries¹⁷. Regarding the US, bullying is related to other terms such as generalized workplace abuse/harassment, emotional abuse, or interpersonal mistreatment at workplace (for a review, see¹⁸). Finally, the concepts of bullying (which implies individual acts of harassment directed towards another individual) and mobbing (which implies abusive behavior from a group to an individual) have been used in several European countries (e.g.,¹⁹).

Although there are slightly differences and connotations between all these concepts, there is a high consensus nowadays in assimilating all of them and considering they are interchangeable terms since they share the

same key defining characteristics²⁰. Therefore, several authors have suggested that the higher prevalence of bullying in Northern European countries, like Finland, are result of the increasing public awareness of bullying during the last few years. This awareness might make employees being more inclined to recognize the phenomenon in comparison to Southern countries like Italy, in which there are limited knowledge of what bullying really is and its seriousness is usually denied (e.g.,²¹). For example, Leka and colleagues (in press²²) have recently highlighted the differences in policies to manage psychosocial risks, the prioritization of such risks, and the structures to support their management between the EU countries. After conducted different interviews with policy level experts, Leka and colleagues concluded that differences in risk management policies are due to a lack of awareness and expertise in supporting infrastructure to deal with workplace risks as well as to cultural variations across countries.

On the other hand, some authors have also pointed out that bullying prevalence varies in large extent depending on how it is measured^{13, 21, 23}. In the present manuscript, we focus on surveys since they are the most extended method to assess workplace bullying^{14, 23}. However, according to Nielsen and colleagues¹⁴ two different approaches have been mainly used in the bullying research when questionnaires have been used: (a) the *self-labeling approach*, which consists on asking participants directly whether or not they perceive that they have been bullied (usually a yes or no question after a given definition), and (b) the *operational approach*, in which participants indicate how frequently are exposed to different potential bullying behaviors or negative acts that neither refer to the concept of bullying nor ask for bullying recognition.

The self-labeling approach has some limitations since focus on subjective evaluations and victim's vulnerability can introduce some biases. Moreover, this method would appear insufficient in countries where the phenomenon is not yet well-known (e.g.,²⁴). In contrast, the operational approach provides more "objective" estimates of the prevalence of bullying as it is based on the Leymann criterion. This criterion indicates that a bullying situation occurs when the target is exposed to at least one negative act in a repeatedly way (usually in a weekly or daily basis) during a prolonged period of time, at least six months²⁵.

Considering the aforementioned theoretical and methodological shortcomings, it may be argued that it is necessary to develop valid and reliable instruments to assess workplace bullying, especially in those countries where a limited knowledge of this phenomenon exists. In the case of Italy, the use of some instruments that have

been recently proposed to analyze workplace bullying and its related stress symptoms (e.g., the *Questionario di Autopercezione di Mobbing -QAM*:²⁶⁾ is not very extended. Moreover, as Salin indicated²¹⁾, the originality of these instruments has been questioned since they are mainly extensions/reductions of the well-known questionnaires *Negative Acts Questionnaire* (NAQ-R¹⁵⁾ and the pioneer *Leymann Inventory of Psychological Terror* (LIPT²⁵⁾). In that sense, although the LIPT was translated into Italian by Ege²⁷⁾, its validity has been seriously questioned since the operational criteria proposed by Leymann was not properly followed and there is a lack of evidence on their psychometric properties (see also²⁸⁾). Consequently, we aim to overcome limitations of former Italian questionnaires by the adaptation and validation of the NAQ, which is the most widely used questionnaire to assess workplace bullying nowadays.

Validation of the Negative Acts Questionnaire in Italy

The *Negative Acts Questionnaire* (NAQ) is conceived as an accurate bullying measurement instrument since it accomplishes different theoretical and methodological issues such as: (a) the questionnaire not contains any reference to the term bullying in order to avoid possible bias introduced by respondents like their level of awareness about the phenomenon or being oversensitive, (b) its items follow a Likert-scale with specific temporal anchors (e.g., daily, weekly) in order to capture the frequency of exposure to bullying behaviors, (c) different studies have analyzed its psychometric properties and have concluded that it is a reliable and valid instrument (e.g., ^{14, 15)}), and (d) the use of a standardized instrument facilitates cross-cultural comparisons among countries since it has been validated in different countries such as Japan (e.g., ²⁹⁾), the US (e.g., ³⁰⁾), or the UK (e.g., ¹⁵⁾).

The revised version of the NAQ is composed by 22 items written in behavioral terms with no specific reference to the term bullying. The available evidence suggest that the dimensionality of the questionnaire seems to converge on a two-factor structure, with a first factor including hostile actions towards the person (*personal bullying*: e.g. “spreading of gossip and rumors about you” or “having insulting or offensive remarks made about your person”), and a second factor related to hostile behavior directed to the work of the person target of bullying (*work-related bullying*: e.g. “someone withholding information which affects your performance”).

Regarding the case of Italy, this two-factor structure was confirmed in a pilot study conducted by Giorgi and colleagues³¹⁾. Moreover, results from this study revealed that five items were inappropriate for using in Italy. Thus, items numbered fourteen, fifteen, eighteen,

nineteen and twenty-two were removed from the original version since they failed to show internal consistency with the rest of the scale and obtained factor loadings below 0.30 (see ¹⁵⁾). We cannot attribute these effects to the translation since the back translation procedure matched the original items. Therefore, we concluded that these items have different severity for the Italian sample. For example, the item 22 focuses on physical violence, which may be too extreme for Italian workers or being considered as a different phenomenon. In that sense, Salin²¹⁾ considered that the NAQ-R is not exhaustive of all bullying behaviors and not all the behaviors included are of equal severity. As several authors have argued, it seems reasonable to think that national culture may play a decisive role on how employees perceive bullying behaviors, thus, what is classified as an “unacceptable” behavior in some countries, may be tolerated in other countries (e.g., ^{32, 33)}).

Finally, previous studies have correlated the scores of the NAQ-R with different measures in order to support the validity of the instrument (e.g., ¹⁵⁾). In this regard, previous research has shown that bullying is associated with several working conditions, such as a high level of role conflict, an inadequate social climate, or an inappropriate leadership behavior (e.g., ^{10, 34, 35)}). Moreover, Giorgi⁹⁾ also supports the idea of the importance of organizational climate as facilitator of workplace bullying. Therefore we correlated the NAQ with an organizational climate measure for validity purposes.

In conclusion, the aim of the present study is to validate a 17 items Italian version of the NAQ-R. In doing so, we assess the validity of the instrument by assessing its (a) internal consistency, (b) dimensionality, and (c) criterion validity in a large Italian sample from different organizations. Furthermore, in this validation of the NAQ-R, authors emphasize the sensitivity of the instrument in identifying bullying victims and non-bullied individuals as well as they try to identify variations in bullying prevalence between different working sectors.

Subjects and Method

Twenty-five, from approximately 100 organizations contacted, agreed to voluntarily participate in the study, which comprised 3,112 professionals (mean response rate=68%). Data were collected by means of a survey between 2004 and 2009. Researchers administered the survey to participants during working hours in rooms provided by the organizations. No payment was provided to participants. Approval from the University of Florence’s ethics committee was granted and informed consent was obtained from each participant.

As can be seen in Table 1, most of the participants

Table 1. General description of the sample (N=3,112)

Type of company	Participants	Response rate	Organizational Climate measure
Public sector			
1. University A	110	84%	Yes
25. University B	371	33%	No
18. School	94	72%	No
13. Hospital A	31	45%	No
19. Hospital B	128	71%	No
21. Hospital C	390	80%	No
23. Hospital D	678	72%	No
24. Hospital E	242	78%	No
2. Local government A	91	85%	No
6. Local government B	96	76%	Yes
11. Local government C	69	77%	No
15. Local government D	113	71%	No
16. Local government E	140	74%	Yes
20. Local government F	60	65%	No
22. Local government G	79	74%	No
12. Public administration	21	88%	No
4. Trade union	24	80%	Yes
<i>Subtotal/Mean</i>	<i>2,737</i>	<i>72%</i>	
Private sector			
3. Private hospital	47	61%	No
5. Engineering research center	58	75%	Yes
8. Manufacturing company A (shoes)	40	50%	Yes
10. Manufacturing company B (gold)	23	95%	No
14. Manufacturing company C (shoes)	51	56%	No
17. Manufacturing company D (furniture)	45	68%	Yes
7. Hotel chain	76	65%	Yes
9. Airport	35	45%	Yes
<i>Subtotal/Mean</i>	<i>375</i>	<i>64%</i>	
Total/Mean	3,112	68%	

Number indicates the order in which the organization collected data.

were from the health sector (48.7%, n=1,556), followed by participants from local governments and public administration (21.5%, n=669), educational sector (18.4%, n=575), manufacturing companies (5.2%, n=159), and other companies (6.2%, n=193). These organizations were conveniently invited to participate in a risk bullying assessment for research purposes. Organizations belonged to the private (n=328; 10.5%) and public sector (n=2,784; 89.5%). It was agreed that demographic data would not be collected due to the highly confidential nature of the study.

Instruments

All participants filled in the *Negative Acts Questionnaire Revised* (NAQ-R: ¹⁵) adapted to Italian by using a standard back-translation method (see also³¹). This scale presents typical bullying behaviors

and participants should respond the frequency that they have suffered such behaviors during the last six months according to a 5-point Likert-scale ranging from 1 (never) to 5 (daily). The Italian version questionnaire is composed by 17 items, each one presenting a potential bullying behavior (e.g. "Someone withholding information which affects your performance"). Personal and work-related bullying dimensions showed high internal consistency ($\alpha=0.91$ and $\alpha=0.70$, respectively). The complete questionnaire also showed high internal consistency ($\alpha=0.91$).

In addition, the *Majer-D'Amato Organizational Questionnaire 10* (MDOQ10: ³⁶) was used to have additional evidence on the construct validity of the NAQ-R. This scale comprises 70 items developed to assess ten core factors of organizational climate identified in analytic research: communication ($\alpha=0.80$), autonomy

($\alpha=0.84$), team ($\alpha=0.87$), fairness ($\alpha=0.69$), job description ($\alpha=0.72$), job involvement ($\alpha=0.68$), reward ($\alpha=0.72$), leadership ($\alpha=0.74$), innovation ($\alpha=0.63$), and dynamism ($\alpha=0.64$). Each question uses a five-point Likert-type response scale (from 1 'never true' to 5 'always true'), with higher scores indicating perceptions of positive organizational climate. This questionnaire has proved to be a valid instrument to measure organizational climate in Italy (e.g., ³⁷).

Results

Different analyses were conducted to validate the Italian version of the NAQ-R. First, a confirmatory factor analysis (CFA) was developed to establish the factorial structure of the questionnaire. Then, the internal consistency was measured using the Cronbach's alpha (see *instruments* section). Finally, the construct validity is also addressed by correlating the NAQ-R with the Majer-D'Amato Organizational Questionnaire-10.

In order to explore the factorial structure of the NAQ-R, a CFA was conducted using maximum likelihood estimation with AMOS 6.0 in which we compared two structural models (one factor versus two factors). According to Bollen³⁸, different indices were used to

evaluate the fit of data to the models. First, since several authors have suggested that chi-square has limitations in assessing how well data fits to models in large samples (e.g., ^{39, 40}), we considered ratio of χ^2 to the degrees of freedom in our analyses instead of the chi-square (χ^2). Secondly, we used the following indicators and criteria to assess the model fit (see also³⁸⁻⁴⁰): (a) the goodness of fit index ($GFI \geq 0.90$); (b) the comparative fit index ($CFI \geq 0.90$); (c) the root-mean-square error of approximation ($RMSEA < 0.08$) and the root mean square residual ($RMR = 0.05$ or less); and (d) the incremental fit index ($IFI \geq 0.90$).

Results from CFA supported a two-factor solution. The examination of the fit indices showed that they met the criteria recommended ($GFI=0.92$; $CFI=0.91$; $RMSEA=0.7$; $RMR=0.03$; $IFI=0.91$). In contrast, the alternative one-factor model did not fit the data well ($GFI=0.89$; $CFI=0.86$; $RMSEA=0.8$; $RMR=0.05$; $IFI=0.86$). Consequently, the results were consistent with previous findings and, as can be seen in Table 2, two factors emerged clearly: 12 items related to personal bullying in which negative acts are directed towards the person directly (items 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, and 16) and 5 items grouped into work-related bullying in which negative acts are related to the task

Table 2. CFA and descriptive data of the 17-item Italian version of the NAQ-R

Items	Mean (SD)			Factor Loadings	
	Total Sample	Private sector	Public sector	Personal bullying	Work-related bullying
1. Someone withholding information which affects your performance	1.87 (1.10)	1.78 (1.01)	1.88 (1.01)	—	0.513
2. Being humiliated or ridiculed in connection with your work	1.34 (0.72)	1.37 (0.73)	1.34 (0.71)	0.641	—
3. Being ordered to do work below your level of competence	1.98 (1.16)	1.92 (1.11)	1.99 (1.16)	—	0.584
4. Having key areas of responsibility removed or replaced with more trivial/unpleasant tasks	1.61 (0.95)	1.55 (0.86)	1.62 (0.96)	—	0.598
5. Spreading of gossip and rumours about you	1.73 (0.97)	1.85 (1.06)	1.71 (0.96)	0.588	—
6. Being ignored, excluded or being 'sent to Coventry'	1.42 (0.80)	1.51 (0.89)	1.41 (0.78)	0.608	—
7. Having insulting or offensive remarks made about your person, attitudes or private life	1.43 (0.84)	1.41 (0.76)	1.43 (0.85)	0.687	—
8. Being shouted at or being the target of spontaneous anger (or rage)	1.46 (0.79)	1.48 (0.82)	1.46 (0.79)	0.717	—
9. Intimidating behaviour such as finger-pointing, invasion of personal space, shoving...	1.27 (0.71)	1.24 (0.67)	1.28 (0.72)	0.665	—
10. Hints or signals from others that you should quit your job	1.23 (0.67)	1.32 (0.76)	1.22 (0.66)	0.664	—
11. Repeated reminders of your errors or mistakes	1.58 (0.82)	1.74 (0.87)	1.56 (0.81)	0.658	—
12. Being ignored or facing a hostile reaction when you approach	1.37 (0.73)	1.42 (0.84)	1.36 (0.72)	0.719	—
13. Persistent criticism of your work and effort	1.49 (0.77)	1.53 (0.76)	1.49 (0.77)	0.718	—
14. Being given tasks with unreasonable or impossible targets or deadlines	1.51 (0.80)	1.51 (0.80)	1.51 (0.80)	—	0.593
15. Having allegations made against you	1.38 (0.71)	1.39 (0.77)	1.37 (0.70)	0.696	—
16. Being the subject of excessive teasing and sarcasm	1.30 (0.69)	1.35 (0.72)	1.29 (0.69)	0.728	—
17. Being exposed to an unmanageable workload	1.74 (0.97)	1.58 (0.86)	1.76 (0.98)	—	0.562
% of explained variance				41.5%	8.62%
Personal bullying Total Score	18.67 (7.01)	19.23 (7.42)	18.61 (6.96)	—	0.64
Work-related bullying Total Score	8.73 (3.34)	8.37 (3.28)	8.77 (3.35)	0.64	—
NAQ Total Score	25.80 (8.80)	26.05 (9.06)	25.77 (8.80)	—	—

that the person perform in her/his job position (items 1, 3, 4, 14, and 17). Moreover, these factors were significantly correlated ($r=0.64$, $p<0.01$).

We also analyze the validity of the NAQ-R by exploring its correlation with the MDOQ10, which was used as criterion. As expected, all correlations with MDOQ10 factors were negative and significant ($p<0.01$): communication ($r=-0.39$); autonomy ($r=-0.25$); teamwork ($r=-0.41$); fairness ($r=-0.37$); job description ($r=-0.39$); job involvement ($r=-0.27$); reward ($r=-0.31$); leadership ($r=-0.42$); innovation ($r=-0.18$); and dynamism ($r=-0.33$). Therefore, data supported the validity of the Italian reduced version of the NAQ.

Finally, we analyze the prevalence of workplace bullying in our sample among different estimation methods. First, we use the operational approach and the exposure criterion suggested by Mikkelsen and Einarsen¹², which considers that a person is victim of bullying if s/he respond to at least two negative acts (instead of only one act as Leymann proposed) with a frequency of 4 or 5 (weekly or daily). In other words, in order to label a person as bullying victim, this person need to be exposed to at least two bullying behaviors in a weekly or daily basis during the last six months. According to this operational estimation method, 15.2% of all employees were victims of bullying in the present study. A high variability was found across organizations, ranging from 4.8% in a public service organization to 31.4% among employees from an airport.

The most frequently experienced negative acts from highest to lowest were calculated. The most frequent acts included: withholding information, jobs outside of the level of competence and gossip. The least frequent acts included: transferred damages, teasing/sarcasm, intimidating behaviors (see also Table 2).

Independent *t* test were then performed to compare the total score of NAQ-R as well as the work-related bullying and personal bullying scale between workers in private and public sectors (see also Table 2). Results suggested that employees from the public sector ($M=8.78$; $SD=3.35$) appear to be more exposed to work-related bullying behaviors than employees from the private sector ($M=8.37$; $SD=3.28$; $t(3048)=2.07$; $p<0.05$), whereas no significant differences were found for personal bullying between these two types of organizations ($t(3110)=-1.53$; n.s.). Complementarily, results also indicated some significant differences between workers in both sectors when the negative acts were compared. In that sense, employees from the private sector were more exposed than those employed in public sector to the following behaviors: gossip and rumors ($t(3110)=2.55$, $p<0.05$), being ignored/excluded ($t(3110)=2.20$, $p<0.05$), hints to quit ($t(3110)=2.44$, $p<0.05$), repeated reminders

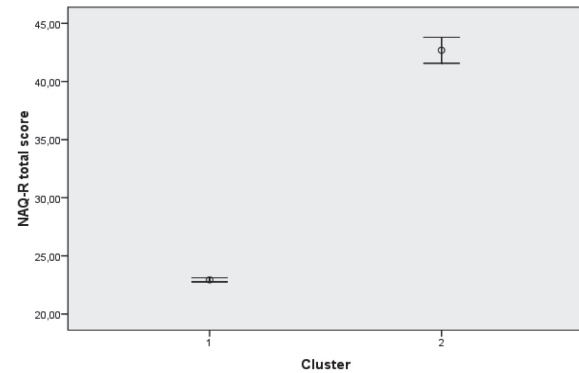


Fig. 1. The two step cluster analysis (victims/non-victims of bullying).

of errors or mistakes ($t(3110)=3.6$, $p<0.001$); whereas workers from the public sector perceived to being exposed to an unmanageable workload in a greater extent than employees in the private sector ($t(3110)=3.1$, $p<0.05$).

In contrast, in order to get further evidence of the NAQ-Italian version's sensitivity to differentiate victims and non-victims, a cluster analysis was performed. Cluster analysis encompasses a number of different algorithms and methods for grouping participants of similar kind into respective categories (clusters). In that sense, a two-step cluster analysis procedure was used in order to reveal natural groups (or clusters) within the data set, without having pre-arranged clusters of who is or not a victim. The first step of the two-step procedure is formation of pre-clusters in order to reduce the size of the matrix that contains distances between all possible pairs of cases. When pre-clustering is complete, all cases in the same pre-cluster are treated as a single entity. Then, in the second step, SPSS uses the standard hierarchical clustering algorithm on the pre-cluster and give you a range of solutions with different numbers of clusters. Therefore, the NAQ total score was considered as variable in the cluster analysis. Results suggested two clusters: the first comprised 14.5% of the cases or employees, which can be categorize as victims of bullying ($M=42.68$; $SD=10.51$), and the second cluster comprised the 85.5% of all employees that participated in our study, which can be categorize as non-victims ($M=22.93$; $SD=10.51$).

Discussion

The main issue addressed in this paper is the validation of an Italian reduced version of the NAQ-R. In this regard, results suggested that a 17 items version of the NAQ-R is a valid and reliable instrument to assess workplace bullying in Italy. According to previous

studies of Einarsen and colleagues, a CFA revealed a two-factor structure: the first factor was labeled “personal bullying” and consisted of 12 items describing exposure to behaviors such as gossip, insulting remarks, excessive teasing and persistent criticism, whereas the second factor was labeled “work-related bullying” and consisted of 5 items measuring exposure to behaviors such as unreasonable deadlines, unmanageable workloads, excessive monitoring and experiencing that necessary information is being withheld (see ¹⁵).

In addition, although potentials for the use of work-related and personal bullying subscales were found, the high level of internal consistency for the NAQ-R 17 items Italian version indicates that computing the total score is appropriate and useful. Furthermore, validity of the Italian version of the NAQ-R was also supported by findings that clearly linked bullying behaviors to the organizational climate, which is considered a pivotal antecedent of workplace bullying⁹.

Consequently, the NAQ-R Italian version appears to be a sensitive measure to identify victims of bullying. In this regard, to authors’ concern, there is no previous data about bullying prevalence in Italy following any well-recognized criteria on bullying literature (e.g., the Leymann Criteria or the operational method). Indeed, according to Giorgi⁹, there is scarce scientific information and a limited knowledge of what bullying really is in Italy, thus, previous percentages of workplace bullying have been underestimating the number of real cases since the term bullying seems to be used to define several concepts of different nature. For example, a recent study of the Italian Institute of Researchers in Economics and Finances (IREF⁴¹) conducted among 3,000 employees, pointed out that 70.4% of participants declared not knowing the phenomenon of bullying/mobbing. This might result in a situation in which bullying is seen as something rather minor that is easily accepted and tolerated.

Nevertheless, authors followed well-established scientific criteria to estimate the number of employees that fitted with the criteria to be labeled as bullying victims in an Italian sample. Thus, according to the operational method the prevalence of workplace bullying was estimated in 15.2% of the total employees that participated in the present study. Moreover, the cluster approach described above also seems an accurate estimation method to differentiate between victims and non-bullied employees. In that sense, the percentages of bullying victims found by using the cluster approach was 14.5%. These results suggest a higher prevalence in Italy than those previously found in different studies and international surveys such as the Fourth European Working Conditions Survey¹⁶. Furthermore, when the

prevalence results were compared with previous international research following the same methodology (Negative Acts Questionnaire and operational method), it emerged that Italian workers perceive higher number of negative acts and more often than workers in different European Countries such as Norway, Finland, the Netherlands, Germany, or the United Kingdom (for a review, see ^{14, 23}).

Focusing on the bullying behaviors it seems that the NAQ-R items have cross-cultural similarities, although the scores of some items were higher in our study compared to previous studies in other countries (e.g., ^{15, 29, 30}). According to Einarsen⁴², by relating these results to Hofstede’s Model of Cultural Dimensions⁴³ it seems reasonable to infer that in Italy, being a masculine society with high power distance, a higher occurrence of negative acts should be reported since conflicts are more likely to be solved through fight and harassment rather than negotiation⁴⁴.

Apart from differences on the bullying prevalence and the most frequent negative acts among different countries, there are also differences between working sectors in the same country (e.g., ^{16, 45}). In that sense, this study indicates that work-related bullying in Italy is more prevalent in the public sector compared to the private sector. In particular, a surprisingly result was that employees from the public sector reported being exposed to an unmanageable workload to a greater extent than employees from the private sector. We consider that some characteristics generally assumed in public organizations of the South European countries such as having a strong hierarchy, a lack of clear and objective evaluation of productivity and performance assessment, and an environment in which interpersonal relationships with supervisors and colleagues might play an important role in the promotion of the own professional career, could be nourishing a work climate favorable to bullying⁹.

However, this paper was also limited in certain areas. First, our findings are based on self-report data from a cross-sectional study, which might introduce common method variance although we offered variations in the response format and instructed the participants that there were no right or wrong answers. Second, the percentage of employees from private sector was not very representative, or at least the number of employees was small compared to those working in the public sector, which may difficult generalizing the results of this study. For that reason, further studies should improve our design in order to clarify differences among sectors in Italy and obtain more representative data from the private sector. In addition, demographic data were also not collected because of the confidential nature of this

study. Further research need to overcome this limitation since demographic data may help to explain differences on bullying exposure as well as the relationship between bullying and other negative social behaviors in the Italian context, such as incivility, workplace deviance, and counterproductive work behaviors.

Despite these limitations, our results indicate that the psychometric properties of the NAQ-R Italian version revealed that it is a valid and useful instrument.

Moreover, differences in employees' perceptions across sectors can be considered as additional evidence of the discriminating properties of the NAQ-R, suggesting its practical use in organizational diagnosis.

The NAQ-R should be used in further studies in order to provide scientific information about the phenomenon in Italy and provide more evidence of its potentialities as an organizational diagnosis measure. In that sense, future research might seek to study workplace bullying more deeply with a special focus on organizational variables such as hierarchical positions, type of organizations, or working sectors (e.g. service vs. manufacturing sectors).

Furthermore, cross-cultural research seems also needed in the bullying field. There are widely differences between the prevalence of bullying in different countries. These differences depend largely upon the estimation methods used, but also cultural dimensions may play an important role in order to better understanding of the underlying mechanisms of workplace bullying. In that sense, the present paper provides an alternative estimation method based on a cluster analysis to establish the prevalence of workplace bullying, and provides insight regarding how to conduct further cross-cultural comparisons under Hofstede's framework in order to explain differences between Southern and Northern European countries, which can become widespread to other cultures.

Finally, the above presented assumptions might suggest that workplace bullying in some particular organizations is a serious problem. In our opinion, negative acts might be considered as identifiable characteristics of the work environment that have a counterproductive impact on the organization as a whole as well as have a severe negative impact on the victims' health and well-being. Therefore, focusing on such negative behaviors—particularly in terms of risk assessment and identifying those negative acts most prevalent in a particular organizational context—might be a new valuable strategy for organizations in order to early intervene against workplace bullying and prevent its counterproductive consequences, which, in turn, may allow these organizations to obtain competitive advantages compared to other organizations from their sector (see also ⁴⁶). As

Papadopoulos and colleagues⁴⁷) point out, appropriate methodologies are required as well as research to conduct risk assessment and implement preventive measures in the changing work environment. For that reason, we consider that the NAQ-R and the cluster analysis used in the present paper might help to direct interventions to counteract psychosocial risks.

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References

- 1) Leymann H (1990) Mobbing and psychological terror at workplaces. *Violence Vict* **5**, 119–26.
- 2) Brodsky CM (1976) *The harassed worker*. Heath and Company, Lexington Mass.
- 3) Hogh A, Mikkelsen EG, Hansen AM (2011) Individual consequences of workplace bullying/mobbing. *In: Bullying and harassment in the workplace. Developments in theory, research, and practice*, 2nd Ed., Einarsen S, Hoel H, Zapf D, Cooper CL (Eds.), 107–28, CRC Press, Boca Raton.
- 4) Vartia M (2001) Consequences of workplace bullying with respect to well-being of its targets and the observers of bullying. *Scand J Work Environ Health* **27**, 63–9.
- 5) Hoel H, Sheehan MJ, Cooper CL, Einarsen S (2011) Organizational effects of workplace bullying. *In: Bullying and harassment in the workplace. Developments in theory, research, and practice*, 2nd Ed., Einarsen S, Hoel H, Zapf D, Cooper CL (Eds.), 129–48, CRC Press, Boca Raton.
- 6) Kivimäki M, Elovaino M, Vahtera J (2000) Workplace bullying and sickness absence in hospital staff. *Occup Environ Med* **57**, 656–60.
- 7) Topa-Cantisano G, Depolo M, Morales F (2007) Acoso laboral: meta-análisis y modelo integrador de sus antecedentes y consecuencias [Workplace Bullying: Meta-analysis and integrative model of its antecedents and consequences]. *Psicothema* **19**, 88–94 (in Italy).
- 8) Leon-Perez JM, Arenas A, Butts T (in press) Effectiveness of conflict management training to prevent workplace bullying. *In: Workplace bullying: symptoms and solutions*, Tehrani N (Ed.), Routledge, London.
- 9) Giorgi G (2010) Workplace bullying partially mediates the climate-health relationship. *J Manage Psychol* **25**, 727–40.
- 10) Skogstad A, Einarsen S, Torsheim T, Aasland MS, Hetland H (2007) The destructiveness of laissez-faire

- leadership behavior. *J Occup Health Psych* **12**, 80–92.
- 11) Bowling NA, Beehr TA, Bennett MM, Watson CP (2010) Target personality and workplace victimization: a prospective analysis. *Work Stress* **24**, 140–58.
 - 12) Mikkelsen EG, Einarsen S (2001) Bullying in Danish work-life: prevalence and health correlates. *Eur J Work Organ Psy* **10**, 393–413.
 - 13) Agervold M (2007) Bullying at work: a discussion of definitions and prevalence based on an empirical study. *Scand J Psychol* **48**, 161–72.
 - 14) Nielsen MB, Notelaers G, Einarsen S (2011) Measuring exposure to workplace bullying. *In: Bullying and harassment in the workplace. Developments in theory, research, and practice*, 2nd Ed., Einarsen S, Hoel H, Zapf D, Cooper CL (Eds.), 149–76, CRC Press, Boca Raton.
 - 15) Einarsen S, Hoel H, Notelaers G (2009) Measuring exposure to bullying and harassment at work: validity, factor structure and psychometric properties of the Negative Acts Questionnaire-Revised. *Work Stress* **23**, 24–44.
 - 16) Parent-Thirion A, Fernández-Macías E, Hurley J, Vermeylen G (2007) Fourth European working conditions survey, European Foundation for the Improvement of Living and Working Conditions, Luxembourg.
 - 17) Giorgi G, Asakura T, Ando M (2008) The unknown side of workplace bullying research: the case of Japan. *Risorsa Uomo* **14**, 31–40.
 - 18) Keashly L, Jagatic K (2011) North American perspectives on hostile behaviors and bullying at work. *In: Bullying and harassment in the workplace. Developments in theory, research, and practice*, 2nd Ed., Einarsen S, Hoel H, Zapf D, Cooper CL (Eds.), 41–74, CRC Press, Boca Raton.
 - 19) Zapf D (1999) Organizational, work group related and personal causes of mobbing/bullying at work. *Int J Manpower* **20**, 70–85.
 - 20) Di Martino V, Hoel H, Cooper CL (2003) Preventing Violence and Harassment in the workplace, European Foundation for the Improvement of Living and Working Conditions, Luxembourg.
 - 21) Salin D (2001) Prevalence and forms of bullying among business professionals: a comparison of two different strategies for measuring bullying. *Eur J Work Organ Psy* **10**, 425–41.
 - 22) Leka S, Jain A, Iavicoli S, Vartia M, Ertel M (2011) The role of policy for the management of psychosocial risks at the workplace in the European Union. *Safety Sci* **49**, 558–64.
 - 23) Zapf D, Escartín J, Einarsen S, Hoel H, Vartia M (2011) Empirical findings on the prevalence and risk groups of bullying in the workplace. *In: Bullying and harassment in the workplace. Developments in theory, research, and practice*, 2nd Ed., Einarsen S, Hoel H, Zapf D, Cooper CL (Eds.), 75–106, CRC Press, Boca Raton.
 - 24) Yildiz S, Tuzunturk S, Giorgi G (2008) Workplace bullying in Turkey: prevalence among private sector employees. *Risorsa Uomo* **14**, 157–70.
 - 25) Leymann H (1996) The content and development of mobbing at work. *Eur J Work Organ Psy* **5**, 165–84.
 - 26) Argentero P, Bonfiglio NS (2008) Uno strumento per la valutazione soggettiva del rischio mobbing: Il questionario QAM 1.6 [An instrument to evaluate mobbing: the questionnaire QAM 1.6]. *Risorsa Uomo* **14**, 207–19 (in Italian).
 - 27) Ege H (1998) I numeri del Mobbing: la prima ricerca italiana [The concept of mobbing: the first Italian research], Pitagora Editrice, Bologna (in Italian).
 - 28) Ceresia F, Lupo I (2003) Un contributo empirico e metodologico per l'indagine della fenomenologia del mobbing [An empirical and methodological study to investigate the mobbing phenomenology]. *Risorsa Uomo* **1**, 39–54 (in Italian).
 - 29) Tsuno R, Kawakami N, Inoue A, Abe K (2010). Measuring workplace bullying: reliability and validity of the Japanese version of the Negative Acts Questionnaire. *J Occup Health* **52**, 216–26.
 - 30) Lutgen-Sandvik P, Tracy SJ, Alberts JK (2007) Burned by bullying in the American workplace: prevalence, perception, degree, and impact. *J Manage Stud* **44**, 837–62.
 - 31) Giorgi G, Matthiesen SB, Einarsen S (2006) Italian validation of the negative acts questionnaire revised. Poster presented at: the 5th International Conference of Harassment and Bullying at Work, Dublin.
 - 32) Beale D, Hoel H (2010) Workplace bullying, industrial relations and the challenge for management in Britain and Sweden. *Eur J Ind Relat* **16**, 101–18.
 - 33) Escartín J, Zapf D, Arrieta C, Rodríguez-Carballeira A (2011) Worker's perception of workplace bullying: a cross-cultural Study. *Eur J Work Organ Psy* **20**, 178–205.
 - 34) Hauge LJ, Skogstad A, Einarsen S (2007) Relationships between stressful work environments and bullying: results of a large representative study. *Work Stress* **21**, 220–42.
 - 35) Notelaers G, De Witte H, Einarsen S (2010) A job characteristics approach to explain workplace bullying. *Eur J Work Organ Psy* **19**, 487–504.
 - 36) D'Amato A, Majer V (2005) MDOQ10 Majer-D'Amato Organizational Questionnaire 10, Università degli Studi di Firenze, Florence (in Italian).
 - 37) D'Amato A, Zijlstra FRH (2008) Psychological climate and individual factors as antecedents of work outcomes. *Eur J Work Organ Psy* **17**, 33–54.
 - 38) Bollen KA (1989) A new incremental fit index for general structural models. *Sociol Method Res* **17**, 303–16.
 - 39) Bentler P (1990) Comparative fit indexes in structural models. *Psychol Bull* **107**, 238–46.
 - 40) Bollen KA, Long JS (1993) Testing structural equation models, Sage, Newbury Park.

- 41) IREF (2004) *Incrociando la punta dell'iceberg. Esplorare un fenomeno sommerso: Il mobbing [Crossing the tip of the iceberg. Exploring a submerged phenomenon: the mobbing]*, Istituto di Ricerche Educative e Formative –IREF–, Roma (in Italian).
- 42) Einarsen S (2000) Harassment and bullying at work: a review of the Scandinavian approach. *Aggress Violent Beh* **5**, 379–401.
- 43) Hofstede G (2001) *Culture's consequences: comparing values, behaviors, institutions, and organizations across nations*, Sage, Thousand Oaks.
- 44) Van de Vliert E, Schwartz SH, Huismans SE, Hofstede G, Daan S (1999) Temperature, cultural masculinity, and domestic political violence: a cross-national study. *J Cross Cult Psychol* **30**, 291–314.
- 45) Einarsen S, Skogstad A (1996) Bullying at work: epidemiological findings in public and private organizations. *Eur J Work Organ Psy* **5**, 185–202.
- 46) Notelaers G, Vermunt JK, Baillien E, Einarsen S, De Witte H (2011) Exploring risk groups workplace bullying with categorical data. *Ind Health* **49**, 73–88.
- 47) Papadopoulos G, Georgiadou P, Papazoglou C, Michaliou K (2010) Occupational and public health and safety in a changing work environment: an integrated approach for risk assessment and prevention. *Safety Sci* **48**, 943–9.