

STRAIGHTFORWARD INCIVILITY SCALE: ADAPTATION AND VALIDATION OF WORKPLACE INCIVILITY MEASUREMENT FOR PORTUGUESE SAMPLES

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Abstract

The concept of workplace incivility is an underestimated subject in Portugal but a popular one in the international literature. Workplace incivility does not intent to harm others, but it harms workplace norms and put peaceful workplace environment into danger. Thus, the main purpose of this study was to present the adaptation and validation of the Straightforward Incivility Scale (SIS; Leiter & Day, 2013) for Portuguese healthcare professionals' samples. SIS has 25 items that cover five different sources of Workplace Incivility (WI): supervisors, colleagues, subordinates, customers or the participant her/himself. A Portuguese version of the scale was administered to a total of 737 healthcare professionals from two major public hospital units from the metropolitan area in Lisbon, Portugal (78% women, 83% nurses, 56% with ages from 25 to 34). To assess the factor structure, we submitted these samples to exploratory and confirmatory factor analyses. The results provided psychometric support for the new Portuguese measurement (SIS). Furthermore, it showed good reliability and convergent validity indices with burnout. Considering the mainstream of studies in the healthcare sector, this study adds to the incivility literature as a novel area of research. Furthermore, the study provides a validated version of Straightforward Incivility Scale allowing simultaneous registration of five different workplace incivility sources, while also providing a measurement with good psychometric properties. It is our hope that the workplace incivility can be the focus of future studies measuring its outcomes

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among healthcare employees as well as to hospital managers and human resources raising awareness within the context of healthcare sector.

Keywords: Workplace Incivility, Straightforward Incivility Scale, measurement validation, factor structure, psychometrics, burnout, health care professionals.

1. Introduction

Workplace incivility (WI) has increased in frequency and severity in the healthcare environment in the last decade (Cortina et al., 2001; Pearson & Porath, 2009; Tricahyadinata et al., 2020). There are numerous circumstantial reports of uncivil behaviour in healthcare settings, although few empirical studies exist in the literature (Laschinger et al., 2009). WI is a subtle form of workplace violence defined as “low-intensity deviant behaviour with ambiguous intent to harm the target, in violation of workplace norms for mutual respect” (Andersson & Pearson, 1999, p. 475). Uncivil behaviours include rude and discourteous comments and actions and generally displaying a lack of concern for others. Pearson and Porath (2005) found that employees who experienced uncivil behaviours at work intentionally reduced their work efforts and the quality of their work. Furthermore, Cortina et al. (2001) linked workplace incivility to job dissatisfaction and burnout. In particular, in healthcare sector, the prevalence of burnout is the highest when compared with other professions (Greenglass, Burke, & Fiksenbaum, 2001). Similarly, more recent research supported the previous findings, linking uncivil behaviours to burnout among healthcare professionals (Laschinger et al., 2008; Read & Laschinger, 2013; Laschinger, 2012). However, there is a dearth of research in incivility in healthcare sector in Portugal, which may be due to the lack of validated versions of well-established measures. Furthermore, the majority of the international research are focused, with few exceptions, on nurses, providing no perspective on a broad occupational group of healthcare setting.

The present study, underpins the theory of Andersson and Pearson (1999) regarding the concept of Workplace Incivility. The authors referred to various counterproductive behaviours in the workplace such as lack of respect, courtesy or politeness toward co-workers. However, little is known about the intention of such manifestations, consequently researchers have provided different interpretations based on their sample and context (Andersson & Pearson, 1999; Cortina et al., 2001; Pearson et al., 2000). Similarly, Leiter (2013) proposed two dynamics that contribute to the emotional response of a negative social behaviour. One reason lies behind the intention the instigator has to exclude the recipient from his or her social group. The other argument highlights the relation of incivility to risk, as instigators of incivility become targets of hierarchy’s own incivility, thus affecting their decision-making, and potentially putting their careers in jeopardy (Irum et al., 2020; Itzkovich, 2016; Jiménez, 2018). Based on a recent systematic review, incivility is still a novel area of research, especially in healthcare sector encompassing the perspective of a broader occupational professions (Vazconcelos, 2020).

The original Straightforward Incivility Scale (Leiter & Day, 2013) was designed to measure five sources of uncivil behaviours, encompassing supervisors, co-workers, subordinates, clients, and the respondent itself. The 25-item scale provides evidence on the frequency uncivil behaviours manifested in the last month. Meanwhile, studies involving healthcare professionals

have reduced the scale of SIS into 15 items. The work of Portoghese et al. (2015) accounted for incivility among supervisors, co-workers, and respondents, while Fida et al. (2018) counted only supervisors, co-workers, and physicians in their study involving Canadian nurses.

However, despite the broad and diverse body of work on incivility, to date it is difficult for scholars and practitioners alike to integrate and understand the variety of findings on this negative workplace behaviour (Schilpzand et al., 2016). Moreover, without a clear understanding of the extant work, practitioners may not be able to incorporate the accumulated knowledge in their organizational practices (Vazconcelos, 2020). However, based on the original theory, considering that uncivil behaviour can lead to a spiral of violence, the present study is the first one to include all five potential sources of incivility as originally anticipated by Leiter and Day (2013). The scale offers an integrated measurement when applied either in a short term or in a longitudinal study, which allows the monitoring of variations in uncivil behaviour over time, as well as considering various sources (including the respondent).

Thus, the goal of this study was to standardize a European Portuguese measure of incivility. To do so, we aimed to examine the validity and reliability of a Portuguese version of SIS in a representative healthcare employees population by testing the internal consistency, the convergent and discriminant validity, and the factorial structure of the scale. To date this is the first study to integrate the perspective of various occupational groups in healthcare sector measuring incivility. Considering the mainstream of studies in healthcare sector, this research adds to the general literature of incivility. Furthermore, there is a dearth of literature studying incivility in Portugal, thus the present study can provide a new instrument for future research to measure the outcomes of incivility, in particular among healthcare providers.

The proposed instrument will allow organizations to assess incivility levels suffered by their staff, informing them about the actual organizational culture. Incivility is a variable related to poor performance and errors, which in a healthcare setting are particularly dangerous. At the same time, it is internally controllable and, therefore, can be easily changed than other variables, which depend on market demands, national policies and budget restrictions. It will distinguish between different origins of incivility, allowing a targeted intervention. It will further deepen understanding between incivility (and its different origins) and other variables pertinent to personal and organizational health and performance.

2. Relevant literature

If anyone has doubts about whether workplace incivility deserves to be concerned, the research suggests that workplace incivility may act as a precursor to other forms of workplace violence (Andersson & Pearson, 1999). Incivility has been recognized as being “one of the most pervasive forms of antisocial behavior in the workplace” (Cortina, 2008, p.56). Furthermore, the main factor making workplace incivility very crucial in today’s work life is the so-called “incivility spiral” (Andersson & Pearson, 1999). Uncivil acts of one employee may create a snowball effect and can influence the whole organization because the targets of incivility can easily transform into instigators.

Among several attempts to characterize workplace incivility, Blau and Andersson (2005) described it as a type of social interaction, while others even as an interpersonal mistreatment

(Cortina & Magley, 2003) that jeopardizes relationships not only from a personal but also organizational and management level as well (Cortina & Magley, 2003; Estes & Wang, 2008; Lewis & Malecha, 2011; Pearson et al., 2000; Torkelson et al., 2016). McNamara (2012) described incivility among healthcare professionals in particular as related to status or position of power. She observed that it is commonplace between co-workers displaying an asymmetry of power in this context.

This position is further solidified in studies with recently graduated nurses that found them more vulnerable to workplace incivility as a result of their limited experience and their new status in the work setting (Laschinger, 2014; Laschinger et al., 2013; Read & Laschinger, 2013; Smith et al., 2010; Wing et al., 2015). Hence it is of high interest to understand the consequences of workplace incivility in nurses' professional and personal life such as increased work stress, absenteeism, frustration and decreasing satisfaction, which can lead to burnout (Tastan & Davoudi, 2015; Welbourn et al., 2020; Wing et al. 2015).

In continuity, Laschinger (2014) found that different types of workplace mistreatment, bullying and incivility in particular, have unfavourable consequences for nurses' perceptions of care quality and patient safety risks. Among healthcare professionals, nurses are most prone to be the victim of uncivil behaviours (Ten Hoeve et al., 2019), especially in cases of physical and verbal violence by patients or their companions (Speroni et al., 2014). A majority of studies made use of the first Workplace Incivility Scale developed by Cortina et al. (2001), evidencing the hostility between supervisor and co-workers (Portoghese et al., 2015). However, the scale has a uni-dimensional structure that does not differentiate the uncivil behaviours coming from different elements of the organization.

Leiter (2013) later developed a new measure of workplace incivility, the Straightforward Incivility Scale (SIS), allows researchers to differentiate the uncivil behaviours, as identified by the original theory. The scale is a self-reported measure aiming to evidence the nature of incivility in the workplace, which has been vastly adapted in different languages and cultures (Matthews et al. 2016; Portoghese et al. 2015; Smidt et al., 2016; Tsuno et al., 2017). The current study provides support for adaptation and validation of the workplace incivility measure, Straightforward Incivility Scale (Leiter & Day, 2013) for Portuguese samples as well. The final discussion points out the main advantages of using the validated instrument and the contributions to the monitoring of civility-promoting actions. The implications for practice and new directions for future research are also discussed.

2.1. The outcomes of incivility

Being the target of workplace incivility evokes negative emotions like anger, fear, and sadness (Porath & Pearson, 2005). Supporting such arguments, there are several studies showing that uncivil work-place experiences are associated with negative work outcomes, like reduced job satisfaction, increased job withdrawal, negative mood, and cognitive distraction (Lim et al., 2008; Miler et al., 2012). Additionally, experiencing incivility is associated with lower energy levels, higher levels of negative affect, lower task performance, etc. (Giumetti & Harfield, 2013). Moreover, a number of studies have found that dissatisfaction with the job predicts various job withdrawal behaviours, including turnover and retirement (Vasconcelos, 2020). Furthermore, workplace incivility significantly reduces the quality of supervisor and co-worker relationship,

which negatively impacts job satisfaction, producing long-term effects on mental and physical health conditions (Carter & Loh, 2017; Lim et al., 2008). As a consequence, organizations suffer the costs of workplace incivility through job turnover, as well as decreased productivity and work performance (Pearson & Porath, 2005; Wang & Chen, 2020).

One of the most important things of incivility is the fact that even witnessing incivility has negative impact on employees. Witnesses of incivility perform less well on complex and creative tasks. They are also less likely to be helpful, exhibit citizenship behaviours and more likely to engage in dysfunctional ideation (Pearson & Porath, 2005). Thus, researchers working on workplace incivility mostly use Leiter & Day (2013) SIS. This 5-dimensional scale allows researchers to differentiate the uncivil behaviours coming from different elements of the organization such as supervisor and co-worker which may have different behavioural forms. Considering the vast repercussion of incivility in organizations, we believe that would be fundamental for future studies to measure the manifestation of uncivil behaviours, among healthcare employees in Portugal. The literature can be of high interest to organizational managers and human resources to embrace a new strategy that can keep uncivil behaviours at bay.

3. Method

3.1. Translation

The first step, consistent with previous literature (Behling & Law, 2000; Brislin, 1970; Werner & Campbell, 1970), included translating the Straightforward Incivility Scale by Leiter and Day (2013). A group of three bilingual research experts in the field were selected to translate the scale from English to Portuguese. Three versions of translations were obtained and compared to keep the original meaning of the scale and adapt to the Portuguese context. Differences were resolved by experts' discussion, reaching unanimity regarding the best proposal. After reaching a final version, three other bilingual research experts in the field were invited to provide the back-translation from Portuguese to English. After concluding this phase, a seventh English native speaker was introduced to a phase of pre-test. Further, the scale was administered among 30 nurses in order to evaluate the items' comprehension for the final version and assess its psychometric properties. The scale suffered minor changes after obtaining these results, taking into account suggestions provided by the nurses. The final Portuguese version of the Straightforward Incivility Scale kept 25 items, same as the original scale (Leiter & Day, 2013). The instructions, format of items and response options were maintained (Appendix A).

3.2. Study design and data collection

A cross-sectional quantitative study design was conducted for the study. A convenience sample with a total of 737 healthcare employees participated in the study, where 310 participants came from Hospital A and 427 from Hospital B. Following ethical approval from the Ethical Commission for the Psychology Research Center at the Universidade Autónoma de Lisboa, a request letter to approach health employees was sent to the administration office of two hospitals

in the great metropolitan area of Lisbon. For anonymity reasons we will refer to these units as Hospital A and Hospital B. Sampaio (2021) found that registered healthcare employees in Portugal suffered from higher rates of burnout and turnover rates, when considering that shortage of staff and overload is more resistant in major hospitals.

After receiving the confirmation from the hospital administrations, all employees received an introductory e-mail, explaining the study. Subsequently, three authors of the study introduced themselves to hospital employees, visiting all teams and inviting them to participate. In Hospital A, data was gathered during December 2015, and in Hospital B from March to April 2016. Although some time has passed since data collection, and the conditions at Hospitals might have changed, we retained the data for instrument validation purposes. This first Portuguese validation will benefit from further studies to verify these results. However, the present study does not use the sample to measure current incivility levels, nor to explore recent relationships between variables. Regardless of current levels, the structure of the concept should remain the same across time. The surveys were self-administered using printed copies of the questionnaire in an enclosed envelope at their workplace after obtaining formal consent, introduced by the research team. In Hospital A questionnaires were gathered in a ballot box until recovery by the research team. In Hospital B questionnaires were offered during team meetings, and immediately gathered by research team members. Inclusion criteria were adult (+18 years) healthcare employees registered at the Hospital A and B at the moment of the data collection. Exclusion criteria included intern health employees, and employees who had ties with either the research project or research team.

3.3. Respondents profile

The study population from the SIS validation consisted from a total of 737 participants from healthcare employees registered in two major public hospitals in Lisbon, which in both samples, the majority were women (respectively 76.4% and 78.4%) in the 25-34 age group (52.3%, 59.4%) with a college degree (66.9%, 85.1%). The majority of healthcare professionals were nurses (59%, 96.5%) with 6-10 years of working experience in the units (34.4%, 32.8%). Table 1 introduces further sample composition in terms of professional groups.

TABLE 1
Sociodemographic Information (N = 737)

Sociodemographic information	Study 1 n = 310	Study 2 n = 427
Gender	n (%)	n (%)
Men	72 (23.6)	90 (21.6)
Women	233 (76.4)	327 (78.4)
Missing values	5	10
Age (years)		
≤ 24	16 (8.2)	31 (14.3)
25 - 34	102 (52.3)	129 (59.4)
35 - 44	36 (18.5)	33 (15.2)

45 - 54	29 (14.9)	20 (9.2)
55 - 64	12 (6.2)	4 (1.8)
Missing values	115	210
Civil status		
Single	134 (43.9)	200 (47.8)
Married / non-marital partnership	151 (49.5)	199 (47.6)
Divorced / Separated / Widowed	20 (6.6)	19 (4.6)
Missing values	5	9
Number of children	1.1 (1.2); Min: 0 - Max: 7	0.7 (0.9); Min: 0 - Max: 3
Missing values		124
Professional Category		
	Nurses: 177 (59.0)	Nurses: 412 (96.5)
	Physicians: 17 (5.7)	-
	Assistents: 84 (28.0)	-
	Technician: 22 (7.3)	-
Missing values	10	15
Educational Level		
PhD	-	1 (0.2)
Master degree	23 (8.0)	40 (9.6)
College degree	192 (66.9)	353 (85.1)
Bachelor or equivalent	3 (1.0)	13 (3.1)
General nursing course	3 (1.0)	8 (1.9)
12th Grade / Vocational course	66 (23.0)	-
Compulsory education	-	-
Missing values	23	12
Tenure		
< 6 months	10 (3.8)	2 (0.5)
≥ 6 months < 2 years	20 (7.6)	36 (8.9)
2 - 5 years	65 (24.8)	84 (20.8)
6 - 10 years	90 (34.4)	132 (32.8)
11 - 15 years	32 (12.2)	69 (17.1)
16 - 20 years	14 (5.3)	41 (10.2)
21 - 30 years	21 (8.0)	32 (7.9)
> 30 years	10 (3.8)	7 (1.7)
Missing values	48	24

3.4. Instruments

3.4.1. Straightforward Incivility Scale (SIS)

To measure workplace incivility, the Straightforward Incivility Scale (SIS) was administered (Leiter & Day, 2013). The scale has a total of 25 items on a seven-point Likert scale ranging from 0 (never) to 6 (more than once per day). The scale measures the frequency uncivil behaviour is manifested in the workplace referring to the last month among the five sources of incivility. Each source is comprised of the same five items (such as quantifying how often a supervisor

“Spoke rudely to you”). The overall alpha Cronbach of incivility in sample 1 (EFA) was .96, while in sample 2 (CFA) .94. Table 3 displays the Cronbach alpha for each of the workplace incivility dimensions.

3.4.2. Maslach Burnout Inventory – General Survey

Since strong correlation have been found between incivility and burnout, it is relevant to test for convergent validity, the Maslach Burnout Inventory (MBI-GS; Maslach & Jackson, 1981). Burnout is defined as “a prolonged response to chronic emotional and interpersonal stressors on the job” [Maslach et al., (2001), p.397]. The MBI-GS consists of 16 items in a seven-point Likert scale ranging from 0 (never) to 6 (every day), distributed along three dimensions: emotional exhaustion (five items), cynicism (five items) and professional efficacy (six items). The concept of burnout comprises higher scores on exhaustion (e.g., “O meu trabalho deixa-me exausto/a”) and cynicism (e.g. “Eu duvido do significado do meu trabalho”) and lower scores on efficacy (e.g. “Na minha opinião eu sou bom naquilo que faço”). The inventory does not provide a score for burnout, but a medium score of each of the dimensions. In the present study the validated MBI-GS Portuguese version (available from Mindgarden.com) was used. The overall burnout Cronbach alpha of the study was .81. Alpha coefficients for the MBI dimensions are emotional exhaustion .90; cynicism .83; and professional efficacy .76.

3.5. Data analysis

Meyers et al. [(2006), pp.467-468] recommend performing factorial analysis of an inventory of 25 items with no fewer than 250 participants. Tabachnick and Fidell (2007) highlighted that “as a general rule of thumb, it is comforting to have at least 300 cases for factor analysis” (p. 613). We presented the Exploratory Factor Analysis (EFA) with $n = 310$ (sample 1) and data were collected from healthcare professionals from Hospital A. We performed a Confirmatory Factor Analysis (CFA), with $n = 427$ health care professionals from several specialized areas in Hospital B (sample 2).

3.5.1. Exploratory Factor Analysis (EFA)

To evaluate the factorial structure of the Portuguese translation of the Straightforward Incivility Scale, EFA was applied, following the procedure of Hair et al. (2006) and Tabachnick and Fidell (2007). For this procedure, we worked with 310 healthcare professionals (sample 1). To determine the suitability of data for factor analysis, the Kaiser–Meyer–Olkin (KMO) test was used. Homoscedasticity of our samples was verified through the Bartlett’s test. The parallel analysis method was used, following the procedure described by O’Connor (2000). To confirm the number of components to extract, the scree plot technique (Cattell & Vogelmann, 1977), based on eigenvalues, known to be one of the most accurate (Zwick & Velicer, 1986) was used. Communalities were analysed and the factors were obliquely rotated using Promax (Tabachnick & Fidell, 2007). Promax has been shown to perform either as satisfactory a Varimax, or “much better” (e.g. at high correlation factors; Finch, 2006). We accepted factor loadings equal to or greater than .40 as sufficient (Hair et al., 2006). The correspondence between the subscale scores was assessed applying zero-order correlation (Pearson).

3.5.2. Confirmatory Factor Analysis (CFA)

CFA of the 25 items was performed with our second sample preponderantly composed of nurses from a different hospital from the EFA sample. Based on previous research (Leiter et al., 2015; Leiter and Day, 2013; Mathews and Ritter, 2016), the theoretical framework, the previous EFA, and comparisons with other validation processes in other languages (Portoghese, et al., 2015; Smidt et al., 2016; Tsuno et al., 2017), we expected to find five factors. Confirmatory factor analyses were performed with IBM SPSS AMOS 24.0 (Arbuckle, 2014).

To analyse the goodness-of-fit indices of the model, we began to assess the chi square value of sample and its significance. However, it is expected that chi-square will almost always be statistically significant for models with $N \geq 300$, because of the sensitivity of the chi-square test to large sample sizes (Kline, 2011).

Additionally, the model was evaluated using several fit indices: the Comparative Fit Index (CFI), the Goodness of Fit Index (GFI), the Bender-Bonnet Normed Fit Index (NFI), and the Root Mean Square Error of Approximation (RMSEA). In general, values close to .95 for the CFI and NFI indicate an excellent fit (Hu & Bentler, 1999; Kline, 2011; Marôco, 2014; Meyers et al., 2006), whereas values of .90 or greater reflect a reasonable fit (Hair et al., 2006; Lomax, 2010; Mueller & Hancock, 2010). However, especially considering the susceptibility of indices to large sample sizes (Meyers et al., 2006), it is pointed out that for $N \geq 250$ and a number of observed variables between $12 < m < 30$, CFI values of .90 or above indicate an excellent fit (Hair et al., 2006). Less affected by sample size, GFI' results closer to .90 indicates the best fit (Meyers et al., 2006). The RMSEA for most acceptable models has values below .10 (Kline, 2011). Therefore, with our large sample size, that is not surprising (Meyers et al. 2006), and we needed to employ alternative fit measures to evaluate the proposed model. To consider the level of parsimony in the model, we took into account the PCFI (Parsimony Comparative Fit Index), PGFI (Parsimony Goodness of Fit Index), PNFI (Parsimony Normed Fit Index) and AIC (Akaike Information Criterion). As is well known, there are no absolute rules or standards to determine a bad and good fit model (Hair et al., 2006; McNeish et al., 2017). Adequacy of fit has to be judged considering the statistical standards, psychometric reflections and internal coherence with the theoretical framework and practical implications.

4. Results

Our results are presented in three main parts. Firstly, we examine the exploratory factor analysis. Secondly, we present the confirmatory factor analysis using structural equation modelling (SEM). Finally, in search of additional effects, we analyse zero-order correlations among SIS and Burnout to assess the convergent validity.

4.1. Exploratory Factor Analysis

We performed the $KMO = .93$ and $Bartlett = \chi^2(300) = 9391.07, p < .001$ tests, which indicated appropriate values. The parallel analysis method (O'Connor, 2000) applied confirmed the five factors. The scree plot technique based on eigenvalues indicating 5 components. The eigenvalue

for the first factor not retained was .82 (Henson & Roberts, 2006). All factors together explain 81% of total variance.

Results confirm the 5-factorial structure of the instrument, no item saturated outside the expected dimension. The interpretation assigned to each of the five factors was as follows. Factor 1 refers to incivility of supervisor behaviour, such as ignoring, excluding, speaking rudely, behaving rudely (through gestures, facial expressions or others) and/or behaving without respect for the participant. Factor 2 concerns the incivility behaviour of colleagues and/or other health care professionals from the same team. Factor 3 concerns the incivility behaviour of subordinates. Factor 4 is related to incivility behaviour of clients, customers or users, and Factor 5 includes items related to incivility on the part of the respondent. Considering that workplace incivility can trigger a spiral of violence, the information from different elements of teams working in the organizations and their perception of uncivil behaviour, including that of clients, contributes to forming a more comprehensive and integrative perspective of the reality of WI in the organizations studied.

4.2. Confirmatory Factor Analysis

As already mentioned, we examined items correlating above .40 with the respective factors in the exploratory factor analysis (after rotation), whose content we considered not redundant with that of other selected items and coherent with the general meaning of the factor (Hair et al., 2006). All 5 items for each factor were keeping. The structural model tested included a general, second-order factor influencing the five factors previously encountered in the exploratory analysis and explaining their intercorrelations (see Figure 1). In the initial analysis with this model, Figure 1 shows the factor structure with standardized estimates of SIS for the adjusted model in our sample 2 ($n = 427$).

We found that ten items showed raised modification indices and, additionally, still emphasized the interaction between items 1 and 2 of the subscales relate to supervisors, colleagues, subordinates, clients and participants themselves. Theoretical plausibility was applied to judge whether the proposed changes should be adopted. If we resort to a qualitative analysis of these items: item 1 refers to being ignored and item 2 refers to being excluded.

We can suppose that these two behaviours are closely related, seeming similar in some people's understanding, probably being related to the source of these values. We decided to add paths between residuals (allowing for covariance) and these items. Still observing the modification indices and taking into account the meaning of some items, we added the other covariances until reaching the best fit. In all cases, there seemed to be a rationale behind these changes – either the items reflected behaviours which tend to co-occur (e.g. rude gestures and rude words), or in the case of different dimensions, the might reflect the same reality from different sources (inconsiderate behaviours across the organization, from supervisors, colleagues, subordinates, clients and self). We did not delete any paths. The quality of the final structural model tested showed good adjustment, as presented in Table 2.

FIGURE 1
Final Structural Model Tested

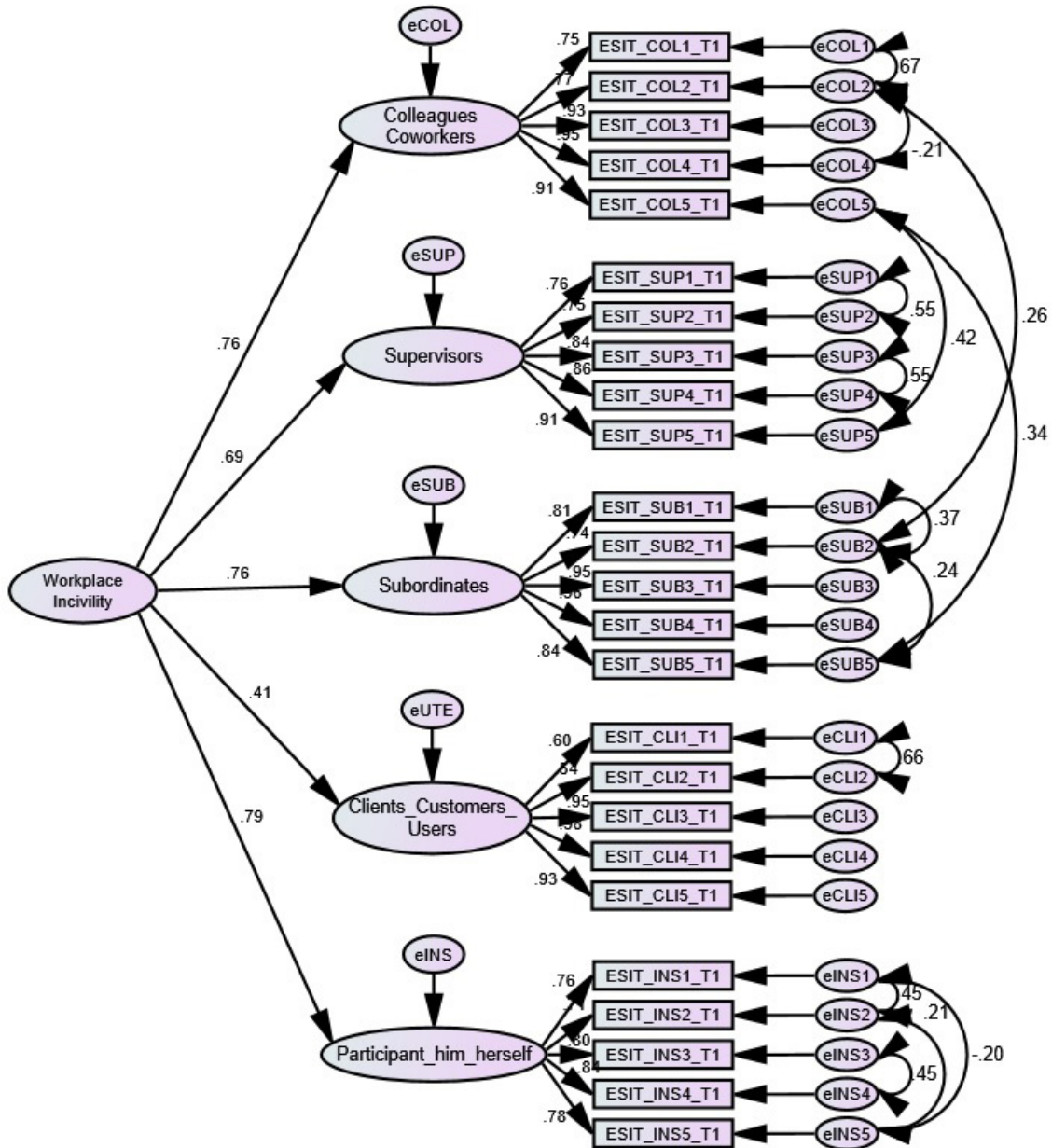


TABLE 2*Goodness of Fit Indices of Structural Models Tested*

Sample 2 (n = 427)	χ^2	df	χ^2/df	CFI	GFI	NFI	TLI	RMSEA	PCFI	PGFI	PNFI	AIC
Model1 (without adjustments)	2193.48**	270	8.12	.83	.68	.81	.81	.129 [.124, .134]	.75	.56	.73	2303.48
Model 2 (with adjustments)	977.44**	256	3.82	.94	.83	.92	.93	.081 [.076, .087]	.80	.66	.78	1115.44

χ^2 (chi-square); df (degrees of freedom); CFI (Comparative Fit Index); GFI (Goodness of Fit Index); NFI (The Bender-Bonnet Normed Fit Index); PCFI (Parsimony Comparative Fit Index); PGFI (Parsimony Goodness of Fit Index); PNFI (Parsimony Normed Fit Index); AIC (Akaike Information Criterion); RMSEA (Root Mean Square Error of Approximation).

** $p \leq .001$

To analyse the goodness-of-fit indices of the model, we began to verify that the chi square value of sample is statistically significant ($p \leq .000$) which indicates the expected lack of fit (for models with $N \geq 300$; Kline, 2011). Therefore, with our large sample size (Meyers et al., 2006), we needed to take into account the level of parsimony in the model (considering PCFI, PGFI, PNFI and AIC).

These indices indicate that we have a good adjustment considering parsimony (Marôco, 2014; Mulaik et al., 1989). Goodness of fit indices before (Model 1) and after model amendments suggested by the results (Model 2) can be seen in Table 2. The SIS showed an acceptable representation through five latent factors representing five different relationships/ sources of workplace incivility (supervisors, colleagues, subordinates, clients, customers, users and the participant him/herself as instigator). Although GFI's value (.83) is in fact below the threshold defined in the literature as representing a good, or at least a reasonable fit (which other indices show), this index is recognized as having a more severe downward bias than others. The general rule of thumb, of a value higher than .90, might not equally work for all indexes (Fan et al, 1999).

The next step was to calculate Cronbach alphas for each of the five factors, checking the contribution of items and deleting those that lowered the alpha value for the factor (see Table 3). We concluded this stage with 25 items and 5 factors as previously observed in the EFA.

4.3. Test of convergent validity

Convergent validity (Urbina, 2014) was evaluated through Pearson's correlation between WI and burnout. The choice of the burnout concept to test convergent validity was due both to its potential conceptual proximity to WI and to the existence of previous empirical studies already mentioning the relationship between these concepts (Fida et al., 2018; Laschinger et al., 2009; Leiter et al., 2015; Leiter et al., 2011). In particular, considering Portuguese samples of health care professionals, Marôco et al. (2016) referred to the interactions between burnout and the perception of poor conditions of work. Among the antecedents of organizational sources of burnout, Vala et al. (2016) related the perception of fewer organizational resources, more demands on relationships with co-workers, more demands on relationships with patients and more demands of working hours as the main predictors of higher levels of burnout. Table 3 shows the Means and Standard Deviations for the scores of Straightforward Incivility Scale (SIS), as well as the intercorrelations of these factors with Burnout ($n = 427$).

We found a high level of correlation between overall constructs, with Overall Incivility relating strongly and positively to Overall Burnout. Turning to more specific SIS factors, we also expected all the correlations between these factors, Overall Burnout and the Burnout dimensions

(exhaustion, cynicism and professional inefficacy) to be strongly related. But they showed only moderate to high correlations. Despite Burnout-Professional Inefficacy also showing significant correlations with all Incivility factors, it was the factor showing the lowest levels of correlation.

TABLE 3

Descriptive Statistics and Correlations Between Factors of the Straightforward Incivility Scale (SIS) and Burnout Using Pearson's Correlation Coefficient in the Portuguese Sample

(n= 427)

Measure	Overall Burnout (MBI)	Exhaustion (MBI)	Cynicism (MBI)	Professional Inefficacy (MBI)	M	SD	α
Overall Incivility (SIS)	.52**	.42**	.45**	.19**	17.03	19.42	.94
1. Factor 1_Supervisor (SIS)	.48**	.41**	.43**	.15**	4.29	6.25	.93
2. Factor 2_Colleagues (SIS)	.37**	.29**	.33**	.12**	2.89	4.93	.94
3. Factor 3_Subordinates (SIS)	.34**	.22**	.28**	.17**	2.48	4.53	.94
4. Factor 4_Client_Consumers_Users (SIS)	.33**	.32**	.25**	.12**	5.03	6.28	.91
5. Factor 5_Participant him/herself (SIS)	.39**	.28**	.39**	.16**	2.34	3.92	.89
M	33.86	16.20	10.02	7.81			
SD	14.59	7.40	7.30	5.10			

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

* Correlation is significant at the 0.05 level (1 tailed)

5. Discussion

Exploratory factor analysis allowed us to identify five factors covering different key players as potential sources of working incivility. Confirmatory factor analysis presented good model adjustment. Cronbach's alpha (internal reliability coefficients) proved to be adequate for the five factors found. Correlations with burnout showed convergent validity of SIS subscales. The SIS measurement has only 25 items, it is simple to administer and score, and can give an integrative vision of WI perceptions in various organizational settings. Given our original goal of validating SIS, we concluded that we achieved the final measure.

Considering the convergent validity test, the participants correlate the perception of burnout (overall and dimensions) with WI. Interestingly, the healthcare professionals in our sample associate the perception of workplace inefficacy (or less professional achievement) with incivility in a moderate way.

Leiter (2013) argued that the SIS was created as a short psychometric instrument to evaluate the frequency of uncivil interactions in the workplace in the last month. Arvey and Cavanaugh (1995) stressed the risk of report periods longer than 12 months potentially leading to serious bias in self-reports related to memory distortions. SIS also differs from the preceding measurements by offering a labelled 7-point Likert scale as response options.

Despite reports of rising incivility levels in the healthcare environment (Cortina et al., 2001; Pearson & Porath, 2009; Tricahyadinata et al., 2020), in Portugal the scientific literature dedicated to this issue is still scarce. Given that incivility may affect service quality (e.g. Giumetti & Harfield, 2013; Pearson & Porath, 2005; Wang & Chen, 2020) as well as the health of the incivility recipient (Carter & Loh, 2017; Lim et al., 2008; Laschinger et al., 2008; Read & Laschinger, 2013; Laschinger, 2012; Porath & Pearson, 2005), measuring its levels to inform the need for intervention is a critical issue.

The proposed instrument identifies several sources of incivility, allowing for a targeted intervention, according to the reality of the respondent. Different health services will have different demands, depending on whether they deal with patients only, patients and their families, different professional classes and patient criticality.

Not only does incivility influence patient care quality and healthcare professionals' health, but incivility, if not correctly addressed, might also work up to violence and bullying (Andersson & Pearson, 1999). Measuring incivility prior to more severe workplace problems allows the timely development of preventive (or corrective) measures. These measures, arising from team and organization dynamics' needs, will have the advantage of not depending on national health policies, which have some stability, and can be tailored to teams' and services' specificities. The availability of SIS for the general healthcare community and respective researchers is an important asset in building better conditions for healthcare professionals, as well as assuring the best possible patient care.

Our validation study is a first contribution towards this goal. Further studies will be necessary to assess the viability of modifications for optimum statistical results and to further our understanding of the SIS suitability for other professions in Portugal. SIS can also advance scientific knowledge on the results of incivility interventions (as a pre and post measure), as well as on the relationship between this and other relevant concepts for Portuguese participants, namely Psychological health measures, productivity results and organizational culture variables.

6. Conclusion

The original SIS version only focused on organizational sources of WI (supervisors, colleagues, subordinates and the participant him/herself or instigated incivility) but subsequently another source was added: customers. SIS considers customers an outside extra-organizational source of incivility. Future research will be able to verify if there are different types of WI spirals triggered by sources inside or outside the organization.

As a self-reported instrument, SIS has the known limitations of this kind of measurement, and these apply to our study. Regarding the samples, further research should strengthen the validity assessment by recruiting samples with other professional or occupational groups and by adding further variables to test convergent and discriminant validity. The evaluation of interactions of Workplace Incivility with other variables will enrich the nomological network of the concept (Cronbach & Meehl, 1955).

Information about the perceived frequency of incivility in the workplace (in the last month) allows it to be used as a one-off measurement or in longitudinal studies to allow monitoring WI oscillations over time, for example, as a way of monitoring the results of interventions that

promote civility (Osatuke et al., 2009). The broader spectrum of responses afforded by the 7-point Likert scale allows the recording of a greater amplitude of incivility oscillations. So, SIS can be an important and practical tool to complement programs to promote civility in the workplace. Future research could bring information about WI in different professional groups. It is also possible to expand the research on WI by considering sectors and types of business, comparing them according to the frequency of this type of behaviour in these contexts. The SIS can bring important developments for theoretical understanding of WI and practical interventions to prevent it and promote civility in the workplace.

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Appendix A

Escala de Incivilidade no Trabalho

[Portuguese version]

Straightforward Incivility Scale (SIS; Leiter & Day, 2013)

Indique em que medida concorda ou discorda com cada uma das seguintes afirmações. Coloque um 'X' na resposta mais adequada, utilizando a seguinte escala de avaliação.

	0	1	2	3	4	5	6
	Nunca	Algumas vezes por mês ou menos	Uma vez por semana ou menos	Algumas vezes por semana	A maior parte dos dias	Diariamente	Mais do que uma vez por dia
No último mês com que frequência os seus supervisores se comportaram das seguintes formas?	0	1	2	3	4	5	6
1. Ignoraram-no(a)							
2. Excluíram-no(a)							
3. Falaram-lhe rudemente							
4. Comportaram-se rudemente consigo (e.g., gestos, expressões faciais, etc.)							
5. Comportaram-se sem consideração por si							
No último mês com que frequência os seus colegas/outros profissionais da equipa de saúde se comportaram das seguintes formas?							
6. Ignoraram-no(a)							
7. Excluíram-no(a)							
8. Falaram-lhe rudemente							
9. Comportaram-se rudemente consigo (e.g., gestos, expressões faciais, etc.)							
10. Comportaram-se sem consideração por si							
No último mês com que frequência os seus subordinados (a quem delega tarefas) se comportaram das seguintes formas?							
11. Ignoraram-no(a)							
12. Excluíram-no(a)							
13. Falaram-lhe rudemente							
14. Comportaram-se rudemente consigo (e.g., gestos, expressões faciais, etc.)							
15. Comportaram-se sem consideração por si							
No último mês com que frequência os seus utentes/clientes se comportaram das seguintes formas?							
16. Ignoraram-no(a)							
17. Excluíram-no(a)							
18. Falaram-lhe rudemente							
19. Comportaram-se rudemente consigo (e.g., gestos, expressões faciais, etc.)							
20. Comportaram-se sem consideração por si							
No último mês quantas vezes você já se comportou das seguintes formas em relação a outras pessoas no trabalho?							
21. Ignoraram-no(a)							
22. Excluíram-no(a)							
23. Falaram-lhe rudemente							
24. Comportaram-se rudemente consigo (e.g., gestos, expressões faciais, etc.)							
25. Comportaram-se sem consideração por si							