Presenteeism levels among Italian nurses. A multicentric survey

Livelli di presenteismo fra gli infermieri italiani. Uno studio multicentrico

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ABSTRACT

BACKGROUND: Presenteeism represents the need to "get to work although we feel sick"; thus, affecting the quality of work, leading to errors or omissions, reducing productivity and increasing costs. Nurses are among the job categories with the highest degree of Presenteeism, which may negatively affect work quality.

Aims and objectives: To assess the prevalence of Presenteeism among Italian nurses.

METHODS: A cross-sectional, multicentric study was carried out from January to December 2015 in a sample of Italian nurses. A total of 652 nurses completed the questionnaire. The mean Stanford Presenteeism Scale (SPS-6) total score was 21.6 (±4.0). Nurses showed high Presenteeism levels when considering the "Avoiding distractions" and "Completing work" sections of the Scale.

RESULTS: Male nurses showed a lower degree of Presenteeism than women, which also tended to be less severe with increasing age (both p<0.05). The presence of ≥ 1 self-reported

health problem was associated with an increase in the score (p<0.05).

CONCLUSIONS: In line with previous studies performed outside Italy, Presenteeism appear to be a widespread condition also among Italian nurses, requiring appropriate treatment and recognition by healthcare providers. The results of this survey might be used as a minimum, most likely underestimated basis for targeted public health policies.

KEYWORDS: Nurse, Health, Presenteeism, Illness, Productivity

RIASSUNTO

INTRODUZIONE: Il presenteismo rappresenta la necessità di "mettersi al lavoro anche se ci si sente male"; influenzando così la qualità del lavoro, portando a errori o omissioni, riducendo la produttività e aumentando i costi. Gli infermieri sono annoverati tra i professionisti con il più alto grado di presenteismo, con potenziali effetti negativi sulla qualità del lavoro.

OBIETTIVI: Accertare la prevalenza del Presenteismo tra gli infermieri italiani.

METODI: E' stato condotto uno studio trasversale, multicentrico da gennaio a dicembre 2015 su un campione di infermieri italiani. 652 infermieri hanno completato il questionario. Il punteggio totale medio alla Stanford Presenteeism Scale (SPS-6) era 21.6 (± 4.0). Gli infermieri hanno mostrato elevati livelli di Presenteismo nelle sezioni: "Evitare distrazioni" e "Completare il lavoro" della Scala.

RISULTATI: Gli infermieri maschi hanno mostrato livell inferiori di Presenteismo rispetto alle donne, che tendevano anche ad essere minori con l'aumentare dell'età (entrambi p <0,05). La presenza di ≥1 problema di salute auto-riferito è stata associata ad un aumento del punteggio (p <0,05).

CONCLUSIONI: În linea con studi precedenti effettuati nel contesto internazionale, il Presenteismo sembra essere una condizione diffusa anche tra gli infermieri italiani, che dovrebbe essere adeguatamente riconosciuta da parte dei manager sanitari.

I risultati di questa indagine potrebbero essere utilizzati come spunto di riflessione, per implementare mirate strategie di politica sanitaria.

KEYWORDS: infermieri, salute, presenteismo, malattia, produttività,

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INTRODUCTION

Presenteeism has gained researchers' attention only in recent years (Johns, 2010). The word "presenteeism" was originally founded as antonym of "absenteism" (Hemp, 2004) and, according to Aronsson et al. (2000) and Johns (2010) it defines the need to "get to work although we feel sick." This definition is the one most widely used by scholars of organizations, and is explicitly or implicitly present in all the literature on organizational health (Goetzel, 2004; Prasad et al., 2004; Stewart et al. 2004; Sheridan, 2004; Simpson, 1998; Koopmanshap et al. 2005; Shultz et al. 2009). Presenteeism affects the quality of work, as it may lead to errors or omissions, resulting in lost productivity (Hemp, 2004) and increased costs (Bergstrom et al. 2009). According to Collins (2005) the costs associated with lost productivity due to presenteeism exceed the sum of those associated with absenteeism and medical care. Stewart (2003) showed that the loss of productivity due to presenteeism is equal to 72% compared with 28% caused absenteeism. Aronssos (2000) has highlighted the impact of Presenteeism on different types of employment, noting that the areas of care, aid and primary education are more prone to this phenomenon, given the existence of a culture of loyalty and concern for vulnerable users such as patients and children. Health care workers have been evaluated as being at increased risk of Presenteeism (Elstad & Vabo, 2008; Aronsson et al. 2000; McKevit et al. 1997), and, according to Pilette (2005), the nursing profession is the sector with the highest degree of presenteeism. Nurses' Presenteeism has been associated with several negative outcomes such as an increased number of medication errors and patients' fall, as well as with poorer selfreported quality of care (Letvak et al. 2012). Workers affected by Presenteeism may suffer from different acute or chronic conditions (Rebmann et al. 2016). Some authors showed that asthma, allergies, and back or neck pain are the nurses' most reported diseases that are potentially associated with Presenteeism as well as arthritis problems, depression, migraine and other types of headaches, sleep disorders, gastro-esophageal reflux, palpitations and irritable bowel syndrome are also common (Gärtner et al. 2010; Allen et al., 2005; Aronssonet al., 2000; Burton et al., 2004; Collins et al., 2005; Goetzel et al., 2003; Ozminkowski et al., 2003; Wanget al., 2003). Furthermore, Presenteeism may be due to other "personal" conditions as a feeling of pressure prom employers and collegues (Demerouti et al. 2009; D'Errico et al. 2013), the perception that not going to work because of illness would "let down" colleagues (D'Errico et al. 2013; Jena et al. 2010) and the imperative that one has to fulfill his/her own duty (Kim et al. 2016). Several studies have evaluated Presenteeism among nurses in the international context (Warren et al., 2011; Brborovic et al., 2014; Umann et al., 2012; Martinez & Ferreira, 2012; Letvak et al., 2012), but very few is known about Italian nurses. To date, only one study was focused on Italian nurses (D'Errico et al. 2013), but it was a monocentric survey, with a small sample, and Presenteeism was not assessed with a validated tool. We thus carried out a multicentric research to quantify the degree of Presenteeism among Italians nurses, using a validated tool (Cicolini et al. 2015).

The objective of this study was to quantify the degree of Presenteeism in a sample of Italian nurses, and to identify the potential predictors of this condition.

METHODS

Design and setting

We carried out a cross-sectional, multicentric study from January to December 2015 in three Hospitals [Blinded for Reviewers] of three Italian Regions.

Participants, recruitment and data collection

The primary end point of the study was to assess nurses' levels of Presenteeism. Because we did not know the response rate of participants, we decided to adopt a convenience sampling.

Nurses from three mean hospitals (at least 200 beds) of three Italian regions were enrolled. A trained pool of nurse researchers was responsible for participants' recruitment. To be enrolled, nurses were provided information about the study and those who voluntarily accepted to participate in the research were asked to sign a written consent. After enrollment, the researchers administered a self-report questionnaire to each participant which had to be filled out and returned within 30 minutes.

Personal identifiers were directly collected by the researchers and were keep separate from the survey results. To guarantee the confidentiality and anonymity, participants re-submitted the questionnaire in an envelope inside a closed box.

Instrument description

The data collection instrument included three parts: a form for demographic data, the Italian version (Cicolini et al. 2015) of the Stanford Presenteeism Scale (SPS), and a form asking participants to self-report if they suffered from several psychological or physical conditions in the past twelve months. Participants were also asked to rank their perceived health status on a scale ranging from 1 (bad) to 5 (excellent).

The Stanford Presenteeism Scale (Koopman et al. 2002) is a 6-item-tool which assesses the ability of nurses to accomplish their work without being distracted by concurrent health problems. For each item, the possible answer is rated on a five-point Likert scale; for three of the six items (n. 2, 5, 6) the possible answers range from 1 ("strongly disagree") to 5 ("strongly agree"); for the items n. 1, 3, 4 the answers are reversed, ranging from 5 ("strongly disagree") to 1 ("strongly agree").

To derive a proxy of the overall degree of Presenteeism in each participant, we summed up the answers to each of the six items, to obtain a SPS-6 total score. Its V. Simonetti et al. 121

levels ranged from a minimum of 6 to a maximum of 30, with higher scores indicating higher level of Presenteeism.

For this research we used the Italian version of the Stanford Presenteeism Scale translated into Italian and adapted to the Italian context by Cicolini et al. (2015) which showed a good internal consistency (Chronbach's = 0.72)

Statistical Analysis

We evaluated the potential predictors of the level of Presenteeism using random-effect linear regression, using region as cluster variable. All covariates were included in the model a priori. Multicollinearity, interactions and higher power terms were tested for all covariates. There were less than 15 missing items for all variables, thus no missing imputation technique was adopted.

Statistical significance was defined as a two-sided p-value<0.05, and all analyses were performed using Stata 13.1 (Stata Corp., College Station, Texas, USA, 2013).

Ethical consideration

Before data collection, the Ethical Committee approval (Nr. 1/2015) was obtained from the University of the Coordinating Centre [Blinded for Reviewers].

Table 1. Overall characteristics of the sample (n=652).

Variables	Overall sample
Male gender, %	28.4
Mean age in years (SD)	43.7(9.0)
Married, %	61.8`´
Families with ≥1 children, %	66.9
Educational level	
- Nursing diploma	50.5
- University diploma	13.3
- Bachelor / Higher	36.2
Region, %	
- Abruzzo	37.5
- Marche	34.7
- Puglia	27.8
Hospital ward, %	
- Internal medicine	21.8
- General Surgery	26.8
- Cardiology	8.7
- Emergency Unit	14.5
- Maternal/Child health	8.6
- Other non surgical specialties	10.7
- Health District/Primary care facilities	8.9
Mean length of employment in years, (SD)	19.4(9.8)
Type of employment contract, %	02.5
- Open-ended contract	92.5
- Fixed term contract	7.5
Mean number of working hours per week (SD)	36.4 (3.7)
Mean monthly salary in Euros (SD) Self-reported health status	1500 (154)
·	2 2 (2 2)
Mean health status (SD)	3.0 (0.9)
Overall health status ≥3, % *	72.8%
Subjects experiencing ≥1 of the following	
health problems in the last year, % **	
- Allergy	21.0
- Dermatitis	9.5
- Depression	6.0
- Stress	38.8
- Anxiety	23.0
- Migraine	40.2
- Respiratory disorders	35.1
- Asthma	4.8
- Gastric reflux	26.1
- Backpain	52.5
- Hypertension	14.1 28.5
- Menstrual pain § - Others	28.5 8.7
Others	0.7

^{*} Self-reported health status rated at least as "good" on a 5-point Likert scale ranging from 1 ("the worst possible") to 5 ("excellent"). ** More than one answer possible. § Females only (n=467).

RESULTS

Sample description

A total of 652 nurses completed the questionnaire (male gender: 28.4%; mean age: 43.7 ± 9.0 years). Almost half of the participants (49.5%) had a University Nursing training; the large majority worked as Registered Nurses with an open-ended contract (92.5%). The mean duration of working experience was 19.4 ±9.8 years.

On a scale ranging from 1 (bad) to 5 (excellent), nurses self-rated their health status with a mean of 3. Overall, 72.8% of the participants rated their health status at least as "good".

Backpain, migraine, and stress were the most frequent health problems during the previous year (reported by 52.5%, 40.2%, and 38.8% of the nurses, respectively). The overall characteristics of the sample are shown in table 1.

Stanford Presenteeism Scale

The mean SPS-6 total score was 21.6 (±4.0) with 58.3% of the participants scoring ≥21/30, as shown in table 2. Nurses showed the highest levels of Presenteeism when considering the "Avoiding distractions" and "Completing work" dimensions of the tool.

Table 2. Main results of the 6-item Stanford Presenteeism Scale (SPS-6) in the sample (n=652).

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Items	
"Avoiding Distraction" Dimension	
1. Because of my health problem(s), the stresses of my job were much harder to handle	
- mean value (SD)	3.2 (1.3)
- % of subjects with score £2, %	36.5
3. My health problem(s) distracted me from taking pleasure in my work	
- mean value (SD)	3.4 (1.3)
- % of subjects with score £2, %	29.9
4. I felt hopeless about finishing certain work tasks, due to my health problem(s)	
- mean value (SD)	3.8 (1.2)
- % of subjects with score £2, %	17.9
"Completing Work" Dimension	
2. Despite having my health problem(s), I was able to finish hard tasks in my work	
- mean value (SD)	3.9 (1.1)
- % of subjects with score ≥4, %	78.9
5. At work, I was able to focus on achieving my goals despite my health problem(s)	
- mean value (SD)	3.7 (1.1)
- % of subjects with score ≥4, %	71.2
6. Despite having my health problem(s) I felt energetic enough to complete all my work	
- mean value (SD)	3.8 (1.1)
- % of subjects with score ≥4, %	72.7
Mean SPS-6 total score (SD)	21.6 (4.0)
% of subjects with total score ≥21/30, %	58.3
SD = Standard deviation.	
For items 1, 3, 4 the possible scores ranged from 5 ("strongly disagree") to 1 ("strongly

For items 1, 3, 4 the possible scores ranged from 5 ("strongly disagree") to 1 ("strongly agree"); for items 2, 5, 6 the possible scores ranged from 1 ("strongly disagree") to 5 ("strongly agree"). The SPS-6 total score is the sum of the scores in each of the 6 items. The total score ranged from 6 (minimum) to 30 (maximum), with higher scores indicating a higher level of Presenteeism.

Higher Presenteeism levels

Variables	Crude Coefficient (95% CI)	Adjusted Coefficient (95% CI) ^a	p ^a	
Male gender	-0.75 (-1.43; 0.07)	-1.07 (-1.76; -0.38)	0.002	
Age, 1-year increase	-0.06 (-0.09; 0.02)	-0.08 (-0.16; -0.00)	0.040	
Married	-0.37 (-0.85; 0.12)	-0.19 (-0.78; 0.39)	0.5	
One or more children	-0.06 (-0.72; 0.60)	0.45 (-0.34; 1.25)	0.3	
Educational degree				
- Nursing diploma	1	1		
- University diploma	-0.05 (-0.99; 0.90)	0.00 (-0.95; 0.95)	0.9	
- Bachelor / Higher	0.97 (0.30; 1.64)	0.75 (-0.08; 1.58)	0.08	
Hospital ward				
- Internal Medicine	1	1		
- General Surgery	0.33 (-0.57; 1.22)	0.21 (-0.66; 1.09)	0.6	
- Other nonsurgical specialties ^b	-0.14 (-1.02; 0.74)	-0.22 (-1.08; 0.65)	0.6	
- Emergency Unit	0.50 (-0.55; 1.55)	0.20 (-0.84; 1.24)	0.7	
- Health District / Primary care facilities	-0.20 (-1.43; 1.03)	-0.50 (-1.70; 0.70)	0.4	
Length of employment, 1-year increase	-0.03 (-0.07; 0.00)	0.04 (-0.03; 0.11)	0.22	
Open-ended employment contract	0.17 (-1.01; 1.35)	-0.39 (-1.61; 0.82)	0.5	
Monthly salary lower than 1500 euros	-0.15 (-0.83; 0.53)	-0.36 (-1.06; 0.35)	0.3	
Health status				
- No health problems	1	1		
- ≤2 self-reported health problems	1.48 (0.57; 2.39)	1.41 (0.51; 2.32)	0.002	
- 3-4 self-reported health problems	1.16 (0.23; 2.10)	1.06 (0.13; 1.99)	0.026	
- 5+ self-reported health problems	-0.56 (-1.50; 0.38)	-0.68 (-1.61; 0.26)	0.16	

CI, Confidence Interval. ^a Random-effect linear regression model, using region as the cluster unit. ^b Including Cardiology, Oncology, Maternal and child health, Mental health, Diagnostic imaging, and Dialysis unit.

Items	Allergy	Dermatitis	Stress	Anxiety	Migraine	Respiratory disorders	Gastric reflux	Backpain	Hyper tension	Menstrual pain
"AvoidingDistraction" Dimension										
Items 1+3+4										
- mean value (SD)	9.9 (3.3)	9.4 (3.1)	9.3 (3.0) *	9.4 (3.0) *	10.0 (3.1) *	10.3 (2.9)	9.5 (3.0) *	9.7 (3.1) *	9.2 (3.2) *	10.0 (3.1)
- % of subjects with score £10, %	53.3	67.7	66.0 *	65.3 *	56.1 *	52.0	64.7 *	60.0 *	62.0 *	55.6
Item 1										
- % of subjects with score £2, %	40.9	51.6 *	52.2 *	46.7 *	43.9 *	34.1	47.1 *	44.4 *	47.8 *	44.4
Item 3										
- % of subjects with score £2, %	34.3	45.2 *	40.7 *	37.3 *	32.8	28.0	40.0 *	36.3 *	39.1 *	37.6 *
Item 4										
- % of subjects with score £2, %	21.9	19.4	22.5 *	24.7 *	17.6	17.0	20.0	21.1 *	21.2 *	13.5
"Completing Work" Dimension										
Items 2+5+6										
- mean value (SD)	11.4 (2.8)	11.3 (3.0)	11.5 (2.5)	11.2 (2.6)	11.5 (2.5)	11.5 (2.6)	11.5 (2.3)	11.5 (2.6)	11.0 (2.5)	11.7 (2.5)
- % of subjects with score ≥12, %	62.0	53.2	59.3	53.3	62.6	61.6	60.0	61.4	51.1	63.2
Item 2										
- % of subjects with score ≥4, %	80.3	74.2	83.4 *	78.7	83.2 *	81.2	82.9	81.9	84.8	86.5 *
Item 5										
- % of subjects with score ≥4, %	69.3	71.0	71.5	65.3	73.3	71.6	71.8	73.1	63.0	74.4
Item 6										
- % of subjects with score ≥4, %	73.0	66.1	70.4	66.7	73.7	72.9	73.5	71.1	57.6	73.7
Mean SPS-6 total score (SD)	21.4 (4.5)	20.7 (4.3) *	20.9 (4.2) *	20.6 (4.0) *	21.5 (4.0)	21.8 (4.0)	21.0 (4.1)	21.3 (4.2) *	20.3 (4.0) *	21.7 (4.0)
% of subjects with total score ≥21/30, %	44.5	37.1	39.5 *	34.7 *	47.3	49.3	41.8	44.7 *	30.4 *	49.6

SD = Standard deviation. * For any item, p<0.05 between patients with and patients without each clinical condition. For items 1, 3, 4 the possible scores ranged from 5 ("strongly disagree") to 1 ("strongly agree"). The SPS6 total score is the sum of the scores in each of the 6 items. The total score ranged from 6 (minimum) to 30 (maximum), with higher scores indicating a higher level of Presenteeism. See Table 2 for the definition of each SPS6 item.

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Table 5. Main results of the 6-item Stanford Presenteeism Scale (SPS-6), overall and stratified by item and age class.

Items	20-34years	35-44years	45-54years	55+years	р*
"AvoidingDistraction" Dimension					
Items 1+3+4					
- mean value (SD)	10.9(2.8)	10.6 (3.2)	10.0 (3.0)	9.6 (3.3)	
- % of subjects with score £10, %	40.5	47.3	53.8	61.0	В, С, Е
Item 1					
- % of subjects with score £2, %	27.6	36.7	38.8	42.9	В, С
Item 3					
- % of subjects with score £2, %	22.4	29.8	30.8	39.0	С
Item 4					
- % of subjects with score £2, %	12.9	16.5	19.6	24.7	С
"Completing Work" Dimension					
Items 2+5+6					
- mean value (SD)	11.5(2.6)	11.2 (3.0)	11.4 (2.8)	11.3 (2.3)	B, C, D, E
- % of subjects with score ≥12, %	61.2	61.9	63.8	57.1	
Item 2					
- % of subjects with score ≥4, %	79.3	76.2	80.4	81.8	
Item 5					
- % of subjects with score ≥4, %	69.8	71.1	72.5	68.8	
Item 6					
- % of subjects with score ≥4, %	74.1	74.3	71.3	70.1	
Mean SPS-6 total score (SD)	22.4(3.8)	21.8 (4.0)	21.4 (4.1)	20.9 (4.1)	В, С
% of subjects with total score ≥21/30, %	56.9	49.1	47.9	37.7	С

SD = Standard deviation. A For any item, p<0.05 between 2034y patients and 3544y patients; B For any item, p<0.05 between 2034y patients and 4554y patients; C For any item, p<0.05 between 3544y patients and 4554y patients; D For any item, p<0.05 between 3544y patients and 4554y patients; D For any item, p<0.05 between 3544y patients and 4554y patients; E For any item, p<0.05 between 4554y patients; F For any item, p<0.05 between 4554y patients and 55+y patients. For any item, p<0.05 between 4554y patients and 55+y patients; E For any item, p<0.05 between 4554y patients and 55+y patients. The standard from 5 ("strongly agree") to 1 ("strongly agre

Presenteeism predictors

At multivariate analysis, female gender seems to be a predictor of higher levels of Presenteeism (p=0.002) which also seems to increase, although slightly, among younger nurses (p=0.040). The only other conditions significantly affecting the severity of Presenteeism seem to be the presence of 2 to 4 self-reported health problems (both p<0.05) as showed in Table 3.

(Insert Table 3 here)

Table 4 shows the main results of the 6-item Stanford Presenteeism Scale (SPS-6), overall and stratified by item and health condition. Among nurses reporting ≥1 physical health problems, significantly higher Presenteeism levels emerged among those reporting back pain and hypertension, as compared to those not affected by these conditions (p<0.05); similarly, a statistically significant difference in the mean SPS-6 total score was reported among nurses declaring anxiety and stress.

No significant differences between nurses employed with an "Open-ended employment contract" or "Fixed term contract" were found.

When stratifying Presenteeism by age, younger nurses showed higher levels of Presenteeism (see Table 5).

DISCUSSION

Presenteeism seems to be very common among Italian nurses, such as in other countries (Warren et al., 2011; Brborovic et al., 2014; Umann et al., 2012; Martinez & Ferreira, 2012; Letvak et al., 2012).

Furthermore, Italian nurses declare their difficulties to accomplish their work with concurrent health problems. The present findings seem to confirm that nurses' Presenteeism affects work productivity and, in turn, quality of care (Letvak et al., 2012; Martinez & Ferreira, 2012; Umann et al., 2012).

In line with previous studies, the most frequently reported health problems associated with Presenteeism are back pain, stress and anxiety, probably because these health problems are strongly related with a profession that typically requires physical and psychological efforts (Letvak et al., 2012; Skela-Savič et al. 2017; Mossad et al. 2017).

As already reported in previous studies (Martinez & Ferreira, 2012; Simpson, 1998), also in Italy male nurses seem to be less prone to Presenteeism, which also seems to decrease with increasing age. Interestingly, declaring up to 4 self- reported health problems is associated with an

increase in the level of Presenteeism, but not the presence of a higher number of health conditions. A possible explanation of this peculiar finding might lie in the fact that over time a spirit of adaptation is established.

This study presents some limitations that should be discussed. First, the cross-sectional design of the present study cannot be able, by its nature, to elucidate causal relationships, but only to assess a potential association between the conditions under evaluation. Second, the use of a self-reported questionnaire, although validated (Cicolini et al., 2015), as investigative tool is inevitably prone to at least some degree of bias.

In conclusion, the present study may add some useful insights in order to achieve a better comprehension of the Presenteeism phenomenon among Italian nurses. It shows that Presenteeism is a common condition also among Italian nurses, such as in the international context, with similar characteristics and consequences. The present findings support the current evidence in emphasizing the importance of planning measures to promote wellbeing among health professionals, which is strongly related to a high-quality and cost-effective health care. In this context, a Performance Evaluation Policy that actually penalizes absenteeism and encourages not to use sick time is likely to lead to higher rates of Presenteeism. Moreover, the increase of retirement age may lead to the need to get to work although health problems, thus affecting quality of work, productivity and costs. Therefore, in an age when all Health Policies are oriented to improve the quality of care and decrease health care costs, nurses' Presenteeism cannot be overlooked.

CONCLUSIONS

Nurses are among the job categories with the highest degree of Presenteeism that is a common condition among many job categories, especially nurses, which may negatively affect work quality.

Findings from this study showed that Italian nurses reported similar characteristics and consequences as reported abroad, but nurses should be more aware on Presenteeism's negative implications both on their health status and profession.

To date, in an age when all Health Policies are oriented to improve the quality of care and decrease health care costs, nurses' Presenteeism cannot be overlooked The present study support the current evidence in emphasizing the importance of planning measures to promote wellbeing among health professionals.

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