

# How are witnessed workplace bullying and bystander roles related to perceived care quality, work engagement, and turnover intentions in the healthcare sector? A longitudinal study

Kristoffer Holm<sup>a,\*</sup>, Sandra Jönsson<sup>a</sup>, Tuija Muhonen<sup>b</sup>

<sup>a</sup> Centre for Work Life and Evaluation Studies/Department of Urban Studies, Malmö University, Malmö, Sweden

<sup>b</sup> Centre for Work Life and Evaluation Studies/Department of School Development and Leadership, Malmö University, Malmö, Sweden

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## ABSTRACT

**Background:** Workplace bullying is widespread in the healthcare sector and the negative effects are well known. However, less attention has been paid to bystanders who witness bullying in the workplace. Bystanders can affect the bullying process by engaging in active, passive, or destructive behaviors. There is a need to study work-related and organizational consequences of witnessing bullying and bystander behaviors.

**Objective:** The aim was to explore how witnessed workplace bullying and bystander behaviors are associated with work-related and organizational consequences, such as perceived quality of care, work engagement, and turnover intentions, among healthcare workers over time.

**Design:** Longitudinal design. An online questionnaire was administered twice over the course of six months.

**Setting(s):** Employees in the healthcare sector in Sweden, such as physicians, nurses, and assistant nurses, responded to the questionnaire.

**Participants:** 1144 participants provided longitudinal data.

**Methods:** Structural equation modeling was used to explore the associations between witnessed bullying, bystander behavior, work-related and organizational factors over time.

**Results:** Witnessed workplace bullying ( $B = -0.18$ , 95 % CI  $[-0.23$  to  $-0.12]$ ) and the bystander outsider role ( $B = -0.24$ , 95 % CI  $[-0.29$  to  $-0.19]$ ) were statistically significantly related to a decrease in perceived quality of care. Work engagement was statistically significantly predicted by all three bystander roles over time; positively by the defender role ( $B = 0.11$ , 95 % CI  $[0.05$ – $0.17]$ ), and negatively by the outsider role ( $B = -0.23$ , 95 % CI  $[-0.29$  to  $-0.16]$ ), and the assistant role ( $B = -0.32$ , 95 % CI  $[-0.41$  to  $-0.24]$ ). The outsider role ( $B = 0.12$ , 95 % CI  $[0.02$ – $0.22]$ ), the assistant role ( $B = 0.17$ , 95 % CI  $[0.03$ – $0.30]$ ), and witnessed workplace bullying ( $B = 0.18$ , 95 % CI  $[0.08$ – $0.29]$ ), all positively predicted increased turnover intentions at a subsequent time point.

**Conclusions:** In addition to the direct negative impact workplace bullying has on those targeted by it, witnessing bullying and taking different bystander roles can have work-related and organizational consequences by influencing perceived care quality, employees' work engagement, and their intention to leave the organization.

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## What is already known

- Workplace bullying is a pervasive and harmful work environment issue in the healthcare sector.
- Workplace bullying may extend beyond targets and perpetrators and affect bystanders' health as well.

- Bystanders can take different roles when they witness bullying, such as defending the victim (active), assisting the perpetrator (destructive), or being an outsider (passive).

## What this paper adds

- Perceived care quality is poorer and turnover intentions are higher among those that have witnessed bullying.
- Active bystander behaviors are positively associated with healthcare employees' work engagement over time.
- Passive and destructive bystander behaviors have negative work-related and organizational consequences, such as poorer perceived

\* Corresponding author at: Centre for Work Life and Evaluation Studies, Malmö University, 205 06 Malmö, Sweden.

E-mail address: [Kristoffer.Holm@mau.se](mailto:Kristoffer.Holm@mau.se) (K. Holm).

care quality, less engaged employees, and higher turnover intentions among healthcare professionals.

## 1. Background

A good work environment and active workplace behavior are considered beneficial for organizational outcomes in healthcare (Hyde et al., 2013). However, the work environment and working conditions in healthcare occupations are often characterized by challenges such as interprofessional conflicts, hierarchies, high demands, frequent turnover, and substantial levels of stress (Belrhiti et al., 2021; Manyisa and van Aswegen, 2017). The healthcare sector also faces challenges such as high levels of workplace bullying and harassment (Obeidat et al., 2018; Stanley et al., 2007; Zachariadou et al., 2018). A demanding work environment and working conditions can be detrimental to individuals working in healthcare, but also to the ability of healthcare organizations to provide high-quality care to patients. For instance, research has shown that workplace bullying can lead to negative outcomes for organizations, such as impaired productivity, absenteeism, and high turnover of employees (for a review, see Hoel et al., 2020). Less is known about the work-related and organizational consequences of witnessing bullying (Hoel et al., 2020), particularly among healthcare workers. In this article the focus is on the relation between witnessing bullying, bystander roles and perceived quality of care, work engagement, and turnover intentions. The three outcome variables, quality of care, work engagement, and turnover intentions, were chosen because they are known to be affected by workplace bullying (e.g., Hoel et al., 2020; Pogue et al., 2022; Rai and Agarwal, 2017). However, to date there is a lack of knowledge about how witnessed workplace bullying and bystander roles relate to these work-related and organizational factors.

### 1.1. Work environment, working conditions, and organizational outcomes in healthcare

The main objective of healthcare organizations, to provide care, can be heavily affected by job characteristics such as the working conditions and work environment of employees in the sector (Copanitsanou et al., 2017; Teoh et al., 2021). For instance, studies have found that patient mortality was 8 % lower in more positively rated work environments (Olds et al., 2017), and that work environments that were rated as more favorable by nurses were associated with increased care quality and patient satisfaction (Aiken et al., 2012a). Likewise, it has been estimated that about a quarter of a million patients die annually in the United States due to clinical errors, making it the third leading cause of death in the US (Anderson and Abrahamson, 2017). An underlying factor related to care quality and patient safety could be employees' working conditions.

Job characteristics have also been found to influence factors such as work engagement for healthcare workers (Wan et al., 2018). Facilitating work engagement is important for both care quality (Wan et al., 2018), and employee retention (Kim and Yoo, 2018), making it a crucial element for the organization to foster (Kim and Yoo, 2018). Similarly, job characteristics such as preceptorship and strategic leadership have also been pointed out as important components for staff retention in healthcare (Jönsson et al., 2021), which is crucial for combating the issue of staff shortages in healthcare (Brook et al., 2019). Taken together, research indicates that the complex challenges of the work environment in the healthcare sector can impact the ability of organizations to carry out their main task: to provide healthcare and treat patients.

### 1.2. Workplace bullying in the healthcare sector

In addition to the organizational pressures in healthcare, stressors can also emerge in the social work environment. One prominent social work environment stressor is workplace bullying, which has been defined as "situations in which a focal person or persons repeatedly over a period

of time is subjected to negative acts in the workplace, where the target has difficulties in defending himself or herself against those negative acts" (Einarsen and Skogstad, 1996, p. 187). Workplace bullying has been tied to several of the factors that are characteristic of healthcare work environments, such as role conflicts (Van den Brande et al., 2016), hierarchical organizations (An and Kang, 2016), high demands (Conway et al., 2021), and organizational change (Baillien et al., 2019), making it a high-risk environment for bullying. Workplace bullying has been found to be prevalent among nurses, assistant nurses, and physicians (Einarsen et al., 1998; Karatuna et al., 2020; Rouse et al., 2016; Shorey and Wong, 2021). A great deal of work has been carried out on workplace bullying in the healthcare sector, as evidenced by several recent reviews (e.g., Castronovo et al., 2016; Johnson and Benham-Hutchins, 2020; Samsudin et al., 2018), with prevalence reports ranging from 31 to 32 % among physicians and nurses (Lever et al., 2019). The high prevalence rates indicate that the healthcare sector may be particularly impacted by workplace bullying. In addition to the negative consequences of bullying on an individual level that are well known (Lever et al., 2019), studies have also shown that workplace bullying can have work-related and organizational consequences within the healthcare sector (Castronovo et al., 2016).

### 1.3. Witnessed workplace bullying and bystander behavior

In a healthcare context, workplace bullying has been found to reach beyond the immediate situation and influence bystanders who witness bullying (Thompson et al., 2020). Nevertheless, most research about workplace bullying has been carried out by focusing on either the target or the perpetrator of bullying (Ng et al., 2020), while less attention has been paid to the largest group, bystanders who witness workplace bullying (Pouwelse et al., 2021). Bystanders have the capacity to influence the bullying situation by engaging in active, passive, or destructive behaviors (Paull et al., 2012; Thompson et al., 2020). In this study, we operationalize active, passive and destructive bystander behaviors by using Salmivalli et al.'s (1996) participant roles. For instance, bystander behaviors could include avoiding the bullying situation (taking a passive outsider role), defending or supporting the victim (an active defender role), or contributing to the bullying (a destructive assistant role) (Salmivalli et al., 1996). Paull and colleagues, building on the roles identified by Salmivalli et al. (1996), describe a defender as a bystander that "stands up for a victim", an outsider as a bystander that "walks away", and an assistant as a "collaborator" that "actively joins in or assists the bully" (Paull et al., 2012, p. 355). Outside of a healthcare context, studies on bystander behavior have shown that passive bystanders are at increased risk of becoming the next target (Rosander and Nielsen, 2021), and that the negative effects of workplace bullying are stronger in groups with a large number of passive bystanders (Ng et al., 2022). Conversely, a larger number of active bystanders in workgroups can reduce the negative impact of bullying (Ng et al., 2022).

Within a healthcare context, studies have explored factors that influence the behavior of bystanders (Jönsson and Muhonen, 2022; Thompson et al., 2020). These studies describe barriers within the healthcare sector that prevent active intervention, such as fear of repercussions and a normalization of mistreatment in the workplace culture (Jönsson and Muhonen, 2022; Thompson et al., 2020). In addition, roles such as facilitating the bullying and defending the victim have previously been found in a pilot study to either threaten or enhance patient safety (Kim, 2020). In fact, bystander behaviors emerged as the strongest predictors of nurse-assessed patient safety, which included medication errors, hospital-acquired infections, complaints, and fall injuries (Kim, 2020).

Consequently, preliminary evidence suggests that not only bullying, but also the bystanders' behavior, can have implications for patient outcomes. However, there is a lack of more detailed knowledge about how bystanders in the healthcare sector are affected by witnessing workplace bullying, in what way their own behavior is related to different outcomes for the organization, and how this develops over time. Although exposure

to bullying has been linked to lower work engagement (Rai and Agarwal, 2017), and higher turnover intentions (Djurkovic et al., 2008), less is known about how witnessed bullying and bystander roles relate to employees' work engagement and willingness to stay in their organization. More knowledge about work-related and organizational outcomes connected to bystanders in workplace bullying is needed in order to understand the full ramifications of bullying in the healthcare sector.

#### 1.4. The present study

In this study, we address the knowledge gap regarding bystanders in workplace bullying by exploring work-related and organizational consequences related to (a) witnessed workplace bullying, and (b) a bystander's behavior in workplace bullying, among physicians, nurses, and assistant nurses. We use data from two time points in order to assure that any potential change in work-related and organizational outcomes is temporally preceded by the witnessed bullying events or bystander behaviors.

The aim of the study was to explore how witnessed workplace bullying and different bystander roles (assistant, defender, or outsider) were related to perceived quality of care, work engagement, and turnover intention, over time in the healthcare sector. Although perceived quality of care, work engagement, and turnover intentions all are manifested on the individual level, they have direct implications for the organization. We therefore refer to them as work-related and organizational outcomes in this study, consistent with previous operationalizations of, for instance, work engagement (e.g., Keyko et al., 2016; Schaufeli and Taris, 2014).

One way of understanding the work-related and organizational outcomes of witnessed bullying on one hand, or bystander behavior on the other hand, is by the job demands–resources model. The job demands–resources model suggests that all job characteristics can be divided into either demands or resources (Bakker and Demerouti, 2017). In turn, job demands and resources are related to both health-impaired and motivational processes, either hampering employee well-being or allowing employees to flourish. This, in turn, has been suggested to relate to work-related outcomes such as work engagement (Schaufeli and Taris, 2014), job performance (Bakker and Demerouti, 2017), and turnover intentions (Chênevert et al., 2021). Although the original model proposed that job resources were associated with work engagement, studies have shown that there also is a relationship between job demands and lower levels of work engagement (Crawford et al., 2010; Kaiser et al., 2020). This suggests that both demands and resources may influence work-related and organizational outcomes.

Workplace bullying has often been conceptualized as a stressor, framed as a job demand (e.g., Ng et al., 2022). This line of reasoning has been extended to witnessed workplace mistreatment in a few studies (Holm et al., 2021; Sprigg et al., 2019). In earlier studies, the effect of witnessed mistreatment on employees' well-being has been in focus (Holm et al., 2021; Sprigg et al., 2019). Less attention has been paid to the work-related and organizational outcomes of witnessing workplace bullying and different bystander roles. Theoretically, job demands could affect not only well-being, but also work-related and organizational factors negatively, as demands are proposed to lead to strain through the health-impairment pathway (Bakker and Demerouti, 2017). Strain, in turn, is associated with withdrawal behaviors and lower commitment (Podsakoff et al., 2007). Strain can therefore result in lower work engagement and increased turnover intentions as a result of withdrawal from the work setting. Additionally, strain is proposed to influence work performance negatively (Bakker and Demerouti, 2017), which could be reflected in care quality within a healthcare context (Wazqar et al., 2017). Consistent with the notion about strain-related outcomes of job demands, earlier studies have shown that workplace bullying is related to lower quality of care, lower work engagement, and higher intention to quit (Hoel et al., 2020; Pogue et al., 2022; Rai and Agarwal, 2017). These observed relationships could be explained by the JD-R framework, when bullying is conceptualized as a stressor in the

workplace. Considering that quality of care, work engagement, and turnover intentions are important practical outcomes for the healthcare sector, and that the prevalence of witnessed bullying is greater than experienced bullying, therefore affecting more employees (Nielsen et al., 2021), it is important to investigate whether, and to what extent, these effects extend to witnessed workplace bullying. Consequently, we hypothesize that the stressor of witnessing workplace bullying negatively relates to work-related and organizational outcomes. We also expect destructive and passive bystander behaviors to follow the same pattern of relationships, whereas active bystander behaviors should relate positively to work-related and organizational outcomes, based on the findings of Kim (2020).

Specifically, we hypothesized that:

**Hypothesis 1.** Witnessing bullying is associated with (a) lower quality of care; (b) lower work engagement; (c) greater turnover intention.

**Hypothesis 2.** The assistant role is associated with (a) lower quality of care; (b) lower work engagement; (c) greater turnover intention.

**Hypothesis 3.** The outsider role is associated with (a) lower quality of care; (b) lower work engagement; (c) greater turnover intention.

**Hypothesis 4.** The defender role is associated with (a) greater quality of care; (b) greater work engagement; (c) lower turnover intention.

## 2. Methods

### 2.1. Procedure

Questionnaire data were collected among healthcare employees at two time points during 2020. The questionnaires were administered by a public opinion poll company (KANTAR Sifo) among healthcare workers included in their panel, and among employees in a regional healthcare organization. KANTAR Sifo's panel comprises over 100,000 randomly recruited individuals aged 16 and above. As the panel registers occupational information, surveys can be targeted to specific occupational groups. In this case, the survey was administered to the panelists reported to be working as physicians, nurses, or assistant nurses. In addition to the panel, the questionnaire was administered through an email address registry within the regional public healthcare organization. The first questionnaire was distributed during April and May 2020 (time 1), and the second one during October and November 2020 (time 2). In total, 1590 participated at time 1, and 1616 participated at time 2. We obtained matched responses over time for 1144 respondents. A majority of these (87.5%) were from the KANTAR Sifo panel. The response rate from the regional healthcare organization was 12% at time 1 and 10% at time 2. The response rate from the panel was 75% at time 1 and 77% at time 2. KANTAR Sifo offers their panelists a small incentive for participation, corresponding to a value of about \$2 per wave. No incentive was offered to the public regional employees. This may explain the differences in response rates. The study had a full panel study design, meaning that all factors were measured at both measurement points, in order to enable exploration of change in cross-lagged relationships.

### 2.2. Participants

The sample primarily consisted of physicians, nurses, and assistant nurses. The sample characteristics are displayed in Table 1.

### 2.3. Measures

#### 2.3.1. Demographics

The demographic questions included gender, age, tenure at current workplace and in healthcare work, and occupational title.



**Table 1**  
The sample's demographic composition at both timepoints.

	N	Age	Gender	Tenure health care	Tenure workplace	Physicians	Nurses	Assistant nurses	Other occupation <sup>a</sup>
Time 1	1590	$M = 50.21$ ( $SD = 12.35$ )	78.4 %women, 20.1 %men	$M = 21.35$ ( $SD = 13.42$ )	$M = 9.75$ ( $SD = 9.87$ )	18.1 %	33.4 %	37.2 %	11.1 %
Time 2	1616	$M = 50.80$ ( $SD = 12.07$ )	79.2 %women, 19.7 %men	$M = 21.78$ ( $SD = 13.42$ )	$M = 10.30$ ( $SD = 10.10$ )	18.3 %	32.5 %	37.3 %	11.6 %

<sup>a</sup> Care assistant, midwife, personal assistant, physiotherapist, psychologist, etc.

### 2.3.2. Witnessed workplace bullying

We measured the degree of witnessed workplace bullying with a Swedish translation (Rosander and Blomberg, 2018), of the Negative Acts Questionnaire-Revised (Einarsen et al., 2009). The scale consists of 22 items measuring work-related bullying, person-related bullying, and violence or threats of violence. The measure included the prompt: "Which of the following negative acts have you witnessed someone else being exposed to in relation to your work the past six months?" A sample item was "Being humiliated or ridiculed in connection with their work". Response options ranged from 1 (never) to 5 (all of the time). Cronbach's alpha ( $\alpha$ ) was 0.95 at time 1, and 0.94 at time 2.

The respondents were also asked whether they had witnessed workplace bullying during the past six months in accordance with the following definition: "Bullying occurs when a person is exposed to repeated uncomfortable, demeaning, or hurtful acts in the workplace. To be called bullying, it must occur over a period of time, and the person subjected to it would have difficulty defending themselves against it. Bullying can occur both offline and online". Response options were either 1 (yes) or 0 (no).

### 2.3.3. Bystander roles

Nine items adapted from the Participant Roles Scale (Salmivalli et al., 1996), were used to measure bystander behavior in response to witnessed bullying. The items, that were originally designed for school children, were adjusted slightly to fit a workplace context. Only participants who reported having witnessed bullying on the single item measure were prompted to report bystander roles. All other measures were completed by all of the participants. Participants who responded "yes" to the witnessed workplace bullying measure in the previous step, were presented with the prompt: "How did you act in the situation?" before the bystander role items. One item "did you assist the perpetrator in any way?" measured the assistant bystander role. Five items (e.g., "did you encourage the victim to tell their supervisor about the bullying?") measured the defender bystander role. Three items measured the outsider role (e.g., "did you pretend nothing happened?"). Response options were 1 (never), 2 (sometimes) and 3 (often). For the defender scale,  $\alpha = 0.76$  at time 1 and  $\alpha = 0.73$  at time 2. For the outsider scale,  $\alpha = 0.68$  at time 1, and  $\alpha = 0.68$  at time 2.

### 2.3.4. Perceived quality of care

Three items assessed quality of care (Berthelsen et al., 2018). A sample item was "To what extent do you think that the following issues characterize your ward/department? Is the quality of the actual treatment of patients good?" Response options were 1 (to a very small extent) to 5 (to a very high extent).  $\alpha = 0.81$  at time 1,  $\alpha = 0.83$  at time 2.

### 2.3.5. Work engagement

Work engagement was measured with three items (Schaufeli et al., 2019). A sample item was "At my work, I feel bursting with energy." Response options ranged from 1 (never) to 7 (always).  $\alpha = 0.82$  at time 1,  $\alpha = 0.80$  at time 2.

### 2.3.6. Turnover intentions

Turnover intentions were measured with two items (Jaros, 1997): "I consider looking for a new job within one year" and "I consider looking for a new job in the near future". Response options were 1 (never/almost never) to 5 (very often/always). The questions were highly

correlated  $r = 0.91$ ,  $p < .001$  at time 1, and  $r = 0.92$ ,  $p < .001$  at time 2. They were therefore averaged into one index representing turnover intentions.

### 2.4. Ethical considerations

All respondents were presented with a consent form including information about the study prior to participation. Participants had to give active consent to participate and were informed that the study design was longitudinal. Ethical approval was granted by the Swedish Regional Ethical Review Board (ref no. 2018/385).

### 2.5. Analytical strategy

To explore whether witnessed bullying or different bystander roles (assistant, defender, or outsider) were related to perceived quality of care, work engagement, and turnover intentions over time, we used structural equation modeling. The lavaan-package (Rosseel, 2012), in R version 4.1.0 (R Core Team, 2021), was used to estimate the models. The analytical strategy consisted of three steps.

First, a confirmatory factor analysis was conducted to investigate the factor structure of the constructs (the measurement model). Items from each scale were set to load on each latent factor. The factors of witnessed negative acts, defender, outsider, quality of care, and work engagement were tested in the same model. Both time 1 and time 2 items were included to load on a time 1 and time 2 factor respectively. Factors and cross-lagged item level residuals were allowed to correlate in the model (Cole and Maxwell, 2003). The factor structure for the assistant factor and turnover intentions could not be tested in the model, as these consisted of 1 and 2 items respectively. We evaluated the models' fit to the data against criteria conventionally used in the literature, i.e., comparative fit index [CFI] > 0.95, root mean square error of approximation [RMSEA] < 0.06, standardized root mean square residual [SRMR] < 0.08, and the  $\chi^2$  test (Hu and Bentler, 1999).

In the second step, a stability model was estimated. In this model, scales rather than latent variables were used to reduce model complexity. The stability model included all the constructs of interest at time 1 and time 2, with autocorrelations (each factor predicting itself over time) specified. This model demonstrates the stability of the ratings over time for each construct.

Third, in the predictive model, paths from witnessed negative acts and the bystander roles at time 1, predicting quality of care, work engagement, and turnover intentions at time 2, were added to the stability model. In this model, a positive statistically significant parameter estimate means that an increase in the predictor is associated with change (higher levels) of the factor over time. A negative statistically significant parameter estimate means that an increase in the predictor is associated with change (lower levels) of the factor over time. Pairwise estimation was used to address partially missing data. All parameter estimates are unstandardized, and 95 % confidence intervals are provided within brackets.

## 3. Results

In total, 16.3 % reported having witnessed workplace bullying at time 1, and 15.3 % reported that they had witnessed workplace bullying at time 2. Respondents who had witnessed bullying reported significantly higher mean levels on the Negative Acts Questionnaire

**Table 2**  
Pearson's correlations, means, and standard deviations of study variables at time 1 (t1) and time 2 (t2) (N = 91–1615).

	WNAQ t1	Assistant t1	Defender t1	Outsider t1	QoC t1	WE t1	TI t1	WNAQ t2	Assistant t2	Defender t2	Outsider t2	QoC t2	WE t2	TI t2
WNAQ t1	–													
Assistant t1	0.00													
Defender t1	0.10	–0.03												
Outsider t1	0.03	–0.03	–0.53***											
QoC t1	–0.40***	0.04	0.06	–0.11										
WE t1	–0.12***	0.07	0.19**	–0.19**	0.30***									
TI t1	0.31***	–0.09	–0.04	0.07	–0.38***	–0.24***								
WNAQ t2	0.63***	–0.04	0.10	–0.07	–0.30***	–0.12***	0.26***							
Assistant t2	–0.09	0.17	–0.02	–0.01	0.08	0.01	–0.01	–0.02						
Defender t2	0.03	–0.01	0.52***	–0.38***	0.11	0.22**	–0.08	0.10	0.07					
Outsider t2	–0.06	0.01	–0.39***	0.63***	–0.12	–0.19*	0.04	–0.03	–0.11	–0.38***				
QoC t2	–0.35***	0.05	0.07	–0.19*	0.63***	0.21***	–0.36***	–0.38***	–0.07	0.05	–0.01			
WE t2	–0.11**	–0.05	0.25**	–0.27***	0.26***	0.69***	–0.24***	–0.11***	0.11	0.17**	–0.18**	0.28***		
TI t2	0.25***	–0.03	–0.04	0.07	–0.28***	–0.20***	0.65***	0.29***	0.04	0.03	–0.05	–0.34***	–0.30***	–
M	1.34	1.09	2.34	1.65	4.08	5.48	2.17	1.31	1.15	2.31	1.64	4.04	5.40	2.27
SD	0.46	0.34	0.53	0.52	0.65	0.88	1.30	0.43	0.46	0.51	0.52	0.67	0.91	1.37

Note. WNAQ = Witnessed Negative Acts; QoC = quality of care; WE = work engagement; TI = turnover intentions. The N for correlations between T1 variables ranged from 257 to 1590. The N for correlations between T2 variables ranged from 244 to 1615. The lowest N was found for the correlations between the bystander behavior constructs over t1 and t2 (N = 91–92), whereas the largest N was found for the correlations between WNAQ, WE and QoC at t2 (N = 1615). All matched respondents (N = 1144) completed the QoC and WE measures at both t1 and t2, with N = 1140 completing the turnover intentions measure at both t1 and t2. The number of respondents completing the bystander behavior measures at t1 and the outcome measures at t2 was N = 176. The number of respondents completing the WNAQ measure at t1 and the outcome measures at t2 was N = 1078–1081.

\*  $p < .05$ .  
\*\*  $p < .01$ .  
\*\*\*  $p < .001$ .

at both time points,  $M_{\text{witnessed}} = 1.89$ ,  $M_{\text{not witnessed}} = 1.23$ , at time 1  $t(279.24) = 15.89$ ,  $p < .001$ ;  $M_{\text{witnessed}} = 1.87$ ,  $M_{\text{not witnessed}} = 1.21$  at time 2  $t(261.12) = 15.21$ ,  $p < .001$ . Table 2 shows descriptive statistics, such as Pearson's correlations, means, and standard deviations of the study variables.

### 3.1. Measurement model

First, we estimated a measurement model using the items for each scale as indicators of latent variables for each construct. The model contained both time 1 and time 2 constructs. Most of the fit indices were acceptable;  $\chi^2(2403) = 10,160.494$ ,  $p < .001$ , CFI = 0.85, RMSEA = 0.04, SRMR = 0.057. Specifically, the RMSEA and SRMR values were within the conventional range, but the CFI was somewhat lower. This is not surprising, considering that CFI usually is reduced in models with a large number of items (Cheung and Rensvold, 2002). The scale for witnessed bullying consisted of 22 items per time point, which could explain the relatively lower CFI value. The  $\chi^2$  test has also been found to be very sensitive to sample size (Iacobucci, 2010). We therefore chiefly relied on the RMSEA and SRMR value when considering the model to fit acceptably to the data.

### 3.2. Stability model

In the next step we estimated a stability model using the scales for each construct. The stability model consisted of all constructs at time 1 and time 2, with autocorrelations specified for each construct. Factors were free to correlate within timepoints. The stability model had an acceptable fit to the data,  $\chi^2(42) = 716.809$ ,  $p < .001$ , CFI = 0.93, RMSEA = 0.088, SRMR = 0.061. The fit indices were in a good range, except for the RMSEA value. However, previous research has shown that RMSEA can be unreliable in models with few degrees of freedom (Kenny et al., 2015). We therefore considered the overall fit of the model to be acceptable. The autocorrelations were statistically significant at the  $p < .001$

level and positive for all factors, in the range of 0.32–0.71. The stability model is depicted in Fig. 1.

### 3.3. Predictive model

Next, we added paths to the stability model from witnessed workplace bullying, the assistant role, the defender role, and the outsider role at time 1, predicting quality of care, work engagement, and turnover intentions at time 2. Each construct at time 1 still had the predictive path (autocorrelation) to itself at time 2 from the stability model, to control for change in the constructs over time. The model fit the data adequately;  $\chi^2(30) = 402.820$ ,  $p < .001$ , CFI = 0.961, RMSEA = 0.078, SRMR = 0.046, and statistically significantly better than the stability model,  $\Delta\chi^2(12) = 313.99$ ,  $p < .001$ . The results showed eight statistically significant paths.

In support of Hypothesis 1(a) and (c), witnessed workplace bullying statistically significantly negatively predicted quality of care, ( $B = -0.18 [-0.23 \text{ to } -0.12]$ ,  $p < .001$ ), and positively predicted increased turnover intentions ( $B = 0.18 [0.08-0.29]$ ,  $p = .001$ ) at time 2. However, witnessed bullying did not predict work engagement, in contrast to Hypothesis 1(b).

In relation to Hypothesis 2, the assistant role was not statistically significantly related to (a) quality of care, but predicted (b) work engagement ( $B = -0.32 [-0.41 \text{ to } -0.24]$ ,  $p < .001$ ), and (c) turnover intentions at time 2 ( $B = 0.17 [0.03-0.30]$ ,  $p = .013$ ), in the hypothesized direction.

In full support of Hypothesis 3, the outsider role was statistically significantly associated with (a) quality of care ( $B = -0.24 [-0.29 \text{ to } -0.19]$ ,  $p < .001$ ), (b) work engagement ( $B = -0.23 [-0.29 \text{ to } -0.16]$ ,  $p < .001$ ), and (c) turnover intentions ( $B = 0.12 [0.02-0.22]$ ,  $p = .021$ ) over time.

Finally, the defender role positively predicted work engagement ( $B = 0.11 [0.05-0.17]$ ,  $p = .001$ ), consistent with Hypothesis 4(b), but the paths to quality of care and turnover intentions failed to reach statistical significance, in contrast to Hypothesis 4(a) and (c).

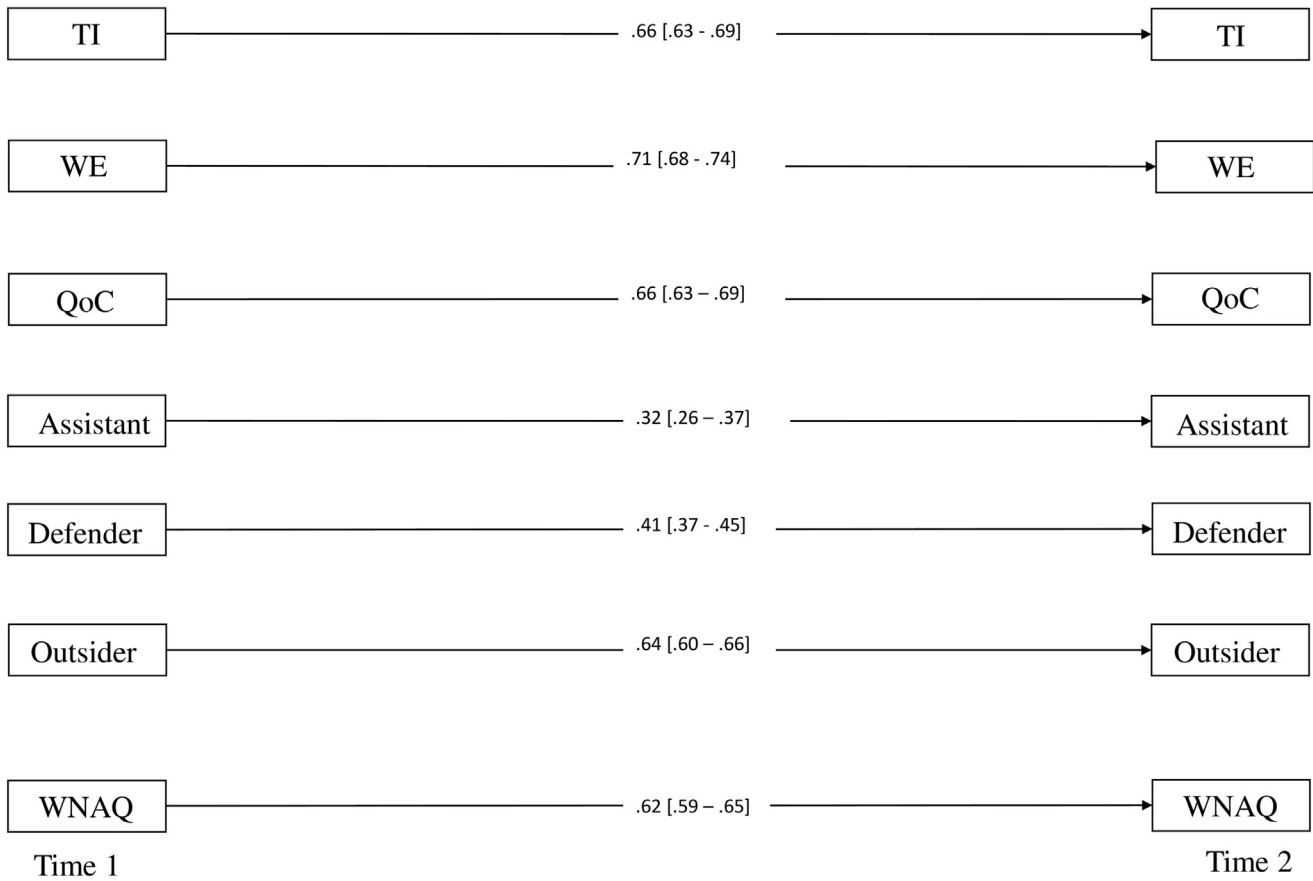


Fig. 1. Structural equation model testing the stability of the constructs over time. All estimates are statistically significant at the  $p < .001$  level. Unstandardized estimates, with 95 % CI within brackets. TI = turnover intentions; WE = work engagement; QoC = quality of care; WNAQ = Witnessed Negative Acts Questionnaire.

To summarize, there was mixed support for Hypotheses 1, 2, and 4, whereas Hypothesis 3 was fully supported. Overall, higher levels of both witnessed bullying and taking the outsider role in response to witnessed bullying were related to perceiving the quality of care as poorer over time. Defenders reported higher levels of work engagement over time, whereas outsiders and assistants reported relatively lower levels. Participants who had taken the outsider or assistant role to a higher degree, or witnessed higher levels of workplace bullying, had a higher tendency to report turnover intentions at a later time point. The predictive model is depicted in Fig. 2.

4. Discussion

The aim of the present study was to investigate how witnessed bullying and different bystander roles (assistant, defender, or outsider) were related to perceived quality of care, work engagement, and turnover intentions over time.

The results showed that both having witnessed workplace bullying and a tendency to take the outsider role in workplace bullying situations were associated with lower perceived care quality at the follow-up measurement. In other words, a work environment where bullying occurs, and where the bystander takes a passive role, can be detrimental to the perceived quality of care provided to patients. This corresponds to previous findings, suggesting a connection between perceived work environment and patient mortality (Aiken et al., 2012b). Reducing bullying may therefore not only be important for targets' and witnesses' health, but also for patients. Unexpectedly, neither the defender nor the assistant role predicted perceived quality of care in the present study, contrary to the hypothesis. This stands in contrast to findings showing these factors to predict nurse-assessed patient safety

(e.g., Kim, 2020). It appears that bystander behaviors have complex relationships to the quality and safety aspects in healthcare. In this study, the passive role was the only bystander behavior that was negatively related to perceived quality of care. In relation to the JD-R model, being a passive bystander could indicate a lack of resources in terms of agency or autonomy. Low job resources have been found to be negatively associated with quality of care (Hodroj et al., 2022). Lack of resources could therefore possibly both increase the tendency to take an outsider role, and negatively affect employees' perception of the quality of work. Conversely, active bystander behaviors may not reflect a lack of resources to the same extent, as active behaviors require that the employees have agency and ability to act. Further studies are needed on the correspondence between patient safety and perceived care quality in relation to

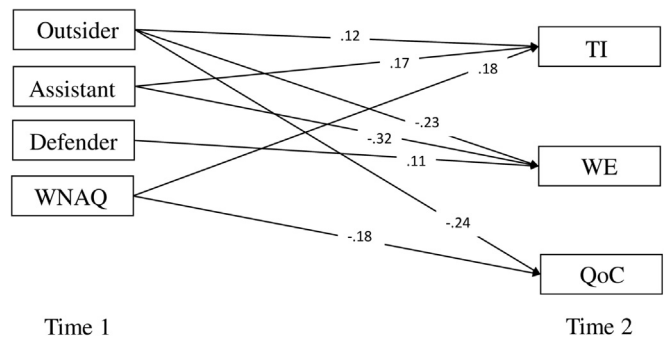


Fig. 2. Final simplified structural model of the statistically significant predictive paths. Unstandardized estimates, with 95 % CI within brackets. TI = turnover intentions; WE = work engagement; QoC = quality of care; WNAQ = Witnessed Negative Acts Questionnaire.

bystander behavior and bullying. In particular, future research should explore the role of job demands and resources in these relationships.

The results also showed that work engagement was predicted by all three bystander roles. Active behavior such as defending the victim was associated with higher work engagement, whereas the two other roles had a negative impact on employees' work engagement over time. Although previous studies have shown a link between workplace bullying and lower work engagement (Rai & Agarwal, 2017), we did not observe this pattern of relationship for witnessed workplace bullying. This could be due to the difference between witnessing and being exposed to bullying, where the latter would be a stronger stressor. Whether the non-significant relationship is specific to healthcare workers, who reportedly have high levels of work engagement (Aboshaiqah et al., 2016), which is influenced by a large number of organizational antecedents (Keyko et al., 2016), remains to be further explored. However, all three bystander roles—assisting the perpetrator, defending the victim, and being an outsider—were related to work engagement over time. Specifically, this could suggest that the employees' own agency in workplace bullying situations may be an important determinant of subsequent work-related outcomes, through influence on individual engagement. Encouraging active intervention when bystanders witness workplace bullying may therefore not only be beneficial for the victim being bullied, but also important for strengthening work engagement for bystanders.

Lastly, turnover intentions were more pronounced over time for those who had witnessed workplace bullying, or taken either the assistant or outsider role. This extends previous findings showing a link between workplace bullying and turnover intentions (Djurkovic et al., 2008), and suggests that retention of healthcare workers can be achieved to a higher degree in work environments where bullying is less frequent, not only for targets, but also for witnesses. Additionally, the findings suggest that bystanders who take the assistant or outsider role may be experiencing their workplace as particularly demanding, and therefore harbor relatively stronger turnover intentions over time, compared to other employees. Consequently, it is important to identify when employees take these roles, as they can lead to employee turnover.

Taken together, this study shows that witnessed workplace bullying and bystander behaviors in workplace bullying have negative consequences for the organization, in the form of lower perceived quality of care, lower work engagement, and higher turnover intentions, whereas active behaviors can increase work engagement over time. Previous studies have demonstrated clear negative consequences of workplace bullying (Mikkelsen et al., 2020), and that these might apply to targets, perpetrators, and bystanders (e.g., Sprigg et al., 2019). However, the present study shows that not only witnessing workplace bullying, but also bystanders' behavior in relation to bullying, can have severe consequences for the organization, by affecting how employees perceive the quality of care that is provided to patients, less engaged workers, and difficulties in retaining staff. Workplace bullying may therefore be an even larger problem than previously anticipated.

#### 4.1. Strengths and limitations

This study is strengthened by the longitudinal design, and the measurement of all constructs at two time points, which allowed us to explore change over time, which increases the internal validity of the conclusions. The study also consisted of a diverse sample of healthcare workers, including physicians, nurses, and assistant nurses, thus strengthening external validity.

Nevertheless, the study also has several limitations. For one, all data consisted of self-reports, thus vulnerable to common method variance (Podsakoff et al., 2003). Two of the outcome measures—perceived quality of care, and turnover intentions—may be particularly sensitive to the self-report format. Perceived quality of care does not necessarily correspond to actual quality of care, as measured by other indicators. Similarly, turnover intentions may not actually lead to employee turnover. Some studies have shown that the link between turnover intentions and actual

turnover is vague (Dollar and Broach, 2006; Cohen et al., 2016). However, meta-analytical evidence has found a statistically significant correlation between turnover intentions and actual turnover (Hom et al., 1992). This suggests that turnover intentions may have real implications over time, even if it would be beneficial to measure actual turnover as well.

Another limitation was the low reliability of the outsider measure at both time points, and the use of a one-item measure for the assistant role. The relatively weak autocorrelation for the assistant measure indicates that this measure was somewhat unstable over time. Due to the low prevalence of witnessed workplace bullying, complete data could only be obtained from a subset of the participants, and there was also limited variance observed in some of the bystander measures (e.g., the assistant role), even in large samples. Specifically, only 19 individuals reported assisting the perpetrator of bullying at time 1 (sometimes, or often), and 26 individuals at time 2. The limited variance may have attenuated the relationships observed in this study (Goodwin and Leech, 2006). Similarly, it should be noted that the effective *Ns* for each path were relatively smaller between the bystander role measures and the outcomes, than the effective *Ns* for the paths between witnessed negative acts and the outcomes, which may have limited the power to detect effects related to the bystander behavior constructs. Future studies could attempt to refine measures for bystander behavior in workplace bullying or complement self-reports with other data sources.

Finally, data were collected during the Covid-19 pandemic in Sweden. Therefore, it is not possible to rule out that the unique situation could have influenced the results of the study. Thus, there is a need for additional studies concerning work-related and organizational outcomes of witnessed workplace bullying and bystander roles.

## 5. Conclusions

Previous research has shown that workplace bullying is a pervasive and harmful work environment issue in the healthcare sector. In addition to the negative impact workplace bullying has on those directly targeted by it, it also affects bystanders. The way bullying affects bystanders has consequences for the organization, by modifying employees' perceived care quality, work engagement, and intention to leave the organization. This study highlights several indirect consequences of workplace bullying and demonstrates the importance of reducing bullying in the healthcare sector in order to mitigate negative outcomes for employees, organizations, and ultimately patients.

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## CRedit authorship contribution statement

**Kristoffer Holm:** Conceptualization, Methodology, Data curation, Formal analysis, Writing – original draft, Writing – review & editing. **Sandra Jönsson:** Conceptualization, Methodology, Investigation, Writing – review & editing, Project administration, Funding acquisition. **Tuija Muhonen:** Conceptualization, Methodology, Investigation, Writing – review & editing, Project administration, Funding acquisition.

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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