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# Public knowledge, attitudes, and intention to act violently, with regard to violence directed at health care staff

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ABSTRACT

*Background:* Violence directed at health care staff is widely prevalent. Few studies have explored public attitudes regarding violence against health care staff.

*Purposes:* To examine the Israeli public's attitudes regarding violence against health care staff and their intention to act violently in various health care settings.

*Method:* A cross-sectional study among 609 adult participants used a self-report questionnaire. The questionnaire dealt with attitudes regarding violence toward health care staff and presented the participants with three scenarios of violence in a health care setting. Logistic regression was conducted to explore variables that may explain the public's intentions to act violently.

*Findings:* The participants expressed condemnation of violence toward health care staff. Men displayed more violent attitudes than women. Participants who justified violence and were supportive of violent behavior displayed significantly more intentions to act violently.

*Discussion:* Actions taken to eliminate violence in the health system must be based on cooperation between health policymakers, health care workers, and the public.

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## Introduction

In March 2017, a community health nurse in a large community health clinic in Israel was set on fire by a patient and burned to death. This was followed by several additional brutal, violent events in hospitals and community clinics nationwide (physical attack of health care staff in the emergency department by several relatives of a patient; a nurse stabbed by a patient causing serious injury; and other incidents), giving rise to a massive uproar in the media. These extreme acts of violence emphasize the importance of coping with the rising violence against health care staff, both

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within the health system and as a broad social problem. In late 2017, the Israeli Ministry of Health nominated a professional committee to develop a comprehensive program to eradicate violence in the health system (Azoli & Shafran-Tikva, 2017). Government discussions are currently in progress on how to implement the committee's recommendations to eliminate violence.

Violence against health care staff is prevalent worldwide. Evidence from the US (Nelson, 2014), Italy (Ferri, Silvostri, Artoni & Di Lorenzo, 2016), Japan (Fujita et al., 2012), China (Zhao et al., 2015), and other countries emphasizes the prevalence and grave effects of violence for health care workers, health organizations, and society as a whole (Phillips, 2016). Violence against health care staff is a complex critical issue, and therefore dealing with it is complex and challenging (Wyatt, Anderson-Drevs & van Male, 2016). For the most part, the issue of violence in the health system has been studied from the point of view of health care workers. Very few studies have been conducted to examine the public perception of this issue (Al et al., 2015). The current study chose to explore the public perception of violence toward health care staff and their intention to act violently when encountering situations that simulate real cases.

## Background

Violence in the health sector includes physical assault, threatening behavior, bullying, verbal violence, and various forms of harassment (Pich et al., 2011). In the United States, the rate of violence against health care workers is higher than that experienced by most other workers. About 75% of all severe workplace attacks and 93% of all attacks on workers were directed against employees in the health care system. These figures refer to rates of both physical and verbal violence. The level of verbal violence is more difficult to estimate because such events are underreported (Phillips, 2016). Globally, nurses are the most vulnerable to violence in their workplace, more than other health workers (Wyatt et al., 2016; Gates, Gillespie & Succop, 2011). Phillips (2016) reported that 39% to 46% of nurses in the US had experienced violent verbal incidents and 13% of them had experienced an actual event of physical violence. Emergency department nurses reported the highest levels of verbal and physical violence.

The Israeli Ministry of Health (2017) reported a rate of 3,000 violent events perpetrated against health care staff every year, with 75% of health care staff reporting having been subjected to verbal violence (shouts, curses, and threats) at least once during the year preceding the study. More than one-third (36%) had experienced physical violence (including objects thrown or a patient refusing to leave the room) at least once a year, with 10% reporting that such events had occurred at least three times a year. In addition, 85% of the medical staff reported having witnessed violent incidents in the past year - defined as "secondary violence" (Elroy et al., 2011; Shafran-Tikva, Chinitz, Stern, & Feder-Bubis, 2017). Nevertheless, violence toward health care staff in Israel, especially verbal abuse, is underreported (Azoli & Shafran-Tikva, 2017). The failure of health professionals to report violence to which they have been subjected is similar in many countries (Wyatt et al., 2016) and is also similar to the underreporting of other violent incidents, such as domestic violence (Gracia, 2004).

Several laws in Israel are supposed to help the health system prevent violence; for example, the director of a health facility can bar a violent person from entering the establishment for 6 months (Azoli & Shafran-Tikva, 2017). However, to date, there is no information as to the extent to which this law is indeed implemented in the Israeli health system.

Violence has many implications for the staff and the organization. Physical and psychological injuries that include feelings of anger, fear, helplessness, humiliation, alienation, and even depression can lead to a decrease in employee motivation, the quality of professional care, sense of workplace and job commitment, and an increase in absenteeism (Phillips, 2016; Gates et al., 2011). Workers who were exposed to physical violence are 1.67 times more likely to suffer illness and to display absenteeism from the workplace even 10 years after the violent event (Friis, Larsen & Lasgaard, 2018). In addition, violent incidents can cause damage to property and to the reputation of the medical organization, in addition to financial expenses related to the treatment and rehabilitation of the injured staff (Spelten et al., 2017; Lanctôt & Guay, 2014).

An interactive model of workplace violence (Chappell & Di Martino, 2006) described a complex interrelationship between four risk factors leading to a violent event in the workplace: the individuals (the perpetrator and the victim), the workplace, the contextual and societal risk factors. Based on this model, it appears that the causes of violent incidents involving patients in health care settings are numerous and complex. Older patients and men tend to be more violent than younger patients and women (Elroy et al., 2011; Hahn et al., 2013). Perhaps not unexpectedly, patients with certain medical and mental condition such as dementia, individuals under the influence of drugs, and those suffering from restlessness, pain, and discomfort, were found to be more violent than other patients (Arnetz et al., 2018). Certain minority groups expressed feelings of disregard for their personal and cultural needs (Armstrong et al., 2013; Baum Kum, Shalit & Tal, 2017). These types of communication and cultural gaps between health care staff and patients increase the likelihood of violent events (Landau, 2004; Burgana, 2017; Fujita et al., 2012). Long waiting times, unavailability or a shortage of medical staff, crowded conditions, and a shortage of hospital beds, may also contribute to the creation of such incidents (Al et al., 2015, Shafran-Tikva et al., 2017). With regard to health care personnel, contributory factors

include poor health care-patient communication, disrespectful and arrogant treatment by health care staff, failure to respond to questions and insensitivity, and negative attitudes (Landau, 2004, Elroy et al., 2011; Landau, Bendalak, Amitay & Marcus, 2018). Moreover, there is evidence that when violence exists in society, it is likely that this will also be reflected in violent behavior within the health system (Chappell & Di Martino, 2006). When all these factors, or part of them, converge at a single point in a health care setting where stress is an integral component of the patient-health care staff encounter, this produces a situation prone to violent events.

To the best of our knowledge, with the exception of one Turkish study (Al et al., 2015), most studies examining violence in health care situations have examined the situation from the viewpoint of the health care staff or were based on an interview with a patient under treatment in a particular department (Magnavita & Heponiemi, 2012; Landau et al., 2018). Public attitudes toward such outbreaks of violence have, in contrast, not been thoroughly investigated to date. Therefore, the purpose of this study was to examine public knowledge and attitudes regarding workplace violence against health care staff and the professed intention to behave violently toward health care staff in various common situations within health settings.

## Methods

### *Design*

This study employed a cross-sectional design, using convenience sampling. The participants answered a closed questionnaire distributed using the "snowball" technique (Chaim, 2008). The research was conducted as part of the "Nursing Research Seminar" for Master's degree nursing students at a central university in Israel.

### *Participants*

Participants were recruited from among Hebrew speaking members of the general adult public (age 18+), who do not work in the health system. Data were collected by 23 nurses who were studying a research course for their Master's degree, in the clinical track with no thesis. The students were mentored by senior faculty members (the authors) throughout the course, which took place over one academic year.

The nursing students who distributed the questionnaires were from all over the country: central, southern, and northern Israel, and included both Jews and Arabs. Also, the students differed in their gender, age, workplace setting, residential area, and culture. The students recruited their acquaintances to participate in the study, therefore the participants were expected to represent the overall Israeli population, with a broad socioeconomic and educational background. Each student interviewed about 25 to 35 participants. A total of 690 adult participants were recruited for the study, with a response rate of 97%. Data collection was conducted during March 2018.

### *Measurement*

The attitudes questionnaires were developed by the researchers based on validated tools published previously: the Maudsley Violence Questionnaire, MVQ (Walker, 2005), developed to examine attitudes toward violence among high school students, and a questionnaire used by Al et al. (2015) to examine public views of violence toward health care staff in Turkey. The original MVQ included 56 items. The researchers chose nine items that were the most suitable for the study purpose and modified them to suit the Israeli health system. For example, "It is okay to hit health care staff if they make you feel stupid". The questionnaire devised by Al et al. (2015) included 33 items. The questionnaire was health-oriented and the researchers chose 10 statements that were suitable for the study purpose. For example, "To what extent do you agree that placing security staff at the hospital/ clinic will prevent violence towards health care staff?" The researchers translated the original items into Hebrew and then retranslated them back into English using Brislin's (1980) translation guidelines. Internal consistency was calculated for each questionnaire. The "Support Violent Behavior questionnaire" and the "Violent Intent Behavior Scenarios questionnaire" were initially developed by the researchers and were designed to be relevant for common events in a hospital or community health setting in Israel.

The final questionnaire for the current study contained six sections:

Part one: A socioeconomic demographic questionnaire, including age, gender, place of birth, religious affiliation and degree of religiosity, marital status, level of education (academic/not academic), and income of the participant's household compared to the average income in Israel. Participants were asked to rate their income compared to the average Israeli income as: Below, above, or the same. The questionnaire also included two questions that examined whether the participant had been exposed in the past to verbal or physical violence directed at health care staff in a health setting.

Part two: A knowledge questionnaire containing two right/wrong questions concerning public knowledge about Israeli law against violence in health care settings. The questions were: "There is a rule against violence in health organizations" and "Healthcare organizations can expel a person who acts violently."

Part three: Attitudes questionnaire. The questionnaire contained 12 statements examining two categories of attitudes:

(a) *General attitude*. Five questions on the general attitude of participants to violence against health care staff (e.g.,"Violence is an unpleasant behavior."). Cronbach's alpha was 0.84.
(b) *Justifications for violence*. Seven questions representing reasons that justify violence toward health care staff (e.g.,"Violence against health care staff is justified because the health care staff does not listen to the patient" or "It is legitimate to hit health care workers if you feel that they are not doing their job."). Cronbach's alpha was 0.78.

The participants were asked to rate their agreement with each statement on a Likert scale of 1 to 4, where 1 ="strongly disagree," and 4 = "strongly agree." A high score for each category reflects strong agreement with the attitude.

Part four: Preventive and punitive measures against violence. This part dealt with public attitudes toward various measures that can prevent violence (five statements with Cronbach's alpha of 0.77), for example: "Improving the physical conditions in the hospital departments", and deterrence by punishing violent individuals (six statements with Cronbach's alpha of 0.83), for example: "3 months in prison for verbal abuse toward a staff member". The questionnaire was constructed by the researchers based on the existing law in Israel and a literature review. The participants were asked to rate their agreement with each statement on a Likert scale of 1-4, where 1 = "strongly disagree," and 4 = "strongly agree." A high score for each sub-questionnaire reflects strong agreement regarding the preventive or punitive measures suggested.

Part five: Questionnaire on support of violent behavior. This part included three short sentences that described violent verbal reactions by a patient or family, directed at health care workers in a hospital setting (e.g.,"A patient shouts and curses at the nurse after waiting an hour for pain relief"). The answer expressed agreement with the violent reaction of the patient or family, on a Likert scale of 1 to 6, where 1 = "strongly disagree" and 6 = "strongly agree". A high score on the questionnaire means that the participant supports the violent behavior demonstrated in the sentences. Cronbach's alpha for this questionnaire was 0.79.

Part six: Violent intent behavior (the dependent variable). Three scenarios were presented, with four optional answers on a Guttman scale, that express the participant's intention to behave in a certain way in response to the event described. The four options began with no violence and ended with expressions of violent behavior. The participants were asked to choose one of the options. Selection of one of the first two options meant rejection of violence. Scenario 1 was called "*Waiting for vaccine*"; Scenario 2 was called "*Only wanted to ask the nurse a question,*" and Scenario 3 was called "*Waiting for a bed in the ward*." The scenarios are presented in the Appendix.

### *Ethical Consideration*

The university's ethics committee approved the study. The purpose of the study was explained to the participants and they were assured that their participation was on a voluntary basis. Anonymity was assured, and the participants signed an informed consent form.

### *Data Analysis*

Descriptive statistics were used to analyze the socioeconomic demographic characteristics of the participants and to analyze gender differences, including witnessing verbal or physical violence. A t test was conducted to analyze gender differences in attitudes. Means and SD were calculated for each attitude category. A chi square test was used to examine the associations between socioeconomic demographic variables and attitudes to violent behavior in the three potentially violent scenarios. For this analysis, the response options for each of the scenarios were recoded to form two categorical variables: the two first response options formed one answer reflecting "non-violent action" and the latter two response options formed one answer reflecting "violent action".

Finally, logistic regression was conducted to examine the unique contribution of the explanatory variables to the dependent variable. The explanatory variables included in the logistic regression were variables that were found to be significant in previous statistical tests. The dependent variables were acceptance of violence in each of the three scenarios presented. $R^2$ was calculated for each scenario. The significance level was $p < .05$. Analysis of the data was done using SPSS version 25.0.

## Findings

A total of 690 participants completed the questionnaires; 334 (48.4%) were men and 356 (51.6%) were women. The women were significantly more educated than the men, but their income was lower. Significantly, more men than women had witnessed verbal or physical violence in the health system (59.5% vs. 51%, $p < .05$, 25.8% vs. 15.8%, $p < .001$, respectively). No other significant gender differences were found (see Table 1).

### *Knowledge Regarding Violence Toward Health Care Staff*

No significant gender differences were found in knowledge of the laws regarding violence against health care staff. However, about half of the participants (47.7% men and 47.2% women) answered that there is no law

**Table 1 – Sample Characteristics (n = 690)***

| | | Men | Women | | |
|---|---|---|---|---|---|
| Variable | | N (%) | N (%) | p= | χ2 |
| | | 334 (48.4) | 356 (51.6) | | |
| Place of birth | Israel | 244 (73.1) | 267 (75.0) | .56 | 0.34 |
| | Not Israel | 90 (26.9) | 89 (25.0) | | |
| Religion | Jewish | 264 (79.0) | 296 (83.1) | .17 | 1.89 |
| | Arab | 70 (21.0) | 60 (16.9) | | |
| Religiosity | Secular | 192 (57.5) | 196 (55.2) | .54 | 0.36 |
| | Traditional -orthodox | 142 (42.5) | 159 (44.8) | | |
| Marital Status | Married | 230 (68.9) | 257 (72.4) | .30 | 1.03 |
| | Not married | 104 (31.1) | 98 (27.6) | | |
| Education | Not academic | 201 (60.2) | 178 (50.0) | .007 | 7.21 |
| | Academic | 133 (39.8) | 178 (50) | | |
| Average income | Below | 233 (71.0) | 299 (84.7) | .001 | 18.57 |
| | Above | 95 (29.0) | 54 (15.3) | | |
| Witnessed verbal violence | Yes | 198 (59.5) | 181 (51.0) | .02 | 4.98 |
| | No | 135 (40.5) | 174 (49.0) | | |
| Witnessed physical violence | Yes | 86 (25.8) | 56 (15.8) | .001 | 10.56 |
| | No | 247 (74.2) | 299 (84.2) | | |
| Knowledge: | | | | .88 | 0.02 |
| The law can protect health care staff from violence | Right | 173 (52.3) | 186 (52.8) | | |
| | Wrong | 158 (47.7) | 166 (47.2) | | |
| A violent person can be excluded | Right | 213 (64.4) | 245 (69.0) | .19 | 1.67 |
| | Wrong | 118 (35.6) | 110 (31.0) | | |
| | | **M (SD)** | **M (SD)** | ***p* =** | **t** |
| **Age** | | 39.9 (13.29) | 36.5 (12.8) | .72 | 0.35 |

* Chi square test was used for categorical variables and t-test for continuous variables (such as "age").

in Israel that can protect health care staff from violence. Additionally, 35.6% of men and 31% of women did not know that a violent person could be barred from a medical facility due to acting in a violent manner toward health care staff (Table 1).

### *Attitudes Toward Violence Against Health Care Staff*

Overall, the participants considered violent behavior toward health care staff to be a harmful phenomenon ($M = 3.2$, $SD = 0.79$ on a Likert scale of 1–4). The participants thought that preventive measures could curb violence toward health care staff ($M = 3.13$, $SD = 0.53$) but only some punitive measures could prevent violence toward health care staff ($M = 2.81$, $SD = 0.64$) (see Table 2).

There was little agreement among the participants regarding the justifications for violence against health care staff, but significantly more men than women justified violent behavior (1.89 vs. 1.79, $p = .02$). Similarly, significantly more men than women were supportive of violent behavior toward health care staff (2.81 vs. 2.47, $p = .001$). In contrast, more women than men were in favor of preventive measures (3.17 vs. 3.08, $p = .01$) (Table 2).

### *Intention to Act Violently*

Analysis of socio-economic demographic variables revealed significant gender differences in the responses to Scenarios 1 and 2. More men than women considered that acts of violence directed toward health staff would help them achieve their goals. For example, in Scenario 2 12% of men vs. 5.1% of women ($p < .001$) thought that acting violently would make it possible for them to enter the nurse's room to ask him or her a question (Table 3).

More participants with no academic education than participants with an academic education thought that violence directed toward the health care staff would

**Table 2 – Attitude Toward Violence Against Health care Staff (t Test)**

| | Entire sample | Men | Women | | |
|---|---|---|---|---|---|
| Attitude | M (SD) | M (SD) | M (SD) | *p* | t |
| General attitude | 3.20 (0.79) | 3.17 (0.77) | 3.22 (0.81) | .36 | −0.90 |
| Justifications for violence | 1.84 (0.57) | 1.89 (0.59) | 1.79 (0.55) | .02 | 2.24 |
| Preventive measures | 3.13 (0.53) | 3.08 (0.51) | 3.17 (0.54) | .01 | −2.40 |
| Punitive measures | 2.81 (0.64) | 2.79 (0.67) | 2.84 (0.71) | .36 | −0.91 |
| Supported violent behavior | 2.63 (1.29) | 2.81 (1.36) | 2.47 (1.19) | .001 | 3.45 |

**Table 3 – Association Between Intention to Act Violently (Three Scenarios), Socioeconomic Demographic Variables, and Having Witnessed Verbal/Physical Violence (Chi-Square Test)[a]**

| Variable | | Scenario 1: Waiting for Vaccine N (%) | Scenario 2: Only Wanted to Ask the Nurse a Question N (%) | Scenario 3: Waiting for a Bed in the Ward N (%) |
|---|---|---|---|---|
| Gender | Women | 22 (6.2) | 18 (5.1) | 8 (2.3) |
| | Men | 39 (11.7)** | 40 (12.0)*** | 13 (3.9) |
| Place of birth | Israel | 46 (901) | 37 (7.3) | 12 (2.4) |
| | Not Israel | 15 (8.4) | 21 (11.7) | 9 (5.0) |
| Religion | Jewish | 50 (9.0) | 46 (8.4) | 14 (2.5) |
| | Arab | 11 (8.5) | 12 (9.2) | 7 (5.4) |
| Religiosity | Secular | 35 (9) | 32 (8.3) | 11 (2.8) |
| | Traditional-orthodox | 26 (8.7) | 26 (8.7) | 16 (3.3) |
| Marital status | Married | 41 (8.5) | 39 (8.0) | 16 (3.3) |
| | Not married | 20 (10.0) | 19 (9.5) | 5 (2.5) |
| Education | Not academic | 43 (11.4)** | 44 (11.7)*** | 16 (4.2)* |
| | Academic | 18 (5.8) | 14 (4.5) | 5 (1.6) |
| Average income | Below | 49 (9.3) | 46 (8.7) | 16 (3.0) |
| | above | 12 (8.1) | 12 (8.1) | 5 (3.4) |
| Witnessed verbal violence | Yes | 42 (11.1)* | 44 (11.7)*** | 16 (4.2)* |
| | No | 19 (6.2) | 14 (4.5) | 5 (1.6) |
| Witnessed physical violence | Yes | 24 (17.0)*** | 25 (17.7)*** | 12 (8.5)*** |
| | No | 37 (6.8) | 33 (3.1) | 9 (1.7) |

* $p < .05$.
** $p < .01$.
*** $p < .001$.
[a] The table shows only the "violent action" answers.

help them achieve their goals in all three scenarios. Furthermore, significantly more people who had previously witnessed a verbal or physical violence incident in a health setting thought that violent behavior would help them achieve their goals and satisfy their needs in all three scenarios. For example, in Scenario 3 8.5% of people who had witnessed physical violence in a health setting in the past vs. 1.7% ($p < .001$) of those who had not witnessed a violent episode, thought that using verbal or physical violence against a nurse would facilitate their receiving a bed in the ward (Table 3).

Logistic regression was conducted to predict the intention to act violently in each scenario. The predictors were variables that showed significant variance between the groups: gender; level of education; income; witnessed verbal/physical violence; justification for violence toward health care staff; preventive measures; and supported violent behavior.

Justifications for violence toward health staff and support of violent behavior were the only attitudes that predicted intention to act violently in all three scenarios. For example, in Scenario 2 participants who justified violence were 3.79 times more likely to consider that behaving in a violent manner is a good way to shorten the wait for the nurse (confidence interval [CI] 2.30–6.23, $p < .001$). In Scenario 3, participants who supported violent behavior toward health care staff were 1.56 times more likely to think that behaving violently is the way to ensure that they would get a bed in the ward ahead of other patients (CI 1.09–2.24, $p < .01$). Having previously witnessed physical violence in Scenario 3 (odds ratio [OR] = 3.21, CI 1.06–9.68, $p < .5$), were other variables that could explain an intention to act violently. Interestingly, participants who expressed more confidence in preventive measures showed less support for violence in Scenarios 2 and 3 (OR = 0.55, CI 0.32–0.96, $p < .5$; OR = 0.38, CI 0.16–0.91, $p < .05$, respectively) (Table 4).

## Discussion

The current study is unique for being one of the few to examine the public perception of violence toward health care staff in hospitals and community settings in Israel and worldwide. The study examined the public knowledge, attitudes, and intention to act violently in three common scenarios at a health care setting. The scenarios focused on the nurse-patient interaction.

### *Public Attitudes Regarding Violence Directed at Health care Staff*

The current study revealed that overall the participants perceived violence against health care staff as a

**Table 4 – Predictive Intention to Act Violently (Logistic Regression)**

| Variable | | Scenario 1: Waiting for Vaccine | | | Scenario 2: Only Wanted to Ask the Nurse a Question | | | Scenario 3: Waiting for a Bed in the Ward | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | B | OR | CI (95%) | B | OR | CI (95%) | B | OR | CI (95%) |
| Gender | Women – ref | | 1 | | | 1 | | | 1 | |
| | Men | 0.20 | 1.23 | 0.66–2.27 | 0.49 | 1.64 | 0.86–3.19 | −0.30 | 0.73 | 0.26–2.04 |
| Education | Academic- ref | | 1 | | | 1 | | | 1 | |
| | Not academic | 0.57 | 1.59 | 0.81–3.10 | 0.91 | 2.50* | 1.22–5.19 | 1.01 | 2.72 | 0.80–9.20 |
| Income | Below average - ref | | 1 | | | 1 | | | 1 | |
| | Above average | −0.05 | 0.86 | 0.43–2.05 | −0.15 | 0.85 | 0.39–1.87 | −0.52 | 0.60 | 0.16–2.07 |
| Witnessed verbal violence | No - ref | | 1 | | | 1 | | | 1 | |
| | Yes | 0.21 | 1.23 | 0.61–2.47 | 0.68 | 1.97 | 0.94–4.13 | 0.12 | 1.12 | 0.33–3.86 |
| Witnessed physical violence | No – ref. | | 1 | | | 1 | | | 1 | |
| | Yes | 0.52 | 1.68 | 0.84–3.40 | 0.51 | 1.67 | 0.83–3.32 | 1.16 | 3.21* | 1.06–9.68 |
| Justifications for violence | | 0.92 | 2.50*** | 1.52–4.12 | 1.33 | 3.79*** | 2.30–6.23 | 1.46 | 4.30* | 1.91–9.69 |
| Preventive measures | | −0.25 | 0.77 | 0.43–1.33 | −0.59 | 0.55* | 0.32–0.96 | −0.96 | 0.38* | 0.16–0.91 |
| Supported violent behavior | | 0.60 | 1.82*** | 1.45–2.27 | 0.28 | 1.32** | 1.16–1.65 | 0.45 | 1.56** | 1.09–2.24 |
| $R^2$ (%) | | | 27.2 | | | 28.5 | | | 30.8 | |

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

negative phenomenon that harms both caregivers and patients. This finding is consistent with the negative implications described in the literature with regard to violence directed at health care personnel (Spelten et al., 2017; Lanctôt and Guay, 2014; Ferri et al., 2016; Fujita et al., 2012; Zhao et al., 2015). However, when presented with statements that could justify violent behavior toward a staff member (such as overcrowding, long waiting times, and a lack of attention and indifference of the staff), there was less consensus between the participants. In previous studies, such reasons were identified as causing violence toward the health care system, in Israel and worldwide (Yaşar, Durukan & Büken, 2017; Shafran-Tikva et al., 2017; Al et al., 2015; Arnetz et al., 2018). In the current study, the general attitude of the participants was that the reasons presented did not justify violent behavior toward the health care staff. This is an encouraging finding for health policymakers, as the public's rejection of violent behavior represents an excellent opportunity for cooperation between health care policymakers and the general public designed to eradicate the phenomenon of violence in the health system. At the same time, it provides a starting point for a campaign dealing with factors that might spark violent incidents. These attitudes were strengthened when the majority of participants expressed reservations when presented with short realistic sentences describing the violent behavior of a patient or a patient's relative toward a health staff member.

The results of the present study indicated that the participants supported the preventive and punitive measures presented to them as a means of preventing violence. This finding is consistent with studies showing that, overall, the public supports preventive measures and punishment for all kinds of crimes (Harris & Socia, 2016; Warshawski, Amit Aharon & Itzhaki,2019). Moreover, these findings support the intervention programs recently proposed in Israel (Azoli & Shafran-Tikva, 2017) and around the world, such as the "Zero tolerance to violence" policy in the United Kingdom (1999) or The Occupational Safety and Health Administration's OSHA program (2015) and the Chinese attempts (Hall, Xiong, Chang, Yin & Sui, 2018) to prevent violence.

Another interesting finding in the current study is that about half of the population sampled had a lack of awareness of the Israeli law against violence directed at health care staff. Moreover, about one-third of the sample did not know that a violent person could be barred from entering a medical facility. According to the law in Israel, the manager of a medical facility can bar a violent person from entering the facility, after giving him or her advance warning, for period of 6 months (Israel Law Book, 2012). The facility can sue the person for his or her violent behavior. To date, no research has been conducted to examine this issue among the public. This finding points to the public's lack of knowledge regarding the law and punishment of those who act violently against health staff and may indicate the need for more focused efforts by the health and judicial systems to inform the public for the purpose of deterrence.

### *Gender Differences in Public Attitudes Regarding Violence Toward Health Staff*

The current study revealed significant gender differences regarding attitudes toward violence directed at health staff. More men than women accepted justifications for violence and supported violent behavior. More men than women also expressed an inclination to act violently in the three scenarios presented to them. The literature supports gender differences regarding violence. Women differ from men in their perception of violence and its severity; men tend to support violent behavior and down-rate its severity (Gammelgård et al., 2012; Lehmann-Lurie, 2007; Flood & Pease, 2009). Moreover, studies demonstrated a higher rate of offensive behavior among men than among women (Bennett, Farrington & Huesmann, 2005). Women were less likely than men to choose a forceful option or at-risk behavior (Bennett, Farrington & Huesmann, 2005), and were less likely to justify violence as a legitimate way of achieving their purposes in a wide range of social conditions or to approve of aggression (Smith, 1984; Bennett, Farrington & Huesmann, 2005). Generally, women feel more vulnerable to violence in society, and they are more anxious about social risks than men (Djerf-Pierre & Wangnerud, 2016). This may explain why the women in our study were less supportive of violent behavior toward health care staff.

In the current study, women ranked preventive measures significantly higher than men. A possible explanation for this finding may be rooted in gender differences in social norms, social roles, and the development of social cognitive skills (Bennett, Farrington & Huesmann, 2005). These are assumed to be different between the genders, and thus contribute to a different perception regarding preventive and punitive measures against violence.

### *Intention to Act Violently Toward Health Care Staff*

The findings in the current study suggest an association between gender, education, and the experience of witnessing verbal or physical violence, and opting for violent behavior in all three scenarios. Among men, more participants without an academic education, and participants who had previously witnessed verbal or physical violence in health care settings, chose to act violently in the scenarios presented. This finding has already been documented in the literature. As mentioned earlier, men and women are different in their use, interpretation, and approval of violence (Bennett, Farrington & Huesmann, 2005). Moreover, Friesdorf, Conway and Gawronski (2015) suggested in their meta-analysis of 40 studies that men tend to make a moral judgment for utilitarian reasons whereas women are more likely to act according to

deontological ethics. A women's choice is therefore motivated by a belief in absolute values and the tendency to act in a nonviolent fashion, since violence is a definite negative value. The choice of men is motivated by their belief in the usefulness of the consequences of the act. If the perceived benefit of a violent choice exceeds the absolute value, then violent behavior may be accepted. These ethical theories may explain the gender differences in the support of violent behavior toward health staff.

Landau et al. (2018) reported that witnessing verbal or physical violence could be a catalyst for the development of negative feelings and a relatively high frequency of violent behavior. Morphet, Griffiths, Beattie, Reyes and Innes (2018) reported that being involved in a violent event in the past is a component in consumer risk assessment to further violence. In other words, the very exposure to violent incidents of any kind evokes feelings of negativity, stress, and distress that may contribute to violent behavior in some people.

In the current study, attitudes that justified and supported violent behavior significantly explained the choice of violent behavior in all three scenarios. Although there was an association between gender and education level and choice of violent behavior, the significance was lost in the logistic regression. Nevertheless, more men than women justified violence toward health care staff and supported violent behavior. According to the theory proposed by Felson and Tedeschi, (1993), the behavior of people with more aggressive attitudes can escalate in some situations, increasing the likelihood that violence will be used. Therefore, in the current study, people who supported and justified aggressive actions (mostly men) were more likely to behave violently toward health care staff. On the other hand, people who favored preventive measures (mostly women) appeared to be protected from acting in a violent fashion. The attitudinal differences between men and women may impact their intentions to act violently toward health staff.

There have been reports of people justifying and supporting violent behavior under specific circumstances such as police violence against a minority group (Gerber et al., 2018) or attacking doctors whose patient had died (Al et al., 2015). This may be partially explained by cultural attitudes (Markowitz, 2003; Gerber et al., 2018). It is possible that even in cases of violence against health care staff, there is a view that the patient will not manage to obtain his or her medical needs without displaying aggression and therefore, violent behavior may be justified. Moreover, there appears to be a relationship between patients' inability to identify with the health care staff and their inclination to act violently but, as far as known, this issue has not been thoroughly investigated.

The current study challenged the participants to consider three events that are very common in the health system. Based on the interactive model of workplace violence (Chappell & Di Martino, 2006), it may be said that violence toward health staff occurs at the junction between the patient-caregiver-health system. The patient is motivated by his or her health needs; he or she wants to receive the best medical treatment as soon as possible.

Although professional health caregivers aspire to support the patient, they may be under stress, overloaded with work, and feel pressured and unprotected. Problematic physical conditions and a shortage of nurses, physicians, and resources may cause the health care staff to contribute to a situation in which violence against them escalates (Shafran-Tikva et al., 2017). Such complex interactions may lead people to justify their choice of violent actions directed toward the health care staff. Nevertheless, the overall rejection of violence toward health care staff and support for appropriate preventive and punitive measures expressed by the research participants, represents a positive aspect that can be used to foster cooperation and eliminate violence in health care settings. Nurses, the most vulnerable to violence in the health sector (Phillips, 2016), should lead in promoting a positive work environment for both nurses and their patients (Itzhaki et al., 2015). The nurses should lead and develop communication skills to de-escalate events with violent potential, learn risk assessment tools to estimate potential violent events (Morphet et al., 2018), and develop on-going training skills in managing aggression to prevent and engage with violent events (Spelten et al., 2017). It is even more important to report all violent events, physical and verbal, investigate each event, draw conclusions and apply them in order to try and prevent the next event.

This study has several limitations. The study used a convenience sampling method, although our sample was large (N = 690) and represented social-economic and demographic characteristics consistent with the Israeli Central Bureau of Statistics (ICBS, 2017). For example, in the current study women had a higher educational level than men but their average income was lower. According to the ICBS (2017), 58% of women and 38% of men in Israel have an academic education but women's income is 72% of men's. Nevertheless, it is possible to achieve only limited generalizability of the findings since there are other social-economic and demographic variables for which we have no available data.

The questionnaire was constructed by the authors especially for this study and was based on a literature review and research tools in the broad subject. At the same time, although the internal consistency of the questionnaire was high, we suggest that the questionnaire be further tested on other populations in the future.

## Conclusions

The public perceives violence toward health care staff as a negative occurrence and supports preventive and punitive measures intended to prevent such violence. There are gender differences between men and

women: Men more than women harbor violent attitudes and have a greater tendency to condone violent behavior. In general, people who justified and supported violent behavior are also more likely to act violently in the scenarios presented to them.

The current study is one of few studies examining the public perception and the intention to act violently toward health care staff. Such violence in a health care setting is a worldwide phenomenon and its eradication deserves to receive high priority. The findings can be used by nursing policymakers to promote nurse education and training, including improving nurse-patient communication, learning to perform violence risk assessment, acquiring skills in de-escalation, dealing with stress, and preventing violence. It is important to note that while the public understands that violence in a health care setting is undesirable and harmful, the phenomenon still exists. It is, therefore, necessary to continue promoting information concerning this subject and to stress the severe consequences of directing violent behavior at health care staff. As those who are in the front of violence toward health care staff, nurses should lead the struggle against violence and raise it to the height of national priorities in order to handle the issue using fundamental and meaningful measures.

## Appendix

Questionnaire on intention to act violently: Three scenarios with the potential of eliciting violent behavior

*Scenario 1, "Waiting for vaccine":* "You come to the community clinic to receive a vaccine. Unfortunately, you have to wait at least 40 minutes before your turn to see the nurse." How do you think you would behave?

*Scenario 2, "Only wanted to ask the nurse a question":* "You come to the community clinic to ask the nurse a question. Some patients are waiting in the waiting room. You open the door to the nurse's room and ask her if you could ask a question. The nurse gets angry because you intruded while she was treating another patient. She tells you to take a number and wait your turn". How do you think you would behave?

Scenario 3, *"Waiting for a bed in the ward"*: "Your father is in an internal medicine ward. Because of the overcrowding in the ward, your father has been given a bed in the corridor instead of in a room. Suddenly, you notice the nurse taking a patient who was admitted after your father into a room". How do you think you would behave?

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