Validation of the German Version of the Second Victim Experience and Support Tool—Revised

Reinhard Strametz, MD,*† Bianka Siebold,‡ Peter Heistermann, MD,§
Susanne Haller,‖ and Stefan Bushuven, MD, MSc*¶**

Introduction: The second victim phenomenon that occurs after critical events poses a serious factor for patient and workplace safety. These experiences can be evaluated using the Second Victim Experience and Support Tool (SVEST), originally in English, or the translated and validated Korean or Chinese versions. In 2020, a revised version was published (SVESTR) with the addition of resilience items. The aim of this study is the validation of the German version, the G-SVESTR, in a multiprofessional setting.

Methods: The G-SVESTR questionnaire was designed according to World Health Organization recommendations. This entails translation, test for face validity, back translation, pretest, expert panel evaluation, and a test in a large population for validity and reliability. We provided an anonymous online questionnaire to physicians, nurses, paramedics, medical assistants, and physician assistants to test our developed tool. Statistics were accomplished using XL-Stats.

Results: Altogether, 72% (306 of 428) of the participants completed the survey. The mean time for completion was 9.4 minutes. Physician assistants and medical assistants were significantly younger than other respondents. The analysis revealed satisfactory reliability (Cronbach $\alpha = 0.844$). A principal component analysis showed 11 factors with eigenvalues greater than 1. Factor loading on distinct dimensions was satisfactory with one exception, the absenteeism item (item 31), which showed cross-loadings and poor factor loading on the absenteeism dimension. The results of the G-SVESTR revealed only some differences between the professional subgroups.

Conclusion: The G-SVESTR is a valid and reliable testing instrument for the evaluation of second victim experiences in different medical professions.

Key Words: second victim, SVEST, SVESTR, multiprofessional

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Background

The term "second victim" was first introduced by Wu[1] in 2000. It refers to health care professionals (HCPs), whereas the first victim is the patient.[2] It is formally defined as the second victim syndrome (SVS): "as the HCPs who commit an error and are traumatized by the event manifesting psychological (shame, guilt, anxiety, grief, and depression), cognitive (compassion dissatisfaction, burnout,

From the *Institute for Medical Education, University Hospital, LMU Munich, Munich; †Wiesbaden Business School, RheinMain University of Applied Sciences, Wiesbaden; ‡Institute for Anesthesiology, Intensive Care, Emergency Medicine and Pain Therapy, Hegau-Bodensee-Hospital Singen, Health Care Association District of Constance, Radolfzell; §German University Association Physician Assistant e.V., Düsseldorf; ‖Elisabeth-Kuebler-Ross Academy—Hospice Stuttgart, Stuttgart; and ¶Institute for Hospital Hygiene und Infection Prevention and **Hegau-Jugendwerk Hospital Gailingen, Health Care Association District of Constance, Radolfzell, Germany.

Correspondence: Stefan Bushuven, MD, MSc, Institute for Hospital Hygiene und Infection Prevention, Hausherrenstrasse 12, 78315 Radolfzell, Germany (e-mail: stefan.bushuven@glkn.de).

secondary traumatic stress), and/or physical reactions that have a personal negative impact."[1,3,4] These traumatizing experiences can be caused by medical error, an unexpected adverse event, injury, or even near-miss.[5–7]

The prevalence of SVS ranges from 9% to 50% of all health care workers.[7,8] Furthermore, these experiences might be related to multiple dysfunctional coping strategies including defensive medicine, posttraumatic stress disorder,[9–11] turnover, and even suicide.[12] The second victim phenomenon not only affects the health care workers but also any further patients treated by second victims, and has therefore been identified as a key issue in patient safety by experts[13] and political leaders.[14] Recently, the term "second victim" has been debated for linguistic issues and aspects of responsibility for medical error and malpractice.[15,16]

Despite the high prevalence and severe manifestations, this phenomenon is still not well known among HCPs. One reason might be that second victims still face stigmatization of being regarded as weak and unsuitable for their job demands.[12] To overcome stigmatization rationally, a valid assessment of this phenomenon is necessary.

The Second Victim Experience and Support Tool (SVEST), originally published in English,[17] has been validated in different settings[17] and translated into Korean,[18] Chinese,[19] Italian,[20] and Danish.[21] Since 2020, a novel revised version (SVEST-R) including resilience items has been available in English.[5]

The SVEST-R comprises 35 items within the following 9 domains addressing persons identifying themselves to be a second victim and those to be involved in critical incidents known to lead to the phenomenon: psychological distress, physical distress, colleague support, supervisor support, institutional support, professional self-efficacy, turnover intentions, absenteeism, and resilience. In addition, there are 7 items regarding the desirability for second victim support options.

All items are scored from 1 (strongly disagree) to 5 (strongly agree) using a 5-point Likert scale. Some items (marked with an *) are scored inversely to reduce bias.[22] The last 7 items are scored using the same scale from 1 (not strongly desired) to 5 (strongly desired).[5]

All preceding SVEST versions showed adequate validity and reliability in the observed population samples, normally consisting of nurses or pediatric nurses.[5,17–19]

Although there is some research on the SVS in Germany,[23–25] no valid and reliable testing instrument is currently available.

Objective

We developed a German version of the SVESTR (G-SVESTR) to evaluate validity and reliability in different professions. We hypothesized that the G-SVESTR comprises adequate feasibility, face, content, and construct validity as well as reliability.

METHODS

Study Design

We conducted a multiple-step approach following the recommendations of the World Health Organization (WHO) for translation,

expert evaluation, back translation, and testing of questionnaires,[26] as shown in Figure 1:

Preparation of the G-SVESTR Questionnaire

First, the SVEST-R was translated into the German language. Thereafter, the results were checked for face validity within an expert panel consisting of 4 physicians. Third, a back translation was completed by an English native speaker who was not familiar with the original SVEST or the SVEST-R. In the next step, the results were reevaluated within the expert panel, and pretests and cognitive interviewing were conducted with the support of 10 medical experts (nurses and physicians) with at least 10 years of medical expertise. After reevaluation, some minor modifications were made on 2 items. Thereafter, the questionnaire was distributed for validation and reliability testing.

Setting

Because of the severe acute respiratory syndrome coronavirus 2 pandemic, the survey was conducted online. Steps 1 to 6 were held between October and November 2020, and the last step was conducted between November and December 2020. Participants were recruited in this last step from local and regional networks, online forums, and social media platforms in Germany, Austria, Switzerland, and expats in Norway.

Study Population

Undergraduate and postgraduate health care workers in a broad spectrum of medical disciplines (physicians, nurses, paramedics, palliative care givers, physician assistants, nonacademic medical assistants, medical therapists) were addressed using a written recruitment and information letter. The wide variety of health care providers

was chosen to limit the selection bias and low response rates. Three rounds of recruitments were carried out within these networks.

Variables

Using a strict translation of the SVEST-R according to WHO guidelines,[26] there were no further modifications of the survey except for some questions about demographic data, occupation, and profession before the main items (Table 1). At the end of the survey, a single free-text entry for comments on the own experience of SVS and the G-SVESTR was included.

Measurements

The items were analyzed identical to the SVEST-R including the reversed items marked with an "*." Free-text entries were coded qualitatively, taking a single-coder phenomenological approach.[27,28] This included simplification of entries (tag allocation), identification of recurring codes (coding), and recontextualization to form themes.

The online survey tool was provided by umfragenonline.com, Enuvo GmBH Zurich, Switzerland. This gave participants the opportunity to complete the survey with different devices, for example, PC, tablet, or smartphone. There were no paper-based versions.

Bias

We addressed the selection bias of the convenience approach[29] by distributing the survey in different professions and populations. Furthermore, the results of the "finishers" versus the "dropouts"[24] were analyzed under the hypothesis that less motivated people might answer the questions differently from those who are motivated to answer them. To limit the decay of method bias, as few items as possible on one page were presented, resulting in 3 to 5
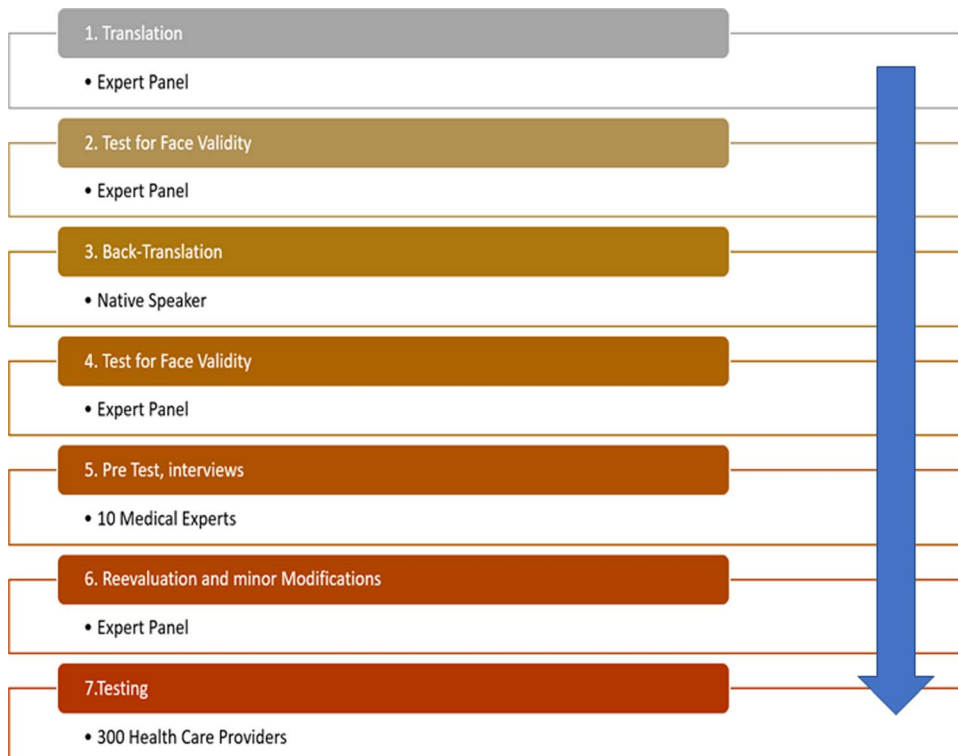

FIGURE 1. Visualization of the development process.

TABLE 1. Questionnaire in German (G-SVESTR) and English (SVESTR) Language for 35 Plus 7 Items

No.	Item	Mean	SD
A	Wie alt sind Sie in Jahren?		
	How old are you?		
B	Welchem Geschlecht ordnen Sie sich zu?		
	What is your gender?		
C	Welcher Berufsgruppe ordnen Sie sich am ehesten zu?		
	What is your profession?		
D	Welchem medizinischen Bereich ordnen Sie sich am ehesten zu?		
	What is the medical sector you work for?		
E	Welchem Bereich ordnen Sie sich am ehesten zu?		
	What is your medical affiliation?		
F	Befinden Sie sich aktuell in der Ausbildung?		
	Are you a trainee?		
G	Sind Sie in der Ausbildung von medizinischen Fachkräften tätig?		
	Are you a medical teacher?		
H	In welchem Land arbeiten Sie hauptsächlich?		
	In which nation are you working?		
	Psychischer Stress/Psychological Distress **(Mean of Items 1–4)**	3.157	1.077
1	Ich habe durch solche Vorfälle Verlegenheit erlebt.	3.580	1.225
	I have experienced embarrassment from these instances.		
2	Meine Beteiligung an solchen Vorfällen haben mir Angst gemacht, dass diese zukünftig erneut auftreten könnten.	3.131	1.283
	My involvement in these types of instances has made me fearful of future occurrences.		
3	Meine Erlebnisse haben dazu geführt, dass ich mich elend gefühlt habe.	3.059	1.342
	My experiences have made me feel miserable.		
4	Ich fühle tiefe Reue/Schuld für die Beteiligung an solchen Vorfällen.	2.859	1.385
	I feel deep remorse/guilt for my past involvements in these types of events.		
	Physischer Stress/Physical Distress **(Items 5–9)**	2.296	0.983
5	Die seelische Last meiner Erfahrungen ist erschöpfend.	2.341	1.156
	The mental weight of my experience is exhausting.		
6	Meine Erfahrungen mit solchen Vorfällen kann es schwierig machen regelmäßig zu schlafen.	2.030	1.204
	My experience with these occurrences can make it hard to sleep regularly.		
7	Der Stress aus solchen Situationen hat dazu geführt, dass ich mich mulmig und unwohl gefühlt habe.	2.977	1.223
	The stress from these situations has made me feel queasy or nauseous.		
8	Wenn ich an solche Situationen denke, kann es schwer sein, Appetit zu haben.	1.869	1.122
	Thinking about these situations can make it difficult to have an appetite.		
9	Ich habe schon schlechte Träume aufgrund solcher Situationen erlebt.	2.233	1.367
	I have had bad dreams as a result of these situations.		
	Unterstützung durch Kollegen/Colleague Support **(Items 10–13)**	1.869	0.603
10	Meine Kollegen können sehr teilnahmslos auf die Effekte reagieren, die solche Vorfälle auf mich hatten.	2.557	1.194
	My colleagues can be indifferent to the impact these situations have had on me.		
11*	Meine Kollegen helfen mir dabei mich als gute Fachkraft zu fühlen, egal welche Fehler ich gemacht habe.	2.346	1.094
	My colleagues help me feel that I am still a good healthcare provider despite any mistakes I have made.*		
12	Meine Kollegen trauen mir nicht mehr.	1.259	0.630
	My colleagues no longer trust me.		
13	Meine berufliche Reputation wurde wegen solcher Vorfälle beschädigt.	1.316	0.698
	My professional reputation has been damaged because of these situations.		
	Unterstützung durch Vorgesetzte/Supervisor Support **(Items 14–17)**	2.599	0.595
14*	Ich spüre, dass mein Vorgesetzter mich nach solchen Vorfällen angemessen behandelt.	3.593	1.269
	I feel that my supervisor treats me appropriately after these occasions.*		
15*	Die Reaktionen meines Vorgesetzten sind fair.	2.205	1.147
	My supervisor's responses are fair.*		
16	Mein Vorgesetzter beschuldigt einzelne Personen.	2.182	1.283
	My supervisor blames individuals.		

TABLE 1. *(Continued)*

No.	Item	Mean	SD
17*	Ich nehme wahr, dass mein Vorgesetzter die Komplexität der Patientenversorgung berücksichtigt. I feel that my supervisor evaluates these situations in a manner that considers the complexity of patient care practices.*	2.434	1.280
	Unterstützung durch die Organisation/Institutional Support **(Items 18–20)**	3.242	1.038
18*	Die Organisation, in der ich arbeite, versteht, dass diejenigen, die in solche Vorfälle verwickelt sind, Hilfe benötigen können um die Auswirkungen zu verarbeiten. My organization understands that those involved may need help to process and resolve any effects they may have on care providers.*	3.289	1.316
19*	Meine Organisation hat eine Reihe von Angeboten, die mir helfen, solche Ereignisse zu verarbeiten. My organization offers a variety of resources to help get me over the effects of involvement with these instances.*	3.597	1.287
20	Die Sorge für das Wohl von Personen, die in solche Vorfälle verwickelt sind, ist nicht stark ausgeprägt in der Organisation, in der ich arbeite. Concern for the well-being of those involved in these situations is not strong at my organization.	2.852	1.345
	Erleben der eigenen Professionalität/Professional Self-Efficacy **(Items 21–24)**	2.363	1.043
21	Nach meiner Beteiligung in solche Vorfälle habe ich Gefühle der Unzulänglichkeit in Bezug auf meine Fähigkeiten in der Patientenversorgung erfahren. Following my involvement I experienced feelings of inadequacy regarding my patient care abilities.	2.671	1.236
22	Durch meine Erfahrungen frage ich mich, ob ich wirklich eine gute Fachkraft bin. My experience makes me wonder if I am not really a good healthcare provider.	2.472	1.310
23	Nach solchen Erfahrungen bin ich ängstlich geworden, schwierige oder riskante Aufgaben zu übernehmen. After my experience, I became afraid to attempt difficult or high-risk procedures.	2.236	1.245
24	Solche Erfahrungen haben meine Arbeitsleistung negativ beeinflusst. These situations have negatively affected my performance at work.	2.088	1.213
	Berufliche Veränderung/Turnover Intentions **(Items 25–28)**	1.820	0.939
25	Meine Erfahrungen haben zu einem Wunsch geführt, lieber fern der Patientenversorgung zu arbeiten. My experience with these events has led to a desire to take a position outside of patient care.	1.691	1.076
26	Manchmal möchte ich durch den Stress durch Beteiligung an solchen Situationen meine Arbeit aufgeben. Sometimes the stress from being involved with these situations makes me want to quit my job.	2.046	1.253
27	Ich habe begonnen nach anderen beruflichen Möglichkeiten Ausschau zu halten. I have started to ask around about other job opportunities.	2.194	1.441
28	Aufgrund dieser Ereignisse plane ich in den nächsten 6 Monaten meinen Beruf zu verlassen. I plan to leave my job in the next 6 months because of my experience with these events.	1.345	0.873
	Absentismus/Absenteeism **(Items 29–31)**	1.631	0.803
29	Meine Erfahrungen mit einem unerwünschten Ereignis oder Fehler haben dazu geführt, dass ich mir für meine seelische Gesundheit einen Tag frei genommen habe. My experience with an adverse patient event or error has resulted in me taking a mental health day.	1.758	1.286
30	Ich habe nach solchen Ereignissen mir schon einmal länger im Beruf freigenommen. I have taken time off after one of these instances occurs.	1.298	0.831
31	Wenn ich arbeite, bin ich durch meine Beteiligung an solchen Situationen abgelenkt und nicht hundertprozentig präsent. When I am at work, I am distracted and not 100% present because of my involvement in these situations.	1.842	1.054
	Resilienz/Resilience	1.915	0.784
32*	Aufgrund solcher Situationen bin ich in meiner Arbeit aufmerksamer geworden. Because of these situations, I have become more attentive to my work.*	1.728	0.867
33*	Solche Situationen haben dazu geführt, dass ich meine Arbeitsqualität verbessert habe. These situations have caused me to improve the quality of my care.*	1.951	0.943
34*	Meine Erfahrungen mit unerwünschten Ereignissen am Patienten oder Fehlern haben positive Veränderungen in den Abläufen der Behandlung von Patienten bewirkt. My experience with an adverse patient event or error has resulted in positive changes in procedures or care on our unit.*	2.173	1.021
35*	Ich bin durch unerwünschte Ereignisse und Fehler als Fachkraft gewachsen. I have grown as a professional as a result of an adverse patient event or error.*	1.787	0.944
	Unterstützungswünsche/SVE Support Option Desirability	3.587	0.786
I	Die Möglichkeit, sich unmittelbar nach einem Ereignis kurz Zeit nehmen zu können. The ability to immediately take time away from my unit for a little while.	4.180	0.980
II	Einen ruhigen Rückzugsort, um sich nach einem solchen Ereignis zu sammeln und zu erholen. A specified peaceful location that is available to recover and recompose after one of these types of events.	3.873	1.148

(Continued next page)

TABLE 1. *(Continued)*

No.	Item	Mean	SD
III	Die Verfügbarkeit eines Mitarbeiters auf Augenhöhe, mit dem man über den Vorfall reden kann. A respected peer to discuss the details of what happened.	4.222	0.963
IV	Ein professionelles Beratungsprogramm außerhalb der Arbeit, in dem Beschäftigte sich frei beraten lassen können. An employee assistance program that can provide free counseling to employees outside of work.	3.353	1.273
V	Eine Diskussion mit meinem Vorgesetzten über das Ereignis. A discussion with my manager or supervisor about the incident.	3.340	1.279
VI	Einen Termin mit einem Berater in meiner Institution, um über das Ereignis zu sprechen. The opportunity to schedule a time with a counselor at my hospital to discuss the event.	2.941	1.289
VII	Die Möglichkeit rund um die Uhr mit einer Person vertraulich über ein Ereignis und die Auswirkungen auf mich zu sprechen A confidential way to get in touch with someone 24 hours a day to discuss how my experience may be affecting me.	3.196	1.393

*Marked items are inverted items.

items per page grouped under the domains, with the exception of 7 items in the section on coping strategies.

Sample Size

Under consideration of the recommendations for psychometric questionnaires, the goal was to recruit at least 300 persons,[30] with a minimum subject to item ratio of at least 2:1.[31]

Statistics

We used MS Excel (Microsoft Corporation, Redmond, Washington) with the Add-In XLStats (Addinsoft SARL, New York, New York) for statistical analysis. Calculations of the Cronbach α and the Guttman criteria were applied to test reliability. To test construct validity, a principal component analysis (PCA) was conducted after determining its prerequisites (Barttlet sphericity and the Kayser-Meyer-Olkin criterion). The PCA was used to calculate eigenvalues as well as scree plots and factor loadings after varimax rotation.

Results from the subgroup analysis were quantified by non-parametric tests in the case of nonnormal distributed ordinal scaled data. Correlations were assessed using Kendall τ calculations. All tests were Bonferroni corrected for multiple testing. Participants with missing data were not accepted, and these were assigned to the dropout group for post hoc assessment of the selection bias.

RESULTS

Participants

Altogether, 428 participants were enrolled. Of those, 306 (71.5%) gave answers to all items and were assigned to the "finisher"

group. In this group, the mean age was 35.5 years, 203 persons were female (66.4%), 101 were male (33.0%), 2 person was non-binary (0.3%), and one did not answer the question about gender (0.3%). The dropout group consisted of 122 persons with a mean age of 39 years, comprising 91 women (74.6%), 29 men (23.8%), and 2 without answer to the gender question (0.6%). Age differences were not significant between those groups ($P > 0.05$), but a significant age difference was seen within professions of physician assistants and medical assistants being significantly younger than the other professional groups ($P < 0.05$).

In the finisher group, there were 75 (24.5%) nurses, 56 (18.3%) physicians, 24 (7.8%) medical assistants, 83 (27.1%) physician assistants, 52 (17%) paramedics, 15 (4.9%) medical therapists (e.g., physiotherapists and speech and language therapist), and 1 remedial therapist (0.3%). Most worked in-hospitals (67%), whereas 53 worked out-of-hospital (17.3%) and all other in general practice. Of all the finishers, 24.5% were pregraduates and 52.6% worked as teachers and instructors in their profession. Of all the participants, 289 (94.4%) were working in Germany, the others in Switzerland and Austria, and one was an expat in Norway.

Completing the questionnaire took between 2 and 57 minutes (mean [SD], 9.4 [7.24] minutes). Dropouts abandoned the survey after 3.6 minutes on average (minimal, 0 minutes; maximum, 30 minutes; SD, 16.53).

Main Results

In the analysis of the questionnaire, a high Cronbach α of 0.884, a very high Guttmans lambda-2 of 0.9, and a high lambda-4 of 0.834 were calculated. Tests for Barttlet sphericity ($P < 0.001$) and the Kayser-Mayer-Olkins value of 0.836 justified further analysis
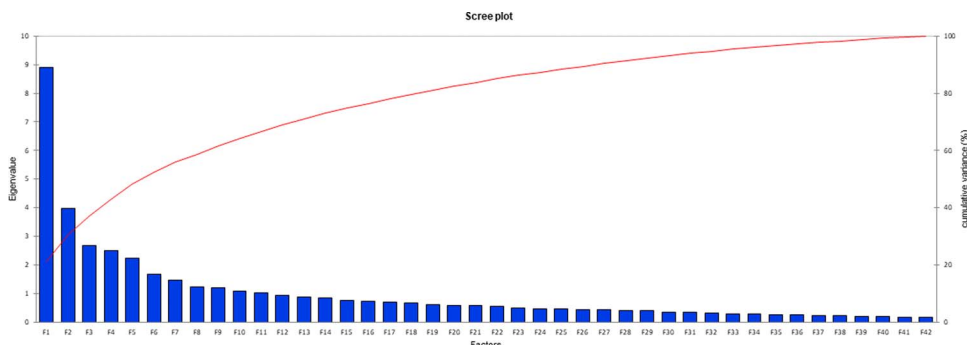

FIGURE 2. Scree plot.

TABLE 2. Questionnaire Items With Factor Analysis

	D1	D2	D3	D4	D5
Psychological distress					
1. Ich habe durch solche Vorfälle Verlegenheit erlebt.	**0.630**	−0.159	0.139	0.100	−0.183
2. Meine Beteiligung an solchen Vorfällen haben mir Angst gemacht. dass diese zukünftig erneut auftreten könnten.	**0.752**	−0.085	0.129	0.112	−0.026
3. Meine Erlebnisse haben dazu geführt. dass ich mich elend gefühlt habe.	**0.763**	−0.159	0.060	0.100	0.109
4. Ich fühle tiefe Reue/Schuld für die Beteiligung an solchen Vorfällen.	**0.739**	−0.116	0.024	0.107	0.046
Physical distress					
5. Die seelische Last meiner Erfahrungen ist erschöpfend.	**0.635**	0.032	0.087	0.007	0.372
6. Meine Erfahrungen mit solchen Vorfällen kann es schwierig machen regelmäßig zu schlafen.	**0.509**	−0.101	0.015	0.064	**0.491**
7. Der Stress aus solchen Situationen hat dazu geführt. dass ich mich mulmig und unwohl gefühlt habe.	**0.694**	−0.032	0.118	−0.027	0.318
8. Wenn ich an solche Situationen denke. kann es schwer sein. Appetit zu haben.	**0.477**	−0.052	−0.042	0.071	**0.426**
9. Ich habe schon schlechte Träume aufgrund solcher Situationen erlebt.	**0.579**	0.033	0.050	0.147	**0.375**
Colleague support					
10. Meine Kollegen können sehr teilnahmslos auf die Effekte reagieren. die solche Vorfälle auf mich hatten.	0.202	−0.084	**0.334**	0.082	0.228
11. Meine Kollegen helfen mir dabei mich als gute Fachkraft zu fühlen. egal welche Fehler ich gemacht habe.*	0.078	0.065	**0.541**	−0.141	0.087
12. Meine Kollegen trauen mir nicht mehr.	0.105	0.149	0.240	0.093	**0.380**
13. Meine berufliche Reputation wurde wegen solcher Vorfälle beschädigt.	0.149	0.058	0.143	0.066	**0.278**
Supervisor support					
14. Ich spüre. dass mein Vorgesetzter mich nach solchen Vorfällen angemessen behandelt.*	−0.130	0.096	**0.690**	0.000	0.291
15. Die Reaktionen meines Vorgesetzten sind fair.*	−0.104	0.149	**0.707**	−0.100	0.303
16. Mein Vorgesetzter beschuldigt einzelne Personen	0.033	−0.021	**0.590**	0.102	0.121
17. Ich nehme wahr. dass mein Vorgesetzter die Komplexität der Patientenversorgung berücksichtigt.*	−0.019	0.110	**0.719**	−0.057	0.193
Institutional support					
18. Die Organisation. in der ich arbeite. versteht. dass diejenigen. die in solche Vorfälle verwickelt sind. Hilfe benötigen können um die Auswirkungen zu verarbeiten.*	0.186	0.008	**0.671**	0.026	−0.168
19. Meine Organisation hat eine Reihe von Angeboten. die mir helfen. solche Ereignisse zu verarbeiten.*	0.282	0.039	**0.545**	0.032	−0.244
20. Die Sorge für das Wohl von Personen. die in solche Vorfälle verwickelt sind. ist nicht stark ausgeprägt in der Organisation. in der ich arbeite.	0.260	−0.058	**0.364**	0.174	−0.001
Professional self-efficacy					
21. Nach meiner Beteiligung in solche Vorfälle habe ich Gefühle der Unzulänglichkeit in Bezug auf meine Fähigkeiten in der Patientenversorgung erfahren.	**0.663**	0.094	0.030	0.103	0.170
22. Durch meine Erfahrungen frage ich mich. ob ich wirklich eine gute Fachkraft bin.	**0.614**	0.121	0.057	0.136	0.128
23. Nach solchen Erfahrungen. bin ich ängstlich geworden. schwerige oder riskante Aufgaben zu übernehmen.	**0.619**	0.222	0.053	0.123	0.266
24. Solche Erfahrungen haben meine Arbeitsleistung negativ beeinflusst.	**0.589**	0.208	0.034	0.171	0.267
Turnover intentions					
25. Meine Erfahrungen haben zu einem Wunsch geführt. lieber fern der Patientenversorgung zu arbeiten.	0.308	0.167	0.153	0.068	**0.645**
26. Manchmal möchte ich durch den Stress durch Beteiligung an solchen Situationen meine Arbeit aufgeben.	**0.470**	0.100	0.180	0.040	**0.580**
27. Ich habe begonnen nach anderen beruflichen Möglichkeiten Ausschau zu halten.	0.209	0.057	0.320	0.054	**0.546**
28. Aufgrund dieser Ereignisse plane ich in den nächsten 6 Monaten meinen Beruf zu verlassen.	0.070	−0.067	0.252	0.007	**0.594**
Absenteeismus					
29. Meine Erfahrungen mit einem unerwünschten Ereignis oder Fehler haben dazu geführt. dass ich mir für meine seelische Gesundheit einen Tag frei genommen habe.	0.103	0.001	−0.007	−0.004	**0.599**
30. Ich habe nach solchen Ereignissen mir schon einmal länger im Beruf freigenommen	0.070	0.021	−0.102	0.065	**0.592**
31. Wenn ich arbeite. bin ich durch meine Beteiligung an solchen Situationen abgelenkt und nicht hundertprozentig präsent.	**0.386**	0.315	0.070	0.106	0.282

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TABLE 2. *(Continued)*

	D1	D2	D3	D4	D5
Resilience					
32. Aufgrund solcher Situationen bin ich in meiner Arbeit aufmerksamer geworden*	−0.195	**0.772**	0.027	−0.052	0.030
33. Solche Situationen haben dazu geführt. dass ich meine Arbeitsqualität verbessert habe.*	−0.019	**0.838**	0.039	−0.091	0.006
34. Meine Erfahrungen mit unerwünschten Ereignissen am Patienten oder Fehlern haben positive Veränderungen in den Abläufen der Behandlung von Patienten bewirkt.*	0.054	**0.773**	0.078	−0.028	0.066
35. Ich bin durch unerwünschte Ereignisse und Fehler als Fachkraft gewachsen.*	0.097	**0.791**	0.085	−0.046	0.040
SVE support option desirability					
1. Die Möglichkeit. sich unmittelbar nach einem Ereignis kurz Zeit nehmen zu können.	0.305	−0.072	0.149	**0.620**	−0.178
2. Einen ruhigen Rückzugsort. um sich nach einem solchen Ereignis zu sammeln und zu erholen.	0.156	0.050	0.165	**0.671**	−0.094
3. Die Verfügbarkeit eines Mitarbeiters auf Augenhöhe. mit dem man über den Vorfall reden kann.	0.168	−0.085	−0.007	**0.672**	−0.111
4. Ein professionelles Beratungsprogramm außerhalb der Arbeit. in dem Beschäftigte sich frei beraten lassen können.	0.139	−0.044	0.009	**0.689**	0.229
5. Eine Diskussion mit meinem Vorgesetzten über das Ereignis.	0.057	−0.125	−0.191	**0.495**	0.111
6. Einen Termin mit einem Berater in meiner Institution. um über das Ereignis zu sprechen.	0.002	−0.028	0.013	**0.724**	0.224
7. Die Möglichkeit rund um die Uhr mit einer Person vertraulich über ein Ereignis und die Auswirkungen auf mich zu sprechen.	0.039	0.076	−0.043	**0.669**	0.158

Dominant factors loadings are shown in bold print. If 2 dimensions are printed in bold, cross-loadings were present.

*Reverse items.

by a PCA. This analysis confirmed 11 factors accounting for 66.6% of the variance. For specific analysis, only eigenvalues of 1 or higher were included (scree plot; Fig. 2). Five factors accounting for "distress," "support," "change," "resilience," and "request for support" were identified.

Because of some cross-loadings (correlation of more than 0.3 with a difference of less than 0.2 to the next higher loadings), a 5-factor varimax rotation was conducted. Table 2 shows the factor loadings after this procedure. Some remaining cross-loadings in items 6, 8, 9, 26, and 31 were determined.

After tests for reliability and validity, we analyzed the mean values of the 9 domains (Table 1): high values (>3) were identified for psychological distress (3.157), organizational support (3.242), the option to take some time after critical events (4.18), and the possibility to consult a peer (4.222).

Correlations and Subgroup Analysis

Neither gender- nor age-specific correlations were detected for the time spent on the questionnaire. (Kendall τ > 0.3). The sole exceptions were speech and language therapists, who showed a negative significant correlation concerning age and turnover intentions ($P = 0.013$, $\tau = −0.629$): the older, the less the desire for change.

Using Bonferroni-corrected Kruskal-Wallis tests, there were only few significant differences between the professional groups (Table 3): physicians showed higher burden concerning physical ($P < 0.001$) and psychical distress ($P = 0.002$) than did paramedics, whereas professional self-efficacy was lower in nurses compared with physician assistants ($P = 0.003$) and paramedics ($P < 0.0001$). On the side of paramedics, they experienced self-efficacies higher than physicians ($P = 0.001$). Regarding nurses, turnover intentions were stronger than in paramedics ($P = 0.002$).

The comparison of finishers and dropouts revealed no significant differences.

Qualitative Data

Altogether, 20 free-text entries (986 words) were analyzed. Taking an iterative approach, we identified the following themes:

1. Participants confirm experience of second victim phenomenon. Two participants reported about incidents resulting in second victim traumatization:

"Impairment due to these events resulted from my job in the ED."

"A new colleague on night shift was challenged with a cardio-pulmonary resuscitation. She did not know where to find the emergency-kit… she did not get the ventilation bag. The doctor failed to intubate and was not able to ventilate. The patient died."

2. There is high demand for improvement of the organizational safety culture.
   Most participants reported about their circumstances and their perceptions for organizational weaknesses in patient safety concerning prevention, identification, and treatment of adverse events. Lack of resources, such as time, professional support, and education, were mentioned multiple times:

"Up to now, failure and near-missed led to the interruption or end of the career."

"Open communication concerning these events are mostly prevented by hierarchal structures."

"Because of several reasons, e.g., staff shortage, high [unrealistic] expectations by the society and the high workload, errors [and events erroneously treated as errors] cannot be prevented."

"In my opinion, the willingness to bring charges or to consult a lawyer is becoming more common and is intended to get compensation payments or to take revenge."

"I think due to staff shortage there is lack of time for onboarding and familiarization at work."

"The biggest problem is staff shortage. We always work understaffed. In the ED we cannot manage the high numbers of patients with the low numbers of nurses. Errors and mix-ups occur often. And you frequently forget the important activities."

TABLE 3. Subgroup Analysis for Nonacademic Nurses, Therapists, Nonacademic Medical Assistants, Physician Assistants, Paramedics, and Physicians

Variable	n	Min	Max	Mean	Std. Var.
Time|Nurses	67	4.000	41.000	10.045	7.246
Time|Therapists	15	6.000	15.000	8.533	2.416
Time|Medical Assistants	20	5.000	38.000	12.000	9.984
Time|Physician Assistants	64	2.000	57.000	10.344	8.256
Time|Paramedics	46	4.000	56.000	9.326	9.636
Time|Physicians	47	3.000	35.000	7.979	5.011
Age|Nurses	67	20.000	63.000	39.776*	10.053
Age|Therapists	15	24.000	55.000	40.067*	9.874
Age|Medical Assistants	20	21.000	54.000	28.950*	8.918
Age|Physician Assistants	64	19.000	56.000	27.563*	8.277
Age|Paramedics	46	22.000	69.000	37.000*	11.110
Age|Physicians	47	31.000	64.000	43.809*	8.360
Psych Distress|Nurses	67	1.000	5.000	3.351	1.104
Psych Distress|Therapists	15	1.500	4.750	3.233	1.037
Psych Distress|Medical Assistants	20	1.000	4.750	2.938	1.057
Psych Distress|Physician Assistants	64	1.000	5.000	3.027	0.953
Psych Distress|Paramedics	46	1.000	5.000	2.875*	1.087
Psych Distress|Physicians	47	1.750	5.000	3.590*	1.080
Phys Distress|Nurses	67	1.000	5.000	2.576*	1.012
Phys Distress|Therapists	15	1.400	3.200	2.013	0.504
Phys Distress|Medical Assistants	20	1.000	3.800	2.280	0.827
Phys Distress|Physician Assistants	64	1.000	5.000	2.194	0.918
Phys Distress|Paramedics	46	1.000	4.400	1.917*	0.866
Phys Distress|Physicians	47	1.000	5.000	2.604	1.166
Colleagues|Nurses	67	1.000	4.000	1.948	0.631
Colleagues|Therapists	15	1.000	4.500	1.783	0.855
Colleagues|Medical Assistants	20	1.000	3.000	1.988	0.529
Colleagues|Physician Assistants	64	1.000	3.250	1.734	0.454
Colleagues|Paramedics	46	1.000	3.500	1.826	0.516
Colleagues|Physicians	47	1.000	4.750	2.059	0.781
Supervisors|Nurses	67	1.500	4.000	2.634	0.617
Supervisors|Therapists	15	1.750	3.500	2.483	0.477
Supervisors|Medical Assistants	20	1.750	4.250	2.825	0.654
Supervisors|Physician Assistants	64	1.000	4.000	2.424	0.519
Supervisors|Paramedics	46	1.750	4.000	2.592	0.631
Supervisors|Physicians	47	2.000	4.000	2.681	0.556
Institution|Nurses	67	1.000	5.000	3.448*	0.982
Institution|Therapists	15	1.667	5.000	3.178	0.983
Institution|Medical Assistants	20	1.333	4.333	3.050	0.887
Institution|Physician Assistants	64	1.000	5.000	2.953*,†	0.887
Institution|Paramedics	46	1.000	5.000	2.826†	1.122
Institution|Physicians	47	1.000	5.000	3.794†	1.087
Professionality|Nurses	67	1.000	5.000	2.362	1.152
Professionality|Therapists	15	1.500	4.250	2.183	0.776

TABLE 3. *(Continued)*

Variable	n	Min	Max	Mean	Std. Var.
Professionality|Medical Assistants	20	1.000	5.000	2.400	1.165
Professionality|Physician Assistants	64	1.000	5.000	2.453	0.966
Professionality|Paramed.	46	1.000	5.000	1.924*	0.880
Professionality|Physicians	47	1.000	5.000	2.660*	1.110
Change|Nurses	67	1.000	5.000	2.157*	1.224
Change|Therapists	15	1.000	3.750	1.800	0.887
Change|Medical Assistants	20	1.000	4.000	1.913	0.974
Change|Physician Assistants	64	1.000	3.250	1.613	0.687
Change|Paramedics	46	1.000	4.000	1.467*	0.672
Change|Physicians	47	1.000	4.250	1.947	0.875

*Significant effects between professional groups.
†Significant effects between professional groups.

"You go home stressed, unsatisfied and tired. You think about how long you can carry on working like this. A shortage of trainees is not the only problem. We cannot get nurses to stay at our hospital."

"The problem is not that errors occur or how professionals deal with it. The problem is why these errors even happen."

"Errors and mistakes in nursing mainly happen due to staff shortage. And this leads to depression and quitting the job."

Some participants reported about already established strategies, for example:

"I am happy to have a well performing team at my side. We make decisions and plan the further therapeutic management together. In my opinion this reduces errors."

Furthermore, there were many participants who declared the desire for optimization of a safety culture:

"The obligatory implementation of Critical Incident Reporting Systems would be of great benefit for patient safety."

"It is desired to have an anonymous database to collect and evaluate errors and mistakes."

3. Critical response to the questionnaire
Five respondents gave constructive criticism about the questionnaire, and 6 declared it to be a feasible and valuable tool. Several persons criticized that the inverted items and the Likert scale were laborious or confusing. One person scrutinized the translation to be inaccurate. In this case, the person seemed to not have understood whether critical incidents leading to second victim traumatization were recent events or those in the past.

DISCUSSION

Key Results

High reliability for the G-SVESTR was shown with a Cronbach α[32] of 0.884 comparable with or higher than the original SVEST (0.79), the revised SVEST-R (0.86), the Korean version (0.71), and the Chinese version (0.52–0.9).[18,19]

Considering the tests for construct validity, it was possible to show the multidimensional main factors with eigenvalues greater than 1 and acceptable factor loading. This loading was attributable

to 5 dimensions, namely, distress (D1), which comprises psychological and physical stress and the experience of the own professional efficacy, which might be impaired because of critical events. Supporting factors (D3) were support and help by colleagues, supervisors, and institutions. Resilience (D2), change (D5), and desire concerning support formats (D4) were the other dimensions.

Cross-loadings of items 6, 8, and 9—all considering somatic symptoms—loaded weaker on the dimension "change" than on "distress," so that they were not removed because of content validity and comparability with other SVEST-R versions. Item 26 also showed a cross-loading on "distress" and "change." This intercorrelation was explained because the word "stress" was part of the question, and therefore, distress might be the driver to the desire for change. The correlation between distress and turnover intentions is well known, especially in case of burnout[33–35] and a poor safety culture.[36,37] In addition, the free-text entries also showed this relationship.

The most problematic item was no. 31 (absenteeism). The results showed 2 loadings (D1 and D2), but no loading on the dimension of the other absenteeism items loaded on (D5). This finding was cross-checked in the translation and the back translation:

We translated item 31 of the SVEST-R ("When I am at work, I am distracted and not 100% present because of my involvement in these situations.") with "Wenn ich arbeite, bin ich durch meine Beteiligung an solchen Situationen abgelenkt und nicht hundertprozentig präsent." and back-translated it with "When I work, I am distracted by my participation in such situations and am not at hundred percent present."

The translation is deemed adequate according to the WHO guidelines. Comparing the content of items 31 to 33, the question addresses a form of missing concentration. This might be the case with presenteeism, whereas items 32 and 33 focus on absenteeism —the habitual withdrawal and retreat from the working place due to poor motivation.[38]

This issue is comparable with the original SVEST,[17] wherein a weaker factor loading could be derived. To maintain content validity, triple assessment of absenteeism and comparability to other SVEST versions, this item was not removed either. Regarding this finding, it could be beneficial to assess persons agreeing to item 31 but not to 32 or 33 for concentration deficits (e.g., due to neurologic impairment) and presenteeism. For future investigations, item 31 should be measured and interpreted cautiously, and it may furthermore be useful to examine absenteeism and presenteeism parameters as separate themes.[38,39]

There were only few differences in response behavior concerning the different professions and none between finishers and dropouts. Although motivation and interests are not the only criteria for completion of a survey, the multiprofessional approach was used and the finisher/dropout comparison for reduction of the selection bias. However, there is no complete ruling out of this error innate to all questionnaire settings. Thus, it cannot be known how people would have answered who refused to participate or were not capable to access the survey or who did not know about it. To assess this, distinct populations of more than 300 participants are necessary for generalizability of the responses.

Furthermore, the translated questionnaire as a top-down screening and assessment instrument does not address the distinction between experience of emotionally or morally challenging events and the identification to be a second victim. This is not the purpose of this questionnaire, although after identification of critical events, it is critical to distinguish between a second victim phenomenen[1] with or without identification of the involved person and other entities like posttraumatic stress[9,40] and moral injury.[40]

The duration of time spent on the questionnaire was about 9.4 minutes in the finisher group and 3.6 minutes in the dropout group, which seems justifiable as a feasible and economic integration into a daily routine. Although the length of a questionnaire should not be the only factor concerning response burden,[41] time-consuming questionnaires may be difficult to implement into daily routine. However, institutions using the G-SVESTR must decide whether identifications of preventable and treatable second victims and following effects on patient safety and economy (e.g., absenteeism, presenteeism, loss of manpower, recruiting of new employees, onboarding processes) justify the time regularly invested in staff assessments.[38,39,42]

Limitations

There are some limitations and possible bias to our study:

1. Translation

   Idiomatic translation is a complex process with the need for a valid and reliable process. This issue was addressed by adhering to the WHO recommendations,[26] with support by an English native speaker, an expert panel, and external experts familiar with patient safety.

2. Study size

   The study size is a key factor for generalizing the results. According to international recommendations, the objective to recruit 300 participants was achieved and the goal of a 1:2 item to responder ratio[30,31] was exceeded.

3. Multiprofessional population

   The project was conducted within different groups of health care providers and not in distinct groups like in the other SVEST validations. These had distributed the survey among nurses at third-level hospitals only.

A multiprofessional, multisectoral design was chosen, which incorporated different professions of prehospital, primary, secondary, tertiary, and ambulatory care. Because SVS affects health care workers from different professions and health care sectors, this approach to detect differences between professional groups was used for the generation of new hypotheses and to show validity and reliability in all groups and not nurses only.

In addition, this was done because nurses in Germany are a group consisting of many different professions with different academic and nonacademic educational courses and workplace definitions. Thus, a direct comparison of nurses in the United States with those in Germany would not be considered valid.

4. Response and convenience bias

There are many advantages and disadvantages of online-based questionnaires distributed using manifold networks and social media platforms[29]: on the one hand, they are flexible, low cost, and easy to conduct and distribute; reach many people; are robust to transfer errors; evoke a higher motivation to answer; and require lower social interaction and a higher level of standardization. On the other hand, qualitative data are collected at a pure verbal level without assessment of paraverbal and nonverbal activity or the possibility of interaction with an interviewer.

Furthermore, motivational factors may have played a role (only motivated, perhaps mainly affected persons) in the decision to participate. This was addressed by taking the finisher-dropout approach. In addition, decentralized access to different professions via social media and regional networks improves generalizability. Unfortunately, hardly detectable bias was not addressed, for example, survey fraud.

To ensure comparability, the English template was copied without supplements, statements, or omissions.

The participants were recruited online according to the convenience sampling approach, except for physician assistants and palliative care nurses, which were sampled in more defined and distinct networks. Contact to these groups was established up to 3 times.[29]

Although the approach cannot exclude the selection bias completely, recruitment, finisher/dropout comparison, and subgroup analysis may limit it. However, it must be emphasized that the content analysis of the results lacks generalizability because of the small groups, whereas construct validation and reliability analysis meets the expected criteria: The project was not intended to assess the second victim situation in Germany. It was intended to validate the instrument to do so in future investigations. However, the first findings derived from qualitative and quantitative content may be used for hypotheses generation.

CONCLUSIONS

The G-SVESTR questionnaire is a valid and reliable instrument for the assessment of second victim effects in a multiprofessional setting. The sole exception is item 31, which assesses for absenteeism. This item was preserved owing to content validity and comparability to other SVEST versions and should be reevaluated in future versions of the SVESTR. Data from this observation concerning content give input for a hypotheses generation but are limited because of the selection bias and small within-group sample sizes. In summary, the G-SVESTR may be validly used for this effort in multiple settings and professions of all health care sectors.

REFERENCES

1. Wu AW. Medical error: the second victim. The doctor who makes the mistake needs help too. *BMJ*. 2000;320:726–727.

2. Scott SD, Hirschinger LE, Cox KR, et al. The natural history of recovery for the healthcare provider "second victim" after adverse patient events. *Qual Saf Health Care*. 2009;18:325–330.

3. Ozeke O, Ozeke V, Coskun O, et al. Second victims in health care: current perspectives. *Adv Med Educ Pract*. 2019;10:593–603.

4. Waterman AD, Garbutt J, Hazel E, et al. The emotional impact of medical errors on practicing physicians in the United States and Canada. *Jt Comm J Qual Patient Saf*. 2007;33:467–476.

5. Winning AM, Merandi J, Rausch JR, et al. Validation of the Second Victim Experience and Support Tool—Revised in the neonatal intensive care unit. *J Patient Saf*. 2020.

6. Mitchell I, Schuster A, Smith K, et al. Patient safety incident reporting: a qualitative study of thoughts and perceptions of experts 15 years after 'To Err is Human'. *BMJ Qual Saf*. 2016;25:92–99.

7. Lane MA, Newman BM, Taylor MZ, et al. Supporting clinicians after adverse events: development of a clinician peer support program. *J Patient Saf*. 2018;14:e56–e60.

8. Seys D, Wu AW, Van Gerven E, et al. Health care professionals as second victims after adverse events: a systematic review. *Eval Health Prof*. 2013; 36:135–162.

9. Baas MAM, Scheepstra KWF, Stramrood CAI, et al. Work-related adverse events leaving their mark: a cross-sectional study among Dutch gynecologists. *BMC Psychiatry*. 2018;18:73.

10. Chung AS, Smart J, Zdradzinski M, et al. Educator toolkits on second victim syndrome, mindfulness and meditation, and positive psychology: the 2017 Resident Wellness Consensus Summit. *West J Emerg Med*. 2018; 19:327–331.

11. Patel RS, Sekhri S, Bhimanadham NN, et al. A review on strategies to manage physician burnout. *Cureus*. 2019;11:e4805.

12. Grissinger M. Too many abandon the "second victims" of medical errors. *P T*. 2014;39:591–592.

13. von Laue N, Schwappach D, Hochreutener M. "Second victim"—error, crises and how to get out of it. *Ther Umsch*. 2012;69:367–370.

14. Jeddah Declaration 2019. Avaialble at: https://www. bundesgesundheitsministerium.de/fileadmin/Dateien/3_Downloads/P/ Patientensicherheit/PSS_2019/Patientensicherheit_Erklaerung_Dschidda_ 2019.pdf. Accessed April 14, 2021.

15. Clarkson MD, Haskell H, Hemmelgarn C, et al. Abandon the term "second victim". *BMJ*. 2019;364:l1233.

16. Petersen IG. The term "second victim" is appropriate for frontline workers. *BMJ*. 2019;365:l2157.

17. Burlison JD, Scott SD, Browne EK, et al. The Second Victim Experience and Support Tool: validation of an organizational resource for assessing second victim effects and the quality of support resources. *J Patient Saf*. 2017;13:93–102.

18. Kim EM, Kim SA, Lee JR, et al. Psychometric properties of Korean version of the Second Victim Experience and Support Tool (K-SVEST). *J Patient Saf*. 2020;16:179–186.

19. Chen J, Yang Q, Zhao Q, et al. Psychometric validation of the Chinese version of the Second Victim Experience and Support Tool (C-SVEST). *J Nurs Manag*. 2019;27:1416–1422.

20. Scarpis E, Castriotta L, Ruscio E, et al. The Second Victim Experience and Support Tool: A Cross-Cultural Adaptation and Psychometric Evaluation in Italy (IT-SVEST). *J Patient Saf*. 2021.

21. Knudsen T, Abrahamsen C, Jørgensen JS, et al. Validation of the Danish version of the Second Victim Experience and Support Tool [published online April 16, 2021]. *Scand J Public Health*. doi:10.1177/ 14034948211004801.

22. Suárez-Álvarez J, Pedrosa I, Lozano LM, et al. Using reversed items in Likert scales: a questionable practice. *Psicothema*. 2018;30:149–158.

23. Wulf H. Patient safety—mission for the future: recommendations for the management of severe treatment complications and burdensome courses (preventing the "second victim"). *Anasthesiol Intensivmed Notfallmed Schmerzther*. 2014;49(7–8):460–464.

24. Wienke A. Briefing and accusation of medical malpractice—the second victim. *Laryngorhinootologie*. 2013;92(Suppl 1):S1–S22.

25. Koll-Krüsmann M. Psychosocial support and prevention for second victims. *Psychiatr Danub*. 2019;31:483–486.

26. WHO. Process of translation and adaptation of instruments 2020 [updated December 31, 2020. Available at: https://www.who.int/substance_abuse/ research_tools/translation/en/.

27. Bradley EH, Curry LA, Devers KJ. Qualitative data analysis for health services research: developing taxonomy, themes, and theory. *Health Serv Res*. 2007;42:1758–1772.

28. Janesick V. The choregraphy of qualitative research: minuets, improvisation and crytallization. In: Denzin NK, Lincoln YS, eds. Strategies of Qualitative Inquiry. Thousand Oaks, CA: Sage Publications, Inc; 2003:46–79.

29. Ball HL. Conducting online surveys. *J Hum Lact*. 2019;35:413–417.

30. Anthoine E, Moret L, Regnault A, et al. Sample size used to validate a scale: a review of publications on newly-developed patient reported outcomes measures. *Health Qual Life Outcomes*. 2014;12:176.

31. Comrey ALLH. *A First Course in Factor Analysis*. 2nd ed. Hillsdale, NJ: Lawrence Erlbaum Associates; 1992:488.

32. Blanz M. *Forschungsmethoden und Statistik für die Soziale Arbeit: Grundlagen und Anwendungen*. Stuttgart: Kohlhammer; 2015.

33. Gray JA, Muramatsu N. When the job has lost its appeal: intentions to quit among direct care workers. *J Intellect Dev Disabil*. 2013;38:124–133.

34. Gray-Stanley JA, Muramatsu N. Work stress, burnout, and social and personal resources among direct care workers. *Res Dev Disabil*. 2011;32: 1065–1074.

35. Smyth E, Healy O, Lydon S. An analysis of stress, burnout, and work commitment among disability support staff in the UK. *Res Dev Disabil*. 2015;47:297–305.

36. Van Bogaert I, Depuydt C, Hachimi-Idrissi S. Dissatisfaction and burnout among Flemish emergency physicians: a qualitative study. *Acta Clin Belg*. 2020;75:329–333.

37. Stehman CR, Testo Z, Gershaw RS, et al. Burnout, drop out, suicide: physician loss in emergency medicine, part I. *West J Emerg Med*. 2019;20:485–494.

38. Gosselin E, Lemyre L, Corneil W. Presenteeism and absenteeism: differentiated understanding of related phenomena. *J Occup Health Psychol*. 2013;18:75–86.

39. Johns G. Attendance dynamics at work: the antecedents and correlates of presenteeism, absenteeism, and productivity loss. *J Occup Health Psychol*. 2011;16:483–500.

40. Barnes HA, Hurley RA, Taber KH. Moral injury and PTSD: often co-occurring yet mechanistically different. *J Neuropsychiatry Clin Neurosci*. 2019;31:A4–A103.

41. Rolstad S, Adler J, Rydén A. Response burden and questionnaire length: is shorter better? A review and meta-analysis. *Value Health*. 2011;14: 1101–1108.

42. Hall J, Cohen DJ, Davis M, et al. Preparing the workforce for behavioral health and primary care integration. *J Am Board Fam Med*. 2015;28 Suppl 1(Suppl 1):S41–S51.