

## How do Physicians Manage Functional Neurological Symptom Disorder and Somatic Symptom Disorder in the Emergency Department? A Vignette Study

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### ABSTRACT

**Introduction:** We aimed to explore how physicians from different specialties approach the management of functional neurological symptom (conversion) and somatic symptom disorders in the emergency department compared with pulmonary embolism and how physicians' professional and personal characteristics influence their diagnostic preferences.

**Methods:** Using a vignette methodology, and cross-sectional design, three emergency department case vignettes of possible functional neurological symptom, somatic symptom disorder, and pulmonary embolism were presented to physicians from internal medicine, emergency medicine, and psychiatry. A structured survey including questions on diagnosis and management of these cases, and physicians' professional and personal characteristics (childhood trauma, attachment style) was conducted.

**Results:** Physicians from internal medicine and emergency medicine tended to consider functional neurological symptom disorder as 'malingering' while psychiatrists tended to diagnose the pulmonary

embolism case as a psychiatric condition. Emergency medicine physicians preferred to manage functional neurological symptom disorder themselves, while other doctors endorsed recommending a psychiatric consultation. In the univariable model, being a physician from psychiatry, emergency medicine, or internal medicine; being a specialist, history of childhood sexual abuse, dismissive, and fearful attachment styles of doctors were significant predictors of diagnosing functional neurological symptom disorder as malingering. Being a psychiatrist stayed as the only significant predictor in the multivariable model.

**Conclusion:** Objectively-aberrant functional neurological symptoms and subjective somatic symptoms may be creating different reactions in physicians. In the emergency department, physicians' diagnostic and treatment preferences of conversion disorder may be influenced by lack of training in conversion disorder, rather than their personal characteristics.

**Keywords:** Healthcare professional, physician, functional neurological symptom, somatic symptom, conversion disorder, attachment

**Cite this article as:** Kılıç Ö, Yapıcı Eser H, Necef I, Altunöz U, Öztıp Çakmak Ö, Aktaş C. How do Physicians Manage Functional Neurological and Somatic Symptom Disorders in the Emergency Department? A Vignette Methodology. Arch Neuropsychiatry 2021;58:261–267.

### INTRODUCTION

Functional neurological symptom disorder (FNSD) or conversion disorder is identified by altered voluntary motor or sensory (e.g. non-epileptic seizures, abnormal movements, weakness) that is incompatible with recognized neurological or medical conditions. Somatic symptom disorder (SSD) is identified as excessive thoughts, feelings, or behaviors related to distressing somatic symptoms (e.g. pain, fatigue). Both FNSD and SSD share the common feature of presenting mainly in medical settings rather than mental health settings and the presence of somatic concerns associated with significant distress and impairment of areas of functioning (1).

Research has demonstrated a variable approach towards patients with FNSD among health care professionals. Neurophysiotherapists reported seeing these patients frequently, having low self-judged knowledge and moderate levels of interest in them (2). Negative attitudes were found to be common among neuroscience nurses: 16% disagreed that the signs

of conversion were "real," 46% felt that patients were "manipulative," The level of self-judged knowledge was low (3). Practicing consultant neurologists reported seeing feigning as entangled with conversion disorder (4). Psychogenic non-epileptic seizures (PNES) present with seizures and can be categorized under FNSD with the specifier 'with attacks or seizures' (1). A systematic synthesis of 21 qualitative studies explored the subjective experience of patients living with PNES. Themes that emerged on the encounter with healthcare professionals revealed that negative experiences were common and anticipated. Patients' key concern was that their voice was not heard or taken seriously leading to frustration and disengagement from treatment (5). Thirty percent of parents of youth admitted to the emergency department (ED) because of FNSD reported being provided insufficient knowledge and inadequate assistance to find mental health services (6). A systematic review has captured attitudes and perceptions of at least 3900 professionals from 30 different studies on PNES. Five themes emerged: (a) confusion about

diagnosis and treatment aspects of PNES (b) perceiving the disorder as primarily correlated with psychological factors; (c) PNES patients found as challenging and frustrating; (d) mixed or controversial viewpoints about who is responsible for the care of these patients (e) perception of PNES to be less severe or debilitating than epilepsy and associated with a higher level of volition. (7). According to a survey of the perceptions of healthcare professionals (HCPs) regarding functional neurological disorders (FND) in Australia, most participants did not feel knowledgeable. Neurologists and general practitioners showed lower interest and more negative attitudes towards FND than psychiatrists, psychologists, and physiotherapists. Many HCPs do not feel comfortable communicating the likelihood of a FND with a patient. The context of HCPs' beliefs looking after these patients was suggested to be considered while evaluating the care they take (3).

Studies exploring personal factors of physicians affecting the diagnostic and treatment of FNSD patients are very scarce. Salmon et al suggested that general practitioners' (GPs) response to the psychosocial aspects of the presentation of patients with medically unexplained symptoms was linked to the (GP's) attachment style (8). We have encountered only one study that has utilized vignette methodology but to explore attitudes towards patients with somatization only (9). The majority of the literature on healthcare professionals' attitudes towards FNSD comes from developed countries (10). Information coming from a country lying between east and west with a different socio-cultural background may provide important information. To the best of our knowledge, this is the first study that examined physicians' attachment and childhood trauma as a factor affecting their diagnosis, management, and treatment decisions of patients with FNSD and SDD in the ED. The present study hypothesized that the professional (e.g., training and specialty) and personal characteristics of the physicians may influence their diagnosis and management of FNSD. We aimed to explore how physicians from different specialties acted towards case scenarios of FNSD and SSD compared with a life-threatening general medical condition of pulmonary embolism (PE) in the ED setting.

## METHODS

### Study Design

Firstly, a pilot survey was developed and distributed in hard-copies to ten emergency medicine (EM) and internal medicine (IM) physicians working in a university hospital. It consisted of a case that was admitted to the ED with contracture and a feeling of faintness suggesting a possible FNSD. Open-ended questions explored the steps physicians are most likely to take. Using the received responses, a multiple-choice, structured questionnaire was formed by the study team composed of physicians from EM, IM, and psychiatry, who are experienced in the diagnosis and management of these patients. Case-vignettes are recommended to portray actual practices in complex emergencies therefore they can be used to assess the quality of management in these circumstances (11).

The 25-item self-report structured survey presented three case vignettes with short medical histories and asked questions to assess physicians' ii) most likely diagnosis iii) next step of management and iii) aim before discharge from the ED. Physicians' demographics, interpersonal attachment styles, and childhood trauma histories were also inquired about. To evaluate the clinicians' conceptualization of the presented cases, the four options were presented as the most likely diagnosis (psychiatric disorder, undiagnosed medical disorder, malingering, and family conflict). The reason for including the option of malingering and family conflict was to explore whether the clinicians perceive the condition with regards to a behavioral characteristic rather than a medical diagnosis.

### Vignettes

All cases in the vignettes were young women seeking help in the ED of a general hospital with a history and symptoms suggesting FNSD or SSD or pulmonary embolism (PE) respectively. FNSD and SSD both lie under the umbrella category of somatic symptom and related disorders but have different clinical presentations. The third group of PE was added as a comparison group to the first two groups.

#### Vignette 1

A 19-year-old woman who had a 10-minute contracture at the extremities and subsequent feeling of faintness after a quarrel in the family was taken to an ED by her family. Blood pressure is 100/70 mmHg, pulse rate 70/min, oxygen saturation was 98%, and temperature 36.8 Celsius. She had prior episodes of fainting after quarrels but no history of a panic attack. During the examination, her eyes were shut and she did not respond to any questions.

#### Vignette 2

A 32-year-old married woman with three children was having severe discord in her family. She was admitted to the ED with abdominal pain. For three years, she had suffered from backache, abdominal pain, dyspepsia, and malaise. Earlier examinations and laboratory tests did not point to a specific illness. Investigations (examination, laboratory, imaging) that were carried out this time in the ED resulted as normal.

#### Vignette 3

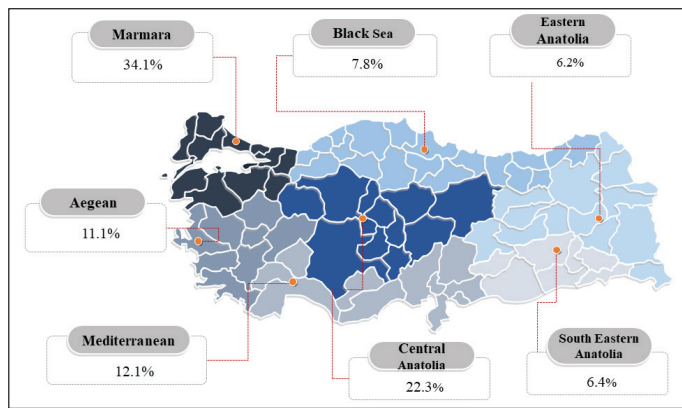
A 23-year-old woman arrived at the ED with her husband and mother-in-law with complaints of suddenly feeling sick, shortness of breath, and palpitation. The patient presented to two other EDs with similar complaints on the same day. Examinations and tests did not point to a specific illness. She was prescribed anxiolytic and antidepressant treatment however the complaints did not subside. Blood pressure was 120/80 mmHg pulse rate 100/min, breath rate 23/min, and oxygen saturation was 94%.

Childhood trauma was assessed with eight items selected from the Childhood Trauma Questionnaire (CTQ-28) which is a self-report instrument with a 5-point Likert scale ranging from never true to often true (12). The reliability and the validity of its Turkish version were demonstrated by Sar et al (13). The selected items were representative for emotional abuse (item 25), physical abuse (item 15), physical neglect (item 2), emotional neglect (item 7), sexual abuse (item 24), and denial-minimization of childhood trauma (items 10, 16, 22).

Relationship Scales Questionnaire (RSQ) is a 30-item scale assessing interpersonal attachment type (14). Turkish adaptation has been made in a previous study (15). For the present study, two items were selected to represent each attachment type. For secure attachment: 'I am comfortable depending on other people (item 10) and 'I am comfortable having other people depend on me' (item 15). For fearful attachment 'I find it difficult to trust others completely' (item 12) and 'I worry that I will be hurt if I allow myself to become too close to others' (item 5). For preoccupied attachment, 'I worry that others do not value me as much as I value them' (item 16) and 'I want to be completely emotionally intimate with others' (item 8). For dismissive attachment, 'It is very important to me to feel self-sufficient' (item 19) and 'I prefer not to have other people depend on me' (item 22). The survey could be found in Appendix A.

### Data Collection

The questionnaire was circulated online (qualtrics.com) among the professional and personal email groups of physicians who are from different institutions of the country. A convenience, non-random sampling method was used. The distribution of the participating physicians demonstrated that all regions of the country were represented. One hundred-seventy (34.1%) physicians were from the Marmara



**Figure 1.** Distribution of the study participants by geographical regions

region, 55 (11.1%) physicians were from the Aegean, 111 (22.3%) from Central Anatolia, 39 (7.8%) were from the Black Sea, 60 (12.1%) from the Mediterranean, 31 (6.2%) from Eastern Anatolia and 32 (6.4%) physicians were from South Eastern Anatolia regions (Figure 1). The participants were physicians either in training or at the specialist level in emergency medicine (EM), internal medicine (IM), and psychiatry. These groups of physicians were chosen given their role in providing healthcare in or as a consultant to the ED. They provided informed consent before the administration of the questionnaire. The study was conducted according to the principles of good scientific practice and was approved by the Koç University institutional ethics committee in Istanbul.

### Statistical Analysis

We used the Software Package for Social Sciences for Windows 26.0 (SPSS Inc. Chicago, IL) for the data analysis. Descriptive statistics were used to

report frequencies and percentages for the categorical variables and the mean value with the standard deviation for the continuous variables. On an analysis-by-analysis basis, missing data were removed and valid percentages were recorded. Differences in physicians' diagnosis and management of the presented cases were explored with Chi-square tests. Analyses of adjusted residuals were performed to examine the most likely diagnosis, the best next step in management, and the aim before discharge from the ED, between specialty groups for all case scenarios. Univariable and multivariable binary logistic regression was used to assess the predictors of physicians' choices of malingering for the FNSD case. A p-value of less than 0.05 was deemed to show a statistically significant result.

## RESULTS

Five hundred fifty-seven physicians agreed to fill in the questionnaires. Fifty-nine participants were excluded due to providing insufficient data. Eventually, a total of 498 physicians participated in the study. Professional and demographic characteristics of physicians are summarized in Table 1.

Physicians' most likely diagnoses for the three cases, their next step on management, and their aims before discharge are summarized in Tables 2, 3, and 4 respectively.

### Physicians' Responses to Questions Regarding the Patient with FNSD

IM and EM physicians tended to choose 'malingering' as their most likely diagnosis for the patient with FNSD, whereas psychiatrists tended to recognize this scenario as a psychiatric condition. EM and IM physicians' most likely diagnoses were not significantly different from each other. The majority of EM physicians preferred to intervene themselves (anxiolytic administration and waiting until the patient regains consciousness), whereas psychiatrists' and internists' indicated the best management option for this case would be advising for an urgent psychiatric

**Table 1.** Professional and demographic characteristics of the physicians who participated in the survey

	N	Age (M, SD)	Women (n, %)	Men (n, %)	Residents (n, %)	Specialists (n, %)
Emergency medicine	159	35.8 (6.2)	78 (49)	81 (51)	44 (27.7)	115 (72.3)
Internal medicine	143	36.1 (7.0)	102 (71.3)	41 (28.7)	31 (21.7)	112 (78.3)
Psychiatry	196	34.4 (8.2)	133 (67.9)	63 (32.1)	77 (39.3)	119 (60.7)
Total	498	35.4 (7.3)	313 (63)	185 (37)	152 (30.5)	346 (69.5)

M, Mean; SD, Standard deviation.

**Table 2.** Physicians' most likely diagnosis for the case vignettes according to the specialty status

Physicians' assessment	Psychiatry (%)	Emergency medicine (%)	Internal medicine (%)	p	$\chi^2$	df
	Patient presenting with functional neurological symptom disorder					
Psychiatric condition	81.0	28.4	30.2	<0.001	136.56	6
Undiagnosed general medical condition	7.9	15.5	15.1			
Malingering	3.2	43.9	44.6			
Family conflict	7.9	12.2	10.1			
	Patient presenting with somatic symptom disorder					
Psychiatric condition	81.8	25.9	45.1	<0.001	110.73	6
Undiagnosed general medical condition	14.8	42.6	28.6			
Malingering	1.1	23.8	18.0			
Family conflict	2.3	7.7	8.3			
	Patient presenting with pulmonary embolism					
Psychiatric condition	51.7	8.6	17.3	<0.001	92.34	6
Undiagnosed general medical condition	41.9	73.6	61.4			
Malingering	0.6	7.1	12.6			
Family conflict	5.8	10.7	8.7			

**Table 3.** Physicians' next step of management for the case vignettes according to the specialty status

Physicians' management decision	Psychiatry (%)	Emergency medicine (%)	Internal medicine (%)	p	$\chi^2$	df
	<b>Patient presenting with functional neurological symptom disorder</b>					
Discharge from emergency unit	1.6	2.7	0.0	<0.001	87.55	8
Prescription of an anxiolytic	16.9	23.8	14.5			
Waiting until the patient regains consciousness	25.2	61.9	30.4			
Urgent psychiatry consultation	32.8	5.4	28.3			
Urgent neurology consultation	23.5	6.2	26.8			
<b>Patient presenting with somatic symptom disorder</b>						
Discharge from emergency unit	8.0	30.1	9.2	<0.001	57.89	8
Prescription of an anxiolytic	23.4	25.2	25.1			
Waiting until the patient's symptom resolves	6.9	14.6	11.5			
Urgent psychiatry consultation	37.7	14.0	23.7			
Urgent neurology consultation	24.0	16.1	30.5			
<b>Patient presenting with pulmonary embolism</b>						
Discharge from emergency unit	1.8	5.1	2.4	<0.001	40.35	8
Prescription of an anxiolytic	24.0	18.8	12.8			
Waiting until the patient's symptom resolves	4.7	21.7	7.9			
Urgent psychiatry consultation	21.1	8.0	19.0			
Urgent neurology consultation	48.4	46.4	57.9			

consultation. In all three specialties, the most commonly reported aim before discharge was to check whether there were any co-occurring medical conditions.

#### Physicians' Responses Related to the Patient with SSD

The most likely diagnosis made by the majority of the psychiatrists and IM physicians for this case was a psychiatric condition. EM physicians preferred an undiagnosed medical condition predominantly and tended to discharge the patient after some clarification, whereas psychiatrists

advised an urgent psychiatric and internists advised an urgent neurology consultation. Psychiatrists' most common preference was to motivate the patient and relatives to apply for subsequent psychiatric evaluation, whereas both the EM and IM physicians preferred to ensure that no other co-occurring medical condition existed.

#### Physicians' Responses Related to the Patient with PE

A psychiatric condition was chosen as the most likely diagnosis by the majority of psychiatrists and an undiagnosed general medical condition

**Table 4.** Physicians' aim before discharging the patient according to the diagnosis and specialty status

Physicians' aim before discharge	Psychiatry (%)	Emergency medicine (%)	Internal medicine (%)	p	$\chi^2$	df
	<b>Patient presenting with functional neurological symptom disorder</b>					
Alleviate the presenting symptoms	5.0	0.7	4.4	<0.001	29.91	8
Ensure no other medical condition exists	56.9	82.1	69.3			8
Calm down the patient and her family	5.5	4.8	2.9			
Encourage the patient and her family to consult psychiatry	32.6	11.7	22.6			
Understand psychological reasons of for the condition	0.0	0.7	0.8			
<b>Patient presenting with somatic symptom disorder</b>						
Alleviate the presenting symptoms	2.9	11.3	5.3	<0.001	45.05	8
Ensure no other medical condition exists	41.4	61.3	63.4			
Calm down the patient and her family	0.6	3.5	2.3			
Encourage the patient and her family to consult psychiatry	53.4	23.2	28.2			
Understand psychological reasons of for the condition	1.7	0.7	0.8			
<b>Patient presenting with pulmonary embolism</b>						
Alleviate the presenting symptoms	14.6	11.7	12.8	0.003	23.38	8
Ensure no other medical condition exists	57.3	77.4	71.2			
Calm down the patient and her family	3.5	4.4	1.6			
Encourage the patient and her family to consult psychiatry	21.1	5.8	11.2			
Understand psychological reasons of for the condition	3.5	0.7	3.2			



**Table 5.** Univariable and multivariable analysis of ‘most likely diagnosis as malingering’ with physicians’ personal characteristics

	Univariable model				Multivariable model			
	RR	95% CI		p	RR	95% CI		p
Age	0.99	0.96	1.01	0.32				
Female gender	1.24	0.82	1.88	0.30				
Specialist physician	0.68	0.43	1.06	0.09				
Years in training	0.84	0.60	1.20	0.34				
Years in practice	1.00	0.97	1.04	0.92				
Type of specialty								
Psychiatry	24.10	10.35	56.13	<0.001	22.09	8.72	55.93	<0.001
Emergency medicine	2.97	1.96	4.52	<0.001				
Internal medicine	3.00	1.96	4.58	<0.001				
Attachment type								
Secure attachment	1.01	0.88	1.17	0.84				
Dismissive attachment	0.81	0.68	0.97	0.02				
Preoccupied attachment	0.89	0.76	1.05	0.18				
Fearful attachment	0.81	0.70	0.92	0.002				
Childhood trauma								
Physical abuse	1.13	0.83	1.52	0.44				
Sexual abuse	1.71	0.90	3.25	0.10				
Emotional abuse	1.05	0.81	1.37	0.71				
Emotional neglect	1.13	0.84	1.51	0.42				
Physical neglect	0.97	0.74	1.27	0.82				
Denial	1.16	0.83	1.62	0.39				

RR, Risk ratio; CI, Confidence interval; p, p-value.

R<sup>2</sup>=0.31 (Nagelkerke) 0.22 (Cox&Snell).

Model X<sup>2</sup> (7)=90.644, p<0.001

by the majority of EM and IM physicians. The most common management preference among all specialty groups was to refer the patient to urgent cardiology consultation. The most common aim before discharge among all specialty groups was to ensure that no co-occurring medical condition existed.

### Predictors of Diagnostic Preference

From the independent variables that were put in the univariable model, being a physician from psychiatry, EM, IM, being a specialist physician rather than a resident, sexual abuse, dismissive, and fearful attachment were significant predictors of diagnosing FNSD as malingering. In the multivariable model, the psychiatric specialty was the only significant predictor of not diagnosing the FNSD case as malingering in the multivariable model when backward regression was conducted (Table 5).

## DISCUSSION

Physicians from three specialties demonstrated substantial variances in the diagnosis and management of the presented case vignettes. Psychiatrists tended to over-interpret the possible PE case in the direction of a psychiatric disorder while EM and IM physicians tended to diagnose the possible FNSD as malingering. For the possible SSD case, EM and IM physicians chose to run additional tests or ask for a consultation as their next step but did not prefer the same for the possible FNSD case. The only significant predictor of not choosing malingering as the most likely diagnosis of the FNSD case was being a psychiatrist. The most common management preference and the most common aim before discharge for the PE case did not show any differences among all specialty groups.

Variances in the diagnosis and management of these cases in the ED could be explained firstly by postgraduate specialty training. Different practice specialties reflect their unique experience and role for both

diagnosis and treatment and are certainly expected to have some impact on specialty-specific decision-making. Emergency physicians are uniformly trained to assume a medical etiology of the symptoms of patients presenting to the ED with complaints potentially suggestive of life-threatening organic disease. The clinical training should discourage from making psychobehavioral diagnoses of patients and are warned not to do so without convincing results of relevant definitive testing, and without support on the part of consultants from a different specialty or both. Psychiatrists, on the other hand, are accustomed to assuming that a patient has been “medically cleared” by a reliable medical specialist at the point they are consulted to do an evaluation. These differences in clinical orientation, overall, are appropriate and adaptive concerning patient needs and are likely to account for why psychiatrists frequently assigned a psychobehavioral diagnosis to the patient with FNSD.

The only significant predictor of not diagnosing FNSD as malingering was being a psychiatrist. This should be about the lack of training on FNSD during medical school and postgraduate training. While being commonly seen by many HCPs in clinical practice, there is a certain need for training on the therapeutic management of FNSD (7, 10, 16–18). Lack of training on FNSD may be interfering with their management in emergency conditions (17, 19, 20) and clinicians may feel discomfort and fall short of adequately caring for them (16). However, lack of and need for training on therapeutic management may also relate to SSD (21), so this does not seem to explain the whole picture.

Another reason for EM and IM physicians’ diagnosing the FNSD case as malingering but not the SSD case could be that FNSD, per definition, requires clear evidence of incompatibility with a “structural” neurological disorder and examination inconsistency (i. e., showing that physical signs elicited through one method of the examination are no longer positive when tested differently). Such a requirement does not exist for SSD,

possibly due to the nature of the symptoms. Although very useful and recommended in making a differential diagnosis, physicians should be aware and cautious about how diagnostic classifications and clinical practice recommendations affect the way we practice. The recommended examination to detect incompatibility may be posing physicians to different pathways of decision-making and attributing the symptoms of FNSD to malingering or feigning.

Indeed, earlier reports have shown some neurologists (4) and neurophysiotherapists (2) did not find conversion disorder distinct from feigning. Both psychiatrists and neurologists reported thinking patients with PNES had greater personal control over their condition than patients with epilepsy (22). Thirty-six percent of physicians who worked in the ED but did not complete a psychiatry rotation thought that the patient with conversion disorder can control his/her symptoms (17). Accordingly, EM and IM physicians' choice on running additional tests or asking for a consultation as their next step for the SSD case, but not preferring the same for the FNSD case could relate to the perception of the condition as a behavioral characteristic of the patient rather than a medical diagnosis.

We were not able to show any effect of attachment style or a history of childhood trauma of physicians on their diagnostic preferences of malingering for the FNSD case. Salmon et al. proposed that the response from GPs to the psycho-social aspect of the presentation of patients with somatic symptoms was linked to GPs attachment styles. GPs who were more likely to recommend somatic treatments despite patients presenting psychosocial issues were suggested to be least positive about their worth in relationships, but more positive about others (8). However, this study examined the relationship of GPs attachment style and treatment decisions for outpatients who had general somatic symptoms in the primary care and did not inform on attitudes towards FNSD. Bediz et al. examined the effect of empathic skills, burnout, work satisfaction, and alexithymia on physicians' attitude towards conversion disorder in the ED and found that the empathic skills were higher in physicians who have completed a psychiatry rotation. They concluded that attitudes are influenced by their knowledge and rather than their emotional status (17). This study did not include physicians from psychiatry and did not examine attachment styles and childhood trauma. The reason for our finding no effect of attachment style and childhood trauma on the choice of malingering could be because of utilizing a limited number of questions from CTQ and RSQ due to the aim of brevity.

Seniority in a specialty was not found to have any significant effect on the choice of malingering for FNSD. Earlier studies demonstrated variable results. Negative views of neuroscience nurses working with FNSDs were demonstrated to be correlated with inexperience and lower nursing grade (3). On the contrary, older neurologists tend to intertwine feigning with FNSD more than younger neurologists (4), and older HCPs were found to have more negative attitudes than younger (18). Junior doctors expressed having witnessed senior colleagues' negative attitudes towards patients with functional symptoms (23). The relatively young age of the participants in our sample might have affected this finding.

Gender did not significantly affect diagnosing FNSD as malingering. This was in line with one study where GP's prescribing a somatic intervention to patients with functional symptoms was not influenced by gender (8). However, another study showed female neurologists endorsed psychological models more clearly and found it easier to discuss with patients with FNSD (4).

Although researchers proposed alternative explanations and models (24–26), the biomedical model – the official explanation of a 'disease'

in medicine – cannot fully answer the questions about the underlying etiology and pathophysiology of the FNSD and SSD. Stigma is eminently associated with FND (16). Insufficient information received (6) and the poor rapport with physicians may turn to self-stigma by patients through internalization of prejudice and discrimination (16). To prevent these, training on the diagnosis and management of FNSD in medical schools is fundamental for the better performance of future physicians. Physicians' who took the training during a psychiatry clerkship demonstrated greater knowledge, higher empathy, and more appropriate management of patients with FNSD in the ED setting compared with physicians who did not complete a psychiatry clerkship (17). Therefore, hands-on learning seems another suitable approach. Besides informative learning, experiential teaching and training are also required to achieve a change in thinking and attitude as approached traditionally by the Balint groups (27). Practical skill development in interactive case-based group discussions on providing suitable explanations to patients will help doctors learn to develop a concept about how to approach and manage patients with FNSD (23). Treatment guidelines and roadmaps to reduce stigma (16) and improve care for FNSD are yet to be developed.

### Limitations

To the best of our knowledge, this has been the first study that evaluated the effect of attachment style and childhood trauma profile of physicians on their management of FNSD and SSD in the emergency department. It also has a large sample size compared to the relevant studies in the literature. The case-vignette methodology contributed to represent actual practices and management in the emergency department. Besides, the present study has limitations. First, the unavailability of official and centralized data concerning the specialist physicians in the country hampered randomization. We could not use all questions in RSQ and CTQ but chose four and eight items respectively due to the aim of brevity. Eliciting all items in RSQ and CTQ could have resulted in a more accurate measuring of attachment and childhood trauma. Nevertheless, this explorative, preliminary study in this understudied field addresses several potentially important issues in the EM practice and training.

### CONCLUSION

The present study showed that objectively-aberrant functional neurological and subjective somatic symptoms created different reactions in physicians. EM and IM physicians tended to consider possible FNSD as 'malingering' while most psychiatrists recognized possible PE as a psychiatric condition. EM physicians operated in a rather pragmatic way in the management of FNSD by trying to solve the problem through their capacities (e.g., anxiolytic drug administration and watching until recovery of consciousness). The majority of the IM physicians and psychiatrists advised for a psychiatric consultation. The latter approach reflected the recognition of the patients' need for an ongoing professional relationship and in-depth psychosocial evaluation besides the medical diagnostic work-up in an emergency setting. Assessed personal and professional factors did not influence the decision of the clinician except being a psychiatrist. Lack of training in conversion disorder rather than personal factors of physicians seems to influence their diagnostic and treatment preferences towards conversion disorder in the ED.

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**Acknowledgment:** We would like to thank Professor Vedat Sar for his support of this research project.

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**Committee Approval:** The study was conducted according to the principles of good scientific practice and was approved by the Koç University institutional ethics committee in Istanbul (2016.210.IRB3.133).

**Informed Consent:** Participants provided informed consent before the administration of the questionnaire.

**Peer-review:** Externally peer-reviewed

**Author Contributions:** Concept– ÖK, HYE, CA, ÖÖÇ; Design– ÖK, HYE, CA, ÖÖÇ; Supervision– ÖK, HYE; Resources– (-); Materials– (-); Data Collection and/or Processing– ÖK, HYE, CA, ÖÖÇ, IN; Analysis and/or Interpretation– ÖK, HYE, IN, UA; Literature Search– ÖK, HYE, IN, UA ; Writing Manuscript– ÖK; Critical Review– ÖK, HYE, IN, UA, ÖÖÇ, CA.

**Conflict of Interest:** The authors have no competing interest to report.

**Financial Disclosure:** This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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