ORIGINAL RESEARCH

# Somatic disorder education's effect on knowledge and attitudes of inpatient and emergency psychiatric staff: Using the Iowa Model

Keith W. Quist*[1,2], Jenny Husk[2], Melanie Kroger-Jarvis[1]

[1] College of Nursing, University of Cincinnati, Cincinnati, Ohio, United States
[2] University of Cincinnati Health, Cincinnati, Ohio, United States

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## ABSTRACT

**Objective:** Knowledge gaps among inpatient and emergency psychiatric staff regarding Somatic Symptom and Related Disorders (SSRDs) contribute to misdiagnosis, ineffective management, and suboptimal patient outcomes. This project aimed to enhance staff understanding and shift attitudes toward patients with somatic disorders through brief, peer led educational sessions.
**Methods:** The Iowa Model for Evidence Based Practice was selected as the guiding framework. Six 10 to 15 minute sessions were delivered to day and night shift staff at a mid-sized inpatient and emergency psychiatric facility. Content focused on prevalence, diagnostics, and nursing interventions related to SSRDs. Sessions were led by a DNP student working at the facility, with material development input from a nurse practitioner and a registered nurse with medical nursing experience. A pre-test/post-test design measured changes in staff knowledge and attitudes using an adapted version of the Opening Minds Scale for Health Care Providers (OMS-HC) and a knowledge questionnaire developed from Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR) content. Surveys were anonymous and matched using unique identifiers. Descriptive statistics and thematic analysis were used.
**Results:** A total of 26 participants completed baseline surveys; two completed matched post intervention surveys. Baseline knowledge scores were relatively high (M = 4.13/5, SD = 0.48). Attitude scores averaged 2.63 on a 1-5 scale, with the disclosure/help seeking domain showing the highest stigma. Qualitative analysis of free text definitions (n = 26) revealed predominant biomedical framing, limited psychological integration, and some misunderstanding or uncertainty. Paired pre/post data showed minimal and inconsistent changes.
**Conclusions:** Findings indicate that knowledge of SSRDs among psychiatric staff is limited in key areas and that misconceptions and stigmatizing attitudes persist. Peer led education is feasible within psychiatric workflows and may help address these gaps, though low post survey participation limited the ability to assess impact. Further study is needed, improve follow up, and evaluate sustainable educational strategies.

**Key Words:** Education, Psychiatry, Somatic symptom and related disorders, Stigma

## 1. INTRODUCTION

Somatic Symptom and Related Disorders (SSRDs) are a group of psychiatric conditions characterized by the presence of one or more distressing somatic symptoms, accompanied by excessive thoughts, feelings, or behaviors related to those symptoms.[1] These symptoms may or may not have an identifiable medical cause, but they are real and disruptive to the patient's functioning.[1] SSRDs include diagnoses such as

*Correspondence: Keith W. Quist; Email: keith.quist@uky.edu; Address: College of Nursing, University of Kentucky, Lexington, KY, United States.

Somatic Symptom Disorder, Illness Anxiety Disorder, and Conversion Disorder.[1]

At the local facility where this project was implemented, no formal education was provided to staff on the identification or management of SSRDs. As a result, misinformation, stigmatization, and inconsistent practices were frequently observed. A victim-blaming mentality is commonly observed in facilities where no formal education is in place, which can increase patient distress and foster an environment of invalidation and mistrust.[2]

Professional understanding of the causes of SSRDs remains limited, leading to uncertainty and inconsistency in treatment approaches.[3] Research has shown that clinicians working with patients diagnosed with Somatic Symptom Disorder often report a range of vague or misaligned treatment goals, with symptom reduction not typically identified as a therapeutic aim even though it is the most common patient treatment aim.[4] This disconnect may result in care that is not only ineffective but may also be perceived as dismissive or harmful by the patient. Furthermore, individuals with insecure attachment dimensions are more likely to develop somatoform symptoms,[5] suggesting that interpersonal dynamics and psychological trauma may play a critical role in symptom expression. Broader patterns of invalidation can also be seen in similar settings; for example, psychological distress in school-aged children has been shown to lead to victimization by teachers,[6] indicating a systemic tendency to misinterpret distress behaviors as manipulative or disruptive.

This project aims to enhance staff understanding and shift attitudes toward patients with somatic disorders through educational sessions led by a peer-run team, which has been shown to help in similar circumstances.[7] This project is categorized as an evidence-based practice (EBP) initiative, as it seeks to integrate research into clinical workflows to address a modifiable gap in staff competency and patient-centered care where no such intervention currently exists.

The Iowa Model of EBP was selected as the guiding framework for this project. This model provides a structured process for identifying practice gaps, reviewing relevant evidence, and implementing sustainable interventions.[8] It was chosen for its practical focus, interdisciplinary orientation, and demonstrated utility in driving lasting change in healthcare systems. The Iowa Model is both adaptable and replicable, making it well-suited for projects targeting practice change in diverse clinical environments.

## 2. METHODS

This project was conducted at a mid-sized inpatient and emergency psychiatric facility located in the United States. The facility lacked formal training on SSRDs at the time of implementation. Psychiatric technicians, registered nurses, social workers, and occupational therapists all interact with patients on a regular basis at this facility and were picked as the primary population.

The intervention consisted of six 10- to 15-minute peer-facilitated educational sessions focused on defining SSRDs, differentiating between the different SSRDs, and general interventions related to these disorders. Sessions were led by a psychiatric nurse (the DNP student investigator) with material development input from a nurse practitioner and registered nurse with medical nursing experience.

The intervention's effectiveness was assessed using a pre-test/post-test design measuring changes in staff knowledge and attitudes regarding SSRDs. Pre-surveys were typically administered immediately before the intervention, with a minority completed up to one week in advance due to scheduling constraints. No randomization or control group was used, only using volunteer-based recruitment. The design aimed to assess medium-term knowledge gains and alterations in attitudes toward SSRDs.

The instruments used included a knowledge check made by the DNP student, an attitudes survey, and a quick demographics survey including age range, gender, role, education level, and race. Knowledge questions were formulated around information found in the literature and drawing heavily from information found in the DSM-5-TR.[1] The attitudes survey was an altered form of the Opening Minds Stigma Scale for Health Care Providers (OMS-HC).[9] Permission for use and alteration was gained from Dr. Andrew Szeto, who was part of the formation of the tool. The alterations were primarily through changing the terms "mental illness" and "mental disorders" to "somatic disorders." The OMS-HC is a fifteen item Likert scale survey for assessing attitudes regarding overall perception, disclosure and help seeking, and social distance for mental illness. Surveys were anonymous and matched using unique identifiers. Post-surveys were collected in the time frame of 7 to 28 days post-intervention.

This project was reviewed and approved as an evidence-based practice project and deemed exempt from full IRB approval by the appropriate institutional oversight body. Participants were informed that participation was voluntary, anonymous, and would not impact their employment in any way. No conflicts of interest were present.

## 3. RESULTS

A total of 26 participants completed baseline surveys containing free-text definitions of somatic disorders and questionnaire data; two participants also completed postintervention

surveys. One survey was excluded due to incompleteness, and three surveys were excluded for being completed postintervention without matching preintervention data. Participant roles were registered nurses (n = 17), psychiatric technicians (n = 4), occupational therapists (n = 2), a social worker (n = 1), and a pharmacist (n = 1); most respondents held bachelor's (n = 12) or master's degrees (n = 2) with two respondents holding a doctoral or associates degree each. At baseline, the mean total knowledge score was 4.13 (SD = 0.48) out of 5.

Attitudes were measured using a 15-item Likert-type scale adapted from the OMS-HC for somatic symptom-related disorders, with lower scores indicating less stigma. The baseline overall attitude score for pre-surveys was 2.63 (scale of 1-5). Subscale means at baseline were attitudes of health care providers (M = 2.43), disclosure/help-seeking (M = 3.02), and social distance (M = 2.54). Item-level means ranged from 1.92 to 4.21.

Paired pre- and post-intervention data were available for two participants. For these cases, total knowledge scores remained stable (both 4/5). Item-level analysis revealed decreased correct responses for items one and two, with improved performance for item four. Pre and post attitude scores demonstrated minor and inconsistent changes: the overall mean attitude shifted from 3.1 to 2.9. Subscale means changed as follows: provider attitudes increased from 2.58 to 3.0, disclosure/help seeking decreased from 3.75 to 3.25, and social distance increased slightly from 2.8 to 3.0. Given the limited paired data, no statistical analyses were conducted.

Free-text definitions (n = 26 baseline) were analyzed using inductive content coding. Nine codes were identified and grouped into four thematic categories. Theme frequencies were as follows:

- Physical symptom with no medical cause (n = 20) – unique category representing biomedical framing
- Mind-body attribution: psychological origin (n = 11) and anxiety-induced (n = 5)
- Preoccupation/functional impact: preoccupation (n = 7) and functional impairment (n = 4)
- Misunderstanding/minimal knowledge: misattribution to psychosis or delusion (n = 4), "unknown" responses (n = 2), and one-word or minimal definitions (n = 3).

These findings suggest baseline conceptualizations of somatic disorders were primarily biomedical with limited psychological integration and some evidence of misunderstanding or uncertainty.

## 4. Discussion

This project sought to address a gap in psychiatric staff education by implementing brief, peer-led interventions focused on SSRDs. The findings suggest that while baseline knowledge among staff was relatively high, key misconceptions persisted: particularly around diagnostic nuance and stigma. These results align with prior literature indicating that SSRDs are often misunderstood, leading to fragmented care and clinician frustration.[2, 10, 11]

The most stigmatized domain identified in this project was disclosure and help-seeking, with participants expressing greater discomfort around acknowledging or discussing SSRDs compared to other mental health conditions. The educational intervention aimed to address these biases by emphasizing trauma-informed care, diagnostic clarity, and the distinction between SSRDs, the no-longer-used malingering, and factitious disorder.

Qualitative analysis of free-text definitions revealed that most participants framed SSRDs as physical symptoms without medical cause, with fewer integrating psychological or biopsychosocial explanations. The biomedical framing, while partially accurate, reflects a limited conceptualization that may hinder effective care. The presence of misunderstanding and minimal knowledge codes further supports the need for structured education. These findings reinforce the rationale for the project's specific aim: to improve conceptual clarity and reduce stigma through targeted, context-specific education.

The intervention was feasible and well-received, delivered across three units and multiple shifts with minimal disruption to workflow. Its brevity (10-15 minutes) and peer-led format enhanced accessibility and relevance. The use of the adapted OMS-HC and DSM-based knowledge items ensured content validity, while the inclusion of the qualitative item added depth to the evaluation. These features represent key strengths of the project.

The largest limitation was the low post-survey completion rate: only two participants provided both pre- and post-intervention data. Consequently, the follow-up findings cannot support conclusions about the intervention's effectiveness strictly. Follow-up was likely hindered by staff turnover, variable schedules, voluntary participation, the 7- to 28-day collection window, and limited investigator availability. A second intervention cycle is warranted using protected survey time, scheduled reminders, increased collection opportunities across shifts, and simplified identifier procedures. These changes may improve retention and permit a more meaningful evaluation of changes in knowledge and attitudes.

Although the intervention's effectiveness could not be determined, a couple of findings are worth acknowledgement. First, it demonstrates that SSRD education can be integrated into psychiatric workflows without significant burden. Second, it highlights specific domains, such as disclosure stigma and diagnostic framing, that warrant targeted attention in future training, even if no meaningful intervention-effect conclusions can be drawn. Third, it provides a replicable model for brief, peer-led education that could be adapted for other high-stigma conditions, such as personality disorders or specific SSRDs (like Functional Neurologic Disorder).

Future directions include expanding the intervention to additional units, increasing post-survey participation through reminders or incentives, and exploring longitudinal outcomes such as changes in documentation practices or patient satisfaction. Incorporating SSRD content into orientation and annual training may enhance sustainability. Ultimately, this project contributes to a growing body of evidence supporting the role of education in reducing stigma and improving care for patients with complex somatic presentations.

## 5. Conclusion

This EBP project demonstrated that brief, peer-led education on SSRDs can be feasibly integrated into inpatient and emergency psychiatric settings. Although participation in post-intervention evaluation was limited, baseline findings highlighted important conceptual gaps and stigmatizing attitudes that warrant continued educational attention. These findings emphasize that moderate familiarity with psychiatric diagnoses alone may be insufficient to support effective, patient-centered care for individuals with somatic presentations.

Improving staff understanding of SSRDs has meaningful implications for psychiatric nursing practice. Clearer diagnostic conceptualization and increased awareness of stigma may support more consistent, validating, and trauma informed interactions with patients. Addressing misconceptions has the potential to reduce frustration among clinicians, strengthen therapeutic relationships, and promote more cohesive multidisciplinary care.

The brief and peer facilitated format used in this project offers a practical strategy for delivering education within demanding clinical environments. Incorporating SSRD focused content into staff orientation, unit based in services, or annual competencies may provide a sustainable approach to reinforcing knowledge and addressing attitude barriers without placing excessive demands on staff time or resources.

Future initiatives should prioritize strategies to improve follow up participation to more accurately measure changes in knowledge and attitudes. Expanding this educational approach across additional units or settings, as well as examining longer term practice outcomes, may further clarify the role of targeted education in improving care for patients with somatic symptom–related disorders.

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## Authors contributions

Dr. Quist and Dr. Husk contributed to the study design and education program development. Dr. Quist collected the data, drafted the manuscript, and revised the manuscript. Dr. Kroger-Jarvis provided guidance and advice throughout the project. All authors read and approved the final manuscript.

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

## Informed consent

Obtained.

## Ethics approval

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## Provenance and peer review

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## Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

## Data sharing statement

No additional data are available.

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