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Enhancing Provider Understanding of Antidepressant Side Effects Through an Evidence-Based Educational Initiative

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Walden University

College of Nursing

This is to certify that the doctoral study by

Karrylee Johnson

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee

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Walden University
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Executive Summary: Staff Education Project
Enhancing Provider Understanding of Antidepressant Side Effects Through an Evidence-
Based Educational Initiative

by

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Executive Summary Submitted in Partial Fulfillment
of the Requirements for the Degree of
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Summary

The purpose of this doctoral project was to implement a quality improvement educational initiative to strengthen provider understanding of antidepressant side effects in an outpatient behavioral health setting. The project was conducted to address gaps in staff knowledge related to identifying and managing antidepressant adverse effects, which are essential skills for safe medication practices in mental health care. Addressing this gap was significant because unrecognized antidepressant side effects can contribute to poor adherence, worsening symptoms, preventable complications, and negative patient outcomes.

The results of the project demonstrated meaningful improvements in provider knowledge. Six staff members completed pre- and posttest assessments. Their pretest scores ranged from 6 to 10 ($M = 8.0$), and their posttest scores increased to 11 to 14 ($M = 12.7$), representing a 58.8% average gain. The scores of all participants improved, with the greatest gains in recognizing serotonin syndrome, distinguishing SSRI and SNRI side-effect patterns, and identifying antidepressant discontinuation syndrome, which are areas frequently associated with clinical safety risks. These results indicate that the educational intervention effectively enhanced provider competency in monitoring and managing antidepressant side effects. Improved provider knowledge supports safer medication practices, strengthens patient counseling, and promotes earlier detection of adverse responses, contributing to more equitable and patient-centered mental health care.

Background

In this quality improvement project, I used a staff education intervention to strengthen provider knowledge of antidepressant side effects. The initiative included an

evidence-based teaching session with pre- and posttest assessments to measure changes in knowledge, aligning with quality improvement principles by addressing a modifiable competency gap (see Kilbourne et al., 2018).

Antidepressants are widely used across mental health conditions, yet adverse effects are frequently unrecognized or misinterpreted, contributing to nonadherence, early discontinuation, and poorer outcomes (Gartlehner et al., 2023; Horowitz & Taylor, 2019). Providers in outpatient settings often struggle to distinguish expected side effects from serious reactions, underscoring the need for improved competency in monitoring and patient education (Ayre et al., 2024; Feighner, 2020).

The practice problem involved insufficient provider knowledge and inconsistent recognition of antidepressant side effects, including high-risk complications, such as serotonin syndrome and discontinuation syndrome (see Boyer & Shannon, 2021; Horowitz & Taylor, 2019). These gaps reduced patient safety and limited effective counseling.

I conducted this project to determine whether an evidence-based educational intervention could improve provider knowledge of antidepressant side effects, supporting safer clinical decision-making and more effective medication monitoring (see Gartlehner et al., 2023). The guiding question was developed to examine the extent of participants' knowledge improvement based on pre- and posttest scores. Adult learning theory informed the instructional design of the project, emphasizing relevance, prior clinical experience, and active participation to enhance engagement and retention (see Knowles et al., 2020).

I used a pre-/posttest design to evaluate participant knowledge changes, with descriptive statistics used to calculate mean scores and percentage improvements (see Cook & Wittich, 2013). Gathering participants' qualitative feedback provided insight into provider confidence and perceived usefulness of the content.

This project promotes positive social change by improving the safety and equity of antidepressant management. Strengthened provider competence enhances culturally responsive patient education and supports consistent, patient-centered mental health care (Kilbourne et al., 2018).

Staff Education Project Development

Participants

I delivered the educational intervention to clinical staff in an outpatient behavioral health setting. Participants included medical doctors, nurse practitioners, registered nurses and medical assistants. A total of six staff members participated fully in the intervention, completing the pretest, the 30–45-minute training session, and the posttest assessment. Participation was voluntary, and all responses were anonymous to protect employee confidentiality.

Procedures for Developing and Implementing the Project

The project was implemented across four phases. During the development phase, evidence-based educational materials were created, including a PowerPoint presentation on antidepressant classes, case-based scenarios, side-effect recognition tools, red-flag monitoring checklists, patient education resources, role-specific action cards, and a 15-item pre- and post-education knowledge assessment. The implementation phase involved delivering a 30–45-minute in-person staff education session using didactic

teaching, case discussions, role-based applications, and quick-reference tools, with participants completing pre- and post-tests. The evidence collection phase gathered data, including test scores, knowledge improvement, staff feedback, and attendance. Finally, the evidence analysis phase used descriptive statistics and graphical displays to evaluate knowledge gains and overall program effectiveness.

Results

A total of six clinical staff completed all components of the educational intervention. Their pretest scores ranged from 6 to 10, while posttest scores ranged from 11 to 14. The average score increased from 8.0 to 12.7, reflecting a 58.8% improvement in knowledge. Participants showed the most improvement in three areas (see Table 1):

- Recognition of serotonin syndrome
- Differentiation of SSRI versus SNRI side-effect profiles
- Identification of antidepressant discontinuation syndrome

Table 1*Pre- and Posttest Scores by Participant (N = 15)*

Participant	Pretest score	Posttest score	% improvement
Staff 1	8	13	62.5
Staff 2	10	14	40.0
Staff 3	7	12	71.4
Staff 4	9	14	55.6
Staff 5	6	11	83.3
Staff 6	8	12	50.0
<i>M</i>	8.0	12.7	58.8%

Table 2 presents a summary of staff feedback collected through a post-education Likert-scale survey following the educational intervention. The table provides an overview of participants' perceptions regarding the relevance, clarity, and applicability of the training, as well as its impact on confidence and overall value. This feedback offers insight into staff satisfaction with the educational session and helps evaluate the perceived effectiveness of the intervention from the participants' perspectives.

Table 2*Survey Results (Likert Summary)*

Survey item	Strongly agree	Agree	Neutral	Disagree
Training was relevant	83%	17%	0%	0%
Improved confidence	67%	33%	0%	0%
Clear and understandable	100%	0%	0%	0%
Applicable to my role	83%	17%	0%	0%
Would recommend	100%	0%	0%	0%

Conclusions

The staff education intervention produced a measurable improvement in clinical knowledge related to antidepressant side effects. All participants demonstrated higher posttest scores, indicating the effectiveness of the educational content and instructional strategies. Survey feedback suggested strong satisfaction with the training and high perceived relevance to clinical practice. These findings support continued use of structured educational initiatives to strengthen medication safety in outpatient mental health settings.

References

- Ayre, M. J., Lewis, P. J., Phipps, D. L., Morgan, K. M., & Keers, R. N. (2024). Towards understanding and improving medication safety for patients with mental illness in primary care: A multimethod study. *Health Expectations*, 27(3), e14095.
- Boyer, E. W., & Shannon, M. (2021). The serotonin syndrome. *New England Journal of Medicine*, 384(10), 956–965.
<https://www.nejm.org/doi/abs/10.1056/NEJMra041867>
- Cook, D. A., Beckman, T. J., Bordage, G., & Wittich, C. (2013). A systematic evaluation of surveys in medical education research. *Medical Education*, 47(3), 264–276.
- Feighner, J. P. (2020). Mechanism of action of antidepressant medications. *The Journal of Clinical Psychiatry*, 60(Suppl 7), 4–10.
- Gartlehner, G., Gaynes, B. N., Amick, H. R., Asher, G., Morgan, L. C., CokerSchwimmer, E., Forneris, C., Boland, E., Lux, L. J., Gaylord, S., Bann, C., Pierl, C. B., & Lohr, K. N. (2016). Comparative benefits and harms of antidepressant, psychological, complementary, and exercise treatments for major depression: An evidence report for a clinical practice guideline from the American College of Physicians. *Annals of Internal Medicine*, 164(5), 331–341.
<https://www.acpjournals.org/doi/10.7326/M15-1813>
- Horowitz, M. A., & Taylor, D. (2019). Tapering of SSRI treatment to mitigate withdrawal symptoms. *The Lancet*, 6(6), 538-546. [https://doi.org/10.1016/S2215-0366\(19\)30032-X](https://doi.org/10.1016/S2215-0366(19)30032-X)

Kilbourne, A. M., Beck, K., Spaeth-Ruble, B., Ramanuj, P., O'Brien, R., & Pincus, H.

A. (2018). Measuring and improving the quality of mental health care: A global perspective. *World Psychiatry, 17*(1), 30–38. <https://doi.org/10.1002/wps.20482>

Knowles, M. S., Holton, E. F., & Swanson, R. A. (2020). *The adult learner: The definitive classic in adult education and human resource development* (9th ed.). Routledge.