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Staff Education on Nonpharmacological Strategies to Reduce Restraint Use.

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This is to certify that the doctoral study by

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Executive Summary: Staff Education Project

Staff Education on Nonpharmacological Strategies to Reduce Restraint Use

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Summary

This Doctor of Nursing Practice (DNP) staff education project aimed to reduce the use of physical restraints in hospitalized psychiatric patients by training clinical staff in nonpharmacological strategies, specifically active listening and handholding. Despite regulatory guidelines and ethical concerns, physical restraint remains a common practice in acute care settings, often resulting in physical harm, psychological trauma, and a breakdown in the therapeutic relationship. The practice-focused question guiding the project was: How does education on nonpharmacological strategies impact a change in knowledge and attitudes to promote the reduction of restraint use among hospitalized patients exhibiting psychiatric symptoms?

Thirty-one staff members participated in an in-person session. Analytical strategies included pre- and post-tests with 10 questions. Results showed significant improvements in knowledge (M = 4.55 to 4.97, p = .005) and attitudes (M =19.38 to 20.44, p = .006), supporting the effectiveness of the intervention. Education on nonpharmacological strategies improves staff readiness to manage psychiatric behaviors without restraints. Integrating the training into orientation, providing refreshers, using simulations, and fostering peer support can strengthen staff attitudes toward nonpharmacological strategies. This approach can reduce restraint-related harm, enhance regulatory compliance, and improve patient outcomes. Expanding the program to other units and facilities may further institutionalize trauma-informed care. The project promotes dignity, equity, and ethical care by reducing reliance on coercive measures and fostering therapeutic nurse-patient relationships.

Background

Physical restraints remain a common intervention for agitation in hospitalized psychiatric patients despite the harm they may bring. The purpose of the project was to train nursing staff in trauma-informed, patient-centered techniques, using active listening and handholding, to reduce the use of restraints. The central question guiding this initiative was: In hospitalized patients exhibiting psychiatric symptoms, how effective is education about nonpharmacological strategies such as active listening and handholding in improving staff knowledge and attitudes aimed at reducing restraint use as compared to standard care?" Despite policies mandating restraints as a last resort, physical restraints remain common in acute settings, contributing to trauma, agitation, and injury for patients and staff (Fernández-Costa et al., 2020; Wong et al., 2020). Training nursing staff in active listening and compassionate touch can potentially enhance effective communication, reduce patient distress, and ultimately decrease reliance on restraints. Clinical practice with the ethical imperatives of autonomy, dignity, and safety will also be promoted.

Evidence strongly supports using nonpharmacological strategies like hand-holding and active listening to reduce physical restraints in patients with psychiatric behaviors. Systematic reviews with randomized controlled trials (RCTs) and quasi-experimental studies (Dang et al., 2022) across diverse care settings consistently show these interventions are effective, ethical, and promote patient-centered care. Liang and Huang (2023) conducted a Level 1 (Dang et al., 2022) systematic review showing that educational and consultative programs effectively reduced restraint use and improved staff attitudes in nursing homes. Despite limitations in language and definitions, the

evidence supported restraint-free care. Similarly, Higgs et al. (2020) investigated the impact of therapeutic activity kits in an emergency department setting for patients with dementia. Their RCT demonstrated that engagement with the kits reduced the need for chemical and physical restraints by mitigating agitation and behavioral symptoms. The study emphasized the urgency of implementing simple, sensory-based interventions to improve care outcomes. The study's findings represent strong Level 1 evidence (Dang et al., 2022) supporting the use of structured, nonpharmacological tools.

In a quasi-experimental study, Via-Clavero et al. (2024) found that multicomponent interventions, such as systematic monitoring, team communication, environmental changes, and flexible visitation, led to reduced restraint use in 158 Spanish ICUs. This Level 2 (Dang et al., 2022) evidence highlights the effectiveness of comprehensive, patient-centered strategies in critical care. Isaac et al. (2021) conducted a Level 2 (Dang et al., 2022) quasi-experimental study using the "Harmony in the Bush" model in rural Australian nursing homes. Incorporating music therapy and person-centered care, they found a significant reduction in agitation, supporting the effectiveness of sensory-based, empathetic interventions. Additionally, Perers et al. (2022) synthesized 18 articles on strategies for reducing restraint and seclusion in child and adolescent psychiatric settings. The article identified various trauma-informed, family-centered, and behaviorally focused interventions, including the use of sensory rooms, mindfulness training, and dialectical behavior therapy. The programs consistently showed reductions in restraint use, emphasizing the importance of preventive measures, staff training, and leadership engagement.

Brugnolli et al. (2020) found that educational training and multicomponent programs significantly reduced physical restraint use in nursing homes. Despite some variability in definitions and measurement tools, the Level 3 evidence (Dang et al., 2022) highlights the effectiveness of these interventions in achieving meaningful restraint reduction.

Adams et al. (2023) found that sensory-based interventions—such as music, healing touch, and aromatherapy—significantly reduced agitation in ICU patients. This Level 1 (Dang et al., 2022) evidence supports using calming, nonpharmacological strategies as effective alternatives to physical restraints. Finally, Duxbury et al. (2019) evaluated the "restrain yourself" program across mental health wards in England. This quasi-experimental, non-randomized controlled trial (Dang et al., 2022) demonstrated that implementing six core strategies—such as leadership commitment, staff training, data transparency, and environmental modification—led to a 22% average reduction in restraint use, with some wards experiencing a 60% decrease. Nonpharmacological strategies effectively reduce restraint use, enhance patient safety, and strengthen therapeutic relationships. Strong evidence across Levels 1–3 supports their safe, feasible use in acute care.

Staff Education Project Development

The staff education project was developed and implemented across various clinical settings, including new graduate orientation, medical-surgical units, and step-down units (see Appendix). Educational sessions in a staff conference room were conducted in person, offered three times to small groups of 10–15 staff members, totaling

approximately 31 participants. The participants included registered nurses, certified nursing assistants, and patient safety sitters.

Ten pretest questions—five knowledge-based and five attitude-based—were administered before training. These exact questions were repeated in the posttest. Content was delivered through group discussions, case study reviews, and role-play exercises focused on active listening and handholding (see Appendix). Immediately after the interactive sessions, participants completed the posttest to measure gains in knowledge, shifts in attitudes, and self-reported confidence in applying these nonpharmacological strategies to reduce restraint use.

Results

Postimplementation Outcomes

Evaluation incorporated participant feedback and Likert-scale surveys to identify perceived barriers and assess the effectiveness of each de-escalation technique, ensuring alignment with organizational restraint-reduction policies and regulatory standards. The educational intervention on nonpharmacological strategies to reduce psychiatric restraint use resulted in statistically significant improvements in both staff knowledge and attitudes.

To assess the effectiveness of the educational intervention, paired samples *t* tests were conducted comparing pre- and post-intervention scores on knowledge and attitude measures. For knowledge scores, the analysis revealed a statistically significant increase from pre-test ($M = 4.55$, $SD = 0.77$) to post-test ($M = 4.97$, $SD = 0.18$), $t(30) = -3.05$, $p = .005$ (two-sided), with a one-sided p-value of .002, indicating a meaningful improvement in staff knowledge following the training. Similarly, attitude scores showed a statistically

significant improvement from pre-test (M = 19.38, SD = 3.18) to post-test (M = 20.44, SD = 3.34), $t(31) = -2.94$, $p = .006$ (two-sided), with a one-sided p-value of .003. These results support the conclusion that the intervention was effective in enhancing both knowledge and attitudes related to nonpharmacological strategies for restraint reduction.

The observed gains support the project's alignment with broader organizational goals, including reducing injury and trauma, enhancing patient safety, and improving compliance with regulatory guidelines. Furthermore, by promoting trauma-informed care, the intervention contributes to cultivating a safer, more therapeutic hospital environment while reducing the likelihood of restraint-related adverse events.

Table 1

Descriptive Statistics

		M	*n*	*SD*
Pair 1	KnowPreTotal	4.5484	31	.76762
	KnowPostTotal	4.9677	31	.17961
Pair 2	AttitudePreTotalR	19.3750	32	3.18008
	AttitudePostTotalR	20.4375	32	3.34025

Table 2

Paired Sample t *Test*

		df	One-sided *p*	Two-sided *p*
Pair 1	KnowPreTotal - KnowPostTotal	30	.002	.005
Pair2-	KnowPreTotal KnowPostTotal	31	.003	.006

Interpretation of Result

For the knowledge-based questions, scores were binary—a score of 1 indicated a correct response, and 0 indicated an incorrect response. Therefore, the increase in the posttest means from 4.55 to 4.97 reflects a measurable improvement in the staff's factual understanding of nonpharmacological strategies. In terms of attitudes, the scoring followed a 5-point Likert scale where a score of 5 indicated the most positive attitude and 1 indicated a negative or unfavorable attitude toward hand holding and active listening. Notably, for Questions 7, 9, and 10, the scale was reverse-coded, meaning a score of 1 was transformed to 5 and vice versa. The total scores uniformly reflected more favorable attitudes. There was an increase from a mean of 19.38 to 20.44, which signals not just a statistical improvement, but a practical shift toward stronger alignment with trauma-informed, patient-centered care values among participants.

Interpretation of Discussion Responses

Following the case study (see Appendix), participants engaged in four discussion questions, offering meaningful insights and practical reflections. This provided an opportunity for discussion and insight into how participants were receiving the information within the context of their job role.

Avoiding Restraint Use

Participants recognized the need for a more proactive, investigative approach. They emphasized understanding the root cause of the patient's behavior by gathering a full psychiatric and medical history, especially through family, for a cognition baseline. Additional suggestions included relocating the patient to a quiet environment and using

calm, therapeutic communication to de-escalate agitation. These responses reflect a strong alignment with trauma-informed, patient-centered care principles.

Balancing Autonomy with Safety

The responses highlighted the ethical tension between respecting patient autonomy and ensuring safety, particularly in patients exhibiting psychiatric symptoms. Staff noted that autonomy should be preserved by offering choices and listening to the patient's needs: "Autonomy will help build patient trust, so it is important to listen to patients' needs." However, participants also mentioned that when safety is compromised, protective measures may need to take priority.

Improving De-escalation Training

There was a clear call for regular staff education and hands-on training, such as role play. Respondents noted that understanding behavioral triggers and promoting early intervention are essential. Adequate staffing and frequent training were considered crucial for empowering nurses, especially registered nurses, to identify high-risk situations. These reflections suggest the staff are aware of the systemic and educational gaps that must be addressed to ensure restraint-free care.

Policy Recommendations for Limiting Restraints

Staff proposed actionable policy suggestions, including environmental adjustments (e.g., private rooms), consistent family involvement, timely physician engagement, and comprehensive team communication. Some responses also expressed that with proper staffing, strict policies might become less necessary, implying that operational support is a major determinant in successful restraint reduction. For example, "Enough staffing, we don't need any policies when we have the staff, we will have more

time for the patients." This reflects the belief that institutional resources, rather than just written policies, play a pivotal role in shaping restraint practices.

Overall, the responses show that staff understand and value nonpharmacological, patient-centered approaches. They are aware of the clinical and ethical complexities surrounding restraint use and recognize the need for enhanced training, adequate staffing, and collaboration. The findings underscore the importance of ongoing education, institutional support, and multidisciplinary communication in reducing restraint use and improving psychiatric care quality. The participants ($N = 31$) represented about 60% of the staff working on the unit; thus, a limitation is that not all were able to attend, suggesting the need for additional education on the topic. There may also be value in expanding the education to other units in the organization as well as to other acute care facilities.

Conclusions

This DNP staff education project demonstrated that equipping nurses and clinical staff with nonpharmacological strategies—particularly active listening and hand-holding—can potentially reduce the use of physical restraints in psychiatric care. The intervention not only improved staff knowledge and attitudes, as evidenced by statistically significant gains in posttest scores, but also aligned with trauma-informed care principles and supported organizational priorities such as reducing patient harm, enhancing safety, and promoting regulatory compliance. By fostering therapeutic communication and reducing reliance on restrictive interventions, the initiative contributes meaningfully to ethical, patient-centered nursing practice.

Going forward, integrating this education into routine staff training and orientation programs can sustain long-term cultural and behavioral shifts in acute care settings. Adding a periodic refresher course will be essential to reinforce learning, sustain behavioral change, and address staff turnover, ensuring that all team members remain competent and confident in using nonpharmacological de-escalation strategies. Establishing peer support will help to build confidence, reduce resistance to change, and foster a culture of empathy and collaboration. Additionally, incorporating simulation-based learning can enhance skill retention by providing realistic, hands-on practice in managing behavioral health crises, improving clinical judgment, and fostering teamwork in high-stress situations. This project underscores the potential for nursing-led interventions to advance social change by promoting dignity, equity, and compassionate care for all patients, particularly those with behavioral health needs.

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Appendix

Staff Education Planning Grid Project Materials

Learning Outcome(s): For nurses and clinical staff to understand the impact of nonpharmacological interventions. Learners will enhance their communication and therapeutic relationship skills by practicing active listening and compassionate touch in the care of patients exhibiting challenging psychiatric behaviors

Nursing Professional Development
Patient Outcome: Enhance patient safety and a decrease in physical and psychological trauma.
Organizational Outcome: To reduced risk of injuries to both patients and staff, and improved compliance with regulatory standards and guidelines.

Topical Content Outline	Time frame	References	Teaching method/learner engagement and Evaluation method
Nonpharmacological strategies that prevents the need for physical or pharmacologic interventions. Use of evidence-based approaches, including their application and benefits.	30”	Perers, C., Bäckström, B., Johansson, B. A., & Rask, O. (2022). Methods and Strategies for Reducing Seclusion and Restraint in Child and Adolescent Psychiatric Inpatient Care. *The Psychiatric Quarterly*, *93*(1), 107-136. https://doi.org/10.1007/s11126-021-09887-x	Lecture Discussion Q&A
Nonpharmacological techniques: handholding, and active listening. Practical applications	30”	Li, W., Mao, Y., Gu, Y., Lu, C., Gu, X., Hua, B., ... & Xu, B. (2021). Effects of hand holding on anxiety and pain during prostate biopsies: a pilot randomized controlled trial. *Patient preference and adherence*, 1593-1600.	Lecture Demonstration (video) https://www.youtube.com/watch?v=CQTiJYiLqQs

of handholding, active listening, and other communication-centered techniques to de-escalate situations.			
Risks and Ethical Considerations of Restraint Use. Restraint use in patients exhibiting psychiatric behaviors in acute care, posing significant risks, including physical harm, and psychological trauma.	30”	Zhou, J., Qin, Q., Chen, S., & Zhang, H. (2024). Moral dilemmas regarding physical restraints in intensive care units: Understanding autonomy, beneficence, non-maleficence, and justice in the use of physical restraints. *Journal of Multidisciplinary Healthcare, 17*, 1619–1627. https://doi.org/10.2147/JMDH.S455910	Case study
Conclusion and Evaluation: Summary of key takeaways, discussion, and post-session evaluation.			Posttest Feedback

Evaluation Method: Pre and post-test (manual data collection before and after the training)

Course Content

Introduction

Topic: Reducing Physical Restraints for Patients with Psychiatric Behaviors Using Nonpharmacological Strategies.

Objective: To discuss the importance of minimizing restraint use in acute care for patients manifesting psychiatric behavior. Physical restraints may occasionally be necessary for high-risk patients; the focus is on promoting compassionate and patient-centered alternatives to reduce the restraints.

Key Discussion Points

Recognize that restraints can cause physical harm, psychological trauma and may damage the therapeutic relationship between staff and patients.

Pre and Posttest

1. What is the primary goal of nonpharmacological interventions in psychiatric care?
    a) Reduce patient freedom
    b) Enhance patient safety and de-escalate behaviors
    c) Quickly sedate the patient
    d) Increase physical control over the patient

2. Which of the following is an example of a nonpharmacological strategy?
    a) Administering sedatives
    b) Physical restraints
    c) Active listening and hand-holding
    d) Isolation

3. What is the potential risk of using physical restraints on psychiatric patients?
    a) Faster recovery
    b) Reduced staff workload
    c) Psychological trauma and physical harm
    d) None of the above

4. Which of the following is a key component of therapeutic communication?
    a) Ignoring patient concerns
    b) Speaking quickly to avoid escalation
    c) Active listening and empathy
    d) Restricting patient interaction

5. Which situation is most likely to escalate a patient's agitation?
    a) Offering the patient choices and listening to their concerns
    b) Using a calm tone and giving personal space
    c) Using a loud voice and standing over the patient
    d) Acknowledging the patient's feelings

Please indicate how much you agree or disagree with each of the following statements about using nonpharmacological strategies to reduce restraint use.

1. I feel confident in my ability to use de-escalation techniques (e.g., verbal redirection and active listening) instead of applying physical restraints.
    1 Strongly Disagree
    2 Disagree
    3 Neutral
    4 Agree
    5 Strongly Agree
2. I believe nonpharmacological interventions require too much time and are not practical on a busy unit.
    1 Strongly Disagree
    2 Disagree
    3 Neutral
    4 Agree
    5 Strongly Agree
3. **Using environmental modifications (e.g., reducing noise, providing soothing distractions) can effectively prevent escalation that leads to restraint use.**
    1 Strongly Disagree
    2 Disagree
    3 Neutral
    4 Agree
    5 Strongly Agree
4. **I am concerned that if I don't use restraints immediately, patient or staff safety could be compromised.**
    1 Strongly Disagree
    2 Disagree
    3 Neutral
    4 Agree
    5 Strongly Agree
5. **I believe de-escalation is ineffective without medication.**
    1 Strongly Disagree
    2 Disagree
    3 Neutral
    4 Agree
    5 Strongly Agree

Nonpharmacological Strategies to Prevent the Need for Physical or Pharmacologic Interventions

Communication as a Tool for De-escalation:

- U**se C**lear, respectful, and empathetic communication to reduce fear and anxiety.
- Clarify patient needs, active listening allows staff to identify underlying issues
- Offering choices to the patient. Patients feel more in control when they understand what is happening.
- Creating a calm environment (e.g., reducing noise and distractions)
- Reflective statements: "I hear that you're feeling upset because..."
- Express patient needs verbally rather than through aggression.

Handing Holding

- Builds a sense of security and comfort.
- Reduces anxiety and fear in distressed patients.

Video
https://www.youtube.com/watch?v=CQTiJYiLqQs

Case Study: Risks and Ethical Considerations of Restraint Use in an Acute Hospital Setting

Patient: Mr. John D., a 42-year-old male with schizophrenia and a history of PTSD.
Setting: Emergency Department.
Reason for Admission: The patient was brought to the emergency department (ED) by family due to paranoid delusions, refusing to eat or take medications, and verbal aggression at home.

Upon arrival at the hospital, Mr. D. was agitated, pacing, and shouting that he was being followed by government agents. Despite efforts by the ED nurse to calm him using verbal de-escalation, he refused medication and attempted to leave the unit. Concerned for his safety and that of others, the nursing staff initiated a four-point physical restraint order to prevent him from eloping.

While in restraints: Mr. D. struggled against the restraints, leading to bruising on his wrists and ankles. He became more fearful and distressed, repeatedly yelling that he was being tortured. His heart rate and blood pressure spiked, requiring additional medical intervention.
After three hours, he was chemically sedated to calm his agitation.

Analysis of Risks and Ethical Considerations

- Injuries from restraints: The tight restraints led to skin abrasions and bruising. Prolonged restraint could increase the risk of blood clots, muscle atrophy, or respiratory distress.

- Medical deterioration: The increased stress response led to hypertension and tachycardia, requiring further intervention.
- Loss of trust in healthcare staff: His future interactions with medical professionals may be marked by heightened fear and resistance to care.
- Autonomy vs. Safety: While Mr. D. had the right to refuse treatment, staff had to balance this with the duty of care and preventing harm to himself or others with the least restrictive alternative, like moving him to a quiet area and acknowledging that his concerns are valid.
- Therapeutic Touch/Hand-holding (if appropriate): Building rapport through compassionate gestures may have reduced his distress.

Discussion Questions for Training

1. What could the staff have done differently to avoid restraint use in this case?
2. How do we balance patient autonomy with safety?
3. How can healthcare staff be better trained in de-escalation techniques to reduce restraint reliance?
4. What hospital policies should be in place to ensure restraint use is truly a last resort?

This case illustrates restraint use's physical, psychological, and ethical complexities and highlights the importance of using nonpharmacological strategies whenever possible.