

Review Article

Scoping Review on Educational Programs for Medical Professionals on the Management of Acute Agitation



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Background: Agitation is a common reason for psychiatric consultation in the general hospital. The consultation-liaison (CL) psychiatrist is often tasked with teaching the medical team how to manage agitation. **Objective:** The purpose of this scoping review is to explore what resources the CL psychiatrist has for educational tools on teaching about agitation management. Given the frequency with which CL psychiatrists help with on-the-ground management of agitation, we hypothesized that there would be a scarcity of educational resources to teach front-line providers how to manage agitation. **Methods:** Following current Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines, a scoping review was conducted. The literature search focused on the electronic databases MEDLINE (PubMed), Embase (Embase.com), The Cochrane Library (Cochrane Database of Systematic Reviews, Cochrane Central Register of Controlled Trials (CENTRAL), Cochrane Methodology Register), PsycInfo (EbscoHost), Cumulated Index to Nursing and Allied Health Literature (CINAHL) (EbscoHost), and Web of Science. Using Covidence software, after screening for titles and abstracts, full texts were screened independently and in duplicate according to our inclusion criteria. For data extraction, we created a pre-defined set of criteria according to which each article was analyzed. We then grouped the articles in the full-text review according to which patient population a curriculum was designed for. **Results:** The search yielded a total of 3250 articles. After removing duplicates and reviewing procedures,

we included 51 articles. Data extraction captured article type and details; educational program information (staff training, web modules, instructor led seminar); learner population; patient population; and setting. The curricula were further divided based on their target patient population, specifically the acute psychiatric patient ($n = 10$), the general medical patient ($n = 9$), and the patient with a major neurocognitive disorder such as dementia or traumatic brain injury ($n = 32$). Learner outcomes included staff comfort, confidence, skills, and knowledge. Patient outcomes included measurements of agitation or violence using validated scales, PRN medication use, and restraint use. **Conclusions:** Despite there being numerous agitation curricula in existence, we found that a large majority of these educational programs were done for patients with major neurocognitive disorders in the long-term care setting. This review highlights the gap in education related to agitation management for both patients and providers in the general medical setting, as less than 20% of total studies are focused on this population. The CL psychiatrist plays a critical role in assisting in agitation management in this setting, which often requires collaboration between technicians, nurses, and nonpsychiatric providers. It calls into question whether the lack of educational programs makes the implementation of management interventions more difficult and less effective, even with the assistance of the CL psychiatrist.

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Key words: education, training, curricula, agitation, aggression, violence, dementias.

Agitation is defined as a state of pathologically intense emotional arousal and motor restlessness. It can manifest in a wide variety of behaviors including yelling, screaming, emotional disinhibition, and aggression. Agitation is a common cause of psychiatric consultation in the general hospital setting. Agitation is associated with higher health care costs, patient distress, interruption of routine care, disruption of the care environment,

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impairment of provider-patient relationships, and longer hospital stays.¹ Emergency departments alone have seen an estimated 20-50% rise in agitated patients in the past decade.² In long term care facilities, 80% of institutionalized patients with dementia will demonstrate agitation or aggressive behavior.³

Staff working with agitated patients are at risk of workplace injury, especially nurses and care technicians. On average 20% of general hospital staff are assaulted by patients annually, with up to 90% of these cases happening on an inpatient unit.⁴ Despite the frequency with which hospital staff will experience the agitated patient during their work, it is unclear if there are adequate educational curricula designed to explicitly teach health care providers how to manage agitation. Therefore, we aimed to review all existing educational curricula that focused on teaching principles of agitation management. We initially focused on curricula aimed at medical providers, but there were too few studies to write a meaningful review. We then broadened our search to include curricula aimed at teaching all providers including technicians, nurses, rehab specialists, advanced practice providers (APPs), and doctors.

While agitated behaviors due to a major neurocognitive disorder, delirium, or a primary psychiatric illness all have different etiologies, there are general principles of agitation management that apply to all patients across the board. These principles include verbal deescalation, knowledge of environmental triggers, and awareness of when emergency medications may be appropriate. Our hypothesis was that there would be a scarcity of educational curricula particularly aimed at teaching staff inside a general hospital setting on how to manage patient agitation; we made this hypothesis because of how frequently CL psychiatrists are asked to teach these principles on an ad-hoc and impromptu basis.

METHODS

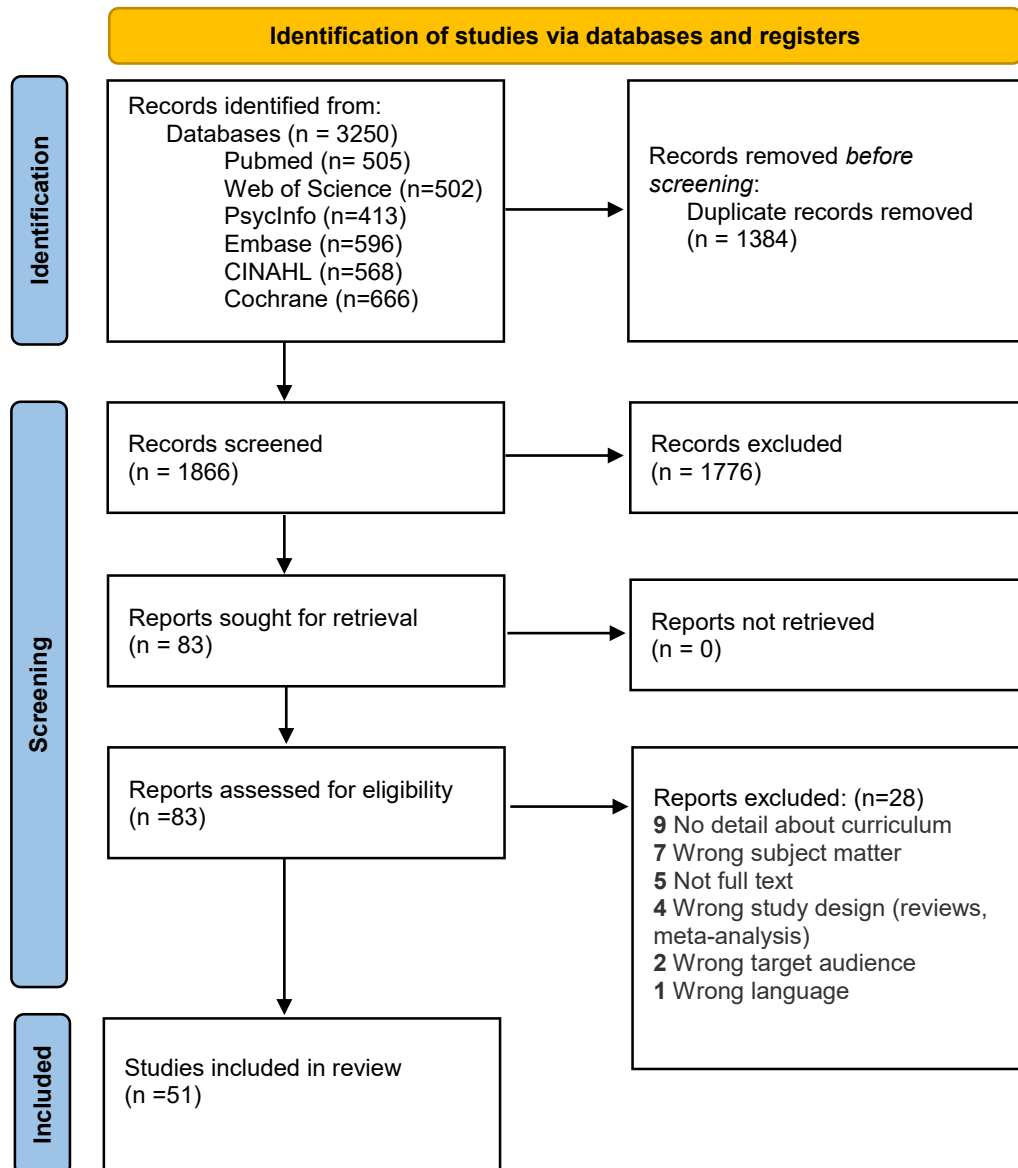
The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Scoping Extension Guidelines were followed for reporting the methodology. The search strategy was run on August 11, 2021, in the electronic databases MEDLINE (PubMed), Embase ([Embase.com](https://www.embase.com)), and The Cochrane Library (Cochrane Database of Systematic Reviews, Cochrane Central Register of Controlled Trials (CENTRAL), Cochrane Methodology Register), PsycInfo (EbscoHost),

Cumulated Index to Nursing and Allied Health Literature (CINAHL) (EbscoHost), and Web of Science. Controlled vocabulary terms were identified and combined with keyword synonyms in Medline, Embase, Cochrane, PsycInfo, and CINAHL. Keywords were used to search in Web of Science. Searches were limited to humans in Medline and Embase. Searches were also limited to journal articles in PsycInfo, CINAHL, and Embase. All databases were limited to the English language. See [Appendix A](#) for additional information regarding search terms. Eligible articles were identified through a title/abstract scan and confirmed through a full-text review. Teams were divided into dyads, and each dyad team reviewed each title/abstract and then full-text article. Conflicts were resolved by a third reviewer. See [Figure 1](#) PRISMA flow diagram.

Our inclusion criteria included: full text only; English only; adult patients >18 years old; curriculum designed for physicians, APPs, medical students, residents, nursing staff including certified nursing assistants (CNAs) and other nursing home staff (PT/RT/OT); curriculum implementation sites included general hospitals, emergency departments, psychiatric wards, rehabilitation units, nursing homes, educational simulation centers, and curriculum about the management of agitation. Our exclusion criteria included: nonfull text articles (conference abstracts, posters); non-English articles; patients <18 years old; curriculum about the management of violence outside medical setting including domestic violence, gun violence, gender violence, harassment, or bullying; curriculum for informal caregivers and/or family members.

Data extraction captured the following domains: author, article details (i.e., article type, year, country); educational program details (staff training, web modules, instructor led seminar); target learner population (attending physician, physician assistant, nurse practitioner, postgraduate resident, medical student, nurse, CNA); target patient population (acute psychiatric, general medical, and major neurocognitive disorders); setting (general hospital, emergency department, psychiatric inpatient setting, inpatient rehab, nursing home, simulation center, and classroom); learner outcomes (increased staff comfort, increased staff confidence, improved knowledge, improved skills); patient outcomes (decreased violence, decreased pro re nata (PRN) medication use, decreased restraint use). The extractions were done by one member of the study team (I.L., A.M., W.T., and S.P.) and confirmed by a second member (D.R.).

FIGURE 1. PRISMA flow diagram.



RESULTS

We retrieved a total of 3250 studies from our initial search. Of these studies, duplicates were removed, and a review of abstracts was performed resulting in the inclusion of 1864 studies. These studies underwent a full-text review, of which 80 were included. After removing duplicates and review procedures, we included 51 articles see [Table 1](#). Of the final 51 studies that were included, a total of 4 had been planned but not yet initiated or

studied, while the remaining 47 had been designed, implemented, and studied. The curricula were broken down by patient population and included three broad categories: curricula aimed at acute psychiatric patients (n = 10), general medical patients (n = 9), and patients with major neurocognitive disorders (n = 32). These studies were done in a variety of settings including long-term care facilities (n = 32), the acute medical hospital setting such as the inpatient medical/surgical unit, intensive care unit (ICU), and emergency department

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TABLE 1. General Study Characteristics

Total number of studies	51
Number of studies for the agitated psychiatric patient	10
Number of studies for the agitated general medical patient	9
Number of studies for the agitated patient with a major neurocognitive disorder	32
Number of studies in long-term care facilities (nursing homes, rehabs)	32
Number of studies in the general hospital setting (ICU, inpatient, ED)	6
Number of studies on the acute psychiatric ward	1
Number of studies in an educational environment (SIM center)	12
Number of studies designed, described, and evaluated	47
Number of studies designed (not implemented)	4
Number of studies with learner outcomes only	19
Number of studies with patient outcomes only	15
Number of studies with patient and learner outcomes	17

(n = 6), acute psychiatric ward (n = 1), and simulation center or classroom in person or online environment (n = 12). Studies examined learner outcomes (n = 19), patient outcomes (n = 15), or both (n = 17).

For a summary of all curricula aimed at teaching how to manage the acutely agitated psychiatric patient, see [Table 2](#). We identified 10 studies that focused on agitation management for acute psychiatric patients. Studies were done in the simulation center (n = 7), classroom setting (n = 2), and acute psychiatric ward (n = 1). Learner populations included psychiatry residents (n = 6), medical students (n = 1), and nurses, patient care technicians (PCTs), and/or therapists (n = 3). All studies looked at learner outcomes; however, only one study included learner and patient outcomes. Learner outcomes focused on 3 major categories, specifically comfort level and confidence (n = 5), management skills in particular communication (n = 1), overall knowledge level (n = 3), or a combination of confidence and management skills (n = 1).

Some notable features of some of the studies in [Table 2](#) can be highlighted as follows. Two studies showed improved learner outcomes when simulation was used rather than other learning modalities^{11,8} whereas another study showed that psychiatry residents who studied written clinical case vignettes did equally well on a knowledge test as those who went through the simulation curriculum.⁷ There was one online video curriculum developed by psychiatry faculty for medical students on the basic tenants of verbal deescalation. This curriculum was very accessible and

has been accessed by over 70,000 users on YouTube to date.¹² The simulation curricula for nurses aimed at decreasing workplace violence⁶ and teaching nurses how to better identify the agitated patient using a standard agitation scale.¹³

For a summary of all curricula aimed at teaching how to manage patients in the general hospital, see [Table 3](#). We identified nine studies that focused on teaching agitation management for the general medical patient. Studies were done in a simulated emergency department (n = 3), ICU (n = 4), inpatient neurology unit (n = 1), and inpatient medical unit (n = 1). Learner populations were only nurses (n = 4), only care technicians (n = 1), medical students (n = 1), providers only (n = 1), nurses and providers (n = 1), or all ED staff (n = 1). Of the total nine studies, seven of these examined only learner outcomes and can be categorized into comfort level and confidence (n = 2), communication and teamwork skills (n = 1), and knowledge (n = 4).

Several trends about curricula for agitation management in a general hospital setting can be observed. For the studies with patient outcomes, the studies were aimed at decreasing restraint use in a delirious patient population^{16,15} as well as improving education for screening for delirium.²² Several studies did aim to improve confidence through a course on verbal deescalation and simulation. Only three of these studies included providers (residents, APPs, MD/DOs) as target learners, while the majority targeted nurses or care technicians. The setting of choice was also quite significant, as four of the studies occurred in the ICU and three in a simulated environment, leaving only two studies conducted in a general medical or neurology inpatient unit.

[Table 4](#) includes the 32 curricula focused on teaching about agitation for patients with major neurocognitive disorders including TBI. Most of the learners were PCTs and nurses. All these studies used some form of in-person lecture or staff training to deliver an educational intervention. The most studied learner outcomes had to do with sense of satisfaction in the job, including domains such as burnout, morale, camaraderie, depression among caregivers, job satisfaction, and quantity of stressful events. Many of the trainings noted that the learners felt improved outcomes in this regard^{24,25,26,27,28} whereas a minority of studies noted no change in burnout after training.²⁹ Many of the studies focused on staff communication, which seemed to improve after training.^{30,31,32} Patient

TABLE 2. Curricula for Agitation for the Acute Psychiatric Patient

Study	Learners/curriculum	Results for learners	Results for patients
Zigman 2013 ⁵	Psychiatry residents/simulation	Improved comfort in taking care of agitated patients	N/A
Martinez 2017 ⁶	Nursing students/simulation on workplace violence	Improved confidence	N/A
Sowden 2017 ⁷ RCT	Psychiatry residents/cf. simulation vs. written clinical case vignettes	Knowledge equally good among residents who received simulation vs. written clinical case vignettes	N/A
Vestal 2017 ⁸ RCT	Psychiatry residents/In person lecture vs. simulation	Knowledge much better among residents who received simulation vs. didactics alone	N/A
Pheister 2017 ⁹	Psychiatry residents/simulation	Improved confidence	N/A
Thomas 2019 ¹⁰	Psychiatry residents/residents provided with "Geri Primer"	Improved confidence in taking care of geriatric patients	N/A
Williams 2019 ¹¹ RCT	Psychiatry residents/simulation vs. guide book to teach agitation	Simulation superior than guide book	N/A
Simpson 2020 ¹²	Medical students/4 free YouTube videos about the best practices in verbal deescalation	Improved comfort and confidence	N/A
Brathovde 2021 ¹³	Nurses/instruction on using standardized agitation scale for acute psychiatric patients	Improved communication and initiation of violence reduction plan	Decreased restraint use
Stewart 2021 ¹⁴	Nurses, techs, OT/RT/in-person simulation; staff training; enhanced crisis prevention and intervention training, self-care education	Improved confidence	N/A

outcomes looked at the severity of agitation before and after training. Most studies used the Cohen-Mansfield Agitation Inventory, a 29-item scale to systematically assess agitation as rated by a caregiver in the past 2

weeks.^{26,33,34,29,31,35,36} Other studies used the neuro-psychiatric inventory.^{37,38} Other outcomes included restraint use and neuroleptic prescription rates. Several education were established curricula such as the

TABLE 3. Curricula for Agitation for the General Medical Patient

Study	Learners/curriculum	Results for learners	Results for patients
Fitzpatrick 1997 ¹⁵ RCT	ICU nurses/use of a Critical Care Restraint Decision Guide (CCRDG) versus a restraint reduction education program alone	N/A	Both control group and intervention group had decreased restraint use
Ozdemir 2009 ¹⁶	CICU nurses/2-day training program on noise, pain, positioning	Improved awareness of patient discomfort	Less restraint use
Flynn 2016 ¹⁷	Neuro ICU PCTs/training on distraction activities and deescalation	Increased confidence and sense of skill	N/A
Ferrara 2017 ¹⁸	Nurses/staff training on deescalation techniques	Improved confidence	N/A
Rolland 2018 ¹⁹	Medical students/simulation	Improved knowledge	N/A
Wong 2018 ²⁰	Physicians, APPs/simulation in the ED	Improved teamwork	N/A
Wong 2018 ²¹	All ED staff/staff debriefing on agitation	Improved understanding of why agitation occurs	N/A
Lieow 2019 ²²	ICU nurses/training on confusion assessment method (CAM) and Richmond Agitation Scale	Improved knowledge of delirium and CAM-ICU, not necessarily better compliance with doing assessments	N/A
Penuela 2019 ²³	ICU nurses and providers/visual reminders and education about delirium	Planning to assess if awareness of delirium is improved	

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TABLE 4. Curricula for Agitation in the Patient with a Major Neurocognitive Disorder

Study	Learners/curriculum	Results for learners	Results for patients
Montgomery 1997 ²⁴	Nurses, PCTs/psychoeducation on reasons for agitation in TBI	Improved morale	N/A
Hughes 2000 ²⁵	Nursing home staff/tracked problematic behaviors	Inc camaraderie	Decreased use of antipsychotics, increased non-pharmacological interventions
Burgio 2002 ³⁰ – RCT	PCTs/classroom instruction on communication and writing behavior plans vs. conventional staff training	Improved communication skills	Decreased agitation maintained at 6 months
Magai 2002 ²⁶	Nurses, PCTs/nonverbal sensitivity training to recognize emotional cues of patients	Decreased depression among caregivers on brief symptom inventory	Increased subjective sense of joy, no change in scores on Cohen-Mansfield Agitation Inventory (CMAI)
Savage 2004 ⁴¹	Nursing home staff/in-person training	N/A	No change on in agitation scores/ fewer assaults during observation period
Landreville 2005 ⁴²	Nurses, PCTs/classroom instruction	Increased use of behavioral techniques, increased sense of self-efficacy	Decreased frequency of restlessness and verbally aggressive behaviors
Teri 2005 ²⁷ STAR VA, RCT	Nurses, PCTs/workshops, expert consultation on site	Increased job satisfaction	Decreased agitation, decreased depression on multiple scales (neuropsychiatric inventory, Geriatric Depression Scale)
Testad 2005 ⁴⁰ RCT	Nursing home staff/in-person training on restraint use	N/A	Decrease in restraint use
Testad 2010 ³³ RCT	Nursing home staff/in-person training on restraint use	N/A	Decrease in restraint use, reduction in agitation on CMAI scores
Testad 2016 ³⁴ RCT	Nursing home staff/in-person training on restraint use	N/A	No change in restraint use, decrease score on CMAI
Fossey 2006 ⁴³ RCT	Nursing home staff/lecture and supervision	N/A	No significant change in antipsychotic dosing prescription
Davison 2007 ⁴⁴ RCT	Nurses/in-person lecture and simulation	No change in burnout	Behavioral ratings improved
McAiney 2007 ²⁸	Nurses/Part of the “Putting the P.I.E.C.E.S Together” (P-Physical, I-Intellectual, E-Emotional, C-Capabilities, E-Environment)	Improved confidence	N/A
Beaulieu 2008 ⁴⁵	TBI rehab unit staff/In-person crisis response training	N/A	Decrease in physical restraint use, increase in PRN medication use
Visser 2008 ²⁹ RCT	Nurses, PCTs/control group vs. education only vs. education and peer support	Staff with education and peer support reported increased skills and confidence but no change in burnout	No change in CMAI, no change in Alzheimer’s Quality of Life Scale
Deudon 2009 ³⁵ RCT	Nurses/lecture and staff training	N/A	Decreased scores on Cohen Mansfield Agitation Inventory
Pieper 2011 ⁴⁶ (planned)	Nursing home staff/teach nursing home staff a stepped-wise approach to treating pain in patients with mild-moderate dementia	N/A	Hypothesis is that this approach will decrease agitation as measured by the CMAI and neuropsychiatric symptoms (as measured by NPI).
Pieper 2016 ⁴⁷ RCT	Physicians, nurses/lecture on STA OP protocol (stop and evaluate for pain)	N/A	Residents treated with STA OP had decreased agitation, decreased medications, decreased pain
Monette 2013 ⁴⁸	Physicians, nurses, PCTs/pocket guide lecture and interdisciplinary meetings	Decreased mean or stable results on Stressful Events Questionnaire	Decreased antipsychotic use during intervention but not maintained
Noguchi 2013 ⁴⁹	PCTs/in-person lecture	No increase in staff burden due to training	Increased engagement in leisure activities

TABLE 4. (Continued)

Study	Learners/curriculum	Results for learners	Results for patients
Rapp 2013 ⁵⁰ RCT	Nursing home staff/teach nursing home staff a stepped-wise approach to treating pain in patients with mild-moderate dementia	N/A	Decreased agitation, decreased antipsychotic prescribing, increased prescribing of antidepressant and cholinesterase inhibitor
Karlin 2014 ³⁹ STAR VA	Psychologists/Psychologist-led 2.5-day intensive staff training	Psychologists had a hard time convincing other staff to engage	Decreased overall problematic behavior, decreased scores on Cornell Scale for Depression in Dementia
Hynes 2014 ⁵¹	Nurses, PCTs/DVD from Alzheimer's Australia specifically on behavior management	N/A	Increased use of non-pharmacological interventions, increased use of music/pet therapy
McCabe 2015 ³¹ RCT	Nurses, PCTs, Rec therapy/classroom instruction, peer support and combination	Increased staff efficacy with higher levels of support	Decreased scores on Cohen-Mansfield Agitation Inventory Scores only sustained with peer support
Maidment 2016 ³⁸	Nursing home staff/staff training, pharmacist consultant	N/A	Planned outcomes: patient scores on neuropsychiatric inventory
Mekki 2017 ⁵² RCT	Nursing home staff/6-month staff coaching program	Increased self-report of skills, knowledge, engagement with patients	Decreased restraint use in homes that used intervention
Dahl 2018 ⁵³	Nurses/staff training	Fluctuating enthusiasm among staff on sharing their experiences	Decreased restraint use
van Duinen-van den 2018 ⁵⁴ Planned	Physicians, nurses, psychologists/staff training	Planned outcome: Workload of staff, job satisfaction	Planned outcome: patient agitation on neuropsychiatric inventory
Livingston 2019 ³⁶ RCT, MARQUE	Nurses, PCTs/Managing Agitation and Raising Quality of Life (MARQUE)	No decrease in burnout on Maslach Burnout Inventory	No decrease on Cohen-Mansfield Agitation Inventory, no decrease in antipsychotic use
Laybourne 2021 ³² MARQUE	Nurses, PCTs/Managing Agitation and Raising Quality of Life (MARQUE)	Improved morale among staff, improved communication	N/A
Reinhardt 2020 ⁵⁵	Nursing home staff/training on symptom reduction	N/A	Decreased pain, decreased clinical symptoms
Smeets 2021 ³⁷ RCT	Nursing home staff including pharmacists/medication review and staff training	N/A	No change in symptoms on neuropsychiatric inventory, no change in medication prescribing

Managing Agitation and Raising Quality of Life intervention^{32,32} or the STAR VA.^{27,39} Notably, 18 of the 32 studies were randomized controlled trials (RCTs), including Testad's study where the protocol was repeated in three different years.^{40,33,34}

DISCUSSION

We identified three major notable gaps in our review of the existing agitation curricula. First, there are limited agitation curricula that have been designed and implemented in the inpatient psychiatric setting. We noticed that the majority of curricula aimed at teaching

how to manage an acutely agitated psychiatric patient were done in a simulation or classroom setting. This may be because implementing agitation curricula in the acute psychiatric ward poses numerous challenges due to the wide variety of underlying etiologies that can lead to agitation; simulation offers a more controlled environment to provide this type of education. Residents were the target learner for most studies in this group. Nurses and care technicians were a less frequently identified learner in this target patient population; we have two hypotheses for this. One is that agitation management education is incorporated into onboarding training for new nurses. Second, agitation training is often done in yearly institutional learning

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platforms, which may not be published in scientific literature. At our institution, nurses receive agitation training during onboarding and yearly refresher courses, as well as refresher courses if an incident does occur.

Second, we were unable to identify any curricula that aimed to teach mid-level providers, residents, or physicians how to manage agitation in the general medical patient in a non-ICU or non-ED environment. As discussed in the introduction, agitation is extremely common in the general medical and surgical wards, yet our scoping review shows there is a scarcity of formalized curricula designed to better prepare staff for proper deescalation and management. We suspect this lack of formalized training is a key contributing factor to the delay of deescalation and early intervention of agitation, leading to care environment disruption and workplace violence, and possibly a delay in psychiatric consultation. It is worth considering as well whether the consult-liaison psychiatrist may be less effective in assisting the primary team with the agitated medical patient due to the lack of comfort, familiarity, and formalized staff training of the primary team. This problem is likely further compounded by frequent technician, nursing, and provider shift changes in that even if the CL psychiatrist provides guidance, key management recommendations may be lost or not fully implemented around the clock, leading to a poor outcome for all parties involved.

Finally, there are a high number of systematic and randomized agitation curricula already designed and implemented in patients with major neurocognitive disorders, specifically in the long-term care setting. We believe this is likely because agitation is a very common problem in patients with major neurocognitive disorders as part of the dementia syndrome. In addition, the frequency of restraint and antipsychotic use in long-term care settings has been nationally tracked and scrutinized.⁵⁶ Many of the patients in this population are older and are part of government programs, for example, Medicare in the United States. The financial success of long-term care facilities depends on reimbursement from these government programs, creating additional financial motivations to systemically study and design curricula aimed at reducing antipsychotic and restraint use. Overall, it is clear from our scoping review that the most systematic (18 RCTs) and the highest quantity of agitation curricula were designed for patients with major neurocognitive disorders and

the health care providers that care for them. When looking closely at the results of the studies, some of the protocols did not access replicability. For example, in Testad's studies, which were repeated three times, in one year restraint use decreased in nursing homes that were trained on restraint use, whereas in another year restraint use was unchanged between nursing homes with the exact same staff training. This is because agitation is multifactorial, and even the best curriculum may not be able to combat other factors that drive agitation.

This study has several limitations. The most important limitation is that we conflated different definitions of agitation; for example, restlessness in dementia is very different from hyperactivity in mania. Second, we likely missed some curricula due to our search strategy. More specifically, we used six databases, and any agitation curricula published outside of these databases would not have been captured by our review. To be included, the word "agitate, agitation, or psychomotor agitation" needed to be used at least once, and if the study used a different descriptor and avoided these terms entirely, we would not have captured these curricula. Third, there are likely numerous unpublished agitation curricula and trainings that are incorporated into hospital staff onboarding and continued education; therefore, the trainings may be quite prevalent but undetectable by our study.

Despite these limitations, our scoping review is the first to study a curriculum designed to educate a broad range of health care staff on how to manage agitation. Our findings revealed that most School-Based Curriculum to Improve Depression Literacy Among US Secondary School Students: A Randomized Effectiveness Trial agitation curricula and training occur in long-term care settings, with a focus on training nurses and clinical technicians. These providers are often on the front lines in terms of behavioral interventions and medication administration; they are also the most often injured when violence occurs. Therefore, it makes sense that a lot of effort has been made to educate them. However, we need more curricula for our physicians and physicians-in-training. Physicians should not only learn about agitation management in a psychiatric didactic, but it should be part of general medicine training as well. One option would be to develop an online asynchronous curriculum on agitation management. This learning modality would make the training easy to disseminate, as physicians with busy schedules

could access it on their own time. To assess whether this is an effective educational strategy, we would need to evaluate three main domains, including provider attitude and perceived learning, provider practice changes, and patient outcome and benefit.

Since completing the original search in August 2021, we have aimed to update the results by repeating our search strategy to account for studies done in the past 18 months. After screening the titles and abstracts of these studies, we found approximately a dozen studies that would likely be included in this paper if a complete full-text review were completed. These studies included new concepts, such as using virtual and immersive simulation to teach agitation management to psychiatry residents.^{57,58} There were several studies that aimed to improve patient and learner outcomes for patients with major neurocognitive disorder by improving staff training and education.^{59,60} However, there was only one study that looked at teaching general medical providers how to manage agitation in an acute geriatric psychiatry unit.⁶¹ This indicates a continued interest in developing curricula for the management of agitation. At the same time, the gap in curricula for the nonpsychiatric physician and/or advanced practice practitioner seems to be ongoing.

CONCLUSION

Our scoping review is the first to our knowledge to identify agitation curricula that have been designed for a broad range of health care staff; this allowed us to see that there are a lot of curricula for PCTs and nurses but relatively few curricula for physicians and advanced practice practitioners, especially in a general hospital setting. We believe that effective agitation management requires collaboration among nonpsychiatric physicians/APPs, nurses, and technicians. Educating these populations will help the CL psychiatrist facilitate effective agitation management in the general medical setting.

SUPPLEMENTARY DATA

Supplementary data related to this article can be found at <https://doi.org/10.1016/j.jaclp.2023.05.003>.

Disclosure: The authors have informed the journal that they agree that both Idris Leppla and William Tobolowsky completed the intellectual and other work typical of the first author.

Conflicts of Interest: The authors declare that they have no conflicts of interest.

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