DASA and DASA:YV Annotated Bibliography

<u>NOTE</u>: Publications were included in cases where DASA scores were a key variable of interest, or a key measure/tool investigated in a systematic review.

DASA

Publications

Amunrud, A., & Bjorklund, P. (2022). Implementation of the dynamic appraisal of situational aggression in inpatient mental health. *Perspectives in Psychiatric Care, 58*(3), 1153-1159. https://doi.org/10.1111/ppc.12915

Purpose: To implement structured violence risk assessment (VRA) using the Dynamic Appraisal of Situational Aggression (DASA) on a 25-bed, adult, inpatient psychiatric unit.
Design and Methods: Inpatient DASA screening for 13 weeks with nursing communication orders (NCOs) to highlight patients at high risk for violence. Pre/post tests measured registered nurse (RN) knowledge and perceptions of the DASA.
Findings: DASA completion rate equaled 81.8% with an NCO issue rate of only 32.8%. RN perceptions of the DASA were positive, and knowledge of structured violence risk assessment increased.
Practice Implications: Structured violence risk assessment with the DASA is feasible and well-accepted on psychiatric units.

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Barry-Walsh, J., Daffern, M., Duncan, S., & Ogloff, J. (2009). The prediction of imminent aggression in patients with mental illness and/or intellectual disability using the Dynamic Appraisal of Situational Aggression instrument. *Australas Psychiatry, 17*, 493-496. https://doi.org/10.1080/10398560903289975

Objective: The aim of this paper was to determine whether imminent aggression in psychiatric inpatients can be accurately predicted using a structured risk assessment instrument, the Dynamic Appraisal of Situational Aggression (DASA).
Methods: This prospective validation study involved 10 013 DASA risk assessments of patients residing in a psychiatric hospital. Twenty-four hours after the risk assessment, psychiatric nurses documented whether patients had behaved aggressively towards others or whether they had deliberately damaged property. They also noted the target of aggression, whether towards staff, patients or property.
Results: The predictive validity of the DASA varied according to the type and target of aggression. The prediction of any aggressive behaviour, irrespective of type of aggression or target, was significantly greater than chance (AUC = 0.69). The strongest predictive accuracy (AUC = 0.80) was for physical aggression towards staff.

Conclusions: These results suggest that imminent aggression in psychiatric hospitals may be able to be accurately predicted by psychiatric nurses using a structured risk assessment instrument.

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Blanchard, A. J., Shaffer, C. S., & Douglas, K. S. (2016). 18 decision support tools in the evaluation of risk for violence. In P. M. Kleespies, *The Oxford Handbook of Behavioral Emergencies and Crises*, 262-288.

Professionals often utilize some form of structured approach (i.e., decision support tool or risk assessment instrument) when evaluating the risk of future violence and associated management needs. This chapter presents an overview of decision support tools that are used to assist professionals when conducting a violence risk assessment and that have received considerable empirical evaluation and professional uptake. The relative strengths and weaknesses of the two main approaches to evaluations of risk (actuarial and structured professional judgment) are discussed, including a review of empirical findings regarding their predictive validity. Following a summary of commonalities among the tools, this chapter provides a brief description of 10 decision support tools focusing on their applicability and purpose, content and characteristics, and available empirical research. Finally, the chapter concludes with a discussion of several critical considerations regarding the appropriate use and selection of tools.

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Challinor, A., Briggs, P., Brennan, F., & Daniels, C. (2023). Evaluating the Interventions Implemented and Subsequent Outcomes Following a Moderate and High Score on the Dynamic Appraisal of Situational Aggression Risk Assessment Tool. *BJPsych Open*, *9*(S1). https://doi.org/10.1192/bjo.2023.182

The Dynamic Appraisal of Situational Aggression (DASA) is one of a few instruments designed for the prediction of violence specifically for inpatient populations. It is important that risk assessment tools demonstrate clinical utility, and that barriers to successful implementation are addressed. If successful, the tool should not only predict risk, but lead to the utilisation of interventions intended to manage and reduce risk. The aim of this study is to learn more about the acceptability of the tool (adherence), it's outputs (nursing interventions), and the outcomes (inpatient aggression and violence). Understanding more about the relationship and processes between an intervention and its outcomes is a key step in intervention evaluation.

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Challinor, A., Briggs, P., Brennan, F., Daniels, C., Hurst, G., Thorpe, M., ... & Nathan, R. (2024). An assessment of interventions following moderate and high scores on the dynamic appraisal of situational aggression risk assessment tool in a forensic mental health unit. *The Journal of Forensic Psychiatry & Psychology*, *35*(1), 16-32. https://doi.org/10.1080/14789949.2023.2280565

The Dynamic Appraisal of Situational Aggression (DASA) provides a quick and systematic assessment of short-term violence risk. Risk assessment should be closely

aligned to management and result in interventions aimed to reduce risk. The aim of this study was to investigate what interventions followed a moderate/high DASA score and whether they reduced risk. The impact of staff training was also assessed. The study was a retrospective analysis of health records within a medium secure hospital over 6 months. Data was gathered on tool adherence and interventions that were used to reduce risk following a moderate/high score. The change in DASA score following the intervention was recorded. There were 70 patients covering 8224 bed days. There were 24 occasions where a moderate score led to an intervention (n = 24/40%), and 26 occasions for a high score (n = 26/87%). A moderate score was mostly followed by no intervention (n = 35/59%), a high score was mostly followed by seclusion (n = 9/29%). The intervention that led to the largest reduction in DASA score was pro re nata medication following a moderate score and seclusion following a high score. The training of staff led to a reduction in tool adherence and increased intervention use. These results support the need for combining the DASA assessment with operationalised systems to link assessment with risk prevention to help reduce aggression and restrictive practices.

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Chan, O., & Chow, K. K. (2014). Assessment and determinants of aggression in a forensic psychiatric institution in Hong Kong, China. *Psychiatry Research, 220*, 623-630. https://doi.org/10.1016/j.psychres.2014.08.008

Institutional aggression in forensic psychiatric setting is an under-researched subject, de-spite the magnitude of the problem. No studies have been conducted on the assessment of risk and the examination of predictors of aggression among the Chinese forensic psychiatric population. Our study aimed to examine the determinants of aggression in the only forensic psychiatric institution in Hong Kong, and to test the psychometric properties of a risk-assessment instrument, the Dynamic Appraisal of Situational Aggression (DASA). We recruited a representative sample of 530 consecutively admitted detainees. Qualified nurses completed two risk-assessment instruments, the DASA and the Brøset Violence Checklist (BVC), once daily during the participants' first 14 days of admission. Aggressive incidents were recorded using the revised Staff Observation Aggression Scale (SOAS-R), and participants' data were collected for multivariate analyses. We showed that female gender, diagnoses of personality disorder and substance-related disorder, and admission at other correctional institutions were associated with institutional aggression. Aggression was perpetrated by 17.7% of the participants, and the DASA was demonstrated to have good psycho-metric properties in assessing and predicting aggressive incidents. Our findings preliminarily support the use of daily in-patient risk-assessment and affirm the role of dynamic factors in institutional aggression.

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Chu, C. M., Daffern, M., & Ogloff, J. R. P. (2013). Predicting aggression in acute inpatient psychiatric setting using BVC, DASA, and HCR-20 Clinical scale. *The Journal of Forensic Psychiatry & Psychology, 24*(2), 269-285. https://doi.org/10.1080/14789949.2013.773456

The assessment and prevention of aggressive behavior are critical components of contemporary psychiatric inpatient care, treatment, and management. This prospective study compared the predictive validity of three dynamic violence risk assessment measures (i.e. Brøset Violence Checklist (BVC), Dynamic Appraisal of Situational Aggression (DASA), and HCR-20 Clinical scale) for imminent aggression (within the next 24 h). The DASA and BVC were developed specifically to assess imminent violence within psychiatric hospitals, whereas the HCR-20 is a 'general' violence risk assessment measure that can also be used for this purpose. Daily risk ratings were completed for 70 psychiatric inpatients; a total of 3449 ratings for each risk assessment measure were obtained. Results showed that the DASA and BVC were acceptable to outstanding predictive validity and were more accurate than the HCR-20 Clinical scale for predicting inpatient aggression. Actuarial and structured professional ratings were similar for the prediction of verbal threats, but actuarial ratings were more accurate for predicting interpersonal violence. Overall, these findings support the use of structured dynamic risk assessment measures to aid in the prediction of imminent aggression within inpatient psychiatric settings.

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Chu, C. M., Hoo, E., Daffern, M., & Tan, J. (2012). Assessing the risk of imminent aggression in institutionalized youth offenders using the dynamic appraisal of situational aggression. *The Journal of Forensic Psychiatry & Psychology, 23*(2), 168-183. https://doi.org/10.1080/14789949.2012.668207

Aggressive behavior in incarcerated youth presents a significant problem for staff, co-residents and the functioning of the institution. This study aimed to examine the predictive validity of an empirically validated measure, designed to appraise the risk of imminent aggression within institutionalized adult psychiatric patients (Dynamic Appraisal of Situational Aggression; DASA), in adolescent male and female offenders. The supervising staff members on the residential units rated the DASA daily for 49 youth (29 males and 20 females) over two months. The results showed that DASA total scores significantly predicted institutional aggression in the following 24 and 48 hours; however, the predictive validity of the DASA for institutional aggression was, at best, modest. Further analyses on male and female subsamples revealed that the DASA total scores only predicted imminent institutional aggression in the male subsample. Item analyses showed that negative attitudes, anger when requests are denied, and unwillingness to follow instructions predicted institutional aggression more strongly as compared with other behavioral manifestations of an irritable and unstable mental state as assessed by the DASA.

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Chu, C. M., Thomas, S. D. M., Daffern, M., & Ogloff, J. R. P. (2013). Should clinicians use average or peak scores on a dynamic risk-assessment measure to most accurately predict inpatient aggression? *International Journal of Forensic Mental Health Nursing, 22*(6), 493-499. https://doi.org/10.1111/j.1447-0349.2012.00846.x

Recent advancements in risk assessment have led to the development of dynamic risk-assessment measures that are predictive of inpatient aggression in the short term.

However, there are several areas within this field that warrant further empirical investigation, including whether the average, maximum, or most recent risk state assessment is the most valid for predicting subsequent aggression in the medium term. This prospective study compared the predictive validity of three indices (i.e. mean score, peak score, and most recent single time-point rating) of the Dynamic Appraisal of Situational Aggression (DASA) for inpatient aggression. Daily risk ratings were completed for 60 psychiatric inpatients (from the acute wards of a forensic psychiatric hospital) for up to 6 months; a total of 1054 DASA ratings were obtained. Results showed that mean and peak scores on the DASA were better predictors of interpersonal violence, verbal threat, and any inpatient aggression than the DASA single time-point most recent ratings. Overall, the results support the use of the prior week's mean and peak scores to aid the prediction of inpatient aggression within inpatient forensic psychiatric settings in the short to medium term. These results also have practical implications for clinicians considering risk-management strategies and the scoring of clinically-relevant items on risk-assessment measures.

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Connor, M., Armbruster, M., Hurley, K., Lee, E., Chen, B., & Doering, L. (2020). Diagnostic sensitivity of the dynamic appraisal of situational aggression to predict violence and aggression by behavioral health patients in the emergency department. *Journal of emergency nursing*, *46*(3), 302-309. https://doi.org/10.1016/j.jen.2019.12.006

Introduction: The Dynamic Appraisal of Situational Aggression (DASA) is an assessment tool that has been validated to predict violent or aggressive behavior in psychiatric inpatient settings. Its validity has not been established for use in the emergency department.
Methods: The DASA was implemented within the electronic health record of an academic medical center with inpatient psychiatric services. A retrospective analysis was conducted using Spearman rank-correlation coefficients to compare a final risk score with the subsequent occurrence of violence or aggression, defined as the use of hard leather physical restraints or the administration of intramuscular sedative medication. A receiver operating characteristic curve was used to summarize the predictive accuracy of the tool to assess aggression in behavioral health patients in the emergency department.
Results: A total of 3,433 scores were analyzed, representing 1,548 patients. The DASA had predictive validity with increasing scores comparing all tested cutoff scores against incidence of violence and aggression. The area under the curve comparing scores of 0 versus more than 0 was 0.79. The median time to subsequent aggression was 110 minutes.
Discussion: The DASA has predictive validity for use in evaluating behavioral health patients in the ED setting in an urban academic medical center. The tool is capable of predicting violence or aggression within a time frame conducive to the implementation of noninvasive measures. The DASA should be tested in other ED settings to further establish its predictive validity.

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Daffern, M., & Howells, K. (2007). The prediction of imminent aggression and self-harm in personality disordered patients of a high security hospital using the HCR-20 Clinical scale and the Dynamic Appraisal of Situational Aggression. *International Journal of Forensic Mental Health, 6*(2), 137-143. https://doi.org/10.1080/14999013.2007.10471258

Drawing on recent advances in the violence risk assessment literature, this study tested the predictive validity of two structured measures designed to support risk related decision making, the HCR-20 and the Dynamic Appraisal of Situational Aggression (DASA), for the prediction of imminent aggression and self-harm in personality disordered patients of a high secure psychiatric hospital. For four months nursing staff completed daily assessments of patients using the DASA and the Clinical scale items from the HCR-20. On the following day they documented whether patients had behaved aggressively and/or self-harmed. Results revealed modest predictive validity, significantly better than chance, for both the pre-diction of imminent self-harm and aggression for both measures. Furthermore, these results suggest that personality disordered patients in a negative psychological state characterized by irritability, impulsivity and disagreeableness are at an increased risk of aggression and self-harm during involuntary psychiatric inpatient treatment and that this state is sensitive to structured risk assessment.

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Daffern, M., Howells, K., Hamilton, L., Mannion, A., Howard, R., & Lilly, M. (2009). The impact of structured risk assessments followed by management recommendations on aggression in patients with personality disorder. *Journal of Forensic Psychiatry & Psychology, 20*(5), 661-679. https://doi.org/10.1080/14789940903173990

This study tested the proposition that structured risk assessments followed immediately by the risk assessment results and recommendations for management can reduce the frequency of aggression in high-risk personality-disordered patients. The study included three phases during which aggressive behaviour was recorded: (a) baseline, (b) daily risk assessment using the Dynamic Appraisal of Situational Aggression (DASA) and HCR-20 Clinical Scale, and (c) daily DASA risk assessment followed by risk assessment results and risk management recommendations. Following the third phase a staff survey was conducted to measure the clinical utility of the DASA and the risk management recommendations. Results revealed no significant difference in the frequency of aggression between the three phases. The staff survey revealed varied reactions to the DASA and to the utility of the risk assessment results and management recommendations. Possible reasons for the limited impact of the DASA and opportunities for future research are discussed.

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DeSouza, F., & Bleich, M. (2023). A quality improvement approach to violence reduction: standardizing the risk identification process. *Journal of Nursing Care Quality*, *38*(4), 361-366. https://doi.org/10.1097/NCQ.0000000000000713

Background: The impact of aggressive and violent behaviors directed toward staff in psychiatric facilities has layers of implications tied to recruitment and retention, cost, quality and safety.

Local Problem: Increased patient aggressive behaviors contributed to staff dissatisfaction and high turnover rates, triggering an analysis of current aggression management approaches.

Methods: The Plan-Do-Study-Act quality improvement method was used for this project.

Interventions: The Dynamic Appraisal of Situational Aggression (DASA) risk assessment tool was implemented.

Results: Daily aggression risk identification increased by 69%, and aggressive incidents toward staff and patients decreased by 64% and 28%, respectively, when the tool was completed more consistently. Surveys revealed acceptance of the tool by nurses.

Conclusions: Quality improvement statistical tools supported evidence-based strategies. A risk for aggression assessment laid the foundations for implementing strategies for reducing aggression and violence.

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Dickens, G. L., O'Shea, L. E., & Christensen, M. (2020). Structured assessments for imminent aggression in mental health and correctional settings: Systematic review and meta-analysis. *International Journal of Nursing Studies*, *104*. https://doi.org/10.1016/j.ijnurstu.2020.103526

Background: Structured risk assessment schemes can aid violence reduction in mental health and correctional settings. However, the properties and effectiveness of schemes for predicting imminent (within 24-h) violence have not been comprehensively reviewed.

Objectives: To systematically review the properties and predictive performance of structured schemes that have been used to predict imminent aggression.

Design: Systematic review and meta-analysis.

Data sources: Multiple electronic databases were searched, relevant reference lists and journals were hand-searched.

Review methods: Thirty-two structured risk assessment schemes were identified and used in a search for evidence about the prediction of imminent violence, or their psychometric properties when used for that purpose. Study findings were synthesised narratively and, where statistics about predictive validity were available, subjected to meta-analyses.

Results: Five schemes (Brøset Violence Checklist, HCR-20: Assessing Risk for Violence version 2.0 clinical subscale, Dynamic Appraisal of Situational Aggression and its variants for youth and for women) have been subject to relevant research. Fifty papers were included in a narrative review, and 31 comprising 26 samples involving 282,238 assessments for 2723 individuals were included in meta-analyses. Only the Dynamic Appraisal of Situational Aggression and the Brøset Violence Checklist were subject to implementation research in which the tools were largely rated as having utility for, and being acceptable to, user-participants. Many studies have not established interrater reliability of the tools in the field. After removing outliers, pooled effect sizes for prediction of aggression against people and for any aggression

were, respectively: Hedges' g = 1.35[1.15–1.56]) and g = 1.24[0.99, 1.50] for the Brøset Violence Checklist and g = 1.04 [0.69, 1.39] and 0.88 [0.62, 1.15] for the Dynamic Appraisal of Situational Aggression. Moderator analyses revealed pooled effect sizes for both schemes were decreased by low study bias risk and increased by patient forensic vs. civil legal status.

Conclusions: Research supports the value of both the Brøset Violence Checklist and the Dynamic Appraisal of Situational Aggression. Both are generally acceptable and feasible to implement, and their predictive value is broadly equivalent producing large pooled effect sizes. There is less evidence about the Dynamic Appraisal of Situational Aggression. variants for women and youth though initial studies are promising.

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Dumais, A., Larue, C., Michaud, C., & Goulet, M. H. (2012). Predictive validity and psychiatric nursing staff's perception of the clinical usefulness of the French version of the dynamic appraisal of situational aggression. *Issues in Mental Health Nursing, 33*(10), 670-675. https://doi.org/10.3109/01612840.2012.697254

This study seeks to evaluate the predictive validity of the French version of the Dynamic Appraisal of Situational Aggression (DASAfr) and psychiatric nurses' perceptions of the clinical usefulness of the scale. The study was conducted in a 12-bed psychiatric intensive care unit in a large adult general psychiatric hospital. We found that the total score on the DASAfr has acceptable predictive accuracy for aggression against others and against staff and for seclusion with restraints; predictive accuracy was poorer for aggression against objects. Moreover, the nurses though the scale would be useful to their practice; and, indeed, the team still uses the DASAfr.

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Fernández-Costa, D., Gómez-Salgado, J., Fagundo-Rivera, J., Martín-Pereira, J., Prieto-Callejero, B., & García-Iglesias, J. J. (2020). Alternatives to the use of mechanical restraints in the management of agitation or aggressions of psychiatric patients: A scoping review. *Journal of Clinical Medicine, 9*(9). https://doi.org/10.3390/jcm9092791

Coercive measures are a highly controversial issue in mental health. Although scientific evidence on their impact is limited, they are frequently used. Furthermore, they lead to a high number of ethical, legal, and clinical repercussions on both patients, and professionals and institutions. This review aims to assess the impact of the main alternative measures to prevent or limit the use of coercive measures with restraints in the management of agitated psychiatric patients. The research was conducted following the guidelines recommended by PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) in Medline, Cochrane Library, CINAHL, Web of Science, PsycInfo, LILACS, and Health Database of records between 2015 and 2020. After a critical reading, 21 valid articles were included. Both simple interventions and complex restraint programs were evaluated. Training in de-escalation techniques, risk assessment, and implementation of the "six core strategies" or "Safewards" program were the most assessed and effective interventions to reduce aggressive behaviors and the use of coercive measures. According to the revised literature, it is possible to reduce the use of restraints and coercive measures and not increase the number of incidents

and violent behaviors among the patients through a non-invasive and non-pharmacological approach. However, further research and further randomized clinical trials are needed to compare the different alternatives and provide higher quality evidence.

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Ghosh, M., Twigg, D., Kutzer, Y., Towell-Barnard, A., De Jong, G., & Dodds, M. (2019). The validity and utility of violence risk assessment tools to predict patient violence in acute care settings: An integrative literature review. *International Journal of Mental Health Nursing*, *28*(6), 1248-1267. https://doi.org/10.1111/inm.12645

To examine risk assessment tools to predict patient violence in acute care settings. An integrative review of the literature. Five electronic databases – CINAHL Plus, MEDLINE, OVID, PsycINFO, and Web of Science were searched between 2000 and 2018. The reference list of articles was also inspected manually. The PICOS framework was used to refine the inclusion and exclusion of the literature, and the PRISMA statement guided the search strategy to systematically present findings. Forty-one studies were retained for review. Three studies developed or tested tools to measure patient violence in general acute care settings, and two described the primary and secondary development of tools in emergency departments. The remaining studies reported on risk assessment tools that were developed or tested in psychiatric inpatient settings. In total, 16 violence risk assessment tools were identified. Thirteen of them were developed to assess the risk of violence in psychiatric patients. Two of them were found to be accurate and reliable to predict violence in acute psychiatric facilities and have practical utility for general acute care settings. Two assessment tools were developed and administered in general acute care, and one was developed to predict patient violence in emergency departments. There is no single, user-friendly, standardized evidence-based tool available for predicting violence in general acute care hospitals. Some were found to be accurate in assessing violence in psychiatric inpatients and have potential for use in general acute care, require further testing to assess their validity and reliability.

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Griffith, J. J., Meyer, D., Maguire, T., Ogloff, J. R., & Daffern, M. (2021). A clinical decision support system to prevent aggression and reduce restrictive practices in a forensic mental health service. *Psychiatric Services*, *72*(8), 885-890. https://doi.org/10.1176/appi.ps.202000315

Objective: Preventing aggression and reducing restrictive practices in mental health units rely on routine, accurate risk assessment accompanied by appropriate and timely intervention. The authors studied the use of an electronic clinical decision support system that combines two elements, the Dynamic Appraisal of Situational Aggression instrument and an aggression prevention protocol (eDASA+APP), in acute forensic mental health units for men.
Methods: The authors conducted a cluster-randomized controlled trial incorporating a crossover design with baseline, intervention, and washout periods in a statewide, secure forensic mental health service. The study included 36 mental health nurses (13 men and 23 women, ages 20–65 years) with direct patient care responsibility and 77

male patients (ages 21–77 years) admitted to one of two acute mental health units during the baseline and intervention periods.

Results: eDASA+APP implementation was associated with a significant reduction in the odds of an aggressive incident (OR=0.56, 95% confidence interval [95% CI]=0.45–0.70, p<0.001) and a significant decrease in the odds of administration of as-needed medication (OR=0.64, 95% CI=0.50–0.83, p<0.001). Physical aggression was too infrequent for statistical significance of any effects of eDASA+APP to be determined; however, incidents of physical aggression tended to be fewer during the eDASA+APP phase.

Conclusions: These results support the use of the eDASA+APP to help reduce incidents of aggression and restrictive practices in mental health units.

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Kaunomaki, J., Jokela, M., Kontio, R., Laiho, T., Sailas, E., & Lindberg, N. (2017). Interventions following a high violence risk assessment score: A naturalistic study on a Finnish psychiatric admission ward. *BMC Health Services Research, 17*(26). https://doi.org/10.1186/s12913-016-1942-0

Background: Patient aggression and violence against staff members and other patients are common concerns in psychiatric units. Many structured clinical risk assessment tools have recently been developed. Despite their superiority to unaided clinical judgments, staff has shown ambivalent views towards them. A constant worry of staff is that the results of risk assessments would not be used. The aims of the present study were to investigate what were the interventions applied by the staff of a psychiatric admission ward after a high risk patient had been identified, how frequently these interventions were used and how effective they were.

Methods: The data were collected in a naturalistic setting during a 6-month period in a Finnish psychiatric admission ward with a total of 331 patients with a mean age of 42.9 years (SD 17.39) suffering mostly from mood, schizophrenia-related and substance use disorders. The total number of treatment days was 2399. The staff assessed the patients daily with the Dynamic Appraisal of Situational Aggression (DASA), which is a structured violence risk assessment considering the upcoming 24 h. The interventions in order to re-duce the risk of violence following a high DASA total score (≥4) were collected from the patients' medical files. Inductive content analysis was used.

Results: There were a total of 64 patients with 217 observations of high DASA total score. In 91.2% of cases, at least one intervention aiming to reduce the violence risk was used. Pro re nata (PRN)-medication, seclusion and focused discussions with a nurse were the most frequently used interventions. Non-coercive and non-pharmacological interventions like daily activities associated significantly with the decrease of perceived risk of violence.

Conclusion: In most cases, a high score in violence risk assessment led to interventions aiming to reduce the risk. Unfortunately, the most frequently used methods were psychopharmacological or coercive. It is hoped that the findings will encourage the staff to use their imagination when choosing violence risk reducing intervention techniques.

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Lantta, T., Daffern, M., Kontio, R., & Välimäki M. (2015). Implementing the Dynamic Assessment of Situational Aggression in mental health units. *Clinical Nurse Specialist, 29*(4), 230-43. https://doi.org/10.1097/nur.0000000000000140

Purpose The aims of this study are to explain the intervention of implementing a structured violence risk assessment procedure in mental health inpatient units using the Ottawa Model of Research Use (OMRU) as a guiding framework and to consider nurses' perspectives of its clinical utility and implementation process.
Background: Patient aggression toward staff is a global concern in mental health units. The limited extant literature exploring the use of structured violence risk assessments in mental health units, although small and inconsistent, reveals some positive impacts on the incidence of aggression and staff's use of restrictive interventions.
Rationale: Although numerous violence risk assessment instruments have been developed and tested, their systematic implementation and use are still limited.
Description of the project: A project titled "Safer Working Management" (111298) was conducted in a Finnish hospital district, across 3 mental health units. The 6 steps of OMRU were followed during implementation of the Dynamic Appraisal of Situational Aggression (DASA).
Outcome: Nurses' views toward structured violence risk assessment procedures varied. Although implementation of the DASA was seen as a useful method to increase discussions with patients and nursing staff, some staff preferred their own clinical judgment for assessment of violence risk.
Conclusion: It is possible to use a specific model to promote the implementation of risk assessment instruments in mental health units. However, the complex mental health inpatient environment and the difficulties in understanding and managing aggressive patients present challenges for the implementation of structured violence risk assessment methods.
Implications: The OMRU provides a tool for clinical nurse specialists to guide implementation process in mental health units. Clinical nurse specialists must promote training for staff regarding use of new innovations, such as the DASA. Implementation processes should be reviewed so that clinical nurse specialists can lead and support mental health staff to properly use structured violence risk assessment measures.

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Lantta, T., Kontio, R., Daffern, M., Adams, C. E., & Välimäki, M. (2016). Using the Dynamic Appraisal of Situational Aggression with mental health inpatients: A feasibility study. *Patient Preference and Adherence, 10,* 691-701. https://doi.org/10.2147/ppa.s103840

Purpose: This paper aims to explore the acceptability of Dynamic Appraisal of Situational Aggression (DASA) from the perspective of patients, its actual use by mental health nurses, and the predictive validity of the DASA instrument.
Methods: A feasibility study design incorporating quantitative and qualitative components was used. The study was conducted in three mental health inpatient units at three hospitals in southern Finland. Quantitative data were used to explore demand (nurses' actual use of the DASA), limited efficacy (predictive validity), and acceptability

(measured through patients' participation in the project). Qualitative data were collected to enhance the understanding of acceptability by describing patients' perceptions of the strengths and weaknesses of the DASA.

Results: Nurses used the DASA for most patient assessments. The predictive validity of the DASA was outstanding or excellent, depending on the type of aggression predicted, although the patient recruitment ratio was low. Patients reported both strengths and weaknesses of the DASA, providing complementary information regarding the instrument's acceptability and clinical application.

Conclusion: The DASA accurately predicts inpatient aggression. The patients' preferences and concerns regarding risk assessment have been noted. More patient involvement in risk assessment research and violence prevention efforts is required.

Keywords: patient participation, nurses, violence, risk assessment, psychiatric hospitals, multi-method approach.

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Lenk-Adusoo, M., Kangro, R., & Haring, L. (2024). The risk assessment of imminent inpatient aggression: A cross-cultural validation study of the dynamic appraisal of situational aggression in Estonia. *Journal of Psychiatric and Mental Health Nursing*, 31(4), 560-571. https://doi.org/10.1111/jpm.13010

Introduction: The reason for this study was void of a data-driven imminent risk assessment instrument for aggression in psychiatry clinics in Estonia. The predictive accuracy of the observer-rated Dynamic Assessment of Situational Aggression (DASA) has been repeatedly demonstrated. However, the research gap remains regarding a deeper conceptual understanding of the underlying latent structure of the DASA.

Aim: Comprehensively evaluate the psychometric properties of the Estonian DASA version for cross-cultural clinical use.

Method: We used a prospective repeated measure design and collected 6097 risk evaluations from 381 adult inpatients, 151 of whom committed 1013 aggressive incidents during the study.

Results: The Estonian DASA version has acceptable inter-rater reliability (Kendall's $\tau = 0.74$) and is a useful instrument with excellent predictive validity (AUC = 0.86) for identifying potentially aggressive inpatients. In our sample, the DASA has a bi-factorial structure which explains 83% of the total variance.

Discussion: The adapted DASA has acceptable validity and reliability indices for measuring imminent aggression risk in adult inpatient units.

Implications for Practice: Evidence-based risk assessment of aggression in psychiatric clinics enhances recognition of the signs of potentially aggressive behaviour in order to apply preventive actions and reduce aggression, thereby improving the quality of the care provided.

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Maguire, T., Daffern, M., Bowe, S. & McKenna, B. (2017). Predicting aggressive behaviour in acute forensic mental health units: a re-examination of the dynamic appraisal of situational aggression's predictive validity. *International Journal of Mental Health Nursing, 26*(5), 472-481. https://doi.org/10.1111/inm.12377.

In the present study, we explored the predictive validity of the Dynamic Appraisal of Situtional Aggression (DASA) assessment tool in male (n = 30) and female (n = 30) patients admitted to the acute units of a forensic mental health hospital. We also tested the psychometric properties of the original DASA bands and novel risk bands. The first 60 days of each patient's file was reviewed to identify daily DASA scores and subsequent risk- related nursing interventions and aggressive behaviour within the following 24 hours. Risk assessments, followed by documented nursing interventions, were removed to preserve the integrity of the risk-assessment analysis. Receiver-operator characteristics were used to test the predictive accuracy of the DASA, and generalized estimating equations (GEE) were used to account for repeated risk assessments, which occurs when analysing short-term risk- assessment data. The results revealed modest predictive validity for males and females. GEE analyses suggested the need to adjust the DASA risk bands to the following (with associated odds ratios (OR) for aggressive behaviour): 0 = low risk; 1, 2, 3 = moderate-risk OR, 4.70 (95% confidence interval (CI): 2.84-7.80); and 4, 5, 6, 7 = high-risk OR, 16.13 (95% CI: 9.71-26.78). The adjusted DASA risk bands could assist nurses by prompting violence-prevention interventions when the level of risk is elevated.

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Maguire, T., Daffern, M., Bowe, S. J., & McKenna, B. (2018). Risk assessment and subsequent nursing interventions in a forensic mental health inpatient setting: associations and impact on aggressive behaviour. *Journal of Clinical Nursing, 27*(5-6). https://doi.org/10.1111/jocn.14107

Aim and objectives: To examine associations between risk of aggression and nursing interventions designed to prevent aggression.
Background: There is scarce empirical research exploring the nature and effectiveness of interventions designed to prevent inpatient aggression. Some strategies may be effective when patients are escalating, whereas others may be effective when aggression is imminent. Research examining level of risk for aggression and selection and effectiveness of interventions and impact on aggression is necessary.
Design: Archival case file.
Methods: Data from clinical files of 30 male and 30 female patients across three forensic acute units for the first 60 days of hospitalisation were collected. Risk for imminent aggression as measured by the Dynamic Appraisal of Situational Aggression, documented nursing interventions following each assessment, and acts of aggression within the 24-hours following assessment were collected. Generalised estimating equations were used to investigate whether intervention strategies were associated with reduction in aggression.
Results: When a Dynamic Appraisal of Situational Aggression assessment was completed, nurses intervened more frequently compared to days when no Dynamic Appraisal of Situational Aggression assessment was completed. Higher Dynamic Appraisal of Situational Aggression assessments were associated with a greater number of interventions. The percentage of interventions selected for males differed from females; males received more pro re nata medication and observation, and females received more limit setting, one-to-one nursing and reassurance. Pro re nata medication was the most commonly documented intervention (35.9%) in this study. Pro

re nata medication, limit setting and reassurance were associated with an increased likelihood of aggression in some risk bands.

Conclusions: Structured risk assessment prompts intervention, and higher risk ratings result in more interventions. Patient gender influences the type of interventions. Some interventions are associated with increased aggression, although this depends upon gender and risk level.

Relevance to clinical practice: When structured risk assessments are used, there is greater likelihood of intervention. Intervention should occur early using least restrictive interventions.

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Maguire, T., Daffern, M., Bowe, S. & McKenna, B. (2019). Evaluating the impact of an electronic application of the Dynamic Appraisal of Situational Aggression with an embedded aggression prevention protocol on aggression and restrictive practices in forensic mental health unit. *International Journal of Mental Health Nursing, 28*(5), 1183-1194. https://doi.org/10.1111/inm.12630

Risk assessment is a pre-requisite for violence prevention in mental health settings. Extant research concerning risk assessment and nursing intervention is limited and has focused on the predictive validity of various risk assessment approaches and instruments, with few at-tempts to elucidate and test interventions that might prevent aggression, and reduce reliance on coercive interventions. The integration of risk assessment and violence prevention strategies has been neglected. The aim of this feasibility study was to test a novel Aggression Prevention Protocol designed to prioritize the instigation of less restrictive interventions on an acute forensic mental health unit for female patients. A prospective quasi-experimental study was designed to test an Aggression Prevention Protocol, linked to an electronic application of the Dynamic Appraisal of Situational Aggression (DASA). Following introduction of the DASA and Aggression Prevention Protocol, there were reductions in verbal aggression, administration of Pro Re Nata medication, the rate of seclusion, and physical and mechanical restraint. There was also an increase in documented nursing interventions. Overall, these results support further testing of the electronic application of the DASA and the Aggression Prevention Protocol.

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Maguire, T., McKenna, B., & Daffern, M. (2022). Establishing best practice in violence risk assessment and violence prevention education for nurses working in mental health units. *Nurse Education in Practice, 61*. https://doi.org/10.1016/j.nepr.2022.103335

Objectives: To explore and evaluate extant and potential methods used in risk assessment and aggression prevention training. This study was also designed to consider the most appropriate method for educating nurses in use of a novel risk assessment instrument linked to a structured nursing intervention protocol (the electronic application of the Dynamic Appraisal of Situational Aggression and Aggression Prevention Protocol).

Background: Organisational and personal concerns have led to the development of training programs designed to prevent and manage aggression in mental health units.

Design: This descriptive qualitative study explored experts' opinions about effective training approaches.
Methods: Data were collected via focus groups (a total of four discrete groups), with each of the four focus groups repeated after four weeks. A semi-structured guide was used to guide the focus group discussions.
Results: Seventeen experts with experience coordinating and facilitating training in prevention and management of aggression in mental health units in New Zealand and Australia participated in this study. Three themes emerged from the data 1) existing training can be "like pulling teeth without anesthetic" 2) the need to "breathe life" into the training and 3) a vision of the "gold standard" for practice and training.
Conclusions: Training is optimal when it is place-based, responsive to local needs and inclusive of relevant clinical, cultural, consumer/carer and contextual factors. Training may benefit from a focus on the application of the knowledge, skills and attitudes learnt and there is a need for ongoing reinforcement of training in the clinical setting, beyond initial introduction and provision of information and orientation to relevant skills.

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Maguire, T., Willetts, G., McKenna, B., Daffern, M., & Garvey, L. (2023). Developing entrustable professional activities to enhance application of an aggression prevention protocol. *Nurse Education in Practice*, *73*. https://doi.org/10.1016/j.nepr.2023.103827

Aim: The research aim of this study was to seek feedback from prevention of aggression training experts about the suitability of Entrustable Professional Activities (EPAs) as an assessment tool for an Aggression Prevention Protocol. The protocol was designed to structure intervention to prevent aggression and reduce the use of restrictive practices following risk assessment using a validated instrument (the Dynamic Appraisal of Situational Aggression).
Background: Preventing aggression and limiting the use of restrictive practices are key priorities for inpatient mental health services. Assessing clinical activities using a competence framework has limitations, particularly when determining complex interventions. EPAs could provide a suitable method for assessing complex clinical activities like de-escalation and limit setting, which comprise some of the interventions in the Aggression Prevention Protocol. EPAs are new to forensic mental health nursing; therefore, feedback was sought regarding the utility of EPAs to assess aggression prevention interventions.
Methods: Data were collected via focus groups including 11 aggression prevention experts from Australia and New Zealand. A thematic analysis, comparative analysis and a Strength, Weakness, Opportunity and Threats analysis was conducted.
Results: Three themes were interpreted from the data: 1) Frameworks such as the APP are needed to work towards elimination of restrictive practices; 2) APP-EPAs afford an opportunity to set the standard for practice; and 3) 'who watches the watchers', were identified by the experts as well as areas to enhance EPAs prior to introduction into practice.
Conclusions: EPAs address a practice-gap and offer a framework to assist movement towards elimination of restrictive practices, while prompting best-practice, self-reflection and practice improvement guidance.

Mesbah, H., Rafique, Z., Moukaddam, N., & Peacock, W. F. (2024). Predicting aggressive behavior in psychiatric patients in emergency department: a systematic literature review. *The American Journal of Emergency Medicine, 80*, 44-50. https://doi.org/10.1016/j.ajem.2024.02.040

Introduction: Aggression and violence are major concerns in emergency departments (EDs), and have negative consequences for patient and staff health and safety. Few validated tools exist for identifying patients at risk of agitation. This study conducted a systematic literature review to identify and summarize the scores that predict aggressive behavior in EDs.
Methods: The search included articles published between Jan 1st, 1987, and Dec 31st, 2022, using the terms "aggress*," "violent*," "emergency," "acute," "score," or "scale."
Results: Ten scores were found to be relevant, with eight of the developed scores intended for use in EDs. The Aggressive Behavior Risk Assessment Tool (ABRAT) was found to be sensitive (84.3%) and specific (95.3%). The Brøset Violence Checklist (BVC) was highly specific (99.4%), whereas the Violence Screening Checklist (VSC) was less sensitive (57.2%) and specific (45.7%). The violence and aggression (OVA)/BVC checklist was found to significantly decrease the number of security call activations ($P < 0.001$). The Behavioral Activity Rating Scale (BARS) and OVA/BVC scores were the shortest, with seven and six items, respectively.
Conclusion: The OVA/BVC checklist is a valuable tool for predicting and preventing violence in the EDs. Future prospective studies should investigate its effectiveness.

Michaels, T. I., Thomas, E., Flaxer, J. M., Singal, S., Hanna, L., Van Meter, A., ... & Saito, E. (2023). Racial and ethnic inequities in psychiatric inpatient building and unit assignment. *Psychiatry Research*, *330*. https://doi.org/10.1016/j.psychres.2023.115560

Racism is a social determinant of mental health which has a disproportionally negative impact on the experiences of psychiatric inpatients of color. Distinct differences in the physical space and clinical settings of two inpatient buildings at a hospital system in the tristate (New York, New Jersey, Connecticut) area of the United States led to the present investigation of racial inequities in the assignment of patients to specific buildings and units. Archival electronic medical record data were analyzed from over 18,000 unique patients over a period of six years. Hierarchical logistic regression analyses were conducted with assigned building (old vs. new building) as the binary outcome variable. Non-Hispanic White patients were set as the reference group. Black, Hispanic/Latinx, and Asian patients were significantly less likely to be assigned to better resourced units in the new building. When limiting the analysis to only general adult units, Black and Hispanic/Latinx patients were significantly less likely to be assigned to units in the new building. These results suggest ethnoracial inequities in patient assignment to buildings which differed in clinical and physical conditions. The findings serve as a call to action for hospital systems to examine the ways in which structural racism impact clinical care.

Ogloff, J.R.P., & Daffern, M. (2006). The Dynamic Appraisal of Situational Aggression: An instrument to assess risk for imminent aggression in psychiatric inpatients. *Behavioral Sciences and the Law, 24*, 799-813.

Considerable research has attempted to delineate the demographic and clinical characteristics of high-risk psychiatric patients and identify salient modifiable aspects of aggression prone environments. Recently, there has also been increased interest in the development and testing of structured schemes for the assessment of risk for aggression within inpatient psychiatric settings. Although some of these methods show acceptable predictive validity, their ability to inform day-to-day treatment and management decisions is limited. The cur-rent research was designed to identify existing and novel risk factors that would assist staff to identify and manage the risk for aggression in psychiatric inpatient populations. Results showed that assessments supported by structured risk measures were more accurate than unaided clinical judgements based only on nurses' clinical experience and knowledge of the patient alone. Seven test items emerged that were maximally effective at identifying acute psychiatric patients at risk for engaging in inpatient violence within 24 hours; these items have been combined in the development of the Dynamic Appraisal of Situational Aggression. Empirical analyses and clinical experience support the efficacy of the instrument in assisting clinical staff in the identification and management of inpatient aggression.

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Ramesh, T., Igoumenou, A., Montes, M. V., & Fazel, S. (2018). Use of risk assessment instruments to predict violence in forensic psychiatric hospitals: a systematic review and meta-analysis. *European Psychiatry*, *52*, 47-53. https://doi.org/10.1016/j.eurpsy.2018.02.007

Background and Aims: Violent behaviour by forensic psychiatric inpatients is common. We aimed to systematically review the performance of structured risk assessment tools for violence in these settings.
Methods: The nine most commonly used violence risk assessment instruments used in psychiatric hospitals were examined. A systematic search of five databases (CINAHL, Embase, Global Health, PsycINFO and PubMed) was conducted to identify studies examining the predictive accuracy of these tools in forensic psychiatric inpatient settings. Risk assessment instruments were separated into those designed for imminent (within 24 hours) violence prediction and those designed for longer-term prediction. A range of accuracy measures and descriptive variables were extracted. A quality assessment was performed for each eligible study using the QUADAS-2. Summary performance measures (sensitivity, specificity, positive and negative predictive values, diagnostic odds ratio, and area under the curve value) and HSROC curves were produced. In addition, meta-regression analyses investigated study and sample effects on tool performance.
Results: Fifty-two eligible publications were identified, of which 43 provided information on tool accuracy in the form of AUC statistics. These provided data on 78 individual samples, with information on 6,840 patients. Of these, 35 samples (3,306 patients from

19 publications) provided data on all performance measures. The median AUC value for the wider group of 78 samples was higher for imminent tools (AUC 0.83; IQR: 0.71–0.85) compared with longer-term tools (AUC 0.68; IQR: 0.62-0.75). Other performance measures indicated variable accuracy for imminent and longer-term tools. Meta-regression indicated that no study or sample-related characteristics were associated with between-study differences in AUCs.

Interpretation: The performance of current tools in predicting risk of violence beyond the first few days is variable, and the selection of which tool to use in clinical practice should consider accuracy estimates. For more imminent violence, however, there is evidence in support of brief scalable assessment tools.

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Roberton, T., & Daffern, M. (2020). Improving the assessment of risk for imminent aggression in older adults in residential facilities. *Aggression and violent behavior*, *51*. https://doi.org/10.1016/j.avb.2020.101364

Aggressive behavior by older adults living in residential facilities occurs commonly, and negatively impacts caregivers, other residents, and sometimes visitors. A precondition of aggression prevention efforts is accurate identification of high-risk individuals and interactions. To this end, elucidation of early warning signs and specification of proximal causes, processes and high-risk interactions is critical. Structured risk assessment instruments have been shown to improve prediction of imminent aggression in inpatient mental health care settings, and these instruments have been applied to various other populations and settings; however, there is little evidence regarding their validity in older adult populations. This paper reviews literature that has sought to identify the proximal causes and processes associated with aggressive behavior in older adults; this includes premorbid personality, cognitive impairment, language impairment, social functioning, mental health, functional dependency, sensory impairments, and pain. Given that the proximate causes and processes leading to aggression in older adults seem to differ in subtle ways from acute mental health inpatients, further examination (and possible modification) of existing risk assessment instruments for use in older adults is warranted. This paper identifies six factors that may improve utility and predictive validity when applying extant risk assessment instruments with older adults in residential facilities: confusion/disorientation, resistiveness to care, social disengagement, fear, symptoms of depression, and uncontrolled pain or discomfort.

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Saito, E., Tebbett-Mock, A. A., & McGee, M. (2020). Dialectical behavior therapy decreases depressive symptoms among adolescents in an acute-care inpatient unit. *Journal of Child and Adolescent Psychopharmacology*, *30*(4), 244-249. https://doi.org/10.1089/cap.2019.0149

Objective: Research has shown that dialectical behavior therapy (DBT) is an effective treatment modality to decrease suicidal ideation, incidents of nonsuicidal self-injurious behavior, and suicide attempts in an adolescent outpatient population. However, research on the impact of DBT on depressive and manic symptoms for adolescents and

within an inpatient setting is limited. The purpose of this study is to examine whether DBT significantly decreases depressive and manic symptoms compared with treatment as usual (TAU) for inpatient adolescents.

Method: We conducted a retrospective chart review for adolescents receiving inpatient DBT and for a historical control group on the same unit before DBT (i.e., TAU). Group differences for continuous outcomes were analyzed using analysis of covariance (ANCOVA), where discharge scores for Hamilton Depression Rating Scale (HAMD), Young Mania Rating Scale (YMRS), Clinical Global Impressions-Severity for Symptoms (CGI-S), and Dynamic Appraisal of Situational Aggression (DASA) were predicted by treatment condition (i.e., DBT and TAU) while co-varying for admission scores and using a t test for CGI-Improvement (CGI-I) in functioning, which was administered upon discharge.

Results: Patients who received DBT had significantly lower HAMD scores, $F(1, 409) = 5.272$, $p = 0.022$, $\eta_p^2 = 0.013$, and lower CGI-I scores, $t(596) = 2.50$, $p = 0.00$ upon discharge when controlling for admission scores, compared with patients who received TAU. ANCOVAs showed no significant differences on the YMRS, CGI-S, or DASA between the DBT and TAU groups.

Conclusion: DBT on an acute-care inpatient unit for adolescents seems to significantly decrease depressive symptoms during a relatively short period of time compared with TAU. DBT may be an effective treatment modality to decrease depressive symptoms for acute-care inpatient units for adolescents.

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Sammut, D., Hallett, N., Lees-Deutsch, L., & Dickens, G. L. (2023). A systematic review of violence risk assessment tools currently used in emergency care settings. *Journal of Emergency Nursing, 49*(3), 371-386. https://doi.org/10.1016/j.jen.2022.11.006

Introduction: Violence risk assessment is commonplace in mental health settings and is gradually being used in emergency care. The aim of this review was to explore the efficacy of undertaking violence risk assessment in reducing patient violence and to identify which tool(s), if any, are best placed to do so.

Methods: CINAHL, Embase, Medline, and Web of Science database searches were supplemented with a search of Google Scholar. Risk of bias assessments were made for intervention studies, and the quality of tool development/testing studies was assessed against scale development criteria. Narrative synthesis was undertaken.

Results: Eight studies were included. Three existing violence risk assessment tools featured across the studies, all of which were developed for use with mental health patients. Three newly developed tools were developed for emergency care, and 1 additional tool was an adaptation of an extant tool. Where tested, the tools demonstrated that they were able to predict patient violence, but did not reduce restraint use. The quality issues of the studies are a significant limitation and highlight the need for additional research in this area.

Discussion: There is a paucity of high-quality evidence evaluating the psychometric properties of violence risk assessment tools currently used along the emergency care pathway. Multiple tools exist, and they could have a role in reducing violence in emergency care. However, the limited testing of their psychometric properties,

acceptability, feasibility, and usability in emergency care means that it is not possible to favor one tool over another until further research is conducted.

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Sikstrom, L., Maslej, M. M., Findlay, Z., Strudwick, G., Hui, K., Zaheer, J., ... & Buchman, D. Z. (2023). Predictive care: a protocol for a computational ethnographic approach to building fair models of inpatient violence in emergency psychiatry. *BMJ open*, *13*(4). https://doi.org/10.1136%2Fbmjopen-2022-069255

Introduction: Managing violence or aggression is an ongoing challenge in emergency psychiatry. Many patients identified as being at risk do not go on to become violent or aggressive. Efforts to automate the assessment of risk involve training machine learning (ML) models on data from electronic health records (EHRs) to predict these behaviours. However, no studies to date have examined which patient groups may be over-represented in false positive predictions, despite evidence of social and clinical biases that may lead to higher perceptions of risk in patients defined by intersecting features (eg, race, gender). Because risk assessment can impact psychiatric care (eg, via coercive measures, such as restraints), it is unclear which patients might be underserved or harmed by the application of ML.
Methods and analysis: We pilot a computational ethnography to study how the integration of ML into risk assessment might impact acute psychiatric care, with a focus on how EHR data is compiled and used to predict a risk of violence or aggression. Our objectives include: (1) evaluating an ML model trained on psychiatric EHRs to predict violent or aggressive incidents for intersectional bias; and (2) completing participant observation and qualitative interviews in an emergency psychiatric setting to explore how social, clinical and structural biases are encoded in the training data. Our overall aim is to study the impact of ML applications in acute psychiatry on marginalised and underserved patient groups.
Ethics and dissemination: The project was approved by the research ethics board at The Centre for Addiction and Mental Health (053/2021). Study findings will be presented in peer-reviewed journals, conferences and shared with service users and providers.

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Simmons, M. L., Maguire, T., Ogloff, J. R., Gabriel, J., & Daffern, M. (2023). Using the Dynamic Appraisal of Situational Aggression (DASA) to assess the impact of unit atmosphere on violence risk assessment. *Journal of Psychiatric and Mental Health Nursing*, *30*(5), 942-951. https://doi.org/10.1111/jpm.12913

Introduction: The Dynamic Appraisal of Situational Aggression (DASA) is an inpatient aggression risk assessment instrument. Recently, research explored whether the unit atmosphere, as indicated by a unit's average DASA score, was related to inpatient aggression risk, but failed to control for individual risk.
Aim: Investigate whether the DASA unit average score or an interaction between the unit average and an individual patient's DASA score was related to the likelihood that an individual would act aggressively.

Method: Cox regression with repeated assessments and recurrent events was used to analyse 11,243 DASA risk assessments of 113 inpatients collected via retrospective file review.

Results: The unit DASA average score was not related to aggression towards staff. There was a negative interaction between the individual and the unit DASA average scores when identifying patient-to-patient aggression; high-risk patients engaged in less aggression when the unit average was heightened relative to units with lower DASA average scores.

Discussion: It is possible that there were more nursing interventions and/or patients engaged in greater self-regulation on unsettled units, thus reducing aggression.

Implications for Practice: Currently, there is insufficient evidence to suggest that the unit average score should be used to supplement individual DASA scores to identify aggression risk.

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Simmons, M. L., Ogloff, J. R. P., & Daffern, M. (2023). Investigating the dynamic nature of multiple risk assessment instruments in a forensic mental health hospital. *Psychological Assessment, 35*(1), 42–55. https://doi.org/10.1037/pas0001174

Readministration of multiple risk assessment instruments to determine the risk of aggression over the short, medium, and long term is common practice in many forensic mental health settings. Justification for the repeated administration and use of multiple instruments is based on purported differences in discriminative validity of risk factors according to whether they are characterized as static, stable, or acute, and the composition of these tools, in terms of the relative balance of different types of risk factors, which can impact the discriminative validity of these instruments over different follow-up periods. However, research has yet to determine whether the use of multiple and repeated administration of risk assessment instruments improves identification of risk, and it may be the case that the heavy burden on service providers to administer multiple instruments is unwarranted. In this study, time-dependent cox regression with repeated assessments and recurrent events was used to investigate the dynamic nature and incremental validity of the dynamic appraisal of situational aggression (DASA), short-term assessment of risk and treatability (START), and HCR-20[v3], which were repeatedly rated on a sample of forensic mental health inpatients (N = 240) over a 2-year period. Results suggest that using the rolling mean or the most recent risk assessment yielded the most accurate characterization of change in aggression risk. Repeated administration of dynamic risk instrument instruments improved the identification of aggression beyond the initial risk assessment. Although static, stable, and acute factors were significantly related to aggression, the combination of data from multiple risk assessment instruments may not result in clinically meaningful improvements in risk identification.

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Singal, S., Howell, D., Hanna, L., Tang, S. X., Van Meter, A., Saito, E., ... & Michaels, T. I. (2024). Race-based disparities in the frequency and duration of restraint use in a psychiatric inpatient setting. *Psychiatric Services*, *75*(4), 308-315. https://doi.org/10.1176/appi.ps.20230057

Objective: Patients' race and age have each been identified as risk factors for experiencing restraint events during psychiatric hospitalization. Restraint duration is also an important variable in determining disparities in treatment. To the authors' knowledge, no studies to date have examined the effect of the interaction of race and age on restraint use and duration in inpatient psychiatric settings. This retrospective chart review of electronic medical records of patients admitted between 2012 and 2019 sought to examine whether race and age interacted in predicting differences in the use and duration of restraints in a psychiatric inpatient setting.

Methods: Logistic and hierarchical regression analyses were conducted on data from a sample of 29,739 adolescent (ages 12–17 years) and adult (ages ≥18 years) inpatients to determine whether the interaction of race and age group (adolescent or adult) significantly predicted a restraint event or differences in restraint duration.

Results: Black (adjusted OR [AOR]=1.85) and multiracial (AOR=1.36) patients were more likely to experience a restraint event than were their White peers. Black race was also significantly (p=0.001) associated with longer restraint duration. No significant interaction was detected between race and age in predicting restraint events or duration.

Conclusions: Although the interaction between race and age did not predict restraint events or duration, the findings indicate racial disparities in the frequency and duration of restraint events among Black and multiracial individuals and may inform efforts to reduce these events.

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Szabo, K. A., White, C. L., Cummings, S. E., Wang, R. S., & Quanbeck, C. D. (2015). Inpatient aggression in community hospitals. *CNS Spectrums*, *20*(3), 223-230. https://doi.org/10.1017/S1092852914000820

Physical violence is a frequent occurrence in acute community psychiatry units worldwide. Violent acts by patients cause many direct injuries and significantly degrade quality of care. The most accurate tools for predicting near-term violence on acute units rely on current clinical features rather than demographic risk factors. The efficacy of risk assessment strategies to lower incidence of violence on acute units is unknown. A range of behavioral and psychopharmacologic treatments have been shown to reduce violence among psychiatric inpatients.

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Tang, C. T., Yi Wen Chan, C., Junpei, E. S., & Kunjithapatham, G. (2018). Patient characteristics and outcomes in the only psychiatric intensive care unit (PICU) in Singapore: An audit study. *ASEAN Journal of Psychiatry*, *19*(2).

Objective: The High Dependency Psychiatric Care Unit (HDPCU) at the Institute of Mental Health, Singapore is the only psychiatric intensive care unit (PICU) in Singapore. The HDPCU provides care for severely disturbed patients and patients who pose risks which the general psychiatric wards are unable to handle. There have been no published studies on the characteristics and outcomes of patients admitted for psychiatric intensive care in Singapore. The primary aim of our audit was to understand

the characteristics and outcomes of patients admitted to the HDPCU. Our secondary aim was to examine the differences in characteristics and outcomes between patients who were directly admitted to the HDPCU from the emergency room and those who were transferred to the HDPCU from the general psychiatric wards. Methods: Data was collected from electronic case notes and the HDPCU database, for all patients who were admitted to the HDPCU from January 2015 to December 2015. Patient demographics and clinical characteristics were collect for all HDPCU patients and compared for patients directly admitted to the HDPCU and patients who were transferred from the general wards. Results: A total of 268 patients were evaluated with the most common primary diagnosis being that of schizophrenia (39.2%), followed by bipolar disorder (25.7%). The main reason for transfer to the HDPCU was because of disturbed, agitated and violent behaviour (74.3%). Dynamic Appraisal of Situational Aggression (DASA) scores, Clinical Global Impression - Severity scale (CGI-S) scores and the 18 item Brief Psychiatric Rating Scale (BPRS) scores were all significantly reduced by 79.69%, 23.10% and 28.10%, respectively. Patients who were directly admitted to the HDPCU compared to patients who were not, had a significantly shorter duration of hospitalisation (22 days versus 28 days (p=0.001) and stay in the HDPCU (6.54 days versus 8.23 days (p=0.001). Conclusion: The HDPCU can potentially contribute to a shorter duration of hospitalisation and better clinical outcomes. Further research needs to be done to determine predictors of HDPCU admissions.

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Van Le, D., Montgomery, J., Kirkby, K. C., & Scanlan, J. (2018). Risk prediction using natural language processing of electronic mental health records in an inpatient forensic psychiatry setting. *Journal of Biomedical Informatics*, *86*, 49-58. https://doi.org/10.1016/j.jbi.2018.08.007

Objective: Instruments rating risk of harm to self and others are widely used in inpatient forensic psychiatry settings. A potential alternate or supplementary means of risk prediction is from the automated analysis of case notes in Electronic Health Records (EHRs) using Natural Language Processing (NLP). This exploratory study rated presence or absence and frequency of words in a forensic EHR dataset, comparing four reference dictionaries. Seven machine learning algorithms and different time periods of EHR analysis were used to probe which dictionary and which time period were most predictive of risk assessment scores on validated instruments.
Materials and methods: The EHR dataset comprised de-identified forensic inpatient notes from the Wilfred Lopes Centre in Tasmania. The data comprised unstructured free-text case note entries and serial ratings of three risk assessment scales: Historical Clinical Risk Management-20 (HCR-20), Short-Term Assessment of Risk and Treatability (START) and Dynamic Appraisal of Situational Aggression (DASA). Four NLP dictionary word lists were selected: 6865 mental health symptom words from the Unified Medical Language System (UMLS), 455 DSM-IV diagnoses from UMLS repository, 6790 English positive and negative sentiment words, and 1837 high frequency words from the Corpus of Contemporary American English (COCA). Seven machine learning methods Bagging, J48, Jrip, Logistic Model Trees (LMT), Logistic Regression, Linear Regression and Support Vector Machine (SVM) were used to identify the combination of dictionaries and algorithms that best predicted risk assessment scores.

Results: The most accurate prediction was attained on the DASA dataset using the sentiment dictionary and the LMT and SVM algorithms.

Conclusions: NLP, used in conjunction with NLP dictionaries and machine learning, predicted risk ratings on the HCR-20, START, and DASA, based on EHR content. Further research is required to ascertain the utility of NLP approaches in predicting endpoints of actual self-harm, harm to others or victimisation.

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Varpula, J., Ameel, M., & Lantta, T. (2024). Attitudes of nurses and nurse managers towards violence risk assessment and management: A cross-sectional study in psychiatric inpatient settings. *Journal of Psychiatric and Mental Health Nursing*. https://doi.org/10.1111/jpm.13069

Introduction: Workplace violence is a prevalent issue in psychiatric inpatient care. Prevention efforts require the identification of at-risk service users using validated violence risk assessment tools. The shift in violence prevention emphasises preventive measures and collaborative risk assessment together with service users. Nurses have a central role in this process. Therefore, their attitudes are crucial when implementing evidence-based methods.

Aim: To assess the attitudes of nurses and nurse managers towards violence risk assessment and management.

Method: A cross-sectional online survey in Finnish psychiatric inpatient care. Data analysis was conducted with statistical methods. The STROBE guideline was used in reporting.

Results: Nurses (n = 142) valued risk assessment and felt that it was their responsibility. Attitudes towards service users' risk-taking as part of their recovery varied. Nurses had mixed attitudes regarding the effectiveness of risk assessment tools. Older participants and nurse managers had more positive attitudes towards risk assessment tools.

Discussion: The study findings highlight a feeling of responsibility of nurses towards violence risk assessment and at the same time their preference towards their own clinical judgement.

Implications for Practice: Understanding nurses' attitudes is crucial in training and implementation processes to address concerns, provide support and enhance positive attitudes.

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Wigglesworth, H., O'Brien, A., & White, S. (2022). Relationship between the Dynamic Appraisal of Situational Aggression (DASA) score and incidents of aggression within 24 hours in patients in a psychiatric intensive care setting. *Journal of Psychiatric Intensive Care, 18*(2), 63-68. https://doi.org/10.20299/jpi.2022.007

The Dynamic Appraisal of Situational Aggression (DASA) is a risk assessment instrument developed in 2006 to assess the likelihood of a patient engaging in violence within 24 hours in a psychiatric inpatient environment. The aim of this study was to investigate whether DASA scores predict incidents of violence, restraints and seclusion in a 24-hour period on a psychiatric intensive care unit (PICU). This study also aimed to identify a meaningful DASA score which would suggest a high risk of an incident of

violence occurring within 24 hours on a PICU. For two months, data collected for every inpatient on PICU were: daily DASA scores, incidents of violence, physical restraint or seclusion and whether the patient was deemed appropriate to transfer from PICU to an acute ward. Receiver operating characteristic (ROC) curves assessed the ability of DASA scores to predict incidents. Higher DASA scores were significantly associated with decreased odds of a patient being deemed fit for transfer to an acute ward and with increased odds of an incident of violence, seclusion or restraint within 24 hours. With a DASA score of 4 or above, there is a 16% probability there will be an incident of violence, 21% probability of seclusion and 11% probability of restraint within 24 hours. The DASA score can be used to predict incidents of violence, seclusion and restraint in the following 24 hours in a PICU setting.

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Wilkie, T., Socha, P., Sims, C., Mahendrian, M., Tagore, A., & Darani, S. A conceptual framework for the management of a COVID-19 outbreak on a secure forensic inpatient unit. *International Journal of Risk and Recovery*, 5.

Responses to outbreaks of the novel coronavirus SARS-CoV-2 (COVID-19) in secure forensic settings have included several interventions, such as cohorting, assertive testing, isolation units, and infection control practices. The design of forensic facilities and the psychiatric impairment inherent to the patient population can make compliance with pandemic protocols challenging. In this study, we report on a COVID-19 outbreak on a low secure forensic inpatient unit in a large mental health hospital. For the 17 patients on the unit, we compared data from the 22-day COVID-19 outbreak period with the 30 days before the outbreak. We developed patient profiles that informed decision-making in COVID-19 outbreak management and developed a conceptual framework to identify interventions to effectively respond to and manage the outbreak. Patients had a decrease in as-needed nicotine replacement therapy during the outbreak. The average Dynamic Appraisal of Situational Aggression score increased slightly across all patients during the outbreak, though these differences were not statistically significant. Although forensic settings present challenges in outbreak management, leveraging therapeutic alliance, highlighting the importance of working together, communicating the rationale for measures, and providing staff information and tools such as a conceptual framework can support patients' following protocols and effective management of an outbreak.

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Wilson, N. J., & Kilgour, T. G. (2019). Managing difficult and disruptive prisoners. In D. L. L. Polaschek, A. Day & C. R. Hollin, *The Wiley International Handbook of Correctional Psychology*, 94-108. https://doi.org/10.1002/9781119139980.ch6

This chapter provides understanding and guidance about how to manage difficult and disruptive prisoners. It addresses the broadly non-compliant and hostile or aggressive behavior by prisoners that is typical of those held in higher security custodial settings. The chapter focuses on individual prisoner characteristics, especially personality, and how psychology can inform prisoner management, the interaction with the prison setting and custodial practices are acknowledged. Personality disorders have been

strongly linked to pervasive and serious misconduct behavior. Structured assessment has demonstrated some potential to assist in the prediction and management of acute violence risk within institutionalized settings such as forensic hospitals and prisons where the risk of violence to staff or between detainees can be significant. One of the few attempts to achieve this has been the Dynamic Appraisal of Situational Aggression (DASA), which aims to predict violence risk over the next 24 hours based on behavior occurring in the previous 24 hours.

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Yuniati, W., Putra, K. R., & Widasmara, D. (2020). Factors Affecting the Success of Psychiatric Nurses in Conducting Risk Assessment of Violence Behavior. *International Journal of Nursing Education*, *12*(4), 252-257.

Background: Patient violence behavior in psychiatric services is a challenge for health care providers. Violence behavior can affect patients themselves, other patients and staff including nurses and affect the quality of service. Psychiatric nurses can play roles in conducting risk assessment of violence behaviors to reduce impact and make appropriate decisions. Purpose: This systematic review aims to find out the factors that influence the success of psychiatric nurses in conducting risk assessment of violence behavior. Method: This systematic review begins with making questions by the PICO method, identification, eligibility, article inclusion criteria selection, screening and appraisal. Search articles through the database of Science Direct, Pubmed and Ebsco with a time span from 2009-2019. And continue with PRISMA flow diagram and JBI critique tool up to get 13 articles that relevant to be analyzed be systematic review. Result and Discussion: Reviews are carried out on articles that fit the inclusion criteria. Factors that influence the success of psychiatric nurses in conducting risk assessment of violence behavior are training and continuing education, self-confidence, understanding early warning signs/alert systems, understanding the causes of violence and the use of violence risk assessment tools) such as the Breset Violence Checklist (BVC) and Dynamic Appraisal of situational Aggression (DASA) Conclusion: Psychiatric nurses still need continuing education and training in understanding the early signs of a patient's violence behavior and the use of assistive devices in the form of risk assessment of violence behavior to increase the confidence of nurses and assist in making appropriate decisions.

Theses

Alvano, M. (2016). Implementation of violence risk assessment tool on in-patient psychiatric unit [Masters thesis, University of San Francisco]. University of San Francisco. https://repository.usfca.edu/capstone/359/

Violence towards healthcare workers in acute care settings, particularly mental health units is increasing nationwide, causing safety and financial concerns for health care organizations. Efforts were made to decrease assaults directed towards healthcare staff on a twenty five bed adult mental health unit in a large academic university hospital. The

aim of the project was to decrease assaults by twenty-five percent in six months after implementation of a Violence Risk Assessment (VRA) tool. The ultimate goal was to maintain assault rates below NDNQI. Assaults on the unit for the fourth quarter of 2015 were 2.92, NDNQI 2.05. Assaults with injury were 2.43, NDNQI 0.75. A literature review was performed to ascertain valid and reliable tools in predicting assaultive behavior which resulted in three VRA tools with high predictive value: the Broset Violence Checklist (BVC), Dynamic Appraisal of Situational Aggression (DASA), and Modified Overt Aggression Scale (MOAS). Each tool was piloted on the unit for two weeks followed by a survey to staff regarding their choice of tool based on risk assessment, ease of use, and acceptability (Appendix A). The DASA (Appendix B) was chosen by the staff and approved by the Nursing Steering Committee. Next steps include implementing the DASA tool in the electronic health record with follow up metrics to determine its effectiveness in identifying and decreasing assault potential. Recommendations include implementing EBP interventions to prevent violence for patients identified as assault risk.

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Ayongaba, F., & Raether, E. (2023). *Reducing coercive measures to improve patient and staff safety by increasing the frequency of risk assessment* [Doctoral dissertation, Seattle University]. SeattleU Scholarworks. https://scholarworks.seattleu.edu/dnp-projects/87/

Violence is a critical issue in Healthcare. Inpatient psychiatric nurses are the healthcare professionals most affected by this problem. Structured risk assessment tools can predict imminent aggression, prompt interventions, mitigate the advent of aggressive behaviors and staff and patient injuries, and reduce restrictive aggression management methods. This quasi-mixed methods project instructed registered nurses in an acute inpatient psychiatric unit to implement the Dynamic Appraisal of Situational Aggression (DASA: IV) more frequently to determine the impact on aggressive behaviors, the use of coercive techniques to manage aggression, and to assess nurses' perception of the tool. Twenty-five registered nurses screened 447 patients over 28 days using the DASA: IV tool. Pre-implementation and implementation data were collected and analyzed with the statistical methods of percentage change, 2-tailed t-test, and ANOV A. The results indicated a 58.55% reduction in overall assault rates and a 20% reduction in the use of seclusions and restraints (S&R). A majority of participants had positive attitudes toward implementing the tool. Implementation of a DASA: IV protocol is feasible and may improve safety in adult inpatient acute psychiatric units.

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Kim, A. (2024). *Evaluating the appropriateness of the Dynamic Appraisal of Situational Aggression for Māori in forensic mental health services in New Zealand: Participatory action research* [Doctoral dissertation, The University of Auckland]. The University of Auckland Research Space. https://hdl.handle.net/2292/68145

Background: In New Zealand (NZ), tāngata whai i te ora Māori (a Māori person seeking health) comprise roughly half of the population in Forensic Mental Health Services (FMHSs; McKenna, 2020). Tāngata whai i te ora Māori are provided with various

interventions to tar-get mental illness and mitigate the risk of harm associated with inpatient aggression (Te Pou, 2015). Yet, these interventions are orientated in Western care practices (Wratten-Stone, 2016). The Auckland Regional Forensic Psychiatry Service has introduced the Dynamic Appraisal of Situational Aggression (DASA) to reduce the risk for inpatient aggression. DASA is a structured risk assessment instrument developed to assess the imminent risk of aggression (within 24 hours of the assessment) (Ogloff & Daffern, 2006). Aim: This study aims to determine the appropriateness of the DASA for Māori in FMHSs in NZ. Methods: Participatory Action Research was used to determine the appropriateness of the DASA for Māori. Two hui (gatherings) were held with seven Māori nurses and a Māori cultural advisor from the service. The first hui (N = 7) explored Māori perspectives on the value of the DASA. The second hui (N = 6) reflected on appropriate adaptions to the measures. Discussions were digitally recorded and thematically analysed. Findings: The findings of this study confirmed support for using the DASA with Māori. However, the current version of the DASA was considered limited in its ability to measure the cultural elements specifically relevant to Māori. To overcome this limitation, five options for adaptations were suggested for cultural enhancement of the DASA. Such cultural enhancement would require a strategic approach that includes consultation with Māori cultural advisors and psychometric testing to ensure the validity and reliability of the DASA for Māori. Conclusion: This is the first study to determine the appropriateness of this instrument from a Māori perspective. For the DASA to be safely used with Māori, there is a need for the current content and process of the DASA to be refined locally within a cultural context and validated with Māori. Suggested options for cultural enhancement would require consultation with Māori cultural expertise to make informed decisions.

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Maguire, T. (2019). *Enhancing risk assessment and nursing interventions to prevent aggression and reduce the use of restrictive interventions in forensic mental health units* [Doctoral dissertation, Swinburne University]. Swinburne University of Technology Thesis repository. https://researchbank.swinburne.edu.au/file/adcff870-5575-49d7-9524-7165b98c8c1d/1/tessa_maguire_thesis.pdf

This thesis concerns risk assessment and nursing interventions in forensic mental health settings. More specifically, it seeks to determine whether nursing interventions matched to risk level, are useful in preventing aggression and reducing the use of restrictive interventions. The thesis commences with a review of literature pertaining to risk assessment, inpatient aggression and the use of restrictive interventions within inpatient mental health services, along with an exploration of seven nursing interventions that are commonly used by nurses to prevent aggression in forensic mental health settings. Following this literature review, two empirical studies are presented through three articles. The first study (presented through the first two articles) used data from a retrospective file review of 60 patients (30 males and 30 females) who were admitted to three acute units (two for male patients and one for females) in a secure forensic mental health service in Melbourne, Australia. Data pertaining to the first 60 days of each patient's hospital stay were reviewed. Files were audited to determine the presence of a daily Dynamic Appraisal of Situational Aggression (DASA) assessment, the daily DASA score, any interventions used to prevent

aggression, and any acts of aggression in the 24 hours following each DASA assessment. The most common interventions documented were the use of Pro Re Nata (PRN) medication, reassurance, observations, distraction techniques, one to one nursing, limit setting and de-escalation (see article two for exploration of these results). The days in which DASA assessments were conducted but which were not followed by nursing intervention to prevent aggression (in the next 24 hours) were then analysed to test the predictive validity of the DASA. Assessments followed by interventions were excluded since these interventions may have been effective and therefore corrupted the evaluation of the DASAs predictive validity. The results of this analysis revealed modest predictive validity for the DASA, for both males and females. Generalised Estimating Equations analysis suggest that it is important to revise the DASA risk bands to the following: 0 = low risk; 1, 2, 3 = moderate-risk (Odds Ratio (OR) = 4.70); and 4, 5, 6, 7 = high-risk (OR = 16.13) (see article one). Nursing interventions (one to one nursing, limit setting, de-escalation, distraction techniques, PRN medication, reassurance and observations) were then examined, and incident (aggression) data analysed, to determine which interventions lessened the likelihood of aggression. Results of these analyses suggested that some nursing interventions were associated with an increased likelihood of aggression in the low and moderate DASA risk bands
(see article two). No interventions were associated with a reduced likelihood of aggression. The literature review on nursing interventions presented in chapter four, and results from study one (article two), were then used to develop an Aggression Prevention Protocol. The protocol was then linked to an electronic application of the DASA, and tested in a prospective quasi experimental study (pre-versus post introduction of the eDASA and protocol), on a female acute forensic mental health unit. Results from this study showed that following the introduction of the protocol, there was a reduction in the rate (per 1,000 occupied bed days) of seclusion, physical restraint and mechanical restraint, and reduction in the use of PRN medication, as well as an increase in the number of interventions documented, and a reduction in verbal aggression. Overall, results from this thesis suggest the DASA has good predictive accuracy, however the original risk bands require modification. Furthermore, structuring nursing interventions according to the level of risk, and using an Aggression Prevention Protocol that recommends interventions according to risk level, can enhance nursing documentation, prevent some forms of aggression, and lessen restrictive interventions.

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Mangana, W. (2020). *Implementing behavioral screening protocols to reduce violence in the emergency department* [Doctoral dissertation, University of Maryland]. UMB Digital Archive. https://archive.hshsl.umaryland.edu/handle/10713/13248

Problem and Purpose: The opioid crisis and lack of mental health resources for patients are two leading causes of elevated levels of violence in the emergency department. As a result, a rise in patient aggressive behavior including verbal and/or physical attacks against emergency department staff has occurred. This increase in violence led to a new restraint protocol and a subsequent increase in restraint orders, though restraint use is not recommended evidence-based practice. The purpose of this quality improvement project was to implement a behavioral assessment protocol for identifying aggressive patient behaviors and reduce physical restraint use in the

emergency department at a community hospital. Methods: The protocol was implemented through a quality improvement project using two behavior identification tools to reduce possible violent incidences against staff thus reducing restraint orders. A modified Dynamic Appraisal Situational Aggression was given to every patient in the emergency to self-identify potential aggressive behavior. The Violence Assessment Tool was completed by the nurse on patients when their score on the modified Dynamic Appraisal Situational Aggression was greater than three. Anytime the Violence Assessment Tool has to be completed, the nurse was required to evaluate the combined tool scores for level of risk. Risk reduction and de-escalation strategies were implemented based on the identified risk level. Results: The data reflects a successful implementation of the protocol with 95% of the emergency department nurses completing the protocol when required, along with patients completing the modified Dynamic Appraisal Situational Aggression at a rate of 98% upon intake. Analysis of the data's clinical component reflects successful reduction of restraint orders from 27.5% to 1.5% percent. Conclusions: The project can be replicated across all departments in the hospital, specifically acute settings and mental health. Educating all new staff regarding the implementation protocol and the de-escalation methods is recommended. In addition, adding a flag to the electronic medical record to alert nurses that a patient completing the modified Dynamic Appraisal Situational Aggression has met the threshold and the completion of the Violence Assessment Tool is necessary. Both recommendations will allow for the results of the project to be sustained and replicated.

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Rodriguez, M. (2024). *Implementation of the Dynamic Appraisal of Situational Aggression (DASA) tool on inpatient mental health unit* [Doctoral dissertation, University of St. Augustine for Health Sciences]. University of St. Augustine for Health Sciences. https://soar.usa.edu/scholprojects/159/

Practice Problem: Inpatient mental health units are vulnerable to aggression and violence, which may lead to physical injuries. It is essential to implement proactive measures to prevent violence before it escalates.
PICOT: In an adult inpatient mental health unit (P), does the use of the Dynamic Appraisal of Situational Aggression (DASA) (I), compared to no screening for aggression (C) decrease restraints and seclusion, provide early detection and awareness of aggressive behaviors (O) within ten weeks.
Evidence: The DASA assessment tool has been tested in various settings, such as forensic and general adult mental health units. It has also been found to have good internal consistency and inter-rater reliability.
Intervention: The Inpatient DASA screening tool was used for eight weeks. A pre/post-test was given to measure RN knowledge and perceptions of using the DASA.
Outcome: The DASA is an effective tool that predicted violence in those patients with a score of greater than four and resulted in a decrease in seclusion and restraints. 85% of the nurses participating perceived the DASA to be effective in identifying aggressive patients, and 92% would like to continue the use of the DASA.
Conclusion: The DASA is an evidence-based tool that can predict violence within 24 hours before its onset. It is easy, practical, and feasible for mental health units. The

DASA allows the RN to identify those at higher risk and implement a treatment plan to mitigate those risks.

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Underwood, S. L. (2017). *Nurses' perception of the use of the Dynamic Appraisal of Situational Aggression (DASA) in an emergency psychiatric setting* [Doctoral dissertation, The University of Arizona]. ProQuest. https://www.proquest.com/docview/1901455751?pq-origsite=gscholar&fromopenview=true&sourcetype=Dissertations%20&%20Theses

Background: The use of the Dynamic Assessment of Situational Aggression (DASA) in acute psychiatric settings to identify aggressive and/or violent patients upon admission.
Objective: Determining nurses' perception of the usefulness of the Dynamic Assessment of Situational Aggression (DASA) in a psychiatric emergency room setting.
Theoretical Background: Langley, Nolan, Nolan and Provost's (2009) Model for Improvement, which incorporates Deming's Plan-Do-Study-Act (PDSA) cycle, was utilized as the theoretical framework to guide this DNP project.
Setting: An adult psychiatric emergency room in urban Phoenix, Arizona.
Measurement: A six-item survey questionnaire measured on a five-point Likert scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (5) describes and measures nurses' perception on the usefulness of the DASA. An additional question explored the influence of static nursing factors (gender, years of experience, level of education, years at the facility), on nurses' perception of the usefulness of the DASA.
Results: Overall, nurses (90%) of the study participants perceived the DASA to be effective in identifying aggressive violent patients and 70% of the participants would like to continue to use the DASA. Static nursing factors showed no difference in nurses' perception of usefulness.
Limitations: Further exploration in similar settings such as regular emergency departments and psychiatric emergency and crisis settings are recommended. In this study only nursing perception was explored. Analysis of the validity of the DASA tool in the psychiatric emergency room setting in addition to nursing perceptions would be more beneficial in determining the DASA's true usefulness.
Conclusion: The results of this DNP project demonstrate that nurses at the SAUPC perceive the DASA to be a useful addition to their admission assessment. Overall nursing response was positive and the SAUPC seclusion and restraint committee recommended incorporating the DASA into the triage nursing admission assessment.

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Publications

Dickens, G. L., O'Shea, L. E., & Christensen, M. (2020). Structured assessments for imminent aggression in mental health and correctional settings: Systematic review and meta-analysis. *International Journal of Nursing Studies, 104*. https://doi.org/10.1016/j.ijnurstu.2020.103526

Background: Structured risk assessment schemes can aid violence reduction in mental health and correctional settings. However, the properties and effectiveness of schemes for predicting imminent (within 24-h) violence have not been comprehensively reviewed.
Objectives: To systematically review the properties and predictive performance of structured schemes that have been used to predict imminent aggression.
Design: Systematic review and meta-analysis. Data sources: Multiple electronic databases were searched, relevant reference lists and journals were hand-searched. Review methods: Thirty-two structured risk assessment schemes were identified and used in a search for evidence about the prediction of imminent violence, or their psychometric properties when used for that purpose. Study findings were synthesised narratively and, where statistics about predictive validity were available, subjected to meta-analyses. Results: Five schemes (Brøset Violence Checklist, HCR-20: Assessing Risk for Violence version 2.0 clinical subscale, Dynamic Appraisal of Situational Aggression and its variants for youth and for women) have been subject to relevant research. Fifty papers were included in a narrative review, and 31 comprising 26 samples involving 282,238 assessments for 2723 individuals were included in meta-analyses. Only the Dynamic Appraisal of Situational Aggression and the Brøset Violence Checklist were subject to implementation research in which the tools were largely rated as having utility for, and being acceptable to, user-participants. Many studies have not established interrater reliability of the tools in the field. After removing outliers, pooled effect sizes for prediction of aggression against people and for any aggression were, respectively: Hedges' $g = 1.35[1.15-1.56]$) and $g = 1.24[0.99, 1.50]$ for the Brøset Violence Check-list and $g = 1.04 [0.69, 1.39]$ and $0.88 [0.62, 1.15]$ for the Dynamic Appraisal of Situational Aggression. Moderator analyses revealed pooled effect sizes for both schemes were de-creased by low study bias risk and increased by patient forensic vs. civil legal status. Conclusions: Research supports the value of both the Brøset Violence Checklist and the Dynamic Appraisal of Situational Aggression. Both are generally acceptable and feasible to implement, and their predictive value is broadly equivalent producing large pooled effect sizes. There is less evidence about the Dynamic Appraisal of Situational Aggression. variants for women and youth though initial studies are promising.

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Dutch, S. G., & Patil, N. (2019). Validating a measurement tool to predict aggressive behavior in hospitalized youth. *Journal of the American Psychiatric Nurses Association*, *25*(5), 396-404. https://doi.org/10.1177/1078390318809411

BACKGROUND: The aggression of hospital patients costs money and affects outcomes. Most methods to assess risk for aggression are developed for adults. This study recommends the use of a predictive tool, the Dynamic Appraisal of Situational Aggression–Youth Version (DASA-YV) to improve accuracy in identifying aggression risk in youth. AIMS: To determine if aggressive behavior of youth is better predicted with DASA-YV versus instinct. We sought to validate the feasibility of DASA-YV and determine its predictive validity for aggressive behavior in a youth-specific psychiatric hospital population, which could lead to prevention of aggression and improve interventions or outcomes. METHOD: After establishing interrater reliability of the DASA-YV, a 6-month pilot study with a prospective validation design compared aggressive behavior outcomes predicted with those that occurred within the next 24 hours. RESULTS: DASA-YV was found to be reliable and valid in predicting aggression in a youth population. CONCLUSIONS: Predicting aggression with the DASA-YV tool demonstrates a useful best practice application for psychiatric nurses that positively affects safety.

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Kasinathan, J., Marsland, C., Batterham, P., Gaskin, C., Adams, J., & Daffern, M. (2015). Assessing the risk of imminent aggression in mentally ill young offenders. *Australasian Psychiatry*, *23*(1), 44-48. https://doi.org/10.1177/1039856214563845

Objectives: Aggression in adolescents presents a significant problem for psychiatric units. The Dynamic Appraisal of Situational Aggression (DASA) is an empirically validated measure designed to appraise the risk of imminent aggression (within the next 24 hours) in adult patients. Our aim was to examine the predictive validity of the DASA: Youth Version (DASA:YV) with youth-specific items, in young offenders hospitalised with a mental illness.
Methods: This prospective validation study involved 4440 DASA:YV ratings of mentally ill adolescents in a secure hospital. At 24 hours post-assessment, the nursing staff documented whether patients had behaved aggressively: physically, verbally or towards property. Predictive accuracy was assessed using the area under the curve (AUC) of the receiver operating characteristic (ROC) curve.
Results: The DASA:YV significantly predicted any imminent aggression (AUC = 0.754). Additional youth-specific items conferred a greater predictive yield, as compared to adult-derived items ($p = 0.014$).
Conclusions: It is possible to monitor the risk state of hospitalised mentally ill youth, so that heightened states can be detected early, thus facilitating interventions to reduce the risk of violence.

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Koh, L. L., Day, A., Klettke, B., Daffern, M., & Chu, C. M. (2020). The predictive validity of youth violence risk assessment tools: A systematic review. *Psychology, Crime & Law, 26*(8), 776-796. https://doi.org/10.1080/1068316X.2020.1734200

This paper reports the findings of a systematic search of published literature which reports the predictive validity of violence risk assessment tools specifically designed for use with youth. A total of 38 studies, involving 9,307 participants, reported data for six

different tools; the most common of which were the SAVRY and the YLS/CMI. Each of the tools demonstrated at least moderate levels of predictive validity, with the predictive validity of several newer assessment tools yet to be established. The results provide an up-to-date overview of the state of knowledge in an area in which practitioners make choices about which tools to use on an almost daily basis. It is important that practitioners are aware of the strength of evidence that is available to support the choice of violence risk assessment tools and the interpretation of results.

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Maguire, T., Bowe, S., Kasinathan, J., & Daffern, M. (2024). Re-Examining the Predictive Validity and Establishing Risk Levels for the Dynamic Appraisal of Situational Aggression: Youth Version. *International Journal of Mental Health Nursing*. https://doi.org/10.1111/inm.13406

The Dynamic Appraisal of Situational Aggression: Youth Version (DASA:YV) is a brief instrument, most often used by nurses and was specifically designed to assess risk of imminent violence in youth settings. To date, it has been recommended that DASA:YV scores are interpreted in a linear manner, with high scores indicating a greater level of risk and therefore need more assertive and immediate intervention. This study re-analyses an existing data set using contemporary robust data analytic procedures to examine the predictive validity of the DASA:YV, and to determine appropriate risk bands. Mixed effect logistic regression models were used to determine whether the DASA:YV predicted aggression when the observations are correlated. Two approaches were employed to identify and test novel DASA:YV risk bands, where (1) three risk bands as previously generated for the adult DASA were used as a starting point to consider recategorising the DASA:YV into three risk bands, and (2) using a decision tree analysis method known as Chi-square automated interaction detection to produce risk bands. There was no statistically significant difference between a four and three category of risk band. AUC values were 0.85 for the four- and three-category options. A three-category approach is recommended for the DASA:YV. The new risk bands may assist nursing staff by providing more accurate categorisation of risk state. Identification of escalation in risk state may prompt early intervention, which may also prevent reliance on the use of restrictive practices when young people are at risk of acting aggressively.

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Shaffer, C. S., Fuller, E. K., & Guy, L. S. (2020). Brief and emerging violence risk assessment measures. In K. S. Douglas & R. K. Otto (Eds.), *Handbook of Violence Risk Assessment* (pp. 52-69). Routledge. https://doi.org/10.4324/9781315518374

In this chapter, we review ten structured decision-making tools that show considerable clinical promise in the screening or assessment of risk for different types of violence: Dynamic Appraisal of Situational Aggression—Inpatient Version, Dynamic Appraisal of Situational Aggression—Youth Version, Dynamic Appraisal of Situational Aggression: Women's Version, Violence-Risk Screening-10, Domestic Violence Screening Instrument, Dynamic Risk Assessment for Offender Re-Entry, Juvenile Sexual Offense Recidivism Risk Assessment Tool—II, Guidelines for Stalking Assessment and Management, Stalking Risk Profile, and Assessment of Risk for Honour-Based Violence.

Following a summary of shared features amongst the tools, we provide a brief description of each tool, focusing on their purpose, content, and characteristics, available empirical research on psychometric properties, and an analysis of professional uptake. The chapter concludes with directions for future re-search on the psychometric properties and applicability of these instruments.

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Theses

Bennett, D. (2023). *Implementation of aggression screening in a child and adolescent psychiatry unit* [Doctoral dissertation, University of Maryland School of Nursing]. UMB Digital Archive. https://archive.hshsl.umaryland.edu/bitstream/handle/10713/20801/Bennet_Implementation-of-agression_2023.pdf?sequence=1&isAllowed=y

Problem: Adequate management of patient aggression within psychiatry proves to be difficult. Seclusion and restraints are often used to help manage aggressive patients. The American Psychiatric Nurses Association released a statement endorsing efforts aimed at reducing seclusion and restraint events. This unit has reported an increase in the use of seclusion and restraint events over a one year time period. Purpose: The purpose of this quality improvement (QI) project is to implement the Dynamic Appraisal of Situational Aggression-Youth Version screening tool in a child and adolescent inpatient psychiatric unit for patients ages eight to seventeen to decrease the use of seclusion and restraints. Method: This project was implemented over a 15-week period from August-December 2022. The DASA-YV screening tool was integrated into the electronic health record. The multidisciplinary team developed guidelines for interventions for each scoring category of screening. Each registered nurse was trained on the use of DASA-YV and the interventions associated with the level category. Screenings were conducted by the registered nurse within 24 hours of patient admission to the unit. Results: Baseline data were collected for seclusion and restraint events for 8 weeks pre- implementation. The numbers of seclusion and restraint events ranged from 0-5 over the 8 week period. Week 2 of implementation revealed 13 seclusion and restraint events. After week 2, seclusion and restraint events ranged between 0-5. Psychiatric nurses screened 86% of newly admitted patients throughout implementation. Compared to 2021, seclusion and restraint events decreased by 26%. Conclusions: Findings indicate that this practice change did not meet process goals for each week of implementation. Through provision of feedback and adjustment of strategies and tactics, compliance improved which reflected acceptance by staff. It is anticipated that over time, seclusion and restraint events will continue to decrease. DASA-YV is a validated screening tool that may assist in identifying aggressive patients and reducing seclusion and restraint events in other inpatient child and adolescent units. Early detection may aid in utilizing interventions to eliminate use of seclusion and restraints.

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Garnett, V. (2021). *Inpatient aggression assessment in pediatric psychiatric settings* [Doctoral dissertation, Drexel University]. Drexel University. https://researchdiscovery.drexel.edu/esploro/outputs/doctoral/Inpatient-Aggression-Assessment-in-Pediatric-Psychiatric/991020220769804721

Patient's aggression in psychiatric settings is widespread. The Dynamic Appraisal of Situational Aggression -Youth Version (DASA-YV) is a validated scale used to appraise patient at risk of imminent aggression. The purpose of the Quality Improvement project was to determine if the use of the DASA-YV, compared with clinical judgment alone, help nurses identify patients and subsequently intervene. The setting is adjoining child and adolescent psychiatric units at an urban children's hospital. The Doctor of Nursing Practice Student Project Leader educated and trained nurses on the scale's purpose, how to score and interpret, and use the final rating to select interventions. Nurses were given a pre and post-test after education and training to assess knowledge of the scale and evaluate learning. The Model of Improvement implemented through a Plan-Do-Study-Act (PDSA) cycle was used as the framework. Nurses provided feedback and completed a post-project, nine-item survey questionnaire, measured on a 5-point Likert scale, ranging from *Strongly Disagree* (1) to *Strongly Agree* (5) that described nurses' level of agreement on the helpfulness of the DASA-YV. Demographic data, on each nurse participant, was collected. The results showed majority of nurses (n=4) agreed that the DASA-YV helped them better identify patient at risk of aggressive behavior and with selection of interventions, but 50% were neutral on the DASA-YV predicts aggressive behavior greater than clinical judgment alone. The DASA-YV is an easy scale to use as an adjunct to Psychiatric Nurses' clinical judgment in assessing patients at imminent risk of aggressive behavior.

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Lang, V. (2015). *Acute assessment of aggression: Using the Dynamic Appraisal of Situational Aggression (DASA) with New Zealand offenders* [Masters thesis, University of Waikato]. University of Waikato. https://researchcommons.waikato.ac.nz/handle/10289/9896

Institutional violence in prisons and other corrections settings is a hazard to the security and wellbeing of staff and other offenders. However, the ability to systematically assess for acute, day-to-day aggression in these settings has not been widely developed. Staff assessing aggression in institutional settings ought to use risk assessment measures to aid professional judgement, and this research suggests a need for dynamic, acute risk assessment for aggression amongst New Zealand offenders. The Dynamic Appraisal of Situational Aggression (DASA; Ogloff & Daffern, 2006) was created originally for use amongst psychiatric inpatients. This research aimed to evaluate the use of the DASA for custodial staff in acute risk assessment and offender treatment in different prison units for its potential to fill this niche. Predictive accuracy of the measure in relation to aggressive behaviour was examined, and custodial staff were surveyed on the ease of administration, their perception of the measure's effectiveness

with their unit, and whether its addition improved offender management. Staff consisted of prison officers and a principle correctional officer in each of the three prison-based units, and custodial management staff at Tai Aroha. These staff nominated offenders (N = 19) on agreement of them being of highest management concern. Results found the DASA to demonstrate moderate predictive validity, with survival analyses showing high scores on the DASA were associated with highly aggressive offenders. Most staff identified the DASA as assisting in identifying those offenders that were a high risk for aggression. Implications for practice in corrections settings are discussed.

DASA-IV and DASA-WV

Anderson, K. K., & Jenson, C. E. (2019). Violence risk–assessment screening tools for acute care mental health settings: Literature review. *Archives of psychiatric nursing, 33*(1), 112-119. https://doi.org/10.1016/j.apnu.2018.08.012

Background: Violence is a large concern for mental health professionals: 90% of physicians and nurses working in mental health areas have been subject to violence from patients. Approximately 80% of violent acts from patients are directed toward nurses. Objective: The purpose of this integrative literature review was to identify violence risk–assessment screening tools that could be used in acute care mental health settings. Design: The Stetler model of evidence-based practice guided the literature search, in which 8 violence risk–assessment tools were identified, 4 of which were used for further examination. Results: The Brøset Violence Checklist and Violence Risk Screening-10 provided the best assessment for violence in the acute care mental health setting. Conclusions: Using a violence risk assessment screening tool helps identify patients at risk for violence allowing for quick intervention to prevent violent episodes.

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Daffern, M. (2007). The predictive validity and practical utility of structured schemes used to assess risk for aggression in psychiatric inpatient settings. *Aggression and Violent Behavior: A Review Journal, 12*(1), 116-130. https://doi.org/10.1016/j.avb.2006.03.005

There has been increased interest in structured schemes for the assessment of risk for aggression within inpatient psychiatric settings. The most commonly utilized schemes are those previously developed to assess risk for prisoners being considered for release on parole and for forensic psychiatric patients being considered for discharge from the hospital to the community. Few structured schemes have been developed with the explicit aim of assessing risk for aggression in the inpatient setting. Recent research utilising a variety of risk assessment schemes has revealed reasonable predictive validity. This narrative review summarizes and appraises this expanding literature within the context of risk assessment decision making tasks typically undertaken by psychiatric unit staff. It is concluded that a number of structured risk assessments schemes do have acceptable predictive validity. Unfortunately, many of the schemes tested are compromised by a lack of practical utility, and only a few are capable of contributing to the entire range of risk assessment decision making tasks required. Options for the application of structured risk assessment schemes are raised.

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Glancy, G., Choptiany, M., Jones, R., & Chatterjee, S. (2021). Measurement-based care in forensic psychiatry. *International Journal of Law and Psychiatry, 74*. https://doi.org/10.1016/j.ijlp.2020.101650

Measurement-based care (MBC) is the systematic evaluation of a patient's symptoms or factors before or during an encounter. It is used to inform treatment and behavioral

health interventions. This article argues that MBC is the natural consequence flowing from evidence-based practice. In this article, MBC is defined and explained in detail. Barriers to the implementation of MBC are presented and methods of selecting a measurement tool are evaluated. The article describes areas where MBC can be applied in forensic settings, and specific risk assessment tools are presented and evaluated, including the HCR-20^{v3}, DASA-IV, DUNDRUM, and CGI___C. The article emphasizes how imperative it is that physicians use MBC and discusses why forensic practice is ideally suited to MBC.

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Griffith, J. J., Daffern, M., & Godber, T. (2013). Examination of the predictive validity of the Dynamic Appraisal of Situational Aggression in two mental health units. *International Journal of Forensic Mental Health Nursing, 22*(6), 485-492. https://doi.org/10.1111/inm.12011

Empirically derived structured violence risk assessment instruments are increasingly used by nurses in forensic mental health settings, typically demonstrating stronger predictive validity than unaided clinical risk assessments, and associated with reduced aggression and reduced restrictive practices including seclusion. However, these instruments are less often used in non-forensic mental health settings despite frequent aggression in these settings. This study represents the first test of the Dynamic Appraisal of Situational Aggression (DASA-IV), a structured instrument used to appraise risk for imminent aggression in a non-forensic mental health hospital. Predictive validity of DASA-IV, and unaided clinical and structured clinical judgements made after DASA-IV assessments were compared. Participants included 105 nurses at two mental health inpatient units in rural Victoria, Australia. During the study, 482 DASA-IV assessments and structured clinical judgements were compared with 997 unaided clinical risk judgements. DASA-IV total scores predicted aggression significantly better than unaided clinical risk ratings over the subsequent 24 hours and for the next shift. Nurses' structured clinical judgement ratings were more accurate than unaided clinical appraisals but less accurate than actuarial (DASA-IV derived) scores. The DASA-IV presents as a valid measure for appraising risk of imminent aggression in mainstream mental health inpatient settings.

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Hamrick, B., Van Hassel, T., Snyder, D., & Stephens, C. (2023). Screening for behavioral health patient aggression in emergency departments to reduce workplace violence. *Journal of Emergency Nursing, 49*(3), 403-414. https://doi.org/10.1016/j.jen.2022.09.010

Introduction: Patient violence in health care facilities occurs daily. Structured risk assessments, when regularly completed, have been effective in prompting interventions to reduce aggression in Behavioral Health (BH) settings.
Methods: This quasi-experimental study evaluated the effectiveness of the Dynamic Appraisal of Situational Aggression – Inpatient Version (DASA) validated screening tool to reduce aggressive outbursts in an emergency department (ED) setting with BH patients awaiting transfer to a psychiatric facility. The tool was used in 4 non-psychiatric

EDs from a large health care system. Chart audits were completed to record initial patient DASA scores observed at triage and at subsequent intervals during the ED encounter. ED staff documented interventions used for patients. Inclusion criteria included adults 21 years and older following a telepsychiatry consultation with a recommendation for BH inpatient admission. Pre-/post-implementation aggressive events were collected to assess ED DASA use. DASA scores from BH ED patients were examined to increase understanding of patient utilization. Staff workplace safety was examined to compare staff safety perception pre- and post-DASA implementation. Results: Violent events were reported statistically significantly higher post-DASA implementation. There was an increased risk of elevated DASA scores for specific diagnoses and genders. An increased awareness of the importance of reporting workplace violence improved documentation.

Discussion: Using an evidence-based screening tool helped identify BH patients with behaviors associated with aggressive ED events. Proactive use of interventions, including use of Comfort Cart items, de-escalation, and prescribed medications, can positively influence reduction of risk from aggressive behaviors within BH patient populations in EDs.

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McLoughlin, L., Carey, C., Dooley, S., Kennedy, H., & McLoughlin, I. (2021). An observational study of a cross platform risk assessment mobile application in a forensic inpatient setting. *Journal of Psychiatric Research*, *138*, 388-392. https://doi.org/10.1016/j.jpsychires.2021.04.034

Consumer-focused healthcare mobile applications have seen widespread adoption in recent years. Enterprise mobile applications in hospital settings have been slower to gain traction. In this study we examine the Dynamic Appraisal of Situational Aggression: Inpatient version (DASA), a short-term risk assessment tool which is well validated and widely used in the prediction of violent incidents, within an inpatient forensic setting. The application was piloted over a period of three months, collecting 847 total DASA scores on 21 different patients. Time stamping allowed for accurate correlation between risk assessment scoring and the violent risk incidents. The internal validity of the app was measured using Cronbach's alpha and was calculated at 0.798 indicating good internal validity. Using violent incidents as the dependent factor and the total DASA score as the independent factor, predictive validity of the app was calculated at 0.85, $p = 0.007$. The use of this application in a forensic setting was successful with good internal and predictive validity. A major benefit of this form of data collection was the electronic time stamping so that the correlation between risk estimation and events could be more closely correlated. Deployment of such an application in a general hospital setting would bring its own challenges but would be useful in other types of risk assessment and screening tools.

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Nqwaku, M., Draycott, S., Aldridge-Waddon, L., Bush, E. L., Tsirimokou, A., Jones, D., & Puzzo, I. (2018). Predictive power of the DASA-IV: Variations in rating method and timescales. *International Journal of Mental Health Nursing*, *27*(6), 1661-1672. https://doi.org/10.1111/inm.12464

This project evaluated the predictive validity of the Dynamic Appraisal of Situational Aggression – Inpatient Version (DASA-IV) in a high-secure psychiatric hospital in the UK over 24 hours and over a single nursing shift. DASA-IV scores from three sequential nursing shifts over a 24-hour period were compared with the mean (average of three scores across the 24-hour period) and peak (highest of the three scores across the 24-hour period) scores across these shifts. In addition, scores from a single nursing shift were used to predict aggressive incidents over each of the following three shifts. The DASA-IV was completed by nursing staff during handover meetings, rating 43 male psychiatric inpatients over a period of 6 months. Data were compared to incident reports recorded over the same period. Receiver operating characteristic (ROC) curves and generalized estimating equations assessed the predictive ability of various DASA-IV scores over 24-hour and single-shift timescales. Scores from the DASA-IV based on a single shift had moderate predictive ability for aggressive incidents occurring the next calendar day, whereas scores based on all three shifts had excellent predictive ability. DASA-IV scores from a single shift showed moderate predictive ability for each of the following three shifts. The DASA-IV has excellent predictive ability for aggressive incidents within a secure setting when data are summarized over a 24-hour period, as opposed to when a single rating is taken. In addition, it has moderate value for predicting incidents over even shorter timescales.

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Riordan, D., Browne, C., Korobanova, D., Kariuki, M., Daffern, M., & Dean, K. (2019). Imminent aggression in female forensic inpatients: A study assessing the predictive validity of the Dynamic Appraisal of Situational Aggression: Women's Version (DASA: WV). *International journal of forensic mental health*, *18*(4), 326-335. https://doi.org/10.1080/14999013.2019.1577315

Despite high rates of aggression on female psychiatric inpatient units and research to suggest that risk factors for violence may be different for men and women, violence risk assessment instruments are typically developed and validated through research on male populations. The current study tested a female-specific modification to an existing risk assessment instrument, the Dynamic Appraisal of Situational Aggression: Women's Version (DASA:WV). The modification involved addition of two factors taken from the Female Additional Manual used in conjunction with the HCR-20 (Covert/Manipulative Behaviour and Low Self-Esteem) and a rating of ward atmosphere to the original DASA. Nursing staff on a high secure female forensic unit rated patients on the DASA:WV at the end of each shift and recorded incidents of verbal aggression and physical aggression against others, objects, and self in the subsequent 24-hr period. Hierarchical (multilevel) logistic regression was employed in the statistical analysis to account for the incorporation of multiple repeated measures for each participant. While the evidence for the predictive validity of the DASA for aggression in a female forensic population was strengthened, the hypothesis that the DASA:WV would significantly improve predictive validity for female patients was not supported.

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Shirk, H., Kreider, C., Bell, T., Gervase, S., Buchko, B. L., & Danford, C. A. (2024). Predictive Ability of the Dynamic Appraisal of Situational Aggression-Inpatient Version (DASA-IV) in Medical-Surgical Units. *Western Journal of Nursing Research*. https://doi.org/10.1177/01939459241271393

Background: Workplace violence persists in health care with nurses reporting physical and verbal abuse from aggressive patients causing emotional stress and lost workdays. The Dynamic Appraisal of Situational Aggression–Inpatient Version (DASA-IV) was developed to measure risk for aggression in patients with behavioral health conditions in psychiatric and emergency department settings. The DASA-IV has not been validated with adult patients admitted to medical-surgical units.
Objective: To determine whether DASA-IV scores are predictive of aggressive events in adults hospitalized on medical-surgical units.
Methods: This multisite study used a case-control design. DASA-IV scores and acts of aggression were extracted from the medical record retrospectively to validate the appraisal's predictability. Receiver operating characteristic (ROC) and area under the curve (AUC) were used to correlate DASA-IV scores with aggressive events.
Results: DASA-IV assessments (N=156 999; mean [SD] 10.1 [10.7]/patient; range 1-220) were collected from 13 611 patients. Patients were primarily White (86.1%) and female (51.7%). Aggression (n = 509 patients; 3.7%) was significantly associated with older age, male sex, smoking, illicit drug use, and high DASA-IV scores. AUC of the ROC analysis for the DASA-IV showed a 97% probability (95% confidence interval [CI] 0.964-0.977) that an aggressive patient would have a higher score on the DASA-IV than a nonaggressive patient. Binary logistic regression predicted that for every point increase in the DASA-IV, there was a 3.51 (95% CI 3.38-3.63) times increased risk for aggression (B = 1.255, SE = 0.18, Wald = 4766.6, P < .001).
Conclusions: This study is the first to validate use of the DASA-IV in medical-surgical populations, demonstrating predictive ability for aggressive incidents. The DASA-IV can be used successfully in medical-surgical populations for early identification of potential aggression.

Thorpe, M. W., Xavier, P. F., Daffern, M., & Dunne, A. L. (2018). The background and clinical use of the Dynamic Appraisal of Situational Aggression–Inpatient Version (DASA-IV): Application to a secure setting. In J. Ireland., C. Ireland., & P. Birch, *Violent and Sexual Offenders* (pp. 302-315). Routledge.

This chapter describes the use of Dynamic Appraisal of Situational Aggression – Inpatient Version (DASA-IV) and its impact within various environments when predicting the likelihood of aggression. It suggests that the DASA can help to interpret complex behaviours that are evident within various environments and can subsequently impact patient safety within inpatient settings. The chapter highlights a need to understand the challenges and barriers at ward level and how organisations can prepare well for the future by utilising nursing skills, knowledge, and experience to improve quality. DASA is widely used and endorsed by the National Institute for Clinical Excellence in the UK for assessing and managing risk of violence within inpatient settings. Clinicians working in secure psychiatric settings are well aware of the risks associated with higher incidents

of violence and aggression. Multidisciplinary clinical teams use DASA scores during team meetings to discuss changes to observations and to monitor progress and outcome, access to activities, and movement between wards.

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Vojt, G., Marshall, L. A., & Thomson, L. D. G. (2010). The assessment of imminent inpatient aggression: A validation study of the DASA-IV in Scotland. *Journal of Forensic Psychology & Psychology, 21*, 789-800. https://doi.org/10.1080/14789949.2010.489952

Inpatient aggression in psychiatric settings poses a serious management problem. This study reports the findings of a prospective pilot study on the Dynamic Appraisal of Situational Aggression – Inpatient Version (DASA-IV), a structured risk assessment tool for imminent aggression. The study was conducted in the State Hospital, the high secure psychiatric hospital for Scotland and Northern Ireland. The outcome data were aggressive incidents recorded on the Staff Observation Aggression Scale – Revised (SOAS-R) and incidents noted on the hospital's online recording tool. All measures were completed by nursing staff as part of their daily clinical routine to ensure ecological validity. The DASA-IV was found to be of moderate to good predictive power. Limitations and suggestions for further research are outlined, and the potential for implementation of the tool is discussed.

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Yuniati, W., Putra, K. R., & Widasmara, D. (2020). Brøset Violence Checklist (BVC) versus Dynamic Appraisal of Situational Aggression-Inpatient Version (DASA-IV): their sensitivity, specificity and accuracy as a predictor of violence in 24 hours among schizophrenia patients. *Higher education*, *3*, 2-7. https://doi.org/10.30595/medisains.v18i2.7454

Background: Brøset Violence Checklist (BVC) and Dynamic Appraisal of Situational Aggression-Inpatient Version (DASA-IV) are risk assessment instruments of violence that nurses can use in psychiatric services, but their accuracy of the instruments in predicting violent behavior in 24 hours need to be tested.
Objective: This study aims to examine the sensitivity and specificity of BVC and DASA-IV instruments in predicting violent behavior within 24 hours and which is more accurate.
Method: This is a diagnostic study with a cross-sectional approach. The sample of this study was 112 patients. The respondents' behaviors were observed, based on parameters assessed by BVC and DASA-IV as well as recording incidents of violent behavior using AOS (Aggression Observation Short) as the gold standard. Sensitivity, specificity, and Receiver Operating Characteristic (ROC) tests were conducted to assess the accuracy of the two instruments in predicting violent behavior within 24 hours.
Results: 23.2% of the respondents in this study experienced violent behavior in the first 24 hours. BVC has a sensitivity value of 65.4% and specificity of 94.5%. DASA-IV has a sensitivity value of 69.2% and a specificity of 95.5%. The level of accuracy of BVC is 87.9%, and of DASA-IV is 92.2%.
Conclusion: DASA-IV is more sensitive, higher in its specificity, and is more accurate in predicting violent behavior within 24 hours in schizophrenic patients compared to BVC.