Danish University Colleges

MR-CRAS The "Mechanical Restraint - Confounders, Risk, Alliance Score"

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The "Mechanical Restraint - Confounders, Risk, Alliance Score"

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INTRODUCTION
A new short-term risk assessment instrument, the MR-CRAS checklist, including three subscales with altogether 18 items has been developed in close collaboration with forensic psychiatric clinicians, e.g., psychiatrists and nurses. The purpose of the MR-CRAS checklist is to support the decision on releasing the patient with the aim of reducing the duration of mechanical restraint as much as safely possible. Clinical validation and pilot testing show that the MR-CRAS checklist is understandable, relevant, comprehensive and easy to use, that it forms a quick overview of essential observations and creates a common basis for continuous assessment of the patient’s readiness to be released from mechanical restraint.

AIM
The aim of this study was to investigate whether the subscales: confounders, risk and parameters of alliance, constituted separate subscales and to further evaluate the use of MR-CRAS and determine the need for revisions of the checklist and its user manual.

METHOD
Construct validity of MR-CRAS was tested through a field-study among nurses, nurse assistants and social and healthcare assistants in 13 Danish closed forensic psychiatric inpatient units. MR-CRAS data were analysed by a Mokken analysis of scalability and a Spearman correlation analysis, and content analysis were performed on feedback data from clinicians.

MR-CRAS
During a mechanical restraint episode, each subscale item is observed, assessed and scored every hour, by the clinician who had observed the patient during that hour. (see also handouts!)

Confounders
Compliance problems
The patient wants to remain restrained
Delusions
Conceptual disorganisation
Hallucinations

Risks
Bulimia
Threat of self-harm
Verbal threats
Assaulting objects
Physical threats
Violence against clinicians

Parameters of alliance
(No degree = 0, Low degree = 1, High degree = 2)
(score: 0, 1, or 2)

Time: Time: Time: Time: Time: Time: Time:

Is there cooperation with the patient?
Can the patient’s behaviour be corrected?
Is the patient with the aim of reducing the duration of mechanical restraint as much as safely possible?

RESULTS
MR-CRAS was completed by clinicians in 143 episodes of mechanical restraint, representing 88 patients, with a mean duration of 63.25 hours. Most patients were younger men, diagnosed within the schizophrenia spectrum. The content analysis shows that the checklist was experienced as:
- Usable for continuous and final assessment of the patient’s readiness to be released from mechanical restraint.
- More manageable than other instruments
- Strengthening clinicians’ documentation

In particular, the parameters of alliance were highlighted as central for conversations with the patient around discontinuation of mechanical restraint. The psychometric analyses confirmed the unidimensionality of the three subscales and that the subscales were not overlapping each other in terms of content.

Thus, no revision to the MR – CRAS checklist was performed and the final version of the three subscales is displayed in the figure.

CONCLUSION
The study shows evidence of the construct validity of MR – CRAS among clinicians at closed forensic mental health inpatient units.

MR-CRAS contributes with:
- A common language
- Structured, systematic, and transparent observations and assessments on an hourly basis during mechanical restraint
- More manageable than other instruments
- Strengthening clinicians’ documentation

MR-CRAS is being combined with targeted risk management interventions through two future projects focusing on:
- The development and testing of the intervention "Guided Clinical Decision-making for Mechanical Restraints Use" (GCDMR) (see poster)
- The “Developing targeted MR-CRAS interventions to reduce the duration of mechanical restraint among forensic psychiatric inpatients” (see poster)