

Ramsay Scale

Ramsay, M., Savege, T., Simpson, B., & R. Goodwin (1974)

Controlled sedation with Alphaxalone-Aphadolone.

Instrument de mesure	Ramsay scale
Abréviation	Pas d'application
Auteur	Ramsay, M., Savege, T., Simpson, B., & R. Goodwin
Thème	Management des symptômes de la sédation
Objectif	Suivi systématique de la sédation chez le patient
Population	Patients SI
Relevé	Dispensateur de soins
Nombre d'items	1 item
Présence du patient requise	La présence du patient est requise
Localisation de l'instrument de mesure	http://www2.mc.duke.edu/depts/hospital/9200bmt/Ramsey.htm

Objectif

La Ramsay Scale vise à suivre le degré de sédation au moyen d'une observation directe.

Groupe cible

L'échelle a été validée au sein d'un groupe de patients hospitalisés dans un service de Soins Intensifs (Ely et al., 2003; Mondello, Panasiti, Siliotti, Florida, David, & Trimarchi, 2002; Riker, Picard, & Fraser, 1999; Sessler et al., 2002).

Description

La Ramsay Scale a été conçue en 1974 par Michael Ramsay (Ramsay, Savege, Simpson, & Goodwin, 1974). La Ramsay Scale a été le premier instrument de mesure dans le thème « management des symptômes de la sédation » et connaît une large application dans les services de Soins Intensifs. La validité de cette échelle a été étudiée pour la première fois en 1999 (De Jonghe, Cook, Appere-de-Vecchi, Guyatt, Meade, & Outin, 2000; Riker & Fraser, 2001).

L'échelle se compose de 6 items. Chaque item définit un état de conscience selon lequel le dispensateur de soins doit sélectionner le niveau le plus représentatif pour le patient. La Ramsay Scale comprend un item traitant de l'agitation ; un item décrit

une conscience claire, éveillée et calme ; les quatre autres items décrivent des niveaux de conscience avec un degré de sédation croissant.

Fiabilité

L'*interrater reliability* de la Ramsay Scale a été vérifiée chez des patients hospitalisés dans un service de Soins Intensifs (Ely et al., 2003; Riker et al., 1999). La valeur Kappa obtenue atteignait respectivement 0.95 et 0.88.

Validité

La Ramsay Scale a été nettement corrélée à des instruments de mesure qui évaluent le degré de sédation (*concurrent validity*). Par exemple, la Ramsay Scale a été corrélée à la Sedation Agitation Scale, $r = 0.83$ (Riker et al., 1999) ; à la Harris Scale, $r = 0.83$ (Riker et al., 1999) ; et à la Richmond Sedation Agitation Scale, $r = 0.78$ (Sessler et al., 2002). De telles corrélations élevées ne sont pas surprenantes, puisqu'il existe un important chevauchement au niveau du contenu de ces instruments de mesure de la sédation (De Jonghe et al., 2000).

La *Convergent validity* a été vérifiée en corrélant des scores Ramsay au Bispectral Index et à la tension artérielle (Mondello et al., 2002). Une importante corrélation positive a été rapportée avec ces mesures de résultat objectives de la sédation.

Convivialité

La convivialité de cet instrument de mesure n'a pas été étudiée. Riker & Fraser (2001) stipulent toutefois que la Ramsay Scale est simple à utiliser et rapide à relever.

Remarques

La Ramsay Scale est un instrument de mesure fiable et valide. La *fiabilité interrater* est élevée, tout comme la *validité concurrente*. Une étude de la sensibilité de la Ramsay Scale (centrée sur le suivi des évolutions du niveau de sédation au fil du temps) fait cependant défaut.

Références

De Jonghe, B., Cook, D., Appere-de-Vecchi, C., Guyatt, G., Meade, M., & Outin, H. (2000). Using and understanding sedation scoring systems: a systematic review. *Intensive Care Med*, 26, 275-285.

Ely, E. W., Truman, B., Shintani, A., Thomason, J. W., Wheeler, A. P., Gordon, S., Francis, J., Speroff, T., Gautam, S., Margolin, R., Sessler, C. N., Dittus, R. S., & Bernard, G. R. (2003). Monitoring sedation status over time in ICU patients: reliability and validity of the Richmond Agitation-Sedation Scale (RASS). *JAMA*, 289, 2983-2991.

Mondello, E., Panasiti, R., Siliotti, R., Florida, D., David, A., & Trimarchi, G. (2002). BIS and Ramsay score in critically ill patient: what future? *Minerva Anesthesiol.*, 68, 37-43.

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Riker, R. R. & Fraser, G. L. (2001). Monitoring sedation, agitation, analgesia, neuromuscular blockade, and delirium in adult ICU patients. *Semin.Respir Crit Care Med*, 22, 189-198.

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Sessler, C. N., Gosnell, M. S., Grap, M. J., Brophy, G. M., O'Neal, P. V., Keane, K. A., Tesoro, E. P., & Elswick, R. K. (2002). The Richmond Agitation-Sedation Scale: validity and reliability in adult intensive care unit patients. *Am J Respir Crit Care Med*, 166, 1338-1344.

Localisation de l'instrument de mesure

[Http://www2.mc.duke.edu/depts/hospital/9200bmt/Ramsey.htm](http://www2.mc.duke.edu/depts/hospital/9200bmt/Ramsey.htm)

RAMSAY SCALE

RAMSAY, M., SAVEGE, T., SIMPSON, B., & R. GOODWIN (1974)

U.K. (English)

Author (year)	Setting	Sample (n)	Design	Reliability	Validity
Mondello, E., Panasiti, R., Siliotti, R., Florida, D., David, A., & Trimarchi, G. (2002)	An Intensive Care Unit (ICU).	Patients affected by obstructive chronic bronchopathy and who underwent mechanical ventilation. (n = 20)	Comparative study. To evaluate the correlation between Bispectral Index (BIS) and Ramsay score and its fluctuations with the sedative dosage variations.		CsV
Riker, R. R., Picard, J. T., & Fraser, G. L. (1999)	A 34-bed multidisciplinary ICU at Maine Medical Center, a 599-bed nonuniversity academic medical center.	Surgical and medical ICU patients. (n = 45)	Comparative study. Sedation Agitation Scale (SAS), Ramsay Scale and Harris scale were compared.	E	CrV

Reliability: Stability (S), Internal consistency (IC), Equivalence (E)

Validity: Face validity (FV), Content validity (CtV), Criterion validity (CrV), Construct validity (CsV)

Sensitivity (Sen), Specificity (Sp), Positive Predictive Value (PPV), Negative Predictive Value (NPV), Receiver Operating Curve (ROC), Likelihood

Ratio (LR), Odds Ratio (OR)

Results reliability	Results validity	Commentary
<p>(E) Interrater reliability: Kappa SAS = 0.92 Kappa Ramsay = 0.88 Kappa Harris = 0.90</p>	<p>(CsV) Convergent validity: -A significant correlation was measured between Ramsay score and BIS: with the increase of the Ramsay score there was a progressive decrease in the BIS score. -A significant correlation was measured between Ramsay score and maximum arterial blood pressure: with the increase of the Ramsay score there was a progressive decrease in blood pressure.</p>	
<p>(CrV) Concurrent validity: A high degree of correlation was measured between SAS and Ramsay ($r = 0.83$; $p < 0.001$), SAS and Harris ($r = 0.86$; $p < 0.001$), and Ramsay and Harris ($r = 0.83$; $p < 0.001$).</p>		

Reliability: Stability (S), Internal consistency (IC), Equivalence (E)
 Validity: Face validity (FV), Content validity (CtV), Criterion validity (CrV), Construct validity (CsV)
 Sensitivity (Sen), Specificity (Sp), Positive Predictive Value (PPV), Negative Predictive Value (NPV), Receiver Operating Curve (ROC), Likelihood Ratio (LR), Odds Ratio (OR)

Author (year)	Setting	Sample (n)	Design	Reliability	Validity
Ely, E. W., Truman, B., Shintani, A., Thomason, J. W., Wheeler, A. P., Gordon, S., Francis, J., Speroff, T., Gautam, S., Margolin, R., Sessler, C. N., Dittus, R. S., & Bernard, G. R. (2003)	The adult medical and coronary ICU's at Vanderbilt University Medical Center, a 641-bed tertiary-care, academic medical center.	Thirty-eight medical ICU patients enrolled for reliability testing (46% receiving mechanical ventilation) and an independent cohort of 275 patients receiving mechanical ventilation were enrolled for validity testing. (Reliability: n = 38) (Validity: n = 275)	Validation study. To test the reliability and validity of the Richmond Agitation-Sedation Scale.	E	FV CsV Sen

Reliability: Stability (S), Internal consistency (IC), Equivalence (E)

Validity: Face validity (FV), Content validity (CtV), Criterion validity (CrV), Construct validity (CsV) Sensitivity (Sen), Specificity (Sp), Positive Predictive Value (PPV), Negative Predictive Value (NPV), Receiver Operating Curve (ROC), Likelihood Ratio (LR), Odds Ratio (OR)

Results reliability	Results validity	Commentary
<p>(E) Interrater reliability: In 290 paired observations by nurses, both the RASS and the Ramsay Scale (RS) demonstrated excellent interrater reliability (weighted kappa 0.91 and 0.94, respectively), which were superior to Glasgow Coma Scale (GCS) (weighted kappa = 0.64; $p < 0.001$ for both comparisons). Using only the first observation for each patient ($n=38$), the weighted kappa values for the RASS, RS, and GCS were unchanged at 0.95, 0.95, and 0.65, respectively.</p>	<p>(FV) Face Validity: 77% of the nurses agreed or strongly agreed that the RASS levels for agitation were clinically relevant and easy to score. 92% agreed or strongly agreed with the RASS scoring scheme, and 81% agreed or strongly agreed that the instrument provided a consensus for goal-directed delivery of medications.</p> <p>(Csv) Convergent validity: The results of the RASS showed excellent discrimination between levels of consciousness as rated using the neuropsychiatric expert reference standard ($p < 0.001$ for all). RASS was also correlated with an attention screening examination ($r = 0.78$, $p < 0.001$), GCS scores ($r = 0.91$, $p < 0.001$), quantity of different psychoactive medication dosages 8 hours prior to assessment (eg, lorazepam: $r = -0.31$, $p < 0.001$), successful extubation ($p = 0.07$), and bispectral electroencephalography ($r = 0.63$, $p < 0.001$).</p> <p>(Sen) As the neuropsychiatric expert raters and RASS raters independently tracked level of consciousness within patients over successive days of ICU care, RASS scores continued to correlate with expert raters' evaluations despite fluctuations in consciousness ($p < 0.001$ for all).</p>	

Reliability: Stability (S), Internal consistency (IC), Equivalence (E)

Validity: Face validity (FV), Content validity (CtV), Criterion validity (CrV), Construct validity (CsV)

Sensitivity (Sen), Specificity (Sp), Positive Predictive Value (PPV), Negative Predictive Value (NPV), Receiver Operating Curve (ROC), Likelihood Ratio (LR), Odds Ratio (OR)

Author (year)	Setting	Sample (n)	Design	Reliability	Validity
Sessler, C. N., Gosnell, M. S., Grap, M. J., Brophy, G. M., O'Neal, P. V., Keane, K. A., Tesoro, E. P., & Elswick, R. K. (2002)	The Medical College of Virginia Hospitals, the 750-bed tertiary-care urban teaching hospital of the Virginia Commonwealth University Health Systems.	<i>Phase 1:</i> 192 consecutive patient encounters from the medical respiratory ICU, neuroscience ICU, coronary ICU, surgical trauma ICU, and cardiac surgery ICU were evaluated. (n = 172) <i>Phase 2:</i> 101 medical respiratory ICU patient encounters were studied. (n = 30)	Validation study. Reliability and validity of a new scale, the Richmond Agitation–Sedation Scale (RASS) was studied in two phases by five investigators (two physicians, two nurses, and one pharmacist): once before and once after implementation of the RASS into clinical practice.	E	CrV

Reliability: Stability (S), Internal consistency (IC), Equivalence (E)

Validity: Face validity (FV), Content validity (CtV); Criterion validity (CrV), Construct validity (CsV)

Sensitivity (Sen), Specificity (Sp), Positive Predictive Value (PPV), Negative Predictive Value (NPV), Receiver Operating Curve (ROC), Likelihood

Ratio (LR), Odds Ratio (OR)

Results reliability	Results validity	Commentary
<p>(E) Interrater reliability phase 1: Excellent interrater reliability was demonstrated for RASS among the entire adult ICU population (intraclass correlation 0.956) ($\kappa = 0.73$). Similarly, interrater reliability was high ($r = 0.922-0.983$) ($\kappa = 0.64-0.82$) for all subgroups.</p> <p>All five investigators selected the same score in 60.4% of cases, four of five investigators in 21.4%, and three of five investigators in 15.1%; thus, there was agreement among the majority of investigators in 97% of cases.</p> <p>(E) Interrater reliability phase 2: The correlation between the nurse educator and the trained bedside nurses ($n = 27$) was 0.964 (0.950) ($\kappa = 0.80$ [0.69, 0.90]). The agreement was high for all subgroups tested, ranging from 0.883 to 0.987 ($\kappa = 0.69-0.90$).</p>	<p>(CrV) Concurrent validity phase 1: The mean RASS score recorded for four investigators correlated highly ($r = 0.93$, $p < 0.0001$) with a sedation-agitation visual analogue scale score.</p> <p>(CrV) Concurrent validity phase 2: Strong correlations between RASS and the Sedation – Agitation Scale score ($r = 0.78$, $p < 0.0001$), Ramsay sedation scale score ($r = 0.78$, $p < 0.0001$), and Glasgow Coma Scale score ($r = 0.79$, $p < 0.0001$).</p>	

Reliability: Stability (S), Internal consistency (IC), Equivalence (E)

Validity: Face validity (FV), Content validity (CtV), Criterion validity (CrV), Construct validity (CsV)

Sensitivity (Sen), Specificity (Sp), Positive Predictive Value (PPV), Negative Predictive Value (NPV), Receiver Operating Curve (ROC), Likelihood Ratio (LR), Odds Ratio (OR)

Ramsey Scale

Bron: Ramsay, M., Savege, T., Simpson, B., & R. Goodwin (1974). Controlled sedation with Alphaxalone-Aphadolone. *BMJ*, 2, 656-659.

- 1. Anxious, agitated, restless.**
- 2. Cooperative, oriented, tranquil.**
- 3. Responds to commands only.**
- 4. Brisk response to light glabellar tap or loud noise.**
- 5. Sluggish response to light glabellar tap or loud noise.**
- 6. No Response to light glabellar tap or loud noise.**

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Ramsey Scale

Niveau	Réponse
1	Malade anxieux, agité
2	Malade coopérant, orienté et calme
3	Malade répondant aux ordres
4	Malade endormi mais avec une réponse nette à la stimulation de la glabelle ou à un bruit intense
5	Malade endormi répondant faiblement aux stimulations ci-dessus
6	Pas de réponse aux stimulations ci-dessus

Qu'est-ce que BEST ?

BEST pour Belgian Screening Tools est le nom d'une étude réalisée par l'Université de Gand, service des Sciences Infirmières, à la demande du Service Public Fédéral de la Santé Publique, Sécurité Alimentaire et Environnement.

Objectif de BEST ?

Le but de ce projet est de construire une base de données contenant des instruments de mesures validés scientifiquement. Dans le but d'objectiver les diagnostics et résultats des interventions infirmières, des instruments de mesures fiables et valides doivent être disponibles pour démontrer l'efficacité des soins infirmiers.

Notre attention se porte sur les instruments de mesure utilisables pour scorer les interventions infirmières du nouveau Résumé Infirmier Minimum ou DI-RHM.

Que pouvez-vous trouver dans ce rapport ?

Le rapport décrit les différents instruments de mesure. En plus, si nous en avons reçu l'autorisation des auteurs, l'instrument est mis à votre disposition. Les instruments de mesure présentant une fiabilité et une validité élevées ont également fait l'objet d'une traduction vers le néerlandais et le français.

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Daem, M., Piron, C., Lardennois, M., Gobert, M., Folens, B., Spittaels, H., Vanderwee, K., Grypdonck, M., & Defloor T. (2007). Mettre à disposition une base de données d'instruments de mesure validés: le projet BEST. Bruxelles: Service Public Fédéral Santé Publique, Sécurité de la Chaîne alimentaire et Environnement.