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# Construction of a Situational Judgement Test for the recruitment of supervisor candidates wishing to join the prison administration: *from activity analysis to item production*

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## Introduction

The items of a Situational Judgment Test (SJT) are composed of a description of a “problematic situation” and several action scenarios that can be used to deal with the situation described, between which one is asked to choose. TJS have the double advantage of being close to the behaviors used in contextualized situations, which allows a better assessment of skills than self-assessment questionnaires allow (Lievens & al., 2008), while allowing a psychometric standardization and easier administration than real-life scenarios (Lothe & al., 2012). The construction of these tools requires a precise analysis of the activity and the conditions in which it is carried out, as well as a modeling of the processes involved, in order to be able to evaluate professional performance (McDaniel & al. 2001, 2007).

## First step: analyze the actual work activity

In order to identify the criteria for structuring the model, we conducted observations and semi-structured interviews. Data collection consisted of : 41 individual interviews and 8 group interviews with prison officers (guards and agents), and 5 individual interviews with prisoners. 18 agents also took the Fleishman Job Analysis Survey (FIAS) to identify the most important skills in the job.

## Second step: modelisation

Content and lexicometric analyses (IRAMUTEQ) resulted in a model with 10 criteria.

**4 situation-related criteria : emergency, criticality, climate and complexity**

**6 inmate-related criteria : dangerousness, vulnerability, agency, compliance, openness and personal motivation**

These criteria were crossed with 6 action modalities, which can be grouped into 3 categories:

1. **direct** (involving physical action or verbal commands)
2. **semi-directive** (involving persuasion or negotiation skills)
3. **non-directive** (involving more participatory or delegative options).

## Third step: translating the model into a decision table

Style	Reactive		Reactive / Preventive		Preventive	
	Physical action	Verbal orders	Persuasion	Negotiation skills	Participative	Délégative
Register	Direct		Semi-Directive		Non-Directive	
Modality of action	Physical action	Verbal orders	Persuasion	Negotiation skills	Participative	Délégative
1. Urgency	Yes	No	No	No	No	No
2. Criticality	Yes	Yes	No	No	No	No
3. Climate	Yes	Yes	Yes	Yes	No	No
4. Complexity	Yes	Yes	Yes	Yes	No	No
5. Dangerousness	Yes	Yes	No	No	No	No
6. Vulnerability	Yes	Yes	Yes	No	No	No
7. Agency	Yes	Yes	Yes	Yes	No	No
8. Compliance	No	No	No	No	Yes	Yes
9. Openness	No	No	No	Yes	Yes	Yes
10. Personal motivation	No	No	Yes	Yes	Yes	Yes

## Fourth step : A Situational Judgement Test for the recruitment of supervisor candidates wishing to join the prison administration

For each of the six modality, two scenarios were proposed. Ultimately, twelve different situations were created, each with seven possible responses: responses were proposed, ranging from the use of physical force to a delegative style and as well a seventh response involving the “laissez faire” style.

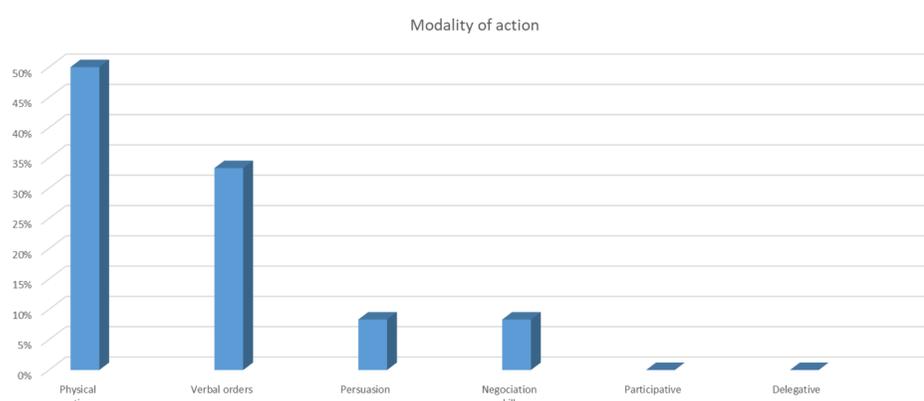
## Final step: Validation by a panel of experts

The SJT was presented to a panel of six experts, who were asked to give their ideal answers. This step allowed us to determine which answers obtained the greatest consensus.

## Item example :

“Two inmates are fighting in the prison yard. They refuse to stop despite your repeated orders. The situation is likely to degenerate into an even more serious altercation any minute now. What do you do?”

- A. You don't intervene, there's a risk to your safety, you prefer to let things happen.
- B. You use restraint techniques to hold them down, then isolate them to put an end to the fight.
- C. ...



## SJT and job performance

The table below summarizes the results of three meta-analyses highlighting the link between SJTs and job performance. These results enable (Patterson & al. 2012) to place SJTs and reasoning tests on the same level in terms of predictive validity (with regard to professional performance).

Meta Analysis	Christian & al.	McDaniel & al.	Webster & al.
Year of study	2010	2003	2020
Number of articles	161	84	26
Correlation	.58	.34	.32

*Correlation between SJT evaluation and job performance*

## SJT and incremental validity

Lothe et al. (2012) report the good incremental validity of SJTs when combined with other measurement instruments, such as personality inventories built on the Big 5 model. McDaniel et al. (2007) found that the SJTs explained 6–7% more variance when used in conjunction with a conventional personality inventory. SJTs also increase the predictive validity of cognitive ability tests by 3-5% (when SJTs focus on intellectual rather than behavioral abilities).

## SJT preconisation

When SJTs are developed from a precise analysis of jobs and workstations through expert data collection, predictive correlations in job performance, are improved from  $r = .29$  to  $r = .38$ . (Corstjens & al., 2017)

## Discussion

The next and final step of this study will be the statistical validation of the SJT. This will be carried out on a representative sample of candidates participating in a prison officer selection. In addition to traditional analyzes (sensitivity, internal consistency and structure), we will explore the links between this behavioral test and:

- 1/ personality, assessed by a questionnaire based on the five-factor model,
- 2/ personality disorders, assessed by a questionnaire based on the Cloninger model (Cloninger & al. 1994)
- 3/ cognitive abilities, assessed by tests of fluid reasoning, visuo-spatial ability, memory capacity and attentional flexibility.

The SJT will thus be a complementary tool to other tools as part of a broader evaluation. This SJT is specific to the behavior of prison guards and is not intended for use with other audiences. However, the methodology used can be transposed to other professional fields.

To be effective, STJs require a strict methodology. If the situations evoke specific professional contexts, it will be necessary to call on experts in the field concerned. The writing of scenarios must also take into account linguistic accessibility in order to limit comprehension biases. (McDaniel & al. 2001)

## Conclusion

The psychometric qualities of SJTs are today sufficiently encouraging to consider them as interesting and useful tools for evaluating individuals. One of the main contributions of SJTs is that they can provide a convincing response to the need to contextualize assessments in order to improve predictive validity with regard to a specific professional field, in this case the prison service.

## References

- Christian, M. S., Edwards, B. D., & Bradley, J. C. (2010). Situational Judgment Tests : Constructs Assessed and a Meta-Analysis of Their Criterion-Related Validities. *Personnel Psychology*, 63(1), 83-117.
- Cloninger, C. R., Przybeck, T. R., Svrakic, D. M., & Wetzel, R. D. (1994). The Temperament and Character Inventory (TCI): A guide to its development and use.
- Corstjens, J., Lievens, F., & Krumm, S. (2017). Situational Judgment Tests for Selection. In *The Wiley Blackwell Handbook of the Psychology of Recruitment, Selection and Employee Retention* (p. 226-246). John Wiley & Sons, Ltd.
- Lievens, F., Peeters, H., & Schollaert, E. (2008). Situational judgment tests : A review of recent research. *Personnel Review*, 37(4), 426-441.
- Lothe, B., Bertrand, F., & Hansez, I. (2012). Elaboration et validation de tests de jugement situationnel comme outil de sélection professionnelle : Guide méthodologique. *Psychologie du Travail et des Organisations*, 18(3), 215-231.
- McDaniel, M. A., Hartman, N. S., & Iii, W. L. G. (s. d.). *RUNNING HEAD: Knowledge and Behavioral Tendency*.
- McDaniel, M. A., Hartman, N. S., Whetzel, D. L., & Grubb Iii, W. L. (2007). Situational Judgment Tests, Response Instructions, and Validity : A Meta-Analysis. *Personnel Psychology*, 60(1), 63-91.
- McDaniel, M. A., Morgeson, F. P., Finnegan, E. B., Campion, M. A., & Braverman, E. P. (2001). Use of situational judgment tests to predict job performance : A clarification of the literature. *Journal of Applied Psychology*, 86, 730-740.
- McDaniel, M. A., & Nguyen, N. T. (2001). Situational Judgment Tests : A Review of Practice and Constructs Assessed. *International Journal of Selection and Assessment*, 9(1-2), 103-113.
- McDaniel, M. A., O'Connell, M. S., Hartman, N. S., Grubb Iii, W. L., & Lawrence, A. (2007). Incremental Validity of Situational Judgment Tests for Task and Contextual Job Performance. *International Journal of Selection and Assessment*, 15(1), 19-29.
- Patterson, F., Ashworth, V., Zibarras, L., Coan, P., Kerrin, M., & O'Neill, P. (2012). Evaluations of situational judgement tests to assess non-academic attributes in selection. *Medical Education*, 46(9), 850-868.
- Webster, E. S., Paton, L. W., Crampton, P. E. S., & Tiffin, P. A. (2020). Situational judgement test validity for selection : A systematic review and meta-analysis. *Medical Education*, 54(10), 888-902.