

Translation and Validation of a Domain -

Methodology and sample characteristics

Claude Montmarquette
CIRANO 2020 University
Montreal, Quebec, Canada

PWGCS Contract No.: W7711-027825/001/TOR

On behalf of
Defence R&D Canada

DRDC Toronto Scientific Authority: Ann-Renee Blais
Defence R&D Canada - Toronto
1133 Sheppard Avenue W
Toronto, ON, M3M 3B9
416.635.2000x3082

The scientific or technical validity of this Contract Report is entirely the responsibility of the contractor and the contents do not necessarily have the approval or endorsement of Defence R&D Canada.

Defence R&D Canada – Toronto

Contract Report
DRDC Toronto CR 2003-139
October 2003

© Her Majesty the Queen as represented by the Minister of National Defence, 2003

© Sa majesté la reine, représentée par le ministre de la Défense nationale, 2003

Abstract

This report summarizes the work completed in contract # W7711-027825/001/TOR. The purpose of this contract was to conduct an initial study towards the goal of applying current theory about risk-taking to military contexts and, in particular, to translate and validate an existing **Domain-Specific Risk-Taking (DOSPERT) Scale (Weber, Blais, & Betz, 2002) for use with French-speaking Canadian adult populations.**

Résumé

Ce rapport résume les travaux effectués dans le cadre du contrat n° W7711-027825/001/TOR. L'objet de ce projet consistait à mener une étude initiale afin d'appliquer aux contextes militaires la théorie actuelle en matière de prise de risque et, en particulier, à traduire et à valider une échelle existante de prise de risque dans des domaines spécifiques (DOSPERT) (Weber, Blais et Betz, 2002), conçue pour être utilisée chez les populations adultes de Canadiens francophones.

Executive summary

Purpose:

To conduct an initial study towards the goal of applying current theory about risk-taking to military contexts and, in particular, to translate and validate an existing **DO**main-**SPE**cific **R**isk-**T**aking (DOSPERT) Scale (Weber, Blais, & Betz, 2002) for use with French-speaking Canadian adult populations.

Methodology:

We contacted by e-mail respondents from our data bank of about 1900 individuals. Those individuals had volunteered to participate to experiments run at our experimental lab (LUB3CE). We prepared an electronic version of the French questionnaires, and the participants completed the survey in our economic experimental lab at CIRANO located in downtown Montreal. The survey included the translated (by CIRANO) risk-taking and risk-perception responses of an expanded (65-item) version of the DOSPERT Scale (Weber, et al., 2002), with some items modified for more general applicability in adult populations. For convergent and discriminant validity evaluation, we also included the French versions of the Sensation-Seeking Scale version IV (SSS-IV; Zuckerman, 1980; Zuckerman, 1994; for the French translation, see Carton, Lacour, Jouvent, & Widlocher, 1990), the Risk-Taking scale of the Jackson Personality Inventory (JPI-RT; Jackson, 1994), the Personal Need for Structure Scale, and the Personal Fear of Invalidity Scale (Thompson, Naccarato, Parker, & Moskowitz, 2001).

Sample Composition:

Four hundred and twelve people completed the survey. Unfortunately, we lost the answers of 18 participants due to a program failure. Of the remaining sample of 394, there were 168 female and 226 male participants. Educational level ranged from CEGEP- Quebec post-secondary degree- (17) to PhD students (16). Eighty-eight students were at the master level, and the rest were undergraduate students. Students came from more than 15 different fields of study with the largest participation from business and administration, engineering, computer science and economics. Participants were aged between 18 and 58, with an average age of 25.

Directions for Future Research:

Future studies should compare domain-specific risk perceptions and risk-taking among anglophone versus francophone Canadian respondents. They should also compare the responses provided by members of the general population to those provided by members of the military, controlling for age and gender composition.

Montmarquette, C. 2003. Translation and validation of a domain- Specific risk-attitude scale. DRDC Toronto CR 2003-139. Defence R&D Canada–Toronto.

Sommaire

Objet

Mener une étude initiale afin d'appliquer aux contextes militaires la théorie actuelle en matière de prise de risque et, en particulier, traduire et valider une échelle existante de prise de risque dans des domaines spécifiques (DOSPERT) (Weber, Blais et Betz, 2002), conçue pour être utilisée chez les populations adultes de Canadiens francophones.

Méthode

Nous avons envoyé un message électronique aux répondants qui figuraient dans notre banque de données contenant environ 1 900 noms. Ces personnes s'étaient portées volontaires pour participer à des expériences dans notre laboratoire (LUB3CE). Nous avons préparé une version électronique de la version française des questionnaires, que les participants ont remplie dans notre laboratoire d'économie expérimentale du CIRANO, au centre-ville de Montréal. L'enquête comprenait la traduction (par le CIRANO) de questions sur la prise de risque et la perception du risque tirées d'une version élargie (65 questions) de l'échelle DOSPERT (Weber et coll., 2002), dont on avait modifié certains éléments pour les rendre plus généralement applicables aux populations adultes. Pour être en mesure d'évaluer la validité concurrente et discriminante, nous avons également inclus la version française de la version IV de l'échelle de recherche de sensations (Sensation-Seeking Scale) (SSS-IV; Zuckerman, 1980; Zuckerman, 1994; pour la traduction française, voir Carton, Lacour, Jouvent et Widlocher, 1990), l'échelle de prise de risque de l'inventaire de la personnalité de Jackson (JPI-RT; Jackson, 1994), l'échelle du besoin personnel de structure (Personal Need for Structure Scale) et l'échelle de la crainte personnelle de l'invalidité (Personal Fear of Invalidity Scale) (Thompson, Naccarato, Parker et Moskowitz, 2001).

Composition de l'échantillon

Quatre cent douze personnes ont participé à l'enquête. Malheureusement, nous avons perdu les réponses de 18 participants en raison d'une défaillance logicielle. Des 394 répondants restants, 168 étaient des femmes et 226, des hommes. On comptait 17 cégépiens, 16 étudiants au doctorat et 88 étudiants à la maîtrise; les autres répondants étudiaient au niveau du baccalauréat. Les répondants provenaient de plus de 15 domaines d'études différents, dont les mieux représentés étaient : l'administration des affaires, le génie, l'informatique et l'économie. L'âge des participants variait entre 18 et 58 ans, l'âge moyen se situant à 25 ans.

Orientation de la recherche future

Dans l'avenir, les études devraient comparer les perceptions du risque et la prise de risque dans divers domaines chez des répondants canadiens anglophones et des répondants canadiens francophones. Elles devraient également comparer les réponses fournies par les membres de la population générale à celles des militaires, en tenant compte de l'âge et du sexe.

Montmarquette, C. 2003. Translation and validation of a domain- Specific risk-attitude scale. DRDC Toronto CR 2003-139. Defence R&D Canada–Toronto.

Table of contents

Abstract.....	i
Résumé	ii
Executive summary	iii
Sommaire.....	iv
Table of contents	v
Terms of the contract.....	1
Deliverables.....	1
Methodology.....	1
Sample Composition	2
Directions for Future Research.....	2
References	4

Terms of the contract

CIRANO was contracted to:

1. Back-translate French versions of the questionnaires, when needed;
2. Administer mass-testing sessions to between 200 and 400 respondents;
3. Provide regular updates of the work schedule to the scientific authority at DRDC Toronto;
4. Provide the raw data to the scientific authority at DRDC Toronto;
5. Provide an electronic copy of the data set to the scientific authority at DRDC Toronto.

Deliverables

1. After we back-translated the DOSPERT Scale and received the approval of the scientific authority at DRDC Toronto, we prepared an electronic version of the French questionnaires.
2. Participants answered all questions of the survey in our lab (LUB/3CE), located at CIRANO in downtown Montreal. On average, 12 participants were present by session. We held 38 sessions between April to June 2003.
3. The final data set sent to the scientific authority at DRDC Toronto contains filled questionnaires for 394 participants of which 42.6% were females.
4. We collected and organized the data in a format agreed upon by the scientific authority at DRDC Toronto. We also produced a codebook detailing the 254 variables constructed from the questionnaires with the SPSS statistical package.

Methodology

We contacted by e-mail respondents from our data bank of about 1900 individuals. Those individuals had volunteered to participate to experiments run at our experimental lab (LUB3CE). The registered individuals are mainly post-secondary and university students.

We prepared an electronic version of the French questionnaires, and the participants completed the survey in our economic experimental lab at CIRANO located in downtown Montreal. The LUB3CE has more than 20 personal computers with curtains isolating participants. All participants were required to sign a consent form supplied by DRDC Toronto and were paid a specific fee of \$10.00 to fill all questionnaires of the survey.

The survey included the translated (by CIRANO) risk-taking and risk-perception responses of an expanded (65-item) version of the **Domain-Specific Risk-Taking (DOSPERT) Scale** (Weber, Blais, & Betz, 2002), with some items modified for more general applicability in adult populations. For convergent and discriminant validity evaluation, we also included the French versions of the Sensation-Seeking Scale version IV (SSS-IV; Zuckerman, 1980; Zuckerman, 1994; for the French translation, see Carton, Lacour, Jouvent, & Widlocher, 1990), the Risk-Taking scale of the Jackson Personality Inventory (JPI-RT; Jackson, 1994), the Personal Need for Structure Scale, and the Personal Fear of Invalidity Scale (Thompson, Naccarato, Parker, & Moskowitz, 2001). After consent to participate was given, respondents provided demographic background information and their answers to the six questionnaires in two different orders. Half of the respondents rated their risk-taking on the 65-item expanded DOSPERT scale first, and their risk perceptions for the same 65 items (presented in a different random order) as the sixth survey, with the 20-item Jackson Personality Risk-Taking scale in second position, the 12-item Need for Structure Scale in third position, the 72-item Zuckerman Sensation-Seeking Scale in fourth position, and the 14-item Personal Fear of Invalidity Scale in fifth position. The other half of the respondents rated their risk perceptions of the 65-item expanded DOSPERT scale first, and their risk-taking for the same 65 items (presented in a different random order) as the sixth survey, with the other five surveys appearing in the same order as for the other half.

At the end of the study, respondents received information about the payment process. Payment was given in cash and participants signed a receipt of payment.

Sample Composition

Four hundred and twelve people participated to the survey. Unfortunately, we lost the answers of 18 participants due to a program failure. On average, it took about one hour to answer all the questionnaires of the survey. Of the remaining sample of 394, there were 168 female and 226 male participants. Educational level ranged from CEGEP- Quebec post-secondary degree- (17) to PhD students (16). Eighty-eight students were at the master level, and the rest were undergraduate students. Students came from more than 15 different fields of study with the largest participation from business and administration, engineering, computer science and economics. Participants were aged between 18 and 58, with an average age of 25.

Directions for Future Research

In the short term, we will match the survey results with a set of lottery decisions that were made by the participants who had filled all the questionnaires. These lottery decisions were always run after participants had filled all questionnaires of the survey. The goal of the lottery experiment was to study the effect of learning outcome value and learning probability by experience on risky decisions (see Weber, Shafir, & Blais, 2001). Decisions under uncertainty were also considered. The lottery experiment was authorized and financed by CIRANO, with no link to DRDC Toronto.

Future studies should compare domain-specific risk perceptions and risk taking among French and English speaking Canadian respondents. They should also compare the responses

provided by members of the general population to those provided by members of the military, controlling for age and gender composition.

References

1. Weber, E.U., Blais, A.-R., Betz, E. (2002). A Domain-specific risk-attitude scale: Measuring risk perceptions and risk behaviors. *Journal of Behavioral Decision Making*, 15, 263-290.
2. Zuckerman, M. (1980). Sensation Seeking. In H. London & J. Exner (Eds.), *Dimensions of personality* (pp. 487-549). New York: Wiley.
3. Zuckerman, M. (1994). *Behavioral expressions and biosocial bases of sensation seeking*. Cambridge, NY: Cambridge University Press.
4. Carton, S., Lacour, C., Jouvent, R., Widlocher, D. (1990). Le concept de recherche de sensations: traduction et validation de l'échelle de Zuckerman. *Psychiatry & Psychobiology*, 5, 39-44.
5. Jackson, D.N. (1994). *French Jackson Personality Inventory – Revised manual*. Port Huron, MI: Sigma Assessment Systems, Inc.
6. Thompson, M.M., Naccarato, M.E., Parker, K.C.H. & Moskowitz, G.B. (2001). The Personal Need for Structure (PNS) and Personal Fear of Invalidity (PFI) Scales: Historical Perspectives, Present Applications and Future Directions. In G. B. Moskowitz (Ed.), *Cognitive social psychology: The Princeton symposium on the legacy and future of social cognition* (pp. 19-39). Mahwah, NJ: Erlbaum.
7. Weber, E. U., Shafir, S., & Blais, A.-R. (in press). Predicting risk-sensitivity in humans and lower animals: Risk as variance or coefficient of variation. *Psychological Review*.

DOCUMENT CONTROL DATA SHEET

1a. PERFORMING AGENCY

Dr. Claude Montmarquette, CIRANO 2020 University, 25th Floor, Montreal
Quebec, Canada H3A 2A5

2. SECURITY CLASSIFICATION

UNCLASSIFIED
Unlimited distribution -

1b. PUBLISHING AGENCY

DRDC Toronto

3. TITLE

(U) Translation and Validation of a Domain – Methodology and Sample Characteristics

4. AUTHORS

C. Montmarquette

5. DATE OF PUBLICATION

October 8 , 2003

6. NO. OF PAGES

14

7. DESCRIPTIVE NOTES

8. SPONSORING/MONITORING/CONTRACTING/TASKING AGENCY

Sponsoring Agency:

Monitoring Agency:

Contracting Agency : DRDC Toronto

Tasking Agency:

9. ORIGINATORS DOCUMENT NO.

Contract Report CR 2003-139

10. CONTRACT GRANT AND/OR
PROJECT NO.

W7711-027825/001/TOR

11. OTHER DOCUMENT NOS.

12. DOCUMENT RELEASABILITY

Unlimited distribution

13. DOCUMENT ANNOUNCEMENT

Unlimited announcement

14. ABSTRACT

(U) This report summarizes the work completed in contract # W7711-027825/001/TOR. The purpose of this contract was to conduct an initial study towards the goal of applying current theory about risk-taking to military contexts and, in particular, to translate and validate an existing Domain-Specific Risk-Taking (DOSPERT) Scale (Weber, Blais, & Betz, 2002) for use with French-speaking Canadian adult populations.

(U) Ce rapport résume les travaux effectués dans le cadre du contrat no W7711-027825/001/TOR. L'objet de ce projet consistait à mener une étude initiale afin d'appliquer aux contextes militaires la théorie actuelle en matière de prise de risque et, en particulier, à traduire et à valider une échelle existante de prise de risque dans des domaines spécifiques (DOSPERT) (Weber, Blais et Betz, 2002), conçue pour être utilisée chez les populations adultes de Canadiens francophones.

15. KEYWORDS, DESCRIPTORS or IDENTIFIERS

(U) sensation seeking, French, translation