

Quantative and Qualitative Evaluation of a Prevention Program for Depressive Adolescents in a school context

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Depression and school dropout

- Dropout probability for depressed students: 1.5 to 3.28 higher (Kessler, Foster, Saunders et Stang, 1995; Stoep *et al.*, 2002).
- 46 % of adolescent dropouts reported the presence of a psychiatric disorders as the main reason for dropping out (Stoep, Weiss, Kuo, Cheney et Cohen, 2003).
- 2/3 of depressed students in Grade 6 presented a risk of dropping out in their first year of high school. (Gagné et Marcotte, 2010).

Depression and school dropout

Risk factors associated to both problematics

- Personal factors:
 - Negative relationship with peers
- Family factors:
 - Family problems
- School factors:
 - Low performance
 - Negative relationship with teachers

Goals of the study

Three objectives were pursued in the present study.

- 1- To assess the quality of the implementation of the prevention program.
- 2- To measure the effect of the program on the proximal variables (cognitive distortions and problem-solving strategies) and distal variables (depressive symptoms and risk of dropout).
- 3- To assess the moderating effect of the fidelity of the implantation on the proximal and distal variables. (Figure 1)

Results of this study will be soon published in:

Poirier, M., Marcotte, D., Joly, J. et Fortin, L. (in press). Program and implementation effects of a cognitive-behavioral intervention for preventing depression among adolescents at-risk of school dropout, depressive type. **Educational Research and Evaluation**.

Poirier, M., Marcotte, D., Joly, J. et Fortin, L. (2012). Évaluation de la qualité de l'implantation du programme Pare-Chocs en contexte scolaire. **Revue pour la recherche en éducation**.

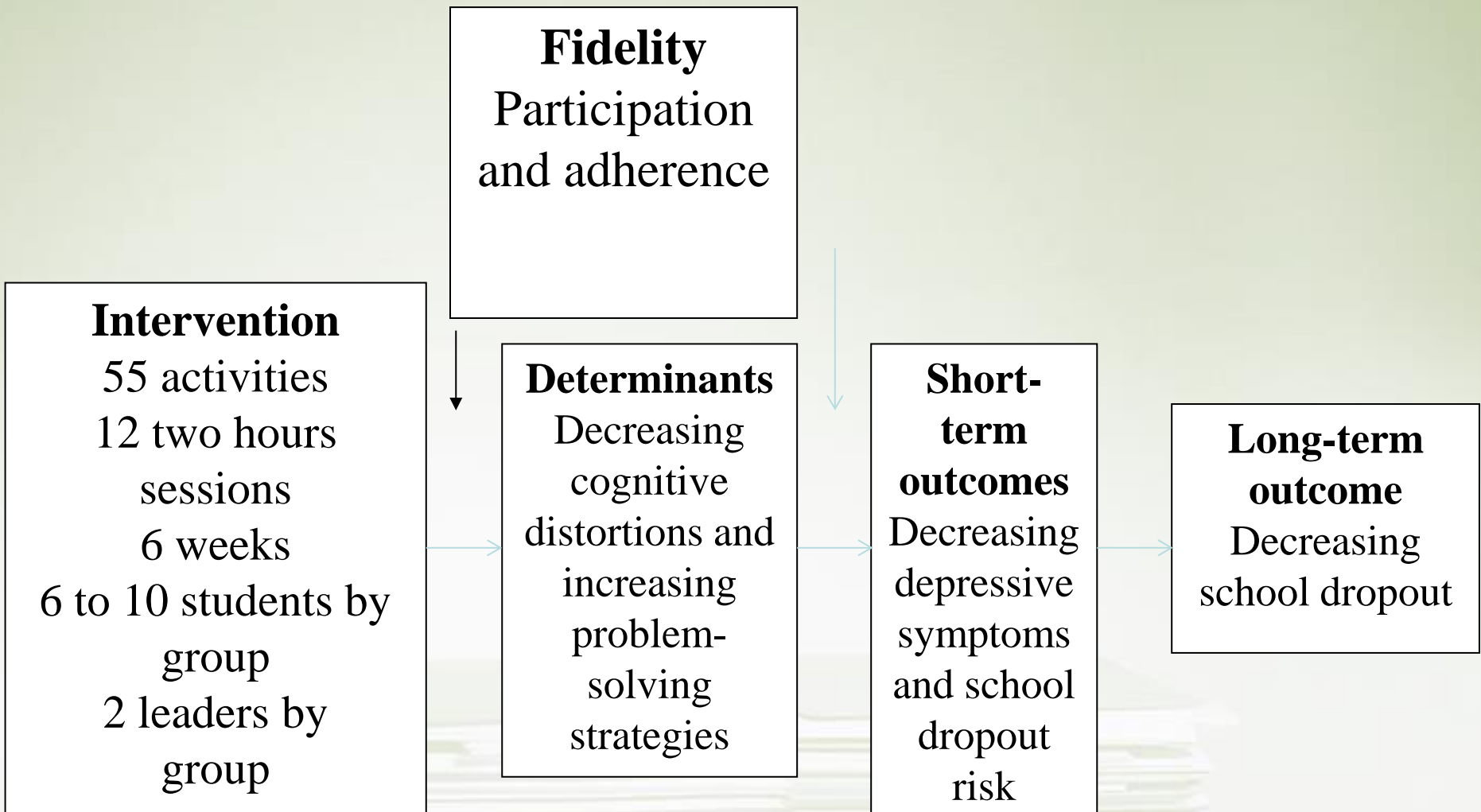


Figure 1 - Moderating mechanism of the relation between intervention, determinants and outcomes
(adapted from Chen, 2005)

Sample

Leaders :

15 professionals (14 women et 1 man) age average: 35 yrs (sd= 8,3)

Participants: 81 students at risk of school dropout with high depressive symptoms were identified (CES-D \geq 20). Final sample is composed of 53 participants

- **Treatment group** : 38 students in the experimental group (33 girls, 5 boys, $X = 15$ years old, $sd 0.75$)
- **Control group:** 15 students* in the control group (11 girls and 4 boys aged on average 14.13 years old, $sd 0.74$)

*significantly younger than those from the experimental group ($t(46) = -3.67, p < 0.05$).
At follow-up (T3), three students from the control group and four students from the experimental group had withdrawn, for a total attrition of 13.5% for the sample.

Components of the Pare-Chocs program:

1. Presentation of the theoretical model underlying the intervention
2. Self-observation skills and increasing pleasurable activities
3. Relaxation techniques
4. Emotional education
5. Cognitive restructuring
6. Communication skills
7. Negotiation and problem-solving skills
8. Social skills
9. Good self-esteem and positive body image
10. Developing knowledge regarding depression
11. School component
12. Parental component

Examples of interview questions

Q. regarding the «clientele» component:

Does the clientele that participated to the program was adequate for this program?

Q. regarding the «intervention protocol»:

Which activities did you implement? Which activities did you decide not to implement? Why? Did you follow the activities proposed by the program? What is the percentage of implemented activities?

Q. regarding the « organisation » component:

How do you perceive the support received from the school direction?

Q. regarding the « Implementing agents »

Have you ever received a training for cognitive-behavioral therapy before?

Q. regarding the «Ecological context» component:

What are the difficulties that you have met during the implementation of the program?

Results: Fidelity of the implementation

- *Adherence* : 78 %
- *Exposition* : 106 %
- *Participation (students)* : 79 %
- *Participation (parents)* : 48 %

Facilitators of successful implementation:

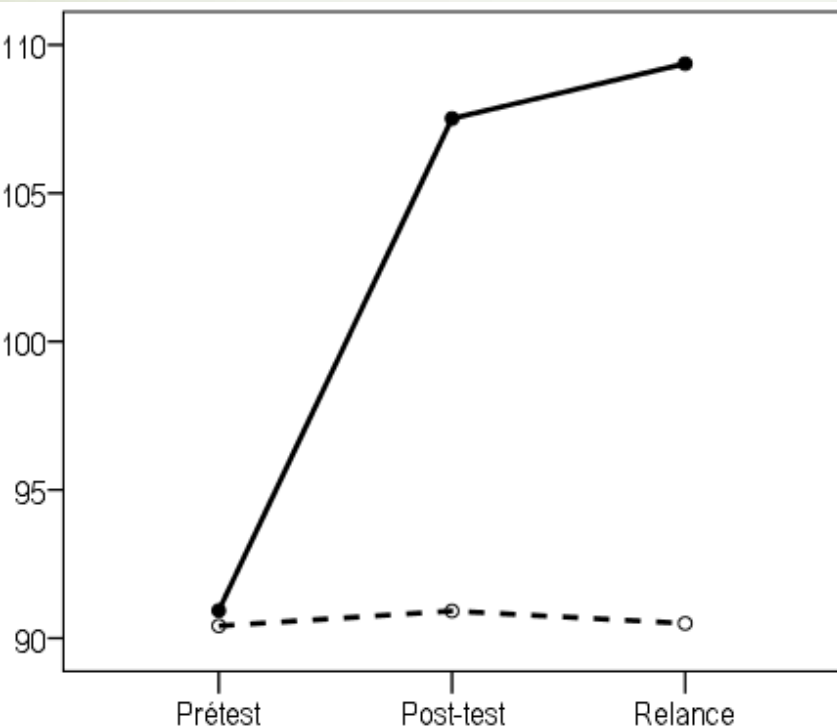
- Selection criteria
- Manual
- Training and supervision
- Leaders' motivation
- Support from school direction and research team

Barriers of successful implementation:

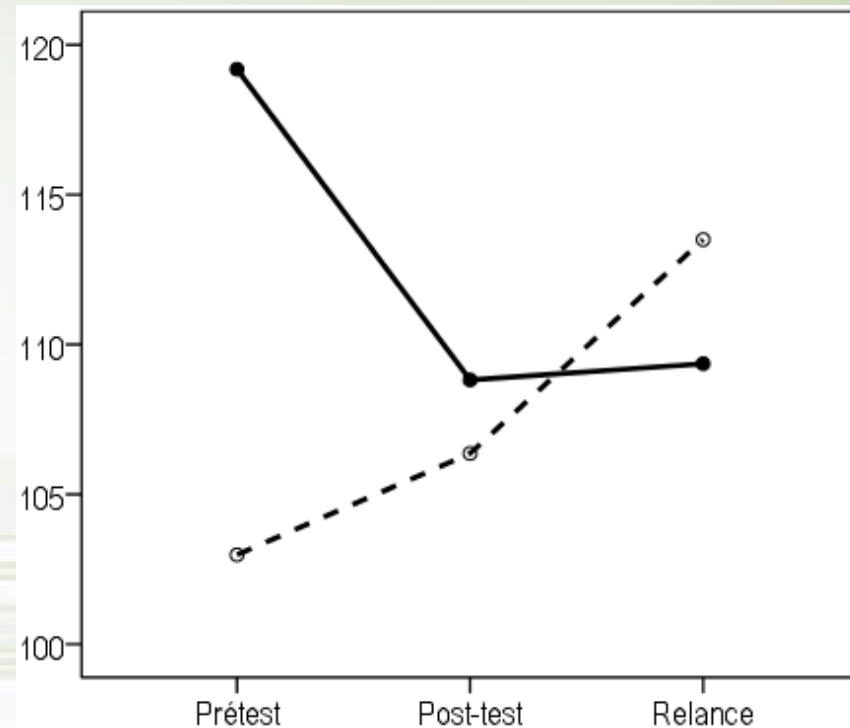
- Time limited
- Heterogeneous previous training
- Participant' absenteeism
- Staff turnover

Results: Program effect on the determinants

Cognitive Distortions*



Problem Solving Strategies*



* Scores are reversed on these scales

— Traitement group
- - - Control group

Table 1 - Hierarchical regression between proximal and program variables

Note: * $p < .05$. ** $p < .01$. *** ; $< .001$.

	Cognitive distortions Post-treatment (T2)		Cognitive distortions Follow-up (T3)		Problem solving Post-treatment (T2)		Problem solving Follow-up (T3)	
Predictor	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1	.39***		.35***		.42***		.21**	
Baseline (T1)		.63***		.60***		.65***		.46**
Step 2	.11**		.12**		.02		.08*	
Baseline (T1)		.63***		.59***		.70***		.56***
Group		.33**		.35**		-.16		-.31*
Step 3	.00		.06		.06		.12*	
Baseline (T1)		.63***		.61***		.70**		.51***
Group Fidelity		.28		.19		-.00		-.17
Participation		.06		.39*		-.40		-.56*
Adherence		.01		-.17		.19		.42
Total R ²	.50		.54		.51		.42	

Table 3 - Hierarchical regression between distal, proximal and program variables

Note: ~ $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

	Depressive sympt Post-treatment (T2)		Depressive sympt Follow-up (T3)		Dropout risk Follow-up (T3)	
Predictor	ΔR^2	β	ΔR^2	β	ΔR^2	B
Step 1	.49***		.37***		.39***	
Baseline (T1) ^a		.70***		.61***		.63***
Step 2	.11**		.18**		.04	
Baseline (T1) ^a		.49***		.30*		.58***
Proximal variables						
Cog Distortions		-.28*		-.33*		-.11
Problem solving		.19~		.27~		.12
Step 3	.00		.01		.09*	
Baseline (T1) ^a		.48***		.28~		.51***
Proximal variables						
Cog Distortions		-.29*		-.35*		-.21
Problem solving		.19~		.25~		.18
Fidelity						
Participation		.00		-.06		.34~
Adherence		.02		-.12		-.01
Total R ²	.60		.56		.52	

Tableau 2. Descriptives Analyses

	Clinical threshold (CES-D \geq 26)	
	Traitement	Control
Pretest	49 % (n = 18/37)	40 % (n = 6/15)
Post-test	35 % (n = 13/37)	50 % (n = 7/14)
Follow-up	39 % (n = 12/31)	50 % (n = 5/11)

Contribution

- Results support the positive impact of school-based cognitive-behavioral intervention for depressive symptoms
- Results support the relation between the evaluation of proximal and distal variables
- Results support the importance of assessing the implementation quality

Limits

- Adherence was assessed by the leaders
- Interviews conducted only with the leaders
- Small sample and non equivalent groups on age may have resulted in a lack of statistical strength
- Weakness of the drop out measure
- Only 2 of the components of the program were assessed

Next step of the research program:

Marcotte, Villatte & Potvin (2012-15) Development and implantation of preventive strategies to prevent depressive symptoms during highschool-college transition. (MELS 2012-15)

Project in progress:

- With the objective to prevent school drop out during that transition, the goal of the present project is to develop two tools that offer strategies for teachers and mental health practioners to intervene with depressive students.

Questions and comments?

