

Narcissism, sensation seeking, depression, anxiety and cognitive distortions: comparative analysis between poker and video lottery terminal players

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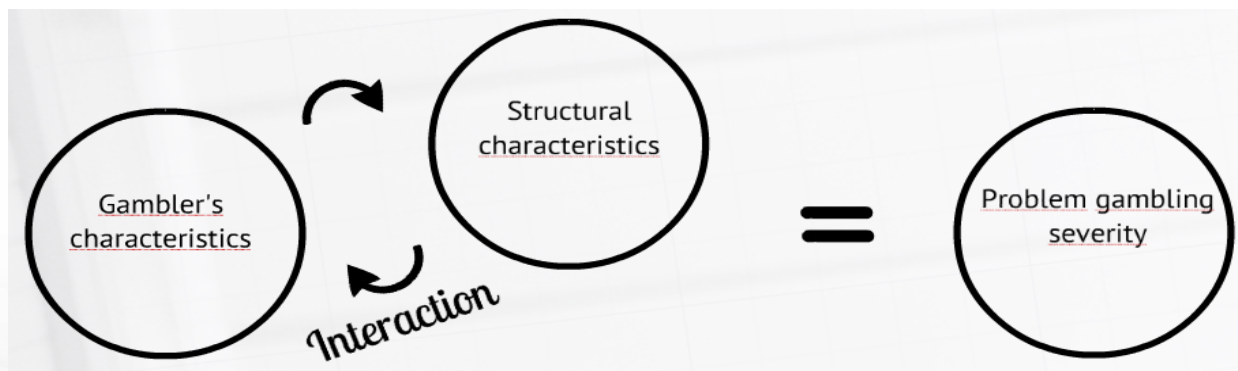


Background

Psycho-structural interaction



- Psycho-structural interaction between gamblers and gambling activity



- Provides a context-specific explanation of addictive behavior rather than a general theory (i.e., addictive personality).
(Griffiths, 1993, 1995)
- Structural and situational characteristics differ, depending on the type of gambling
(Abbot, 2007; Griffiths, 1993, 1999; Griffiths et Parke, 2003; Parke et Griffiths, 2007)
- Identifying gamblers' characteristics of specific gambling activities, provides significant and specific information (game selection, at-risk psycho-structural interactions).

Background

Current study : two popular gambling activities



Poker



- Card game
- Quasi-**skill** game
- Active game
- Competition aspect/multiplayer game
- Social game
- Problem gambling prevalence (2012) : 7,9% (Quebec)

Video Lottery Terminal (VLT)



- Electronic machine
- Pure **chance** game
- Passive game
- No competition aspect/single player game
- Bank game
- Problem gambling prevalence (2012): 16,4% (Quebec)

(Bjerg, 2010; Chevalier, et al. 2004; Kairouz et nadeau, 2014; Schwartz, 2006)

Background

Psychological characteristics related to pathological gambling



- **Narcissism & sensation seeking**

(Black, & Moyer, 1998; Blaszczynski, & Steel, 1998; Coventry, & Brown, 1993; Lakey, et al., 2008; Myrseth, et al., 2012; Livingston, 1974; Rosenthal, 1986; Steel, & Blaszczynski, 1998; Taber & Chaplin, 1988; Vitaro, et al., 1999)

- Biological vulnerability
- Interfere with decision-making (Over-estimate their chances of winning, bored hunting)

- **Depression & anxiety**

(Blaszczynski, & Nower, 2002; Lindberg, Fernie et Spada, 2010)

- Emotional vulnerability
- Interfere with decision-making
- Alleviate unpleasant states of boredom, anxiety or low mood (i.e. negative reinforcement)

- **Cognitive distortions**

(Barrault & Varescon, 2012; Ladouceur & Walker, 1996; Langer, 1975; Langer & Roth, 1975; Oei et Raylu, 2004; Toneatto, 1999)

- Thinking biases, distorted reasoning, and errors in judgment (↑problem gambling)
- Some studies show psychological disorders (personality, mood) leads to automatic patterns of thinking (mediation effect?)

Background

Literature review synthesis and limitations



Identifying subgroups

- ≠ homogeneous population
 - There are different subgroups.
 - Distinct clinical features and aetiological processes.

**An understanding of the essential differences →
give information on appropriate form of intervention required**



Study Aims

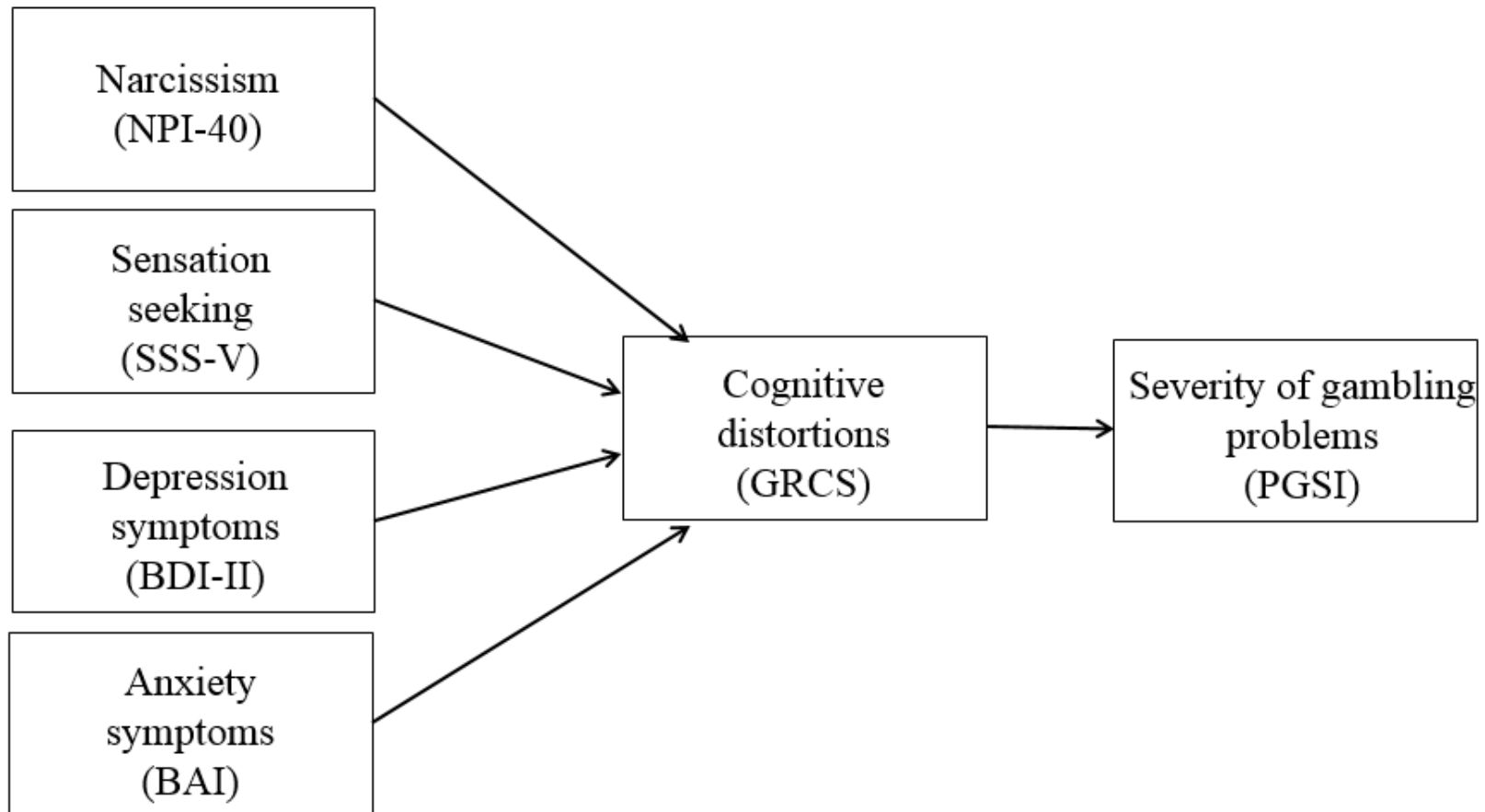
Specific objectives



- (1) To **compare** poker and VLT players on problem gambling severity and psychological characteristics.
- (2) to test empirically the **mediating effect (indirect effect)** of cognitive distortions between individual characteristics and problem gambling severity
- (3) To **test the predictive model** of problem gambling severity and **verify the invariance** of this model between groups.

Study Aims

Hypothesized model



Method

Selection criteria



Inclusion



- Male gamblers
- 18 years old or +
- Gambling with real money
- Regular players: 2X/month for poker OR 1X/month for VLT
- No previous treatment for pathological gambling
- Defines himself as a poker player or a VLT player

Exclusion



- Participants who play both types of games

Method

Participants



N = 272 Gamblers (191 poker players; 81 VLT players)

	Poker	VLT
Age	<i>M</i> = 28,40, <i>SD</i> = 9,21	<i>M</i> = 51,11, <i>SD</i> = 15,95
Marital status	55% single	58% married
Annual income	52% [25 000 \$CAN and less]	63% [25 000\$ et 75 000\$CAN]
Education	81% [11 years or more]	65% [11 years or less]
Occupation	51% student	44% full-time worker

Similar profiles to : Stevens, & Young, 2009 and Svensson, & Romild, 2014

- Strategic gamblers : Younger (35-), ↓ income, ↑ academics achievement
- Non-strategic gamblers: Older (35+), ↓ academics achievement

Method

Instruments and Procedure



Gambling problem severity :	Problem Gambling Severity Index (PGSI) (Ferris & Wynne, 2001)
Narcissism :	Narcissistic Personality Inventory (NPI) (Raskin et Terry, 1988)
Sensation seeking :	Sensation Seeking Scale-Form V (SSS-V) (Zuckerman et al. 1978)
Depression :	Beck Depression Inventory-II (BDI-II) (Beck, Steer, Brown, 1996)
Anxiety :	Beck Anxiety Inventory (BAI) (Beck, Epstein, Brown, Steer, 1988)
Cognitive distortions:	Gambling Related Cognitions Scale (GRCS) (Raylu & Oei, 2004)
Gambling habits & socio-demographic information	Questionnaires specifically designed for the present study

- Recruited in Quebec, Canada (newspapers, email lists, gambling forums)
- Online survey (86.8%) and telephone survey (13.2%)
- Compensation : gift certificate and draw

Method

Analyses



Preliminary analysis

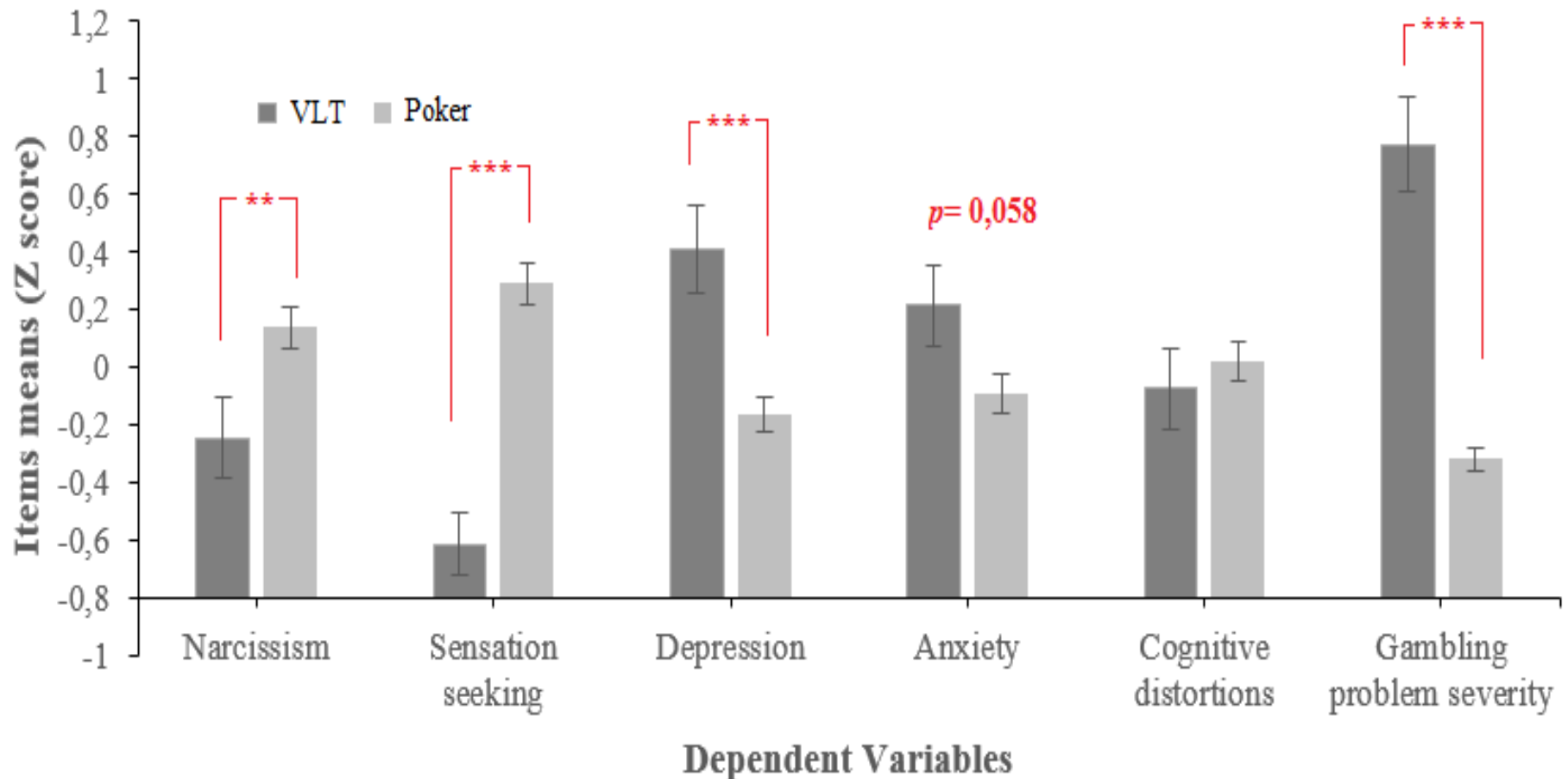
- Bivariate correlations among dependant variables

Principal Analysis

- *(Obj.1) Comparisons among dependant variables*
 - ANOVA model in Mplus (Linear Regression)
- *(Obj.2) Indirect effect (mediation)*
 - Bootstrapping test : non-parametric method based on resampling with replacement which is done many times.
- *(Obj.3) Test the predictive model and verify the invariance*
 - Path analysis with Maximum Likelihood Robust (MLR)
 - Multi-group Invariance Testing

Results

(Obj.1) Comparisons among DVs



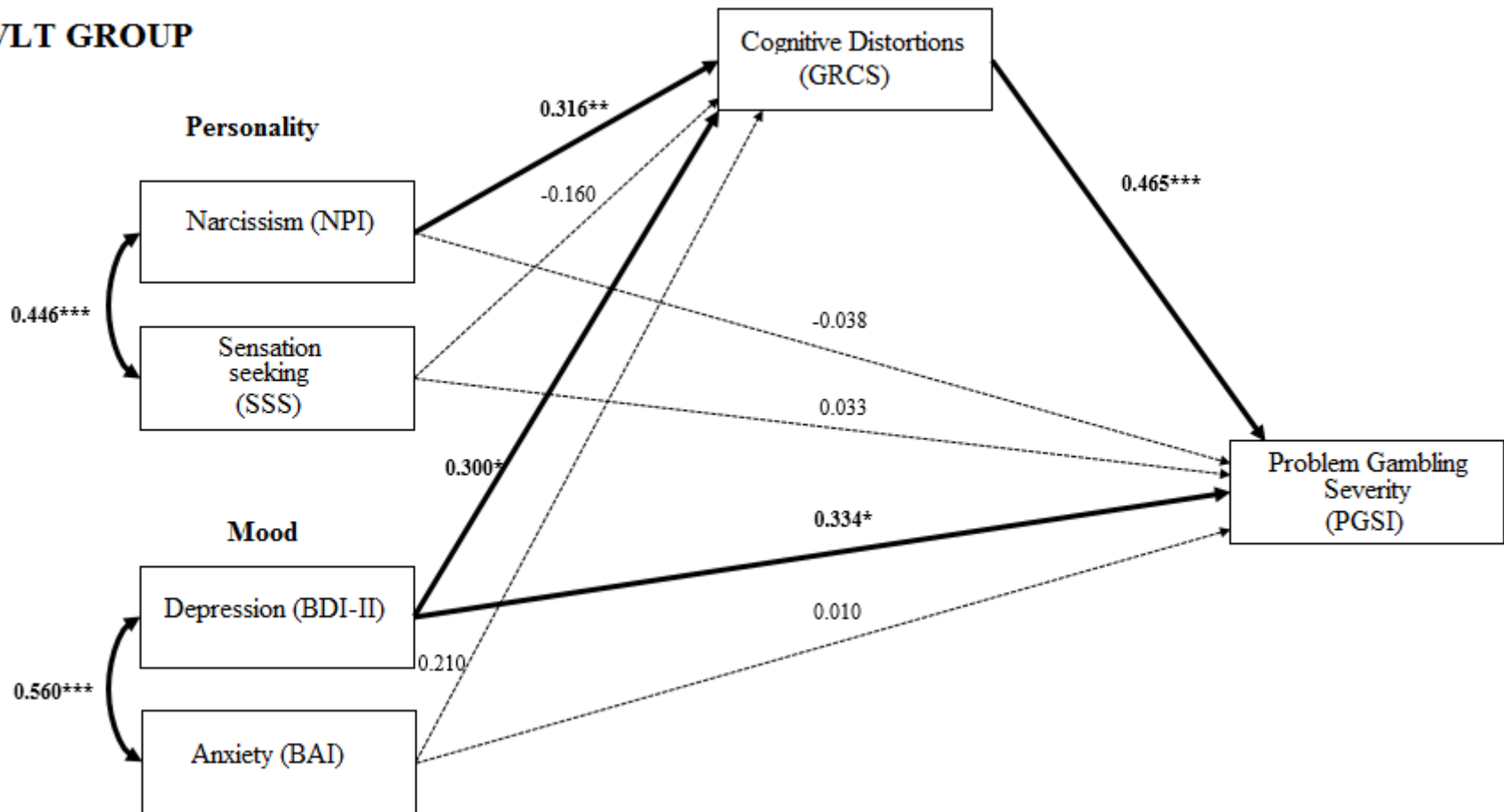
Results

(Obj.2) Indirect effect (mediation)

(Obj.3) Predictive model/invariance



VLT GROUP



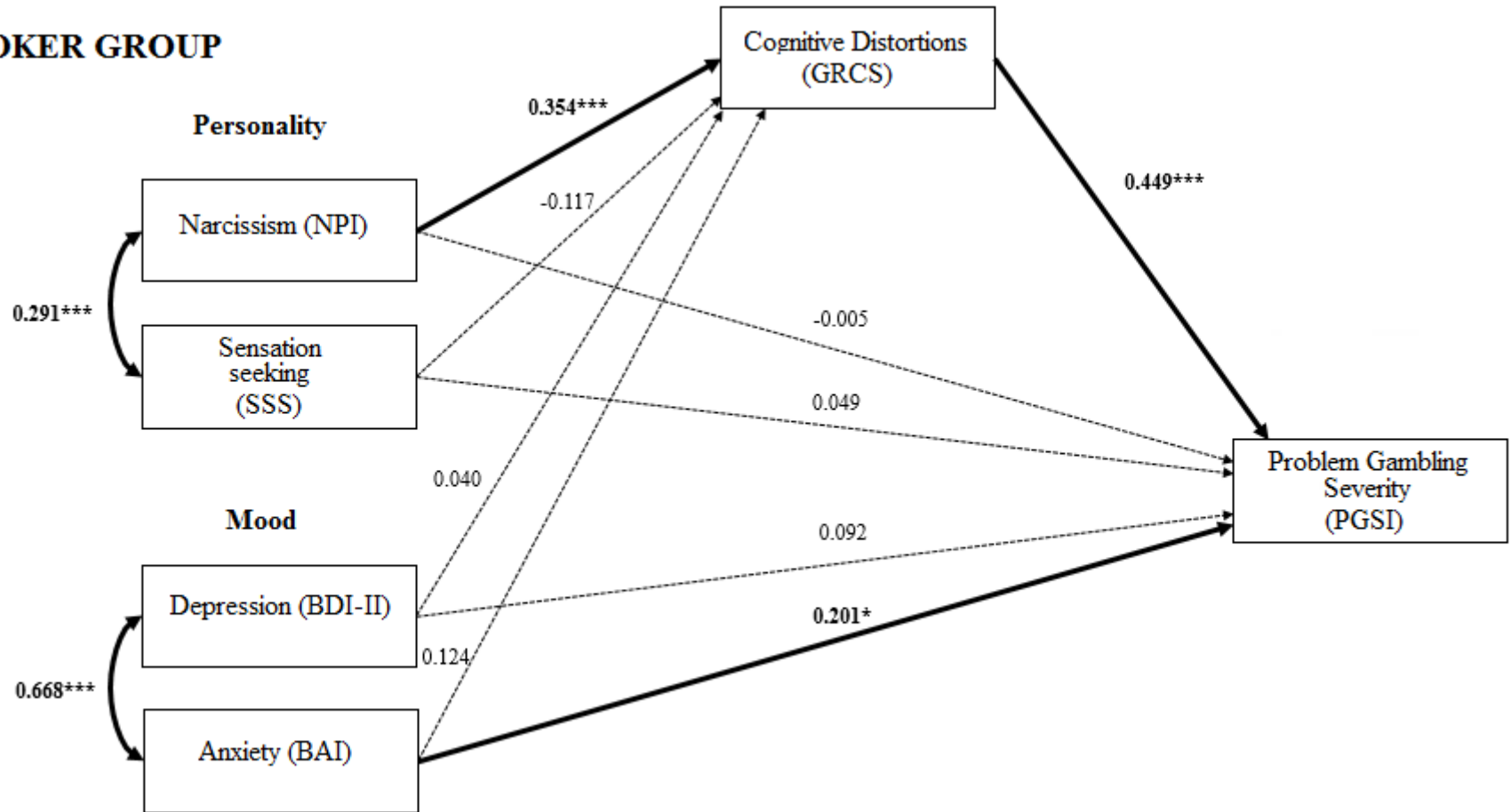
Results

(Obj.2) Indirect effect (mediation)

(Obj.3) Predictive model/invariance



POKER GROUP



Discussion

(Obj.1) Comparisons among DVs



POKER

Gamblers with narcissistic characteristics may choose **high skill activities** with social aspects to **impress, for the thrill and to be the best**

« **Egotism** »

(Ledgerwood & Petry, 2006)

« Desire for attention and feeling like a big shot, feeling less shy, feeling like a god, and using winnings to impress others. »

Discussion

(Obj.1) Comparisons among DVs



VLT

Gamblers with anxiodepressive symptoms select **low skill activities** to narrow their focus of attention and produce states of dissociation (Blaszczynski, & al. 1986; Blaszczynski, 1988)

« **Escape** »

« a conscious effort to escape from problems, stress, guilt, shame, anxiety and painful feelings. »

(Blaszczynski & Nower, 2002; Ledgerwood & Petry, 2006)

Discussion



(Obj.2) Indirect effect (mediation)

(Obj.3) Test the predictive model and verify the invariance

- Good fit of data to the hypothesized model ($CFI > 0,96$)
- **PATH: Depression -> Cognitive distortions -> Problem gambling severity**
 - Only for VLT group
 - Full mediation (Bootstrap)
 - Responsible for the non-invariance ($\Delta CFI > 0,04$)
 - Supports the psycho-structural interaction theory :
 - Depression – VLT : higher risk ?
 - Depression – Poker: lower risk ?
- **Narcissism -> Cognitive distortions -> Problem gambling severity**
 - Both groups
 - Full mediation (Bootstrap)
 - Overconfidence effect is linked to greater illusion of control/illusion of superiority, which is positively related to gambling problem severity

Conclusion



Differences on sociodemographic and clinical characteristics of gamblers support the relevance of considering the type of gambling

But...

Understanding gambling behaviors is not just about the “substance”. The subjective experience and underlying needs are also important
(Peele, 2009)

Psycho-structural interaction!



External source of **evaluation and excitement** for people with a **fragile ego** (cognitive distortion: illusion of superiority)?



Antidepressant/hypnotizing effect of the game for people with **anxi-depressive symptoms** (cognitive distortion: illusion of control)?

Conclusion

Strengths & Limitations



Strengths

- Instruments have good psychometric properties
- Selection criteria for the populations of interest are defined in terms of relevant demographic variables and gambling habits

Cross-sectional design

- Impossible to infer causality
- Confounder : age! (poker < VLT) with sensations seeking
 - Statistically controlling is not an ideal strategy, especially under conditions where covariates may interact with the group variable (Miller and Chapman, 2001).
 - 35+ years : Poker > VLT on SSS, $p=,002$
 - May be an inherent characteristic but need to be challenge

Conclusion

Implications



This preliminary and exploratory study provides data that supports:

- Psycho-structural interaction theory and heterogeneity between gamblers of different types of gambling.
- First study to test the mediation effect of cognitive distortions between some psychological characteristics and problem gambling.

Conclusion

Implications



An understanding of the essential differences →
give information on appropriate form of intervention required

Ego ++
Sensations seeking ++
Prefer poker

Patient Group with the Same diagnosis.
- Should they receive the same treatment?

Mood ++
Ego +
Prefer VLT

A central cluster of approximately 15 smiley faces in various colors (blue, green, red, orange, pink). The faces are arranged in a loose, overlapping group, with some appearing more prominent than others. The colors likely represent different personality traits or preferences as indicated by the text on the left.



Thank you!

QUESTIONS & COMMENTS

Research funding

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- Ministère de la Santé et des Services sociaux (MSSS)

Questions period

Overlap Age * type of gambling



Tableau 1

Relative contribution of age on gambling preference.

	Predictors	Type of gambling
1st Block	SSS	,170***
2nd Block	SSS	,170***
	Age + SSS	,471***

Questions period

Overlap BDI * type of gambling



- Potential confounders : PGSI! (poker < VLT) with depression
 - Problematic gamblers only: VLT > Poker, $p=,003$