

# Cognitive Restructuring of Gambling- Related Thoughts : A Systematic Review

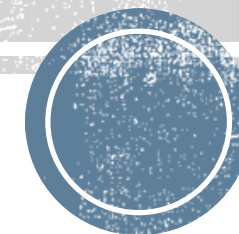
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# Presentation Outline

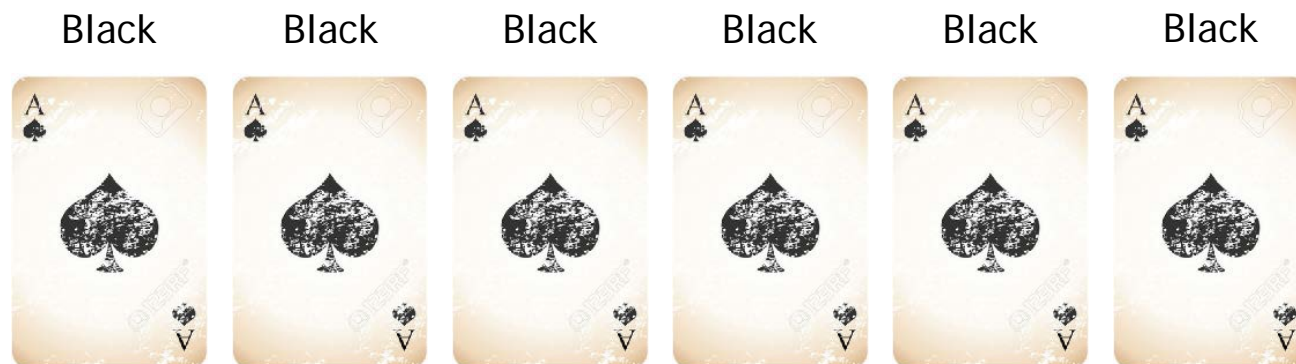
- Introduction
- Method
  - Search strategy
  - Study selection
  - Flow diagram
- Results and discussion
  - Terminology; treatment objectives; modalities; techniques; skill game-related thoughts
- Conclusion

# Gamblers' Thoughts

- Key factor in the onset and maintenance of gambling disorder (Blaszczynski & Silove, 1995; Gaboury & Ladouceur, 1989; Ladouceur, 2004)
- Several terminologies (Barrault & Varescon, 2012)
  - E.g., erroneous thoughts, dysfunctional thoughts, cognitive distortions...
- Erroneous thoughts
  - Underly that the thought is false
  - Do not consider the notion of randomness

# Gamblers' Thoughts

Black or red ?



# Gamblers' Thoughts

- Important contribution to the development and maintenance of gambling disorder (Blaszczynski & Silove, 1995; Gaboury & Ladouceur, 1989; Ladouceur, 2004)
- Several terminology (Barrault & Varescon, 2012)
  - E.g., erroneous thoughts, dysfunctional thoughts, cognitive distortions...
- Erroneous thoughts
  - Underly that the thought is false
  - Do not consider the notion of randomness
- Some thoughts are not false, yet still harmful for the gambler's functioning (Bouchard et al., 2013; Kovacs & Beck, 1978)
  - E.g. « Gambling makes me forget my problems »

# Treatment

- Cognitive restructuring (CR) = central component of CBT (Ladouceur et al. 2001)
  - CBT = gold standard for treating gambling disorder (Cowlshaw et al., 2012)
- Directly targets
  1. Identification
  2. Modification
- According to Lafond et Brisson (2007), only half of the therapists surveyed use CR on a regular basis:
  - Most therapists did not feel comfortable with the diversity and intensity of gamblers' thoughts
  - Perceived a lack of proper tools to identify and correct the thoughts

# Many Questions Regarding CR

- According to Blaszczynski (2005), the objective of the treatment is often not cited
  - Target of the CR
    - To reduce gambling-related thoughts ? Or the number of DSM-5 gambling disorder criteria ?
- What are the guidelines with respect to the different treatment modalities ?
  - Individual vs Group
  - By Internet vs Face-to-face
- Skill game-related thoughts
  - Are there any specific findings or recommandations from the literature in regard to the correction of these thoughts ?

# Objectives

- The aim of this study is to review research on cognitive restructuring with gamblers
- ➡ a) Identify the terms used to refer to gamblers' thoughts
- ➡ b) Identify the objectives and outcome measures of CR
- ➡ c) Describe CR modalities
  - Availability (face-to-face, self-help treatment, etc.)
  - Format (individual, group)
  - Duration (e.g., number of session, hours)
- ➡ d) Describe tools and techniques used to identify and correct gambling-related thoughts
- ➡ e) Describe how skill game-related thoughts are identified and corrected



# Method – Search Strategy

- Identify cognitive treatment studies or studies that include CR sessions
  - Published between 1980 and 2014 in PsycINFO, PubMed and FRANCIS
- Two different search strategies
  1. Keywords in the abstracts combining two themes
    - a) Gambling
    - b) Treatment

(gambling OR gambler\*) AND (treatment\* OR intervention\* OR therapy OR therapies)

# Method – Search Strategy

## 2. Thesaurus from PsycINFO and PubMed

- PsycINFO

{Gambling} AND {Psychotherapy} OR {Cognitive Behavior Therapy} OR {Cognitive Restructuring} OR {Cognitive Therapy} OR {Cognitive techniques}

- PubMed

("Gambling"[Mesh]) AND ("Cognitive Therapy"[Mesh])

- Gray literature

- Google and Google Scholar
- Unpublished studies from addiction treatment or research centers in Canada

# Method – Inclusion Criteria

	Inclusion criteria	Exclusion criteria
Population	Primary gambling problem	Primary disorder other than problem gambling
Intervention	Psychological cognitive treatment or psychological treatment that includes one or more CR sessions	Other types of treatment (e.g., pharmacological treatment) or not including CR (behavioral treatment only)
Type of publication	Treatment studies (randomized trial or not)	Others : review and meta-analysis, survey, prevention studies
Language	French or English	Other languages

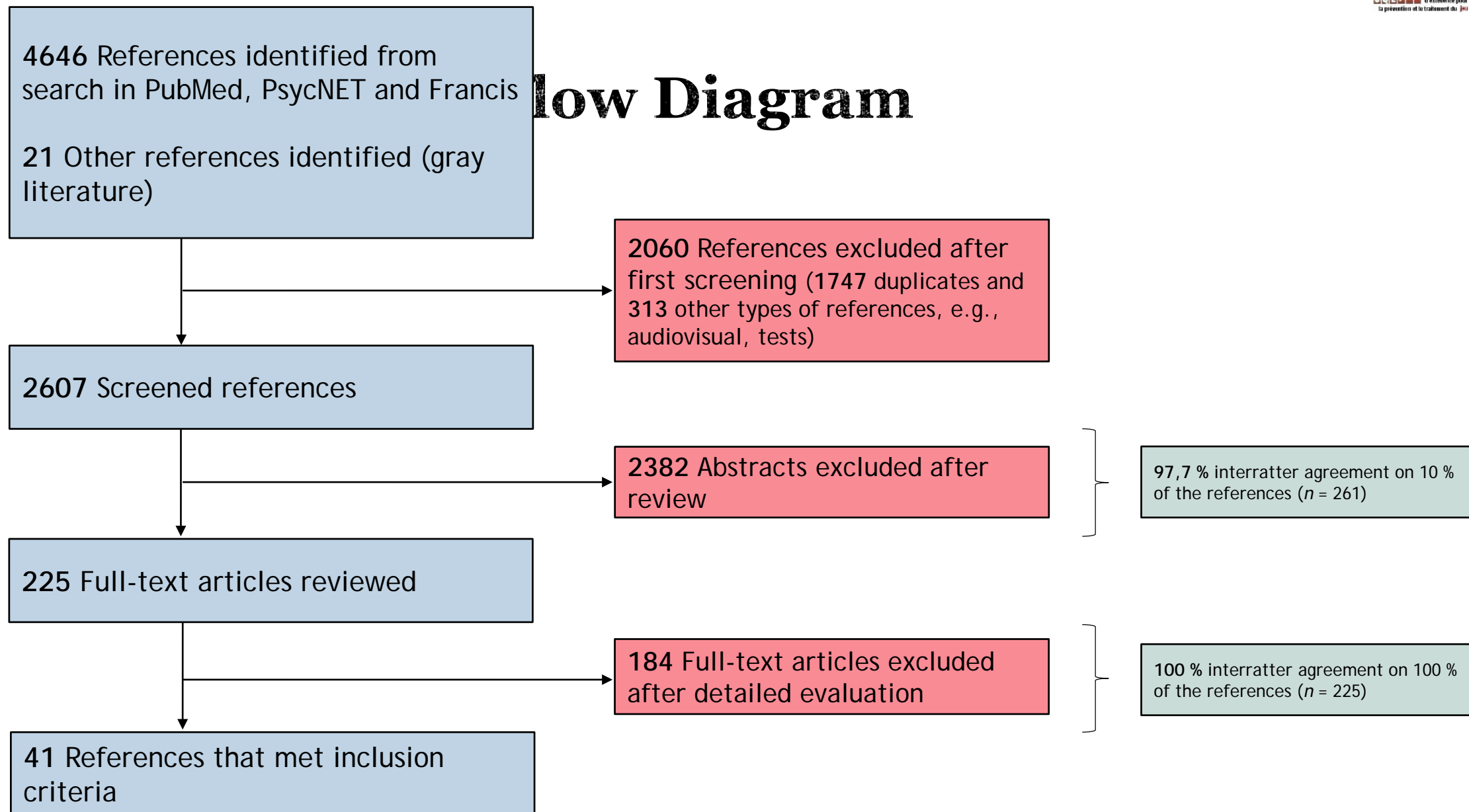
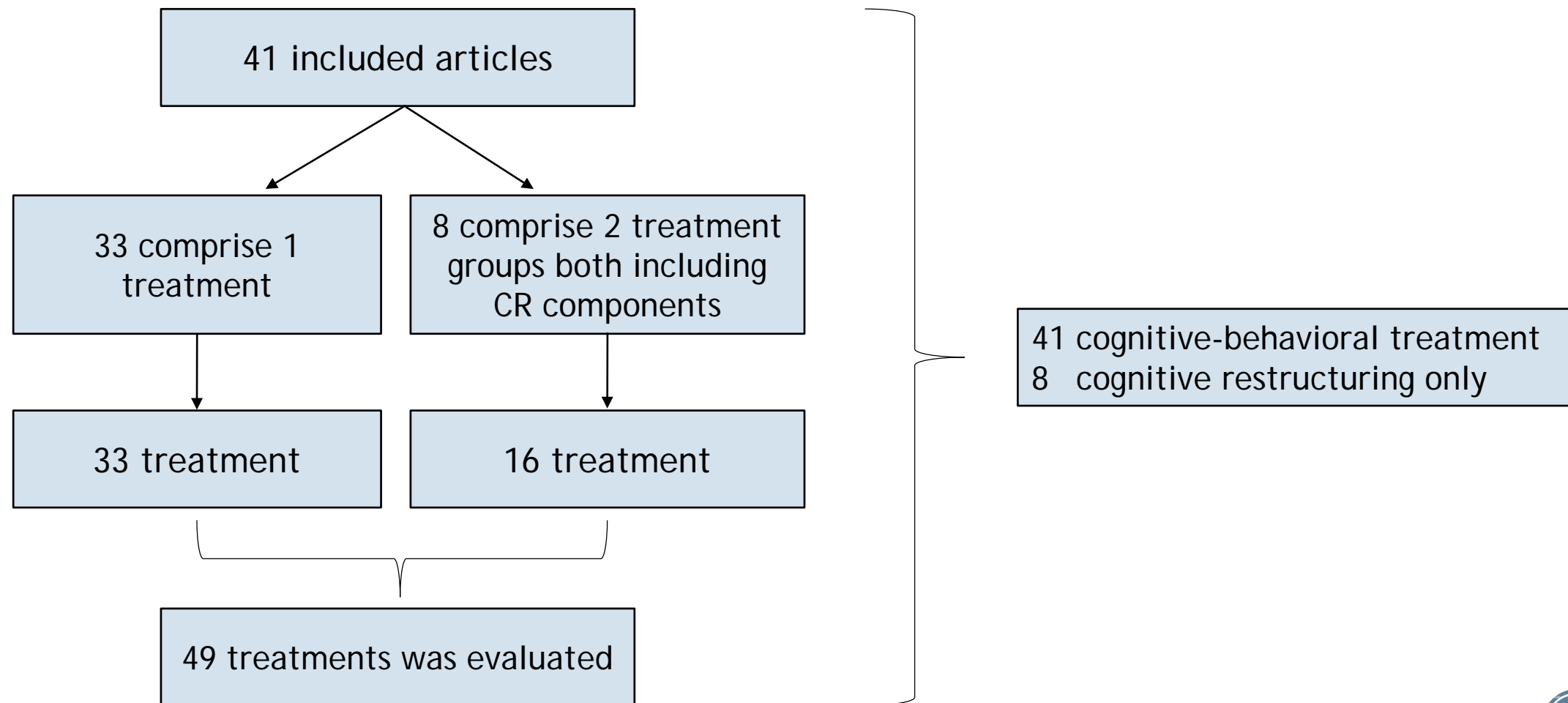


Figure 1. Flow diagram (The PRISMA Group, 2009)

# Results - Terminology

- 61 % of the studies used several terminologies to refer to gamblers' thoughts
  - 14.6 % used Erroneous thoughts (56.1 %)
  - 24.5 % used Cognitive distortions (29.3 %)
  - 14.6 % used 2 Irrational thoughts (19.5 %)
  - 19.5 % used 1 Unadapted thoughts (9.8 %)
  - 14.6 % do not refer to gamblers' thoughts Dysfunctional thoughts (9.8 %)

# Results – Study Characteristics



# Results – Treatment Objectives and Outcome Measures

- Treatment objective reported in 95.1 % of studies
  - 17 (41.5 %) have specific objectives with respect to gamblers' thoughts
- Treatment objectives are mainly based on indicators
  - Gambling disorder is manifested by indicators such as:
    - “reduce the number of gambling-related thoughts”
    - “increase the number of adequate thoughts related to chance”
  - No diagnostic criteria related to the amount of money spent gambling
- Only 5 studies (12.1 %) report effectiveness of treatment
- Thoughts - Behaviors - Emotions are interdependent (Beck, 1963)
- Gambling-related thoughts = risk factor (Blaszczynski & Silove, 1995; Gaboury & Ladouceur, 1989; Ladouceur, 2004)

# Results – Treatment Modalities

- Availability
  - Face-to-face : 83.7 %
    - All CR-only treatment are performed in face-to-face ( $n = 8$ )
- Format
  - Individual : 65.9 %
  - Group : 31.7 %
  - Both : 2.4 %
    - Among the 8 CR-only treatment, 6 are performed in individual
- Duration
  - CR in CBT makes up for 10 to 50 % of sessions
  - CR-only treatment : short to medium term (6 sessions to 20 hours of intervention)



# Results – Techniques and Tools

- 74.2 % of studies identify techniques and tools to perform CR
  - Psychoeducation
    - Explain the true odds of winning and the concept of randomness
  - Exposure to access gamblers' thoughts
    - Imaginal
    - *In vivo*
  - Different types of worksheets (visual support) to confront gamblers' thoughts
    - Teach links between thoughts, feelings and behavior (Node-Link-Mapping)
    - *ABCD* exercise
    - Cue-cards (thought checklist)

# Results – Skill game-related Thoughts

- Of the 41 studies included, 59.4 % recruited skill game gamblers
- None provides explanation about how to identify or correct their thoughts
- None provides information about a possible adaptation of CR
  - Did therapists perform CR with these gamblers the same way they did with chance game gamblers ?
  - If so... is this because their thoughts do not differ from those of chance game gamblers ?
- According to Delfabbro (2004), these gamblers have different thoughts
- Lack of knowledge concerning skill game-related thoughts:
  - Contribute to the therapists' difficulties applying CR with skill game gamblers (Papineau et al., 2005) ?

# Conclusion & Recommendations

- Terms used to designate gambling-related thoughts should be properly defined across studies
- Difficult for therapist to learn CR from the reading of studies
  - No extensive treatment description and few examples on how to use the tools
    - Several constraints by journals (number of words and tables, appendices, etc.)
- Therapists who wish to use evidence-based interventions should have access to the treatment manuals

# Strengths & Limitations

- Limitations
  - No effect size was calculated to evaluate effectiveness of CR-only
    - Need for a meta-analysis
  - No descriptive evaluation of treatment manuals
- Strengths
  - First review on that subject
  - Systematic review with a rigorous methodology
    - Interrater agreements for the study selection and for the data extraction
- Future studies should compare the effectiveness of CR applied to chance game vs. skill game gamblers
  - Is CR as effective with skill game gamblers, in comparison with chance game gamblers?
  - If not, how should CR be adapted?

# Thank you !

## Any questions ?

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