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Université de Montréal

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Étude des intrusions cognitives et des croyances dysfonctionnelles
reliées au trouble obsessionnel-compulsif

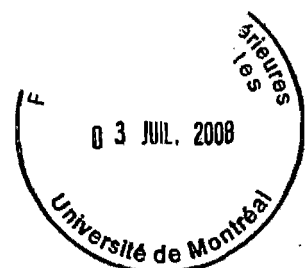
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Thèse présentée à la Faculté des études supérieures
en vue de l'obtention du grade de doctorat
en psychologie,
option recherche/intervention

Février, 2008

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**Université de Montréal
Faculté des études supérieures**

Cette thèse intitulée :

**Étude des intrusions cognitives et des croyances dysfonctionnelles
reliées au trouble obsessionnel-compulsif**

présentée par :

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a été évaluée par un jury composé des personnes suivantes :

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Résumé

Selon les modèles cognitifs récents du trouble obsessionnel-compulsif (TOC), la majorité des individus non cliniques ont des pensées, images ou impulsions intrusives similaires aux obsessions des individus présentant le TOC. Ceux-ci entretiendraient cependant des croyances dysfonctionnelles à propos de leurs intrusions cognitives, faisant en sorte que ces dernières se développent en obsessions. Les individus non cliniques ne partageraient pas ces croyances dysfonctionnelles et ignoreraient alors plus facilement leurs intrusions cognitives. Cette thèse a pour objectif global d'évaluer de façon théorique et empirique quelques aspects des modèles cognitifs récents du TOC.

La version française d'un questionnaire mesurant les croyances dysfonctionnelles reliées au TOC (*l'Obsessive Beliefs Questionnaire*) a été validée auprès d'un échantillon de 280 participants présentant le TOC. La version française du questionnaire présente une solution factorielle similaire à celle de la version originale, ainsi qu'une bonne validité convergente et divergente. Des analyses de covariance (contrôlant pour l'anxiété et la dépression) comparant les participants présentant le TOC et les participants non cliniques ($N = 465$) révèlent que les premiers endossent significativement plus les croyances dysfonctionnelles reliées au TOC que les derniers. Des analyses de variance indiquent que les participants présentant le TOC endossent significativement plus les croyances dysfonctionnelles que les participants présentant un trouble panique ($N = 21$) et que les participants non cliniques.

L'hypothèse selon laquelle l'importance des croyances dysfonctionnelles varie selon le sous-type du TOC des participants (p. ex. : contamination, vérification) a été examinée auprès d'un échantillon de 126 individus présentant le TOC. Des analyses de covariance (contrôlant pour l'anxiété) révèlent que le sous-type de rumination présente davantage les croyances reliées à l'importance/contrôle des pensées que le

sous-type de contamination. Des analyses de régressions contrôlant pour l'anxiété et la dépression suggèrent que les croyances de responsabilité/estimation du danger sont liées au sous-type de rumination, que les croyances de perfectionnisme/intolérance à l'incertitude sont en lien avec les sous-types de vérification et de symétrie, et que les croyances d'importance/contrôle des pensées sont liées au sous-type de phobie d'impulsion.

Un examen critique de la littérature suggère que les études portant sur l'universalité des intrusions cognitives chez les individus non cliniques comportent des limites susceptibles d'avoir faussé l'estimation de la prévalence des intrusions cognitives, notamment au niveau de la validité de contenu, et de la validité convergente et divergente. Un nouveau questionnaire mesurant la présence de pensées, images et impulsions intrusives a donc été développé et validé auprès d'un échantillon de 24 participants présentant le TOC et de 90 participants non cliniques. Ce questionnaire présente des qualités psychométriques se comparant avantageusement à celles de ses prédécesseurs. Tous les participants non cliniques de l'échantillon ont présenté au cours de leur vie des pensées, images et impulsions intrusives similaires à celles des individus présentant le TOC, mais elles se produisaient dans un contexte différent, étant davantage provoquées par des stimuli que celles des participants présentant le TOC.

Les implications de ces résultats pour les modèles cognitifs récents du TOC sont discutées.

Mots clés : Trouble obsessionnel-compulsif, sous-types, intrusions cognitives, obsessions, croyances dysfonctionnelles, contexte, validation, questionnaire

Abstract

Recent cognitive models of obsessive-compulsive disorder (OCD) suggest that the majority of non-clinical individuals experience intrusive thoughts, images, and impulses that are similar to the obsessions of individuals with OCD. The latter would appraise their cognitive intrusions on the basis of dysfunctional beliefs, leading the cognitive intrusions to escalate into obsessions. Non-clinical individuals would not consider the occurrence and content of cognitive intrusions to have a special significance, and therefore these cognitive intrusions would be easily dismissed. The global aim of this thesis is to investigate theoretically and empirically some aspects of recent cognitive models of OCD.

The French version of a questionnaire measuring the dysfunctional beliefs related to OCD (the *Obsessive Beliefs Questionnaire*; OBQ) has been validated in a sample of 280 participants with OCD. The factor solution of the French version of the questionnaire was similar to the original version; the questionnaire showed a good convergent and divergent validity. Analyses of covariance (controlling for anxiety and depression) comparing participants with OCD and non-clinical participants ($N = 465$) revealed that the participants with OCD scored higher on the OBQ than the non-clinical participants. Analyses of variance showed that participants with OCD scored higher on the OBQ than participants with an anxiety disorder other than OCD ($N = 21$) and than non-clinical participants.

The hypothesis that specific OCD symptom subtypes (e. g. washing, checking) are characterized by specific dysfunctional beliefs was investigated in a sample of 126 participants with OCD. Analyses of covariance (controlling for anxiety) revealed that the participants in the rumination symptom subtype scored higher on Importance/Control of Thoughts than the participants in the washing subtype. Regression analyses controlling for anxiety and depression revealed that Responsibility/Threat Estimation predicted rumination scores,

Perfectionism/Certainty predicted checking and precision scores, and Importance/Control of Thoughts predicted impulse phobia scores.

A critical review of the literature suggested that studies investigating the universality of cognitive intrusions in non-clinical individuals have important limitations that might impact on the estimates of the prevalence of cognitive intrusions, especially regarding content validity, and convergent and divergent validity. A new questionnaire measuring intrusive thoughts, images, and impulses has been developed and validated in samples of 24 participants with OCD and 90 non-clinical participants. The psychometric properties of this questionnaire compared advantageously to previous measures of cognitive intrusions. All non-clinical participants experienced cognitive intrusions which were similar to obsessions, but they occurred in a different context: The intrusive thoughts, images, and impulses of non-clinical participants were more likely to be triggered by observations in the here and now than the intrusive thoughts, images, and impulses of participants with OCD.

The implications of these results for the current cognitive models of OCD are discussed.

Keywords: Obsessive-compulsive disorder, subtypes, cognitive intrusions, obsessions, dysfunctional beliefs, context, validation, questionnaire

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LISTE DES ABRÉVIATIONS

AC : Anxious controls

ADIS-IV : Anxiety disorders interview schedule for DSM-IV

ANCOVAs : Analyses of covariance

ANOVAs : Analyses of variance

APA : American Psychiatric Association

BAI : Beck Anxiety Inventory

BDI : Beck Depression Inventory

C1, C2 et C3 : Contexte de la première, deuxième et troisième intrusion cognitive sélectionnée dans l'II

CFI : Comparative Fit Index

CI1, CI2 et CI3 : Première, deuxième et troisième intrusion cognitive sélectionnée dans l'II

CT : Cognitive therapy

DSM-IV : Diagnostic and statistical manual of mental disorders, 4^e édition

ERP : Exposure and response prevention

GAD : Generalized anxiety disorder

GFI : Goodness of Fit Index

ICQ : Inferential Confusion Questionnaire

II : Intrusions Inventory

ITs : Intrusive thoughts

NATs : Negative automatic thoughts

NCC : Non-clinical controls

NFI : Normed Fit Index

OBQ : Obsessive Beliefs Questionnaire

OBQ-44 Obsessive Beliefs Questionnaire, version à 44 énoncés

OBQ-87 : Obsessive Beliefs Questionnaire, version à 87 énoncés

OCCWG : Obsessive Compulsive Cognitions Working Group

OCD : Obsessive-compulsive disorder

OII : Obsessional Intrusions Inventory

OVI : Overvalued ideas

p. ex. : Par exemple

PI : Padua Inventory

PI-R : Padua Inventory-Revised

RMSEA : Root Mean Square Error of Approximation

SPSS : Statistical Package for the Social Sciences

TLI : Tucker-Lewis Index

TOC : Trouble obsessionnel-compulsif

YBOCS ou Y-BOCS : Yale-Brown Obsessive Compulsive Scale

REMERCIEMENTS

Mes premiers remerciements vont de plein droit à Kieron O'Connor, mon directeur de thèse. Merci, Kieron, pour ton temps, ton dévouement, tes idées, tes suggestions, ta grande disponibilité, ton humour irlandais... Merci aussi de m'avoir fait confiance. Plusieurs de mes collègues étudiants ont eu des conflits avec leur directeur de thèse. Ça n'a pas été mon cas. Si tout était à refaire, je reprendrais sans aucune hésitation le même directeur. C'est tout dire.

Thanks to Frederick Aardema, who in many regards acted as a co-director...without being paid for it.

Merci également au Fonds de recherche en santé du Québec, qui par son soutien financier a permis la réalisation des travaux contenus dans cette thèse.

Que serait également la recherche scientifique sans les participants? J'espère que la recherche aura su vous donner en retour.

Ont également contribué à cette thèse Ariane Fontaine, Sébastien Grenier, Anick Laverdure, Annie Taillon, et France Quevillon, qui ont travaillé à l'entrée des données, à la gestion des fichiers ou autre.

Sur une note plus personnelle, merci à mes parents pour ces petites et grandes choses.

Finalement, salutations à Audrey Bertrand, Avril Blanchet et Rachel Boisjoli, des personnes bien spéciales chacune à leur manière : Audrey pour sa persévérance, Avril pour sa sensibilité, et Rachel pour son équilibre et sa justesse.

INTRODUCTION

Environ 2,5% des individus répondront au cours de leur vie aux critères diagnostiques du trouble obsessionnel-compulsif (TOC) (American Psychiatric Association [APA], 1994). Les personnes présentant un TOC sont assaillies par des obsessions, généralement accompagnées de compulsions. Les obsessions sont des pensées, des images ou des impulsions intrusives, répétitives, inacceptables et non désirées, qui peuvent ne pas correspondre à la personnalité de l'individu (« Ça ne me ressemble pas de penser à ça! ») et qui ne sont pas des inquiétudes à propos des problèmes quotidiens (p. ex. : le travail, l'argent). Les compulsions sont des comportements observables ou mentaux que les individus se sentent poussés à accomplir de manière répétitive afin de réduire la détresse causée par les obsessions ou afin de prévenir un événement jugé négatif (APA, 1994; Rachman & Hodgson, 1980). Le TOC touche autant les hommes que les femmes, et apparaît généralement de façon graduelle, au cours de l'adolescence ou au début de l'âge adulte (APA, 1994). Le TOC est une des problématiques qui répond le moins bien à la thérapie. En tenant compte des participants qui refusent ou qui ne complètent pas le traitement, environ 50% des gens qui présentent le TOC voient leurs difficultés liées au TOC diminuer de façon significative. Vingt-cinq pourcent de ceux-ci (i.e., de ce 50%) ne répondront plus aux critères diagnostiques du TOC à la fin du traitement (Eddy, Dutra, Bradley, & Westen, 2004).

Les premières descriptions de ce qui serait reconnu aujourd'hui comme étant le TOC ont été évoqués il y a plusieurs siècles déjà. À cette époque, on attribuait l'origine des obsessions et des compulsions à des causes surnaturelles, telles qu'être possédé par des esprits. Les premiers modèles psychologiques du TOC postulaient plutôt que des conflits inconscients étaient à la base des obsessions et des compulsions (Carter, Pauls, & Leckman, 1995). Par exemple, pour Freud, la neurose obsessionnelle (i.e. le TOC) est provoquée par un conflit concernant les pulsions sexuelles et agressives chez une personne fixée au stade anal ou qui a régressé à ce stade. Chez un tel individu, les pulsions sexuelles et agressives provoqueraient une vive anxiété contre laquelle l'individu se protégerait en utilisant des mécanismes de défense. Selon cette perspective,

les obsessions et les compulsions seraient la manifestation observable du conflit entre la gratification d'une pulsion et la défense contre cette même pulsion (Freud, 1958).

Le neurologue et psychologue Janet regroupe plutôt les manifestations obsessionnelles et compulsives avec les tics, les phobies et la dépersonnalisation, et leur donne le nom de psychasthénie. Janet postule que l'esprit humain est constitué de différentes fonctions hiérarchisées et qu'une énergie psychique circule à travers les nerfs. Selon lui, la psychasthénie est caractérisée par un déséquilibre au niveau des fonctions de l'esprit et de l'énergie psychique (Carter et al., 1995).

Le modèle behaviorale du TOC (voir la figure 1) propose que les peurs obsessionnelles naissent d'un conditionnement classique et qu'elles sont maintenues par un conditionnement opérant. Par exemple, une poignée de porte (stimulus neutre) peut devenir un stimulus conditionnel entraînant la peur si un individu associe le fait d'avoir touché une poignée de porte au fait d'avoir attrapé une maladie (stimulus inconditionnel). Cette peur obsessionnelle est maintenue par renforcement négatif : le lavage compulsif des mains après avoir touché une poignée de porte et l'évitement des poignées de portes réduisent l'inconfort et la possibilité qu'une conséquence négative (tomber malade) ne se produise, augmentant ainsi la probabilité que ces comportements soient émis à nouveau (Taylor, 2005). Un traitement behaviorale du TOC a été développé, basé sur l'exposition (la mise en contact avec l'élément craint, ici les poignées de portes) et la prévention de la réponse (l'absence du lavage des mains).

Cependant, une importante constatation a dirigé la compréhension et le traitement du TOC vers une nouvelle avenue. Cette constatation, c'est que la vaste majorité des individus non cliniques (entre 78 et 100% selon les études) sont également confrontés, au cours de leur existence, à des intrusions cognitives dont le contenu est similaire à celui des obsessions des individus présentant un TOC (p. ex. : Purdon & Clark, 1993; Rachman & de Silva, 1978; Salkovskis & Harrison, 1984). Les intrusions cognitives sont des pensées, des images ou des impulsions répétitives, désagréables, involontaires, difficiles à contrôler, apparaissant brusquement dans la conscience, et pouvant être jugées

comme irrationnelles, irréalistes et egodystones (Yao, Cottraux, Martin, & Bouvard, 1996). Les deux types d'intrusions (i.e. les intrusions cognitives et les obsessions) sont donc similaires quant à leurs thèmes (p. ex. : contamination, vérification, phobie d'impulsion), leur forme (pensées, images, impulsions) et leurs caractéristiques (p. ex. : intrusives, répétitives, egodystones). Par contre, les obsessions sont plus fréquentes, anxiogènes, intenses et difficiles à contrôler que les intrusions cognitives (Rachman, & de Silva, 1978).

Si les individus non cliniques et ceux présentant le TOC sont confrontés à des intrusions qui sont similaires quant à leur forme et à leur contenu, comment expliquer que les individus non cliniques soient peu affectés par ce genre d'intrusions, alors que les individus présentant le TOC en soient troublés au point de s'engager dans des comportements ritualisés visant à diminuer leur détresse? Les modèles cognitifs récents du TOC (voir la figure 2) proposent que ce ne sont pas les intrusions qui sont problématiques pour les individus présentant le TOC –puisque à peu près tout le monde a ce type d'intrusions–, mais plutôt la signification qu'ils donneront à la présence et au contenu de leurs intrusions (Freeston, Rhéaume, & Ladouceur, 1996; Rachman, 1997, 1998; Salkovskis, 1985, 1989, 1999). Pour les individus présentant un TOC, cette interprétation s'effectuerait sur la base de croyances dysfonctionnelles, soit des croyances relativement stables et générales entretenues par les individus, prenant de façon caractéristique la forme d'attitudes dysfonctionnelles ou de pensées irrationnelles (Obsessive Compulsive Cognitions Working Group [OCCWG], 1997). Ces croyances dysfonctionnelles proviendraient de l'expérience passée. Le sens donné aux intrusions sur la base des croyances dysfonctionnelles provoquerait de l'anxiété et pousserait les individus présentant le TOC à faire des compulsions qui réduiraient à court terme l'anxiété. Les compulsions seraient maintenues par renforcement négatif. De leur côté, les individus non cliniques n'entretiendraient pas ces croyances dysfonctionnelles et ignoreraient alors plus facilement leurs intrusions cognitives (Rachman, 1997; Salkovskis, 1989). Par exemple, un individu présentant le TOC et un individu non clinique pourraient tous deux avoir la pensée « Peut-être que je pourrais poignarder mon

enfant sans le vouloir vraiment ». L'individu présentant le TOC pourrait interpréter cette pensée comme étant révélatrice de sa véritable nature agressive et l'amener à faire un rituel mental afin de se sécuriser, alors que l'individu non clinique pourrait se dire que cette pensée n'est pas significative et l'ignorer ensuite facilement. Six croyances dysfonctionnelles présumées centrales au TOC ont été identifiées : un sentiment de responsabilité excessif, une importance excessive accordée aux pensées, un besoin excessif de contrôler les pensées, une surestimation du danger, une intolérance à l'incertitude et un besoin de perfectionnisme (OCCWG 1997).

Les modèles cognitifs récents du TOC reposent donc sur deux prémisses (Hallam & O'Connor, 2002) : (1) la majorité des individus non cliniques ont des intrusions cognitives similaires aux obsessions; et (2) la façon dont les intrusions cognitives sont interprétées détermine si elles se développent ou non en obsessions.

Bien que la première prémisse bénéficie d'un support empirique considérable (voir Edwards & Dickerson, 1987; England & Dickerson, 1988; Freeston, Ladouceur, Thibodeau, & Gagnon, 1991; Niler & Beck, 1989; Parkinson & Rachman, 1981a, 1981b; Purdon & Clark, 1993, 1994; Rachman & de Silva, 1978; Salkovskis & Harrison, 1984; Wells & Morrison, 1994; Yao, Cottraux & Martin, 1999; Yao et al., 1996), les études ayant évalué la prévalence des intrusions cognitives chez les individus non cliniques comportent des limites importantes susceptibles d'en avoir faussé l'estimation (Clark & Purdon, 1995). Notamment, certains énoncés des questionnaires portant sur la présence d'intrusions cognitives ne mesuraient pas ce concept, mais plutôt celui des inquiétudes des gens présentant le trouble d'anxiété généralisée et celui des pensées automatiques négatives de gens d'humeur dépressive. Clark et Rhyno (2005) ont suggéré que les pensées automatiques négatives sont plus fréquentes que les intrusions cognitives. Il pourrait en être de même pour les inquiétudes. L'inclusion d'inquiétudes et de pensées automatiques négatives dans les questionnaires mesurant la prévalence des intrusions cognitives peut donc en avoir faussé l'estimation. La prévalence des intrusions cognitives pourrait alors être inférieure à ce qui est généralement admis, peut-être au point de

remettre en question l'universalité des intrusions cognitives chez les individus non cliniques. Aussi, certains thèmes obsessionnels (accumulation, besoin d'ordre et de symétrie, perfectionnisme) étaient sous-représentés dans la liste des énoncés des questionnaires mesurant les intrusions cognitives. S'il s'avérait que ces thèmes ne sont pas présents chez les individus non cliniques, alors des paramètres autres que le sens donné aux intrusions cognitives distingueraient les individus non cliniques de ceux présentant le TOC, pour certains thèmes obsessionnels à tout le moins. Finalement, les corrélations entre les questionnaires mesurant les intrusions cognitives et ceux mesurant le TOC ne sont généralement pas plus élevées que les corrélations entre les questionnaires mesurant les intrusions cognitives et ceux mesurant l'anxiété ou la dépression, ce qui va à l'encontre de l'hypothèse selon laquelle les intrusions cognitives et les obsessions sont sur un même continuum (Clark & O'Connor, 2005; Salkovskis, 1985; Rachman, 1981, 1997; Taylor, 2002).

Concernant la seconde prémisse, un questionnaire mesurant les croyances dysfonctionnelles reliées au TOC, l'*Obsessive Beliefs Questionnaire* (OBQ), a été développé et validé dans sa version originale anglaise (OCCWG, 2001, 2003, 2005). Une version française de l'OBQ est disponible, mais n'a pas encore été validée. Les modèles cognitifs récents du TOC postulent que les résultats obtenus à l'OBQ par les individus présentant le TOC seront significativement plus élevés que ceux des individus présentant un trouble anxieux autre que le TOC et que ceux des individus non cliniques. Au premier abord, des recherches empiriques supportent cette hypothèse (OCCWG, 2005; Tolin, Worhunsky, & Maltby, 2006). Par contre, lorsque l'on tient compte de l'influence de la dépression et l'anxiété en contrôlant ces variables, la très grande majorité des différences sur l'OBQ entre les individus présentant le TOC, les individus présentant un trouble anxieux autre que le TOC et les individus non cliniques s'estompent, ce qui va à l'encontre de la seconde prémisse des modèles cognitifs récents du TOC (Tolin et al., 2006).

Aussi, le TOC est trouble hétérogène, qui comprend généralement cinq sous-types : la contamination, la vérification, la phobie d'impulsion, la rumination, ainsi que le besoin d'ordre et de symétrie (van Oppen, Hoekstra, & Emmelkamp, 1995). Il a été avancé que les sous-types du TOC pourraient être davantage caractérisés par certaines croyances dysfonctionnelles que par d'autres (Clark, 2002; OCCWG, 2003; Purdon & Clark, 2002; Thordarson & Shafran, 2002). Par exemple, le sous-type de phobie d'impulsion pourrait être caractérisé par l'importance excessive accordée aux pensées et le besoin excessif de contrôler les pensées, alors que le sous-type de vérification pourrait être caractérisé par le sentiment de responsabilité excessif et la surestimation du danger. Deux études empiriques auprès de participants présentant le TOC soutiennent l'hypothèse d'un lien particulier entre les sous-types du TOC et les croyances dysfonctionnelles (OCCWG, 2005; Tolin, Brady, & Hannan, sous presse), mais les liens particuliers qu'elles identifient ne sont pas concordants.

Globalement, il apparaît que les modèles cognitifs récents du TOC sont moins bien fondés empiriquement qu'il n'appert au premier abord. Clark et Purdon (1995) ont fait une critique pertinente des questionnaires mesurant les intrusions cognitives, mais des critiques additionnelles aux modèles cognitifs récents du TOC peuvent être soulevées. Aussi, un paramètre autre que la façon d'interpréter les intrusions cognitives pourrait distinguer les individus non cliniques de ceux présentant le TOC. En effet, les modèles cognitifs récents du TOC négligent le contexte dans lequel se produisent les intrusions. Par contexte, nous entendons la situation qui entoure l'apparition d'une intrusion, notamment la présence ou l'absence d'un stimulus déclencheur et le discours interne que se tient un individu. Bien que les obsessions et les intrusions cognitives partagent des thèmes communs, O'Connor, Aardema, et Pélissier (2005) ont avancé que les intrusions cognitives sont justifiées par des indices clairs, présents dans leur contexte d'apparition, alors que les obsessions ne sont pas provoquées par des stimuli présents dans la situation entourant leur apparition. Par exemple, un individu non clinique pourrait avoir la pensée intrusive « Peut-être que la porte n'est pas barrée » après avoir entendu un bruit étrange

en tournant la clef, un individu présentant un TOC parce qu'il doute tout simplement d'avoir verrouillé la serrure.

La présente thèse porte donc sur l'évaluation critique et empirique des modèles cognitifs récents du TOC, notamment en examinant à l'aide d'études de validation de questionnaires et de comparaisons entre groupes le lien entre le contenu des intrusions cognitives, les croyances dysfonctionnelles, et le TOC. Selon ce qui précède, les questionnaires actuels mesurant la présence d'intrusions cognitives présentent d'importantes limites, notamment en ce qui concerne la validité de contenu. Un nouveau questionnaire mesurant les pensées, images et impulsions intrusives reliées au TOC est donc requis, et ce, afin d'examiner si le pourcentage d'individus non cliniques présentant des intrusions cognitives a été justement évalué. S'il s'avérait que ce pourcentage devait être révisé à la baisse, cela pourrait impliquer que l'expérience d'intrusions cognitives n'est pas un phénomène normal, ce qui contredirait la première prémisse des modèles cognitifs récents du TOC. Il appert aussi primordial pour les modèles cognitifs récents du TOC de supporter empiriquement la deuxième prémisse qui propose que les croyances dysfonctionnelles sont spécifiques au TOC (i.e., davantage endossées par les individus présentant le TOC que par les individus présentant un trouble anxieux autre que le TOC ou que par les individus non cliniques) indépendamment de l'anxiété et de la dépression. À défaut de ce faire, les croyances dysfonctionnelles ne joueraient pas le rôle crucial que leur prêtent les modèles cognitifs récents du TOC dans l'étiologie du trouble. Ces modèles ne pourraient en effet expliquer pourquoi les intrusions cognitives se transforment en obsessions pour les individus présentant le TOC alors qu'elles sont facilement ignorées pour les individus non cliniques, ni pourquoi certains individus développent le TOC alors que d'autres développent un trouble anxieux autre que le TOC. Des différences entre les nationalités (p. ex. : américaine, française, grecque) ayant été rapportées pour l'OBQ (l'instrument mesurant les croyances dysfonctionnelles) (OCCWG, 2005), il semble important de valider la version française de cet instrument. Au niveau conceptuel, il est également essentiel que les modèles cognitifs récents du TOC parviennent à expliquer les liens entre les croyances dysfonctionnelles et les sous-types du TOC (Tolin et al., 2006).

Avant de ce faire, la nature de ces liens doit être précisée. Finalement, un paramètre ignoré par les modèles cognitifs récents du TOC, le contexte d'apparition des intrusions, doit être examiné. Des différences dans le contexte d'apparition des intrusions des individus non cliniques et présentant le TOC devraient être expliquées et pourraient impliquer que des processus autres que la façon d'interpréter les intrusions cognitives jouent un rôle dans l'étiologie des obsessions. Les articles qui suivent visaient à apporter un éclairage sur ces sujets fondamentaux pour les modèles cognitifs récents du TOC.

Le premier article avait pour objectif de valider la version française de l'OBQ auprès d'un échantillon de participants présentant le TOC. Une collaboration avec des équipes des villes de Québec et de Lyon nous a permis de recueillir un échantillon de 280 participants présentant le TOC. Dans cet article, nous avons évalué la structure factorielle de l'OBQ, sa cohérence interne, sa stabilité temporelle, et sa validité convergente et divergente. Une autre objectif de cet article était d'examiner l'hypothèse selon laquelle les croyances dysfonctionnelles caractérisent davantage les participants présentant le TOC que les participants présentant un trouble anxieux autre que le TOC et que les participants non cliniques. Notre échantillon de participants présentant le TOC et des échantillons de 21 participants présentant un trouble panique et de 465 participants non cliniques nous ont permis d'examiner cette hypothèse à l'aide d'analyses de variance et de covariance.

L'objectif du second article était d'évaluer l'hypothèse selon laquelle des liens spécifiques relient les croyances dysfonctionnelles et les sous-types du TOC. Nous disposions pour ce faire d'un échantillon de 126 participants présentant le TOC. Deux stratégies ont été utilisées pour vérifier ces liens. Dans une première série d'analyses, nous avons déterminé à quel sous-type du TOC appartenait chaque participant. Les sous-types représentés étaient la contamination, la vérification, la phobie d'impulsion, la rumination et le besoin de symétrie. Certains participants n'ont pu être classés et ont formé une catégorie dont le sous-type était non spécifique. Nous avons comparé à l'aide d'analyses de covariance (en contrôlant pour l'anxiété et la dépression séparément) si des

sous-types du TOC entretenaient plus que d'autres des croyances dysfonctionnelles. Dans une seconde série d'analyses, nous avons examiné à l'aide de régressions multiples quelles croyances dysfonctionnelles prédisaient le mieux les sous-échelles du TOC de contamination, vérification, phobie d'impulsion, rumination et besoin de symétrie.

Le troisième article visait à faire le bilan des modèles cognitifs récents du TOC en évaluant de façon critique le soutien empirique que recueillent leurs deux prémisses de base. Pour ce faire, notre examen a été guidé par des critères énoncés dans la littérature scientifique ainsi que par des critères additionnels que nous avons identifiés. Cinq critères ont ainsi été considérés pour évaluer la première prémisse des modèles cognitifs actuels du TOC (la normalité des intrusions cognitives). Premièrement, la majorité des individus non cliniques devraient présenter des intrusions cognitives. Deuxièmement, les intrusions cognitives devraient avoir un lien spécifique avec les obsessions. Par exemple, les corrélations entre les mesures d'intrusions cognitives et du TOC devraient être supérieures aux corrélations entre les mesures d'intrusions cognitives et de dépression ou d'anxiété. Troisièmement, les intrusions cognitives devraient pouvoir être différenciées des autres cognitions accompagnants les humeurs dépressives et anxieuses, telles les pensées automatiques négatives et les inquiétudes. Quatrièmement, les énoncés des questionnaires portant sur les intrusions cognitives devraient être représentatifs de l'ensemble des obsessions rencontrées dans le TOC. Par exemple, des obsessions moins courantes telles les idées surévaluées devraient également être représentées dans ces questionnaires. Cinquièmement, les structures factorielles des questionnaires mesurant les intrusions cognitives devraient être similaires. Quatre critères ont été retenus pour évaluer la seconde prémisse des modèles cognitifs récents du TOC (la façon d'interpréter les intrusions cognitives distingue les individus présentant le TOC des autres). Premièrement, les croyances dysfonctionnelles devraient être spécifiques au TOC, c'est-à-dire entretenues davantage par les personnes présentant le TOC que par ceux présentant un trouble anxieux autre que le TOC ou que par les individus non cliniques. Deuxièmement, tous les sous-types du TOC devraient entretenir des croyances dysfonctionnelles. Troisièmement, il devrait être possible d'expliquer théoriquement les

liens entre les croyances dysfonctionnelles et les sous-types du TOC. Quatrièmement, la thérapie cognitive devrait s'avérer un traitement efficace pour le TOC. S'ajoutent à cet examen du soutien empirique des deux prémisses des modèles récents du TOC des considérations concernant les devis expérimentaux utilisés dans les études et l'étiologie des obsessions.

Le quatrième article visait deux objectifs. À la suite des lacunes identifiées dans l'article précédent, nous voulions réévaluer l'hypothèse de la normalité des intrusions cognitives. Pour ce faire, nous avons développé un nouveau questionnaire mesurant les pensées, images et impulsions intrusives reliées au TOC ainsi que leur contexte d'apparition. Nous avons identifié trois liens possibles entre une intrusion et son contexte d'apparition : un lien direct, un lien indirect et une absence de lien. Nous présentons les qualités psychométriques de ce nouvel instrument (validités de contenu, convergente et divergente, stabilité temporelle) validé auprès d'un échantillon de 24 participants présentant le TOC et de 90 participants non cliniques. La proportion d'individus non cliniques présentant des intrusions cognitives similaires aux obsessions des individus présentant le TOC a été évaluée. En second lieu, cet article a examiné l'hypothèse selon laquelle le contexte d'apparition des intrusions cognitives et des obsessions diffère, et ce, en comparant à l'aide d'analyses de variance et de covariance le contexte d'apparition des intrusions de l'échantillon d'individus non cliniques et de l'échantillon d'individus présentant le TOC.

En conclusion, les principaux résultats de la thèse sont exposés et nuancés en vue d'orienter les recherches futures.

Avertissons à l'avance que le lecteur rencontrera certaines inconsistances entre les articles. Par exemple, le premier article de la thèse traite de la validation française de l'OBQ, alors que le second article mentionne que les propriétés psychométriques de la version française de l'OBQ n'ont pas encore été évaluées. Le lecteur comprendra que l'ordre de présentation des articles n'est pas nécessairement l'ordre chronologique dans lequel ils ont été écrits, et que le second article a été rédigé avant le premier.

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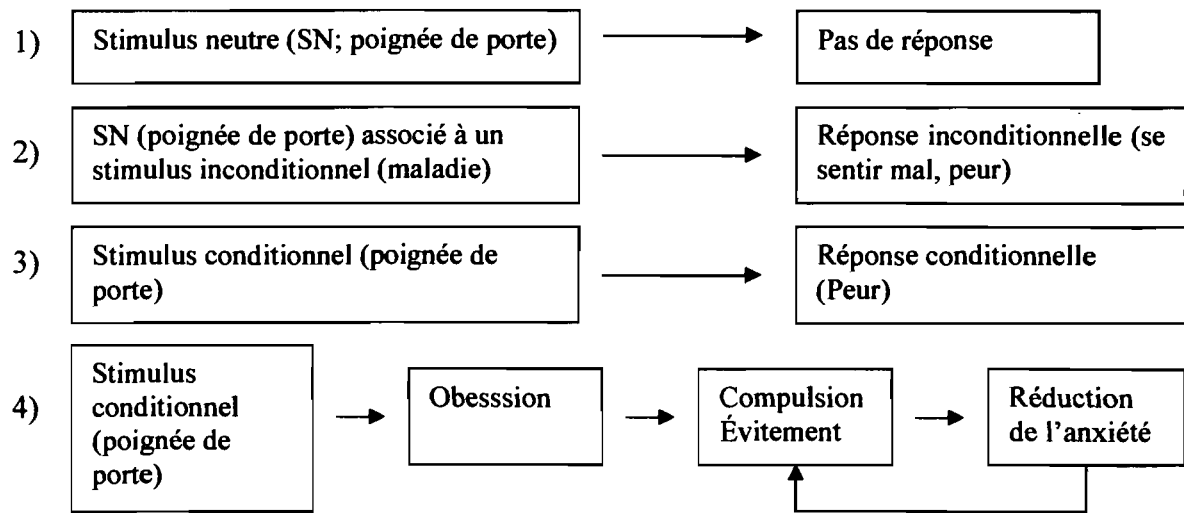


Figure 1. Le modèle behavioral du TOC

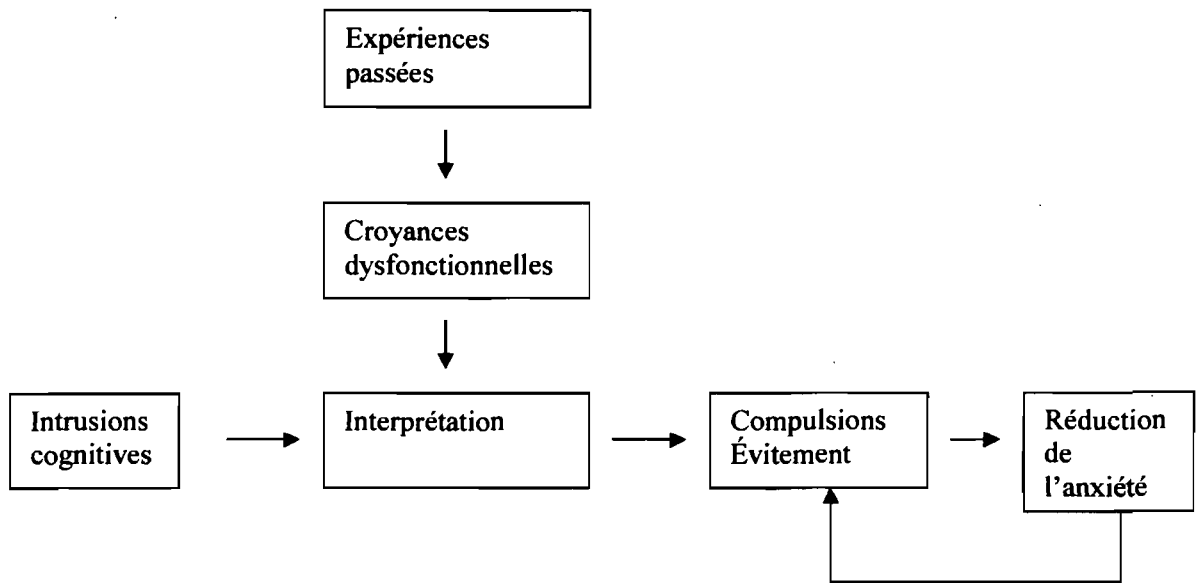


Figure 2. Les modèles cognitifs récents du TOC

PREMIER ARTICLE¹

Specificity of belief domains in OCD: Validation of the French version of the
Obsessive Beliefs Questionnaire and a comparison across samples

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¹Cet article est sous presse dans *Journal of Anxiety Disorders*, Julien, D., Careau, Y., O'Connor, K. P., Bouvard, M., Rhéaume, J., Langlois, F., Freeston, M. H., Radomsky, A. S., & Cottraux, J., Specificity of belief domains in OCD: Validation of the French version of the *Obsessive Beliefs Questionnaire* and a comparison across samples, Copyright Elsevier (2008).

Abstract

This paper assesses the psychometric properties of the French version of the *Obsessive Beliefs Questionnaire* (OBQ-44) and investigates whether the questionnaire discriminates between obsessive-compulsive disorder (OCD), anxious control (AC), and non-clinical control (NCC) participants. A confirmatory factor analysis suggested a poor fit of the model. An exploratory factor analysis replicated the original factor structure. The subscales were moderately intercorrelated and highly correlated with the total score. There was partial support for convergent/divergent validity of the OBQ-44. In analyses of variance comparing the three samples, the participants in the OCD sample scored significantly higher than the participants in the AC and NCC samples on all of the OBQ-44 scores. In analyses of covariance comparing the OCD and NCC samples while controlling for general distress and age, the participants with OCD scored significantly higher than the NCC participants on all of the OBQ-44 scores. Implications of the current study are discussed.

Keywords: Obsessive-compulsive disorder, Cognitions, Beliefs, Questionnaires, Psychometrics, Validation

From time to time almost everyone experiences intrusive thoughts, images, or impulses that are similar in content to the obsessions of people suffering from obsessive-compulsive disorder (OCD) (Purdon & Clark, 1993; Rachman & de Silva, 1978; Salkovskis & Harrison, 1984). However, the subjective reaction to these cognitive intrusions differs dramatically: people without mental health problems apparently dismiss them easily, whereas people with OCD feel compelled to neutralize them by performing overt or covert compulsive behaviors. According to the cognitive model of OCD, the difference in subjective reaction lies in the meaning (appraisal) given to these cognitive intrusions. On the one hand, people with OCD are hypothesized to appraise the occurrence and content of their cognitive intrusions as significant and meaningful on the basis of particular dysfunctional beliefs which are believed to contribute to their escalation into obsessions (Obsessive Compulsive Cognitions Working Group [OCCWG], 1997; Rachman, 1997, 1998; Salkovskis, 1985, 1989). On the other hand, people without mental health problems would not consider the occurrence and content of cognitive intrusions to have a special significance and so these cognitive intrusions are easily dismissed (Rachman, 1997, 1998; Salkovskis, 1989).

The OCCWG (1997), an international group of leading researchers and theoreticians in the OCD field, identified six rationally derived belief domains central to OCD: inflated responsibility, overestimation of threat, perfectionism, intolerance of uncertainty, overimportance of thoughts, and control of thoughts. The *Obsessive Beliefs Questionnaire*, an 87 item measure (OBQ-87; OCCWG, 2001, 2003), was developed to assess these six belief domains.

The hypothesis that individuals with OCD hold the rationally derived belief domains more strongly than healthy volunteers has been empirically supported (Anholt et al., 2004; OCCWG, 2001, 2003). In comparison to other anxious disorders (e.g. generalized anxiety disorder, panic disorder with or without agoraphobia, social phobia), the belief domains have been hypothesized to be either OCD-specific

(endorsed more strongly by people with OCD than by people with other anxiety disorders) or OCD-relevant (endorsed equally by people with OCD and other anxiety disorders) (Salkovskis & Forrester, 2002). However, empirical studies have provided equivocal results regarding which belief domains are OCD-specific and which are OCD-relevant (see, for example, Anholt et al., 2004; OCCWG, 2001, 2003; Sica et al., 2004; Tolin, Worhunsky, & Maltby, 2006).

Translations of the OBQ-87 are available in Dutch, French, Greek and Italian. So far, the psychometric properties of the OBQ-87 have only been examined on English-speaking (e.g. OCCWG, 2001, 2003) and Italian-speaking (Sica et al., 2004) samples. Differences in the variance-covariance matrices amongst different linguistic populations were observed for the OBQ-87, contraindicating the pooling of data across samples using different language versions of the questionnaire (OCCWG, 2003). Therefore, studies in a French-speaking sample to validate the questionnaire and to test the specificity of the belief domains seems a necessary step for the cognitive model of OCD.

However, high correlations between the OBQ-87 subscales and factor analysis of this instrument recently led the OCCWG to develop a 44 item version of the instrument with sounder psychometric properties, the OBQ-44 (OCCWG, 2005). The OBQ-44 collapsed the six rationally derived dimensions of the OBQ-87 into three empirically derived belief domains: Responsibility/Threat Estimation, Perfectionism/Uncertainty, and Importance/Control of Thoughts. The three combined factors are both intuitively understandable and more empirically grounded than the six rationally derived belief domains (OCCWG, 2005). Responsibility/Threat Estimation is characterized by responsibility for bad things happening, a desire to prevent harm, and beliefs about the consequence of inaction. People who endorse beliefs about Perfectionism/Uncertainty have high and absolute standards of completion, are rigid, concerned over mistakes, and uncomfortable in the face of uncertainty. Importance/Control of Thoughts characterizes those who fear the

consequence of having cognitive intrusions and who feel the need to get rid of them (OCCWG, 2005).

Two studies investigated if participants with OCD endorsed the OBQ-44 belief domains more strongly than other anxious or non-clinical participants (see Table 1). Participants with OCD consistently scored higher on the three empirically derived belief domains than non-clinical controls (OCCWG, 2005; Tolin et al., 2006). Compared to anxious controls, participants with OCD consistently endorsed Perfectionism/Uncertainty more strongly although support for stronger endorsement by participants with OCD for Responsibility/Threat Estimation and Importance/Control of Thoughts was inconsistent. These findings did not control for general distress (depression and/or anxiety). However, when depression or anxiety were controlled separately (Tolin et al., 2006), there were no significant differences for the belief domains between OCD and anxious participants, and few differences for the belief domains between OCD and non-clinical participants. A more stringent test than Tolin et al. (2006) would be to control for depression and anxiety simultaneously. Nevertheless, the results of Tolin et al. (2006) are problematic for the cognitive model: if OCD and non-clinical participants do not differ in belief domains when general distress is controlled, then it is hard to see how appraisals could lead to the escalation of cognitive intrusions into obsessions. Further, if participants with OCD do not differ from other anxious controls in these specific belief domains, then the model does not explain why individuals with OCD develop this disorder rather than another anxious disorder, and vice versa (Julien, O'Connor, & Aardema, 2007). Thus, the role of belief domains in OCD, crucial for the cognitive model, requires further investigation.

 Table 1 about here

The aims of the current study are twofold. First, we investigated the psychometric properties of the French version of the OBQ-44. The validation of the

OBQ-44 was preferred over the OBQ-87 because, as mentioned, the shorter version may be more relevant to OCD than the OBQ-87 (OCCWG, 2005). Second, we investigated the specificity of belief domains in OCD both without covariance and whilst controlling for depression, anxiety, and age simultaneously.

Method

Participants

The participants with OCD ($N = 290$) were recruited at three sites: Montreal (Canada) ($n = 164$), Quebec City (Canada) ($n = 41$), and Lyon (France) ($n = 85$). Diagnosis for the Montreal participants was based on one of two semi-structured interviews (*Anxiety disorders interview schedule for DSM-IV (ADIS-IV)*, Brown, DiNardo, & Barlow, 1994; *Structured Clinical Interview for the DSM-IV*, First, Spitzer, Gibbon, & Williams, 1996) or clinical interview by a trained psychiatrist using *Diagnostic and statistical manual of mental disorders, 4th edition (DSM-IV)* criteria (American Psychiatric Association, 1994). Inclusion criteria were: (a) a primary diagnosis of OCD (defined as the most severe psychopathology according to the assessor's rating when comorbidity was present), confirmed by a second experienced clinical psychologist; (b) no evidence of current substance abuse; and (c) no evidence of current or past schizophrenia, bipolar disorder or organic mental disorder. For the Quebec City site, participants with OCD were referred by a psychiatrist. Selected sections of the ADIS-IV (on OCD, panic disorder and agoraphobia) and the YBOCS were administered by experienced clinicians or trained graduate psychology students. Inter-rater agreement was assessed for 75% of the Quebec City participants. Inclusion criteria for the Quebec City site were: (a) a primary diagnosis of OCD (defined as the most severe psychopathology and having a difference greater or equal to 2 points on the severity scale of the ADIS-IV when comorbidity was present); (b) aged between 18 and 65 years old; (c) no comorbid psychotic disorder or bipolar disorder; and (d) no suicidal ideation. For the Lyon site, the diagnosis was based on the *Mini International Neuropsychiatric Interview*

(Lecrubier et al., 1997). Inclusion criteria for the Lyon site were: (a) a primary diagnosis of OCD (defined as the most severe psychopathology according to the assessor's rating when comorbidity was present); and (b) no current comorbid psychotic or substance use disorders.

Site differences were investigated by analyses of variance (ANOVAs) on OBQ-44, PI, YBOCS, BAI and BDI total scores (see the Measures section for the abbreviations and a description of the questionnaires). PI, BAI and BDI scores were transformed by a square root correction to normalize the distribution of the residuals. The ANOVAs revealed significant site differences on the OBQ-44 total score ($F[2, 289] = 7.62, p < .01$) and YBOCS total score ($F[2, 289] = 14.22, p < .001$), but not for the PI ($F[2, 289] = 1.38, p > .05$), the BAI ($F[2, 289] = 14.22, p > .05$), and the BDI ($F[2, 289] = 14.22, p > .05$) total scores. Post hoc comparisons revealed that the participants with OCD from the Montreal site scored significantly higher on the OBQ-44 total score than the participants with OCD from Quebec City and Lyon sites ($p_s < .05$ and $.01$, respectively), and that the participants with OCD from the Lyon site scored significantly higher on the YBOCS than the participants with OCD from Montreal and Quebec City sites ($p_s < .001$). These significant site differences suggested that it was not appropriate to pool the data of the three sites together. Therefore, we equalized the three site samples on the OBQ-44 total score by removing a limited number of high and low scorers on the OBQ-44, which resulted in no significant differences on the OBQ-44 total score for the different sites.¹ A total of ten participants with OCD (5 high and 5 low scorers on the OBQ-44 total score) were removed to equalize the sites on the OBQ-44 total score. When these 10 participants were taken out of the analyses, the post hoc comparisons revealed no significant site differences ($p_s > .05$). Therefore, the analyses on the validation of the French version of the OBQ-44 and on group comparisons were computed on a sample size of 280 participants with OCD. Information on comorbidity diagnosis was available for 66%

¹ The OBQ-44 was chosen over the YBOCS to equalize the sites because the current study is a validation of the OBQ-44 and because differences in the YBOCS can be explained by the presence of more severe cases in the Lyon site (a psychiatric hospital where the most severe cases are referred).

of the OCD sample. Comorbidity diagnoses were: major depression (9%), generalized anxiety disorder (10%), social phobia (14%), specific phobia (9%), posttraumatic stress disorder (1%), panic disorder with or without agoraphobia (9%), and a diagnosis not specified but other than OCD or panic disorder with or without agoraphobia (4%).

Anxious controls (AC; $N = 21$) were participants diagnosed with panic disorder with or without agoraphobia, all recruited at the Quebec City site. Inclusion criteria were similar to those of the participants with OCD from the Quebec City site, except for a primary diagnosis of panic disorder with or without agoraphobia. Information on comorbidity diagnosis was available for 100% of the AC sample. Comorbidity diagnoses were: OCD (5%), and a diagnosis not specified but other than OCD or panic disorder with or without agoraphobia (24%).

Non-clinical controls (NCC; $N = 465$) were recruited from the Montreal ($n = 412$) and Lyon ($n = 53$) sites. The NCC participants were mainly university students.

Measures

Revised Version of the Obsessive Beliefs Questionnaire (OBQ-44) (OCCWG, 2005). The OBQ-44 assesses belief domains related to OCD. The participants completed the OBQ-87, but the items of the shorter version (OBQ-44) were selected for the analyses. The OBQ-44 total score ranges from 44 to 308. The English version of the OBQ-44 shows excellent internal consistency for the different subscales ($\alpha = .89-.93$ in the OCD sample). The factor structure was found to be consistent across two OCD samples and a student sample. The subscales were moderately intercorrelated in an OCD sample ($r_s = .42-.57$). There is support for the convergent and divergent validity of the OBQ-44 (OCCWG, 2005). The psychometric properties of the French version of the OBQ-44 are investigated in the current study.

Padua Inventory (PI) (Sanavio, 1988). This self-report instrument assesses obsessive-compulsive behavior. A factor analysis revealed four factors: rumination, contamination, checking, and impulse phobia. There are no factors for other OCD symptom subtypes such as hoarding and symmetry in the original PI. The PI total score ranges from 0 to 240. The English version of the PI shows good internal consistency (α -coefficient was .90 for men and .94 for women) and satisfactory test-retest correlations ($r_s = .78$ for men and .83 for women) (Sanavio, 1988). A factor analysis on a French version of the PI replicated the original factors, but with fewer items (40). The French version of the PI shows good convergent/divergent validity: The correlations between the French version of the PI and measures of OCD symptoms ($r_s = .73-.78$) were higher than the correlations between the French version of the PI and measures of anxiety (BAI; $r = .55$) and depression (abridged version of the BDI; $r = .53$). The test-retest validity of the French version of the PI was good ($r = .77$) (Freeston, Ladouceur, Letarte, et al., 1994). The French version of the PI (40 items) was used in the current study.

Yale-Brown Obsessive Compulsive Scale (YBOCS) (Goodman, Price, Rasmussen, Mazure, Delgado, et al., 1989; Goodman, Price, Rasmussen, Mazure, Fleischmann, et al., 1989). The YBOCS (clinician-rated) assesses the severity of obsessions and compulsions on five criteria: length of time, distress, interference, resistance, and control. The YBOCS total score ranges from 0 to 40. The original instrument shows excellent inter-rater reliability for the YBOCS total score ($r = .98$), and good internal consistency ($\alpha = .88-.91$) (Goodman, Price, Rasmussen, Mazure, Fleischmann, et al., 1989). The French version of the YBOCS (Mollard, Cottraux, & Bouvard, 1989) has excellent internal consistency; convergent and divergent validity are satisfactory (Bouvard et al., 1992).

Beck Anxiety Inventory (BAI) (Beck, Epstein, Brown, & Steer, 1988). The BAI assesses the severity of anxiety symptoms (mainly somatic). The BAI total score ranges from 0 to 63. The English version of the BAI shows high internal consistency ($\alpha = .91$), good test-retest reliability ($r = .75$), moderate convergent validity ($r = .51$),

and good divergent validity ($r = .25$) (Beck, Epstein, et al., 1988). The French version of the BAI shows good internal consistency and satisfactory test-retest stability, convergent and divergent validity (Freeston, Ladouceur, Thibodeau, Gagnon, & Rhéaume, 1994).

Beck Depression Inventory (BDI) (Beck, Rush, Shaw, & Emery, 1979). The BDI assesses depressive symptoms (cognitive, emotional, and somatic). The BDI total score ranges from 0 to 63. The psychometric properties of the English version of the BDI are well established (see Beck, Steer, & Garbin, 1988). The French version of the BDI shows excellent internal consistency and satisfactory test-retest reliability (Bourque & Baudette, 1982).

Procedure and Analyses

The clinical groups were patients presenting for treatment. They completed the questionnaires at the pre-treatment phase. The analyses addressing the psychometric properties of the French version of the OBQ-44 are based on the OCD sample, with the exception of exploratory principal component analyses which were conducted on three samples (OCD sample, total sample, and NCC sample) and of the 3 week test-retest reliability, which came from a subsample of Montreal NCC participants ($n = 39$). For the investigation of the specificity of belief domains in OCD, the size of the AC sample was too small to include this group in analyses of covariance (ANCOVAs). Therefore, in a first series of analyses, we conducted ANOVAs comparing OCD, AC, and NCC samples on the OBQ-44 scores (total and subscale scores). In a second series of analyses, we conducted ANCOVAs comparing OCD and NCC samples on the OBQ-44 scores (total and subscale scores) controlling simultaneously for anxiety (BAI), depression (BDI), and age.

OBQ Translation

The French version of the OBQ-87 was translated by a team of bilingual mental health professionals (J. R., M. H. F., M. B., & J. C.). Three of the translators

spoke French as first language (two from France, one from Quebec City), one spoke English as a first language but had worked in French in Montreal and Quebec City for 12 years. A standard translation-back-translation method was used. Some of the translators translated the OBQ-87 from English to French. Then, another translator translated the OBQ-87 back from French to English. This second English version was compared to the original English version, and modifications were made by consensus to the French version to improve items and to resolve the differences between European and Canadian French.

Results

Participants Information

Demographic information for the groups and scores on the BAI and BDI appear in Table 2. ANOVAs were conducted to compare the groups on age and on BAI and BDI scores. These three scores were transformed by a square root correction to normalize the distribution of the residuals. There were significant group differences on age, and on BAI and BDI scores (Bonferroni correction).

 Table 2 about here

Psychometric Properties of the French Version of the OBQ-44

Confirmatory factor analysis. For the confirmatory factor analysis, the criteria for goodness of fit were defined as a χ^2/df ratio smaller than 2.0, a Comparative Fit Index (CFI) larger than .95, a Normed Fit Index (NFI) greater than .95, a Root Mean Square Error of Approximation (RMSEA) smaller than or equal to .06 (Tabachnick & Fidell, 2007), a Tucker-Lewis Index (TLI) close to .95 (Hu & Bentler, 1999), and a Goodness of Fit Index (GFI) greater than .85. The confirmatory factor analysis suggested that the model fit the data poorly: $\chi^2 = 1950$, $df = 899$, $\chi^2/df = 2.17$, CFI = .82, NFI = .71, RMSEA = .07, TLI = .81, and GFI = .74. To improve the fit,

we modified the model using the modification indices. We only considered theoretically-relevant changes. For example, we allowed a covariation between items 38 (“In daily situations, failing to prevent harm is as bad as deliberately causing it”) and 41 (“Not preventing harm is as bad as causing it”) based on content similarity, suggesting a common error variance. These changes did not improve the fit of the model: $\chi^2 = 1856$, $df = 895$, $\chi^2/df = 2.07$, CFI = .83, NFI = .72, RMSEA = .06, TLI = .82, and GFI = .75. Because of the poor model fit, an exploratory principal component analysis of the OBQ-44 was undertaken.

Exploratory principal component analysis. Exploratory principal component analyses with oblique rotation were conducted on the OBQ-44 items in the OCD sample, in the total sample (OCD, AC, and NCC), and in the NCC sample. In the OCD sample, the correlation matrix was suitable for the factor analysis (Kaiser-Meyer-Olkin Index = .92; Bartlett test significant at $p < .001$). The number of factors was determined by the Scree Test and the interpretability of factors. These criteria suggested a three-factor solution, explaining 46.3% of the variance. Factor loadings of the Matrix Structure are reported in Appendix A.² Tabachnick and Fidell (2001) suggest that, in exploratory factor analysis, an item forms a part of a factor if its factor loading on that factor is at least .32 and at least .1 greater than its other factor loadings. Three items (# 61, 69, and 84; one for each subscale) did not meet these criteria. The three factors replicated the original factor solution of the OBQ-44: Responsibility/Threat Estimation, Perfectionism/Uncertainty, and Importance/Control of Thoughts.

In the total sample, the three factors were replicated, but five items (# 10, 59, 61, 69, and 84) did not meet the criteria of Tabachnick and Fidell (2001). In the NCC sample, the three factors were also replicated, but seven items (# 10, 32, 34, 42, 59, 61, and 84) did not meet the criteria of Tabachnick and Fidell (2001). Taken together, the three exploratory principal component analyses replicated the original factor

² [Note des auteurs : voir à la fin de cet article]

structure of the OBQ-44, but items forming part of any single factor varied according to the sample used (OCD, total sample, or NCC). Because the belief domains are hypothesized to play a key role in OCD, the factor solution (41 items) derived from the OCD sample seemed the factor solution of choice. However, it is unlikely that the exclusion of three items would result in a significantly improved model fit. Moreover, the factor loading of one of these items (# 69) was only .01 away from meeting Tabachnick and Fidell (2001)'s criteria. Therefore, for practical reasons (principally to allow a comparison of means across other studies), all further analyses were carried out on the OBQ-44. It should be noted that the analyses were also reconducted with the 41 item version of the questionnaire, and that these analyses provided the same significant results as the OBQ-44 analyses. Only the results of the OBQ-44 are provided below.

Internal consistency. The internal consistency of the OBQ-44 was very good: for the OBQ-44 total score, $\alpha = .94$; for Responsibility/Threat Estimation, $\alpha = .92$; for Perfectionism/Uncertainty, $\alpha = .92$; and for Importance/Control of Thoughts, $\alpha = .87$ (alphas for standardized items are reported).

Intercorrelations. Zero-order correlations were calculated for the OBQ-44 total and subscale scores (see Table 3). All subscale scores are highly correlated with the OBQ-44 total score ($r_s = .77-.87$). Subscales are also moderately intercorrelated ($r_s = .43-.57$).

 Table 3 about here

Convergent and divergent validity. The OBQ-44 would show good convergent/divergent validity if the OBQ-44 scores (total and subscale scores) correlated significantly with measures of OCD symptoms (PI and YBOCS), and if these correlations were stronger than the correlations between the OBQ-44 scores (total and subscale scores) and measures of general distress (BAI and BDI). For

example, the correlations between Importance/Control of Thoughts subscale and measures of OCD symptoms were expected to be significant and stronger than the correlations between Importance/Control of Thoughts subscale and measures of general distress. Table 4 presents the zero-order and partial correlations. For the zero-order correlations, the correlations between the OBQ-44 scores (total and subscale scores) and other clinical measures (PI total and subscale scores, YBOCS, BAI and BDI) were all significant.

The convergent/divergent validity of the OBQ-44 was good with at least one of the standard measures of OCD symptomatology. Each of the OBQ-44 scores (total and subscale scores) correlated more strongly with the PI total score than with the BAI or the BDI. However, each of the OBQ-44 scores (total and subscale scores) was less correlated with the YBOCS than with the BAI or BDI. We calculated paired *t*-tests between correlation coefficients to investigate if the correlations between the OBQ-44 total score and measures of OCD symptomatology (PI and YBOCS total scores) were significantly different to the correlations between the OBQ-44 total score and measures of general distress. To correct for the number of comparisons, the significance level was fixed at $p < .01$. The *t*-tests revealed that the OBQ-44 total score was significantly more related to the PI than to the BDI ($t = 2.59, p < .01$) and showed a tendency to be more related to the PI than to the BAI ($t = 2.08, p < .05$). The OBQ-44 total score showed a tendency to be less related to the YBOCS than to the BDI ($t = -2.08, p < .05$) and the BAI ($t = -2.44, p < .05$).

To provide a conservative test of the OBQ-44 convergent validity (OCCWG, 2001), partial correlations were calculated with measures of OCD symptoms (PI and YBOCS) and with measures of general distress (BAI and BDI). When measures of general distress were partialled out, most of the correlations (15 out of 20) between the OBQ-44 scores (total and subscale scores) and the PI (total and subscale scores) remained significant. The OBQ-44 total score and Perfectionism/Uncertainty were significantly correlated with the YBOCS when controlling for general distress, but Responsibility/Threat Estimation and Importance/Control of Thoughts were not.

When measures of OCD symptoms were partialled out, the correlations between the OBQ-44 scores (total and subscale scores) and the BAI or the BDI decreased markedly, but most of them (7 out of 8) remained significant.

 Table 4 about here

Test-retest reliability. The Pearson correlation coefficients for the 3 week test-retest in a NCC subsample ($n = 39$) were: for the OBQ-44 total score, $r = .85$; for Responsibility/Threat Estimation, $r = .73$; for Perfectionism/Uncertainty, $r = .88$; and for Importance/Control of Thoughts, $r = .77$. All correlations were significant at $p < .001$. Thus, the OBQ-44 can be considered as showing adequate levels of stability for a measure of beliefs.

Specificity of Belief Domains in OCD

ANOVAs comparing OCD, AC and NCC samples. The Importance/Control of Thoughts scores were transformed by a square root correction to normalize the distribution of the residuals. To protect against Type I error, multivariate analyses of variance were conducted to compare the OCD, AC and NCC groups on the OBQ-44 total and subscale scores. The test was significant, Wilks' Lambda = .61, $F = 71.06$, $p < .001$. Four one-way ANOVAs were then conducted to compare the OCD, AC, and NCC groups on the OBQ-44 total and subscale scores. The ANOVAs revealed significant group differences on the OBQ-44 total and subscale scores. Post hoc comparisons (see Table 5; Bonferroni correction) indicated that the OCD sample scored significantly higher than the AC and NCC samples on the OBQ-44 total score, and on Responsibility/Threat Estimation, Perfectionism/Uncertainty, and Importance/Control of Thoughts subscale scores. The AC sample scored significantly higher than NCC sample on the OBQ-44 total score, and on Responsibility/Threat Estimation and Importance/Control of Thoughts subscale scores, but not on the Perfectionism/Uncertainty subscale score. The results did not change when

participants with comorbid diagnoses of OCD and panic disorder with or without agoraphobia were excluded from the analyses and the ANOVAs were recalculated.

ANCOVAs comparing OCD and NCC samples. Age and BDI scores were transformed by a square root correction to make the data suitable for the ANCOVAs. To protect against Type I error, multivariate analyses of covariance were conducted to compare the OCD and NCC groups on the OBQ-44 total and subscale scores whilst controlling for anxiety, depression, and age (age was included as a covariate because of significant group differences on that parameter; see Table 2). The test was significant, Wilks' Lambda = .81, $F = 56.52$, $p < .001$. Follow-up ANCOVAs were then conducted on each of the OBQ-44 scores (total and subscale scores) to compare the OCD and NCC groups whilst controlling for anxiety, depression, and age. The results of the ANCOVAs are presented in Table 5. The ANCOVAs revealed significant group differences on the OBQ-44 total and subscale scores. When controlling for anxiety, depression, and age, the OCD sample scored significantly higher than the NCC sample on the OBQ-44 total score, and on Responsibility/Threat Estimation, Perfectionism/Uncertainty, and Importance/Control of Thoughts subscale scores. All findings were significant at $p < .001$, indicating robust results. The findings remained significant when participants with comorbid diagnoses of OCD and panic disorder with or without agoraphobia were excluded from the analyses and the ANCOVAs were recalculated.

 Table 5 about here

Discussion

The aims of this study were to examine the psychometric properties of the French version of the OBQ-44 and to investigate whether the belief domains of the OBQ-44 are OCD-specific. In our OCD sample, a confirmatory factor analysis suggested that the model fit the data poorly. A poor model fit of the OBQ-44 was

found by Woods, Tolin, and Abramowitz (2004) among a student sample. Therefore, an exploratory principal component analysis was conducted on the OBQ-44. In the OCD sample, the factor structure of the French version of the OBQ-44 suggested a three-factor solution that replicated the original factors of the OBQ-44:

Responsibility/Threat Estimation, Perfectionism/Uncertainty, and Importance/Control of Thoughts. Only three items did not meet the criteria suggested by Tabachnick and Fidell (2001) to determine item assignment to a factor. The three factors were replicated in exploratory principal component analyses conducted on the total (OCD, AC, and NCC) and the NCC samples, although in these cases the factor solutions suggested fewer items. The differences in the number of items may be explained by the fact that some items correlated strongly with more than one factor, and were thus eliminated according to the .1 factor loading difference criterion proposed by Tabachnick and Fidell (2001). The factor solution of the OCD sample was preferred over the total and NCC samples, because belief domains are hypothesized to play a greater role in OCD. However, for practical reasons (see the Exploratory Principal Component Analysis section), the analyses were conducted on the OBQ-44. Moreover, Woods et al. (2004) argue that a confirmatory factor analysis may not be suitable for the highly intercorrelated items of the OBQ-44, because items are assigned to a single factor in a confirmatory factor analysis, but tend to load on more than one factor in exploratory factor analysis.

The internal consistency of the factors of the OBQ-44 was highly satisfactory. The factors were all highly correlated with the OBQ-44 total score, and moderately intercorrelated. A similar pattern was found in the original OBQ-44 (OCCWG, 2005). These moderate intercorrelations suggest that the three belief domains may overlap, a result not surprising considering that the factors were not constrained by orthogonal rotation and were thus allowed to correlate. An important step in improving the OBQ-44 may be to reduce item overlap among the subscales (Woods et al., 2004) although there may still be substantive reasons to expect correlations between subscales. In addition to some degree of overlap between these constructs as measured, it is also

possible that individuals hold several types of belief either in relation to a single dimension of obsessive-compulsive symptoms (e.g. washing *or* checking), or to more than one dimension of symptoms (e.g. washing *and* checking). This is entirely consistent with the cognitive model of OCD.

Zero-order correlations between the OBQ-44 scores (total and subscale scores) and other clinical measures (PI total and subscale scores, YBOCS, BAI, and BDI) were all significant. There was partial support for the convergent/divergent validity of the OBQ-44 in that the correlations of the OBQ-44 scores (total and subscale scores) with one of the two measures of OCD symptoms (PI total score) were higher than their respective correlations with measures of general distress. The correlation between the OBQ-44 and the PI total scores was significantly higher than the correlation between the OBQ-44 total score and the BDI, and tended to be significantly higher than the correlation between the OBQ-44 total score and the BAI. The correlations between the OBQ-44 scores (total and subscale scores) and the other measure of OCD symptom (YBOCS) were significant, but showed a tendency to be lower than the correlation between the OBQ-44 total score and the BDI or BAI. The OCCWG (Stage 3 data [unpublished], S. Taylor, personal communication, September 21, 2007) also reported low correlations between the YBOCS (clinician-rated) and the OBQ-44 subscales. Responsibility/Threat Estimation and Importance/Control of Thoughts were not significantly related to the YBOCS in the OCCWG Stage 3 data. The lower correlations between the OBQ-44 and YBOCS scores may be explained by use of different assessment methods strategy. The PI and YBOCS differ in two ways. First, the PI is a self-report measure whereas the YBOCS is clinician-rated. Second, the items of the PI each represent a different symptom that is endorsed for frequency whereas the YBOCS measures five dimensions of obsessions and five dimensions of compulsions (irrespective of how many different obsessions are experienced). Thus there is likely to be greater common method variance between the OBQ-44 and the PI where higher scores may reflect a broader presentation of obsessive-compulsive symptoms and beliefs than between the OBQ-44 and the YBOCS where higher scores

on the latter may define severity in a different way. Overall, the partial correlation results suggest that the relationship between belief domains and OCD symptoms (especially the PI) is not an artifact of general distress; however, the belief domains are also related to general distress. Test-retest of the OBQ-44 in our non-clinical subsample suggests that the OBQ-44 shows appropriate stability.

The current study supports the hypothesis of the specificity of the belief domains to OCD. ANOVAs comparing the OCD, AC, and NCC samples on the OBQ-44 total and subscale scores revealed that the participants in the OCD sample scored significantly higher than the participants in the AC and NCC samples on OBQ-44 total and subscale scores. The participants in the AC sample scored significantly higher than the participants in the NCC sample on the OBQ-44 total score and on Responsibility/Threat Estimation and Importance/Control of Thoughts subscale scores, but not on the Perfectionism/Uncertainty subscale score. Similar results have been reported in previous research (see Table 1). The results were not affected by comorbid diagnoses of OCD and panic disorder with or without agoraphobia.

When we compared OCD and NCC samples whilst controlling for general distress and age, participants with OCD scored significantly higher than NCC participants on the OBQ-44 total score, and on Responsibility/Threat Estimation, Perfectionism/Uncertainty, and Importance/Control of Thoughts subscale scores. Again, the results were not affected by comorbid diagnoses of OCD and panic disorder with or without agoraphobia. The results of the ANCOVAs are in accordance with the cognitive model of OCD, but are partly inconsistent with the findings of Tolin et al. (2006), who found no significant differences between OCD and NCC samples on Responsibility/Threat Estimation when they controlled for depression and on the three belief domains when they controlled for anxiety. The discrepancy between the results of these two studies might be due to differences in relative group size ($n = 89$ for the OCD sample and $n = 33$ for the NCC sample in Tolin et al., 2006; $n = 270$ for the OCD sample and $n = 462$ for the NCC sample in

the current study), planned group comparisons (OCD, AC, and NCC in Tolin et al., 2006; OCD and NCC in the current study) and to the use of different measures for controlling for anxiety (State-Trait Anxiety Inventory-Trait Version in Tolin et al., 2006; BAI in the current study).

Strengths of the current study include large OCD and non-clinical samples and two different approaches to the conceptualization and measurement of OCD symptoms. A limitation is that the same OCD sample was used for the validation of the OBQ-44 and for the investigation of belief domain specificity to OCD. Also, the participants completed the 87 items of the OBQ-87, but the analyses were computed on the 44 items of the OBQ-44, a procedure used in other studies (e.g. Tolin et al., 2006; Woods et al., 2004). It is not known if this procedure provides different results than completing only the 44 items of the OBQ-44. Another limitation to this study is that the small anxious group limited the range of analyses possible. Also, the anxious group represented a limited portion of the anxious spectrum, because it was wholly constituted of participants presenting panic disorder with or without agoraphobia. The use of the BAI to control for anxiety may also have been problematic, because it lists predominantly somatic symptoms of individuals with panic disorder with or without agoraphobia. A cognitive measure of anxiety might have been more appropriate. Finally, women were overrepresented in the three samples. Nevertheless, the current study reports good psychometric properties of the French version of the OBQ-44. It also shows that, when compared to an NCC sample, the belief domains are specific to OCD while stringently controlling for general distress (and age). However, there is so far no evidence that the belief domains are specific to OCD compared to anxious controls when controlling for any differences in general distress, opening the possibility that the degree of endorsement is as much a marker of mood disturbance as it is of beliefs specific to a particular disorder; therefore more research is needed on this issue. Further research could include, as anxious controls, a wider range of anxious disorders such as posttraumatic stress disorder, social phobia, specific phobia, or generalized anxiety disorder. Indeed, sufficiently large groups of some

disorders may be required to provide adequate power to test whether the belief domains are specific to OCD or relevant to OCD and other anxiety disorders. For example, beliefs about thoughts, responsibility, and threat may be relevant to generalized anxiety disorder whereas beliefs about thoughts may also be relevant in posttraumatic stress disorder.

The overall approach to measuring strength of belief, by calculating an average across a broad range of related belief items, may in fact be insufficiently sensitive to capture the specificity of highly idiosyncratic beliefs that individuals hold very strongly. Such personal beliefs may have greater clinical significance in the etiology and maintenance of OCD than the broader nomothetically defined constructs measured by the OBQ-44 (see OCCWG, 1997). Assessing beliefs qualitatively by interview or targeting highly salient items may be clinically useful. Finally, the present finding supporting the specificity of belief domains to OCD does not permit any conclusions about the direction of the association, i.e. whether the belief domains are a cause, a concomitant or a consequence of OCD.

Acknowledgment

This work was supported by fellowship grants from the *Fonds de la recherche en santé du Québec* to the first author, and from the Canadian Institutes of Health Research to the third author. Authors wish to thank Miguel Chagnon for his statistical assistance and Frederick Aardema for his comments on the drafts of the paper.

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Table 1. Empirical status of stronger endorsement of belief domains in participants with OCD

	OCCWG (2005)	Tolin et al. (2006)		
	Without covariate	Without covariate	Controlling for depression	Controlling for anxiety
Resp/Threat Estimation	OCD>AC>NCC	OCD, AC>NCC	OCD=AC=NCC	OCD=AC=NCC
Perf/Uncert	OCD>AC>NCC	OCD>AC>NCC	OCD>NCC	OCD=AC=NCC
Imp/Ctrl of Thoughts	OCD, AC>NCC	OCD>AC>NCC	OCD>NCC	OCD=AC=NCC

Note. Resp/Threat Estimation: OBQ-44 Responsibility/Threat Estimation subscale;
 Perf/Uncert: OBQ-44 Perfectionism/Uncertainty subscale; Import/Ctrl of Thoughts:
 OBQ-44 Importance/Control of Thoughts subscale

Table 2. Demographic information

	OCD	AC	NCC	<i>F</i>	Significant post hoc comparisons
% women	63%	86%	82%	-	-
Age	37.82 (10.92)	31.86 (8.11)	23.25 (7.72)	226.65***	OCD > AC > NCC
BAI	17.17 (11.27)	25.13 (14.92)	8.44 (7.07)	102.58***	AC > OCD > NCC
BDI	16.87 (9.79)	18.12 (11.07)	8.08 (7.28)	101.30***	OCD, AC > NCC

*** $p < .001$

Table 3. Intercorrelations of the OBQ-44 (total and subscales scores)

	Total score	Resp/Threat Estimation	Perf/ Uncert	Import/Ctrl of Thoughts
Total score	–	.87**	.81**	.77**
Resp/Threat Estimation		–	.52**	.57**
Perf/Uncert			–	.43**
Import/Ctrl of Thoughts				–

** $p < .01$

Table 4. Zero-order and partial correlations between OBQ-44 and measures of OCD symptoms and general distress

	PI					YBOCS	BAI	BDI
	Total	Wash	Check	Rumin	Imp pho			
Zero-order correlations								
OBQ-44 Total score	.52***	.26***	.35***	.60***	.27***	.24***	.41***	.38***
Resp/Threat Estimation	.46***	.26***	.30***	.52***	.18**	.19**	.37***	.27***
Perf/Uncert	.46***	.21***	.40***	.51***	.14*	.26***	.32***	.39***
Import/Ctrl of Thoughts	.35***	.14*	.13*	.43***	.39***	.12*	.31***	.29***
Partial correlations								
	Controlling for BAI and BDI					Controlling for PI and YBOCS		
OBQ-44 Total score	.41***	.17**	.29***	.47***	.19**	.13*	.27***	.17**

	PI					YBOCS	BAI	BDI
	Total	Wash	Check	Rumin	Imp pho			
Resp/Threat	.37***	.19**	.26***	.42***	.10	.10	.24***	.06
Estimation								
Perf/Uncert	.34***	.14*	.34***	.37***	.04	.18**	.16*	.19**
Import/Ctrl of	.24***	.06	.05	.32***	.37***	.02	.24***	.15*
Thoughts								

Note. Wash: PI washing subscale; Check: PI checking subscale; Rumin: PI rumination subscale; Imp phob: PI impulse phobia subscale.

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 5. Group comparisons on the OBQ-44

	OCD	AC	NCC	<i>F</i>	Significant post hoc comparisons	Partial η^2
ANOVAs ^a						
OBQ-44 total score	176.52 (50.10)	139.81 (56.29)	106.54 (37.47)	230.96***	OCD > AC > NCC	.38
Resp / Threat Estimation	61.66 (22.94)	50.97 (23.36)	35.85 (15.26)	167.97***	OCD > AC > NCC	.31
Perf / Uncert	74.25 (22.04)	56.56 (25.08)	48.43 (18.01)	148.93***	OCD > AC, NCC	.28
Import / Ctrl of Thoughts	40.60 (16.01)	32.29 (17.49)	22.26 (9.46)	188.91***	OCD > AC > NCC	.33
ANCOVAs ^b						
OBQ-44 total score	175.79 (50.07)	–	106.36 (37.17)	138.68***	OCD > NCC	.16
Resp / Threat Estimation	61.51 (22.73)	–	35.77 (15.18)	89.54***	OCD > NCC	.11
Perf / Uncert	73.79 (22.21)	–	48.36 (17.88)	66.00***	OCD > NCC	.08
Import / Ctrl of Thoughts	40.49 (15.93)	–	22.23 (9.43)	156.18***	OCD > NCC	.18

^aFor the OCD group, $n=280$; for the AC group, $n=21$; for the NCC group, $n=465$. ^bFor the OCD group, $n=270$; for the NCC group, $n=462$.

*** $p < .001$

Appendix A

Factor loadings after oblique rotation (principal components analysis) with abbreviated item content

Original OBQ #	Item	Factor 1	Factor 2	Factor 3
Responsibility/Threat Estimation				
39	Éviter des problèmes sérieux requiert un effort constant de ma part. (Avoiding serious problems requires constant effort on my part.)	.80	-.23	.25
72	Des événements dangereux se produiront si je ne suis pas prudent. (Harmful events will happen unless I am very careful.)	.76	-.44	.36
23	Je devrais prévenir un danger improbable à n'importe quel prix. (Even if harm is unlikely, I should try to prevent it at any cost.)	.73	-.27	.27
20	Quand j'ai l'occasion, je dois agir pour empêcher que des mauvaises choses se produisent. (When I see the opportunity, I must act to prevent bad things.)	.71	-.20	.23
68	Même lorsque je suis prudent, je pense que des mauvaises choses vont arriver. (Even when I am careful, I think bad things will happen.)	.70	-.32	.37
41	Ne pas prévenir le danger est aussi mal que causer du tort. (Not preventing harm is as bad as causing it.)	.70	-.28	.29
77	Ne pas prévenir une tragédie est aussi mal que de la provoquer. (Failing to prevent a disaster is as bad as	.70	-.31	.49

Original OBQ #	Item	Factor 1	Factor 2	Factor 3
	causing it.)			
50	Si je ne prends pas de précautions supplémentaires, j'ai plus de chance d'être victime ou de provoquer une tragédie. (If I do not take extra precautions, I am more likely to have or cause a disaster.)	.67	-.30	.38
38	Dans les situations quotidiennes, ne pas réussir à prévenir le danger est aussi mauvais que de faire délibérément du mal. (In daily situations, failing to prevent harm is as bad as deliberately causing it.)	.66	-.33	.38
27	Si je n'interviens pas pour prévenir un danger, je serai à blâmer pour les conséquences. (If I don't act when I foresee danger, I am to blame for consequences.)	.64	-.33	.25
43	Je devrais m'assurer que les autres sont protégés contre les conséquences négatives de mes décisions ou actions. (I should make sure others are protected from negative consequences of my decisions or actions.)	.64	-.38	.15
53	Pour me sentir en sécurité, je dois être préparé à tout ce qui pourrait aller mal. (To feel safe, I have to be prepared for anything that could go wrong.)	.64	-.45	.33
79	Les expériences ordinaires de ma vie sont pleines de risques. (Ordinary experiences in my life are risky.)	.63	-.27	.48
67	Si mes gestes pouvaient avoir un petit effet sur la survenue d'un malheur, j'en serais responsable. (If my actions could have small effect on a misfortune,	.60	-.34	.37

Original OBQ #	Item	Factor 1	Factor 2	Factor 3
	I am responsible for the outcome.)			
6	Je pense que les choses autour de moi sont dangereuses. (I think things around me are unsafe.)	.60	-.23	.31
61	Ça m'arrive plus souvent de faire accidentellement du mal à moi ou aux autres. (I am more likely to accidentally cause harm to myself or others.)	.35	-.17	.33
Perfectionism/Uncertainty				
45	Les choses ne sont pas correctes si elles ne sont pas parfaites. (Things are not right if they are not perfect.)	.22	-.78	.14
57	C'est essentiel que tout soit clair et net, même les détails mineurs. (It is essential for everything to be clear cut, even minor matters.)	.34	-.77	.13
19	Pour avoir de la valeur, je dois être parfait dans tout. (To be worthwhile, I must be perfect at everything.)	.35	-.76	.38
33	Les erreurs mineures veulent dire qu'un travail n'est pas terminé. (Minor mistakes mean a job is not complete.)	.34	-.74	.14
28	Si je ne peux pas faire quelque chose parfaitement, je ne devrais pas le faire du tout. (If I can't do something perfectly, I shouldn't do it at all.)	.19	-.74	.20
56	Faire une erreur est aussi mal qu'échouer complètement. (Making a mistake is as bad as failing completely.)	.35	-.73	.42
74	Je dois continuer à travailler sur quelque chose tant que ce n'est pas fait exactement comme il le faut. (I	.23	-.73	.01

Original OBQ #	Item	Factor 1	Factor 2	Factor 3
	must keep working at something until it's done exactly right.)			
65	Je dois être le meilleur dans les choses importantes pour moi. (I must be the best at things important to me.)	.27	-.71	.39
78	Si je ne fais pas un travail parfaitement, les gens ne me respecteront pas. (If I don't do a job perfectly, people won't respect me.)	.39	-.69	.42
13	Les choses devraient être parfaites selon mes critères. (Things should be perfect according to my standards.)	.29	-.66	.24
31	Je dois donner mon plein rendement en tout temps. (I must work to my full potential at all times.)	.39	-.62	.20
32	C'est essentiel de considérer toutes les conséquences possibles. (It is essential to consider all possible outcomes.)	.43	-.60	.16
35	Je dois être sûr de mes décisions. (I must be certain of my decisions.)	.23	-.60	.01
42	Je devrais être fâché si je fais une erreur. (I should be upset if I make a mistake.)	.32	-.56	.22
10	Si je ne suis pas absolument certain, c'est sûr que je vais faire une erreur. (If I'm not absolutely sure, I'm bound to make a mistake.)	.35	-.54	.39
84	Peu importe ce que je fais, ça ne sera pas assez bon. (No matter what I do, it won't be good enough.)	.34	-.51	.46
	Importance/Control of Thoughts			
46	Avoir de mauvaises pensées veut dire que je suis	.32	-.30	.74

Original OBQ #	Item	Factor 1	Factor 2	Factor 3
	une mauvaise personne. (Having nasty thoughts means I am terrible.)			
76	Avoir des pensées violentes veut dire que je vais perdre le contrôle. (Having violent thoughts means I will lose control.)	.26	-.15	.73
83	Avoir une mauvaise pensée n'est pas différent de commettre une mauvaise action. (Having a bad thought is no different than doing a bad deed.)	.36	-.19	.72
24	Avoir de mauvaises impulsions est aussi mal que de passer à l'acte. (Having bad urges is as bad as carrying them out.)	.45	-.31	.71
64	Avoir de mauvaises pensées veut dire que je suis bizarre ou anormal. (Having bad thoughts means I am weird or abnormal.)	.36	-.26	.70
66	Avoir une pensée sexuelle indésirable veut dire que je veux vraiment le faire. (Having an unwanted sexual thoughts means I really want to do it.)	.13	-.16	.66
86	Si je ne contrôle pas mes pensées, je serai puni. (If I don't control my thoughts, I'll be punished.)	.50	-.28	.65
55	Je ne devrais pas avoir de pensées bizarres ou dégoûtantes. (I should not have bizarre or disgusting thoughts.)	.35	-.17	.59
34	Avoir des pensées agressives à propos d'êtres chers veut dire que je peux secrètement vouloir les blesser. (Having aggressive thoughts about my loved ones means I secretly want to hurt them.)	.19	-.13	.57
58	Avoir des pensées blasphématoires est aussi péché	.36	-.21	.56

Original OBQ #	Item	Factor 1	Factor 2	Factor 3
	que de commettre un sacrilège. (A blasphemous thought is as sinful as a sacrilegious act.)			
69	Avoir des pensées intrusives veut dire que j'ai perdu contrôle. (Having intrusive thoughts means I'm out of control.)	.44	-.30	.53
59	Je devrais débarrasser mon esprit de pensées indésirables. (I should rid my mind of unwanted thoughts.)	.23	-.20	.39

Note. Loadings in bold met the criteria of Tabachnick and Fidell (2001).

DEUXIÈME ARTICLE¹

The specificity of belief domains in obsessive-compulsive symptom subtypes

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¹Cet article a été publié dans *Personality and Individual Differences*, 41(7), Julien, D., O'Connor, K. P., Aardema, F., & Todorov, C., The specificity of belief domains in obsessive-compulsive symptom subtypes, pp. 1205-1216, Copyright Elsevier (2006).

Abstract

The aim of this study was to investigate specificity of belief domains in obsessive-compulsive disorder (OCD) symptom subtypes (rumination, impulse phobia, washing, checking, precision and non-specific). One hundred and twenty-six OCD participants completed the *Obsessive Beliefs Questionnaire* (OBQ-44) and the *Padua Inventory* prior to treatment. Analyses of covariance revealed that the participants in the rumination symptom subtype scored higher on Importance/Control of Thoughts than the participants in the washing subtype when we controlled for anxiety. This difference was nearly significant when we controlled for depression. Regression analyses controlling for negative mood states revealed that Responsibility/Threat Estimation predicted rumination scores, Perfectionism/Certainty predicted checking and precision scores, and Importance/Control of Thoughts predicted impulse phobia scores. Implications for future research and treatment are discussed.

Keywords: Obsessive-compulsive disorder, Cognitions, Beliefs, Subtypes, Subgroups

About 80–99% of the non-clinical population experience intrusive thoughts, images or impulses that are similar in content to people suffering from obsessive-compulsive disorder (OCD) (Purdon & Clark, 1993; Rachman & de Silva, 1978; Salkovskis & Harrison, 1984). Cognitive models postulate that people with OCD appraise the occurrence and content of their intrusions as significant and meaningful, on the basis of particular dysfunctional beliefs (Obsessive Compulsive Cognitions Working Group [OCCWG], 1997; Rachman, 1998; Salkovskis, 1985, 1989). Consequently, intrusions escalate into obsessions, whereas normally a person would not consider the occurrence and content of intrusions to have a special significance (Rachman, 1998; Salkovskis, 1989).

The OCCWG originally concluded that six rationally derived belief domains were of central importance in OCD: Inflated responsibility, overimportance of thoughts, control of thoughts, overestimation of threat, intolerance of uncertainty and perfectionism (OCCWG, 1997). The *Obsessive Beliefs Questionnaire* (OBQ; OCCWG, 2001, 2003) was developed to assess these six belief domains. High correlations between the OBQ subscales and further analysis on this instrument led the OCCWG to a revision of the OBQ, the OBQ-44, which combines dimensions in three empirically derived belief domains: Responsibility/Threat Estimation, Perfectionism/Certainty and Importance/Control of Thoughts (OCCWG, 2005).

OCD is a heterogeneous psychopathology that can be divided into four or five symptom subtypes (Tolin, Woods, & Abramowitz, 2003), commonly: rumination, impulse phobia, washing, checking and precision. However, the notion of OCD symptom subtypes is problematic. OCD symptom subtypes have significant secondary symptoms. For example, the impulse phobia symptom subtype has been associated with additional secondary obsessions of symmetry, and the washing symptom subtype has been associated with additional secondary concerns about aggression and checking (Calamari, Wiegartz, & Janeck, 1999; Calamari et al., 2004).

Presently, there is no gold standard method to identify OCD symptom subtypes and criteria have remained ambiguous. However, the reliable identification of OCD symptom subtypes has already been established in several symptom questionnaires, which have been developed through empirical research (e.g. Foa et al., 2002; Sanavio, 1988).

Belief domains could play a role in the delineation of OCD symptom subtypes (McKay et al., 2004). It has been suggested that specific OCD symptom subtypes are characterized by specific belief domains (Freeston, Rhéaume, & Ladouceur, 1996; Lee & Kwon, 2003; Rachman & Shafran, 1998; Sookman & Pinard, 2002). So far, all of the proposed relationship between the belief domains and the OCD symptom subtypes are based on the rationally derived belief domains. It has been proposed that inflated responsibility is of particular importance for the checking symptom subtype (Rachman, 1993; Rachman, Thordarson, Shafran, & Woody, 1995). Yao, Cottraux, and Martin (1999) concluded that the responsibility belief domain was more associated with aggressive obsessional themes (impulse phobia symptom subtype). According to Sookman and Pinard (2002), the checking symptom subtype may be more characterized by intolerance to uncertainty than the washing symptom subtype. It has also been argued that the overimportance of thoughts and the need to control thoughts belief domains would be more characteristic of the impulse phobia and the rumination symptom subtypes than the washing and checking symptom subtypes (Lee & Kwon, 2003). Tables 1 and 2 summarize the empirical support for specific belief domain-OCD symptom subtype links. Studies are contradictory and so far there is no current model to offer strong predictions about the specificity of the empirically derived belief domains in OCD symptom subtypes. For example, checking and washing symptoms might be distinguished by inflated responsibility according to Rachman and Shafran (1998), but by intolerance to uncertainty according to Sookman and Pinard (2002). Thus, it is unclear which of the empirically derived belief domains (Responsibility/Threat Estimation or Perfectionism/Certainty) differentiate between checking and washing symptoms. The specificity of belief

domains in OCD symptom subtypes requires further empirical support (Clark, 2002; McKay et al., 2004; OCCWG, 2003).

Insert Tables 1 and 2 here

So far, no study has categorized participants on the basis of OCD symptom subtype and investigated group differences on belief domains through analyses of variance. The present study investigates whether specific OCD symptom subtypes are associated with specific belief domains in an OCD sample using controlled analyses of covariance (ANCOVAs) and hierarchical regression analyses, and on the basis of the empirically derived belief domains questionnaire (OBQ-44).

Method

Participants

The data for the present study were obtained from the pre-treatment files of French-speaking OCD patients who participated in clinical studies in Montreal, Canada. Diagnosis was based on semi-structured interview (ADIS-IV; Brown, DiNardo, & Barlow, 1994) or clinical interview by a trained psychiatrist using DSM-IV criteria (American Psychiatric Association, 1994) subsequently confirmed by an experienced clinical psychologist. Entry criteria for inclusion in the study were (i) a primary diagnosis of OCD, (ii) no evidence of current substance abuse, and (iii) no evidence of current or past schizophrenia, bipolar disorder or organic mental disorder. The initial sample in this study consisted of 126 OCD patients. Seventy-five (60%) were female and 51 (40%) were male. Mean age was 38.74 (SD = 11.15).

Measures

Revised version of the Obsessive Beliefs Questionnaire (OBQ-44) (OCCWG, 2005). The OBQ-44 assesses belief domains. On the 44 items of the OBQ-44, scores range from 1 (disagree very much) to 7 (agree very much). The OBQ-44 shows

excellent internal consistency for the different subscales ($\alpha = 0.89\text{--}0.93$ in the OCD group). The factor structure was consistent across two OCD samples and a student sample. The subscales are moderately intercorrelated in the OCD sample ($r_s = 0.42\text{--}0.57$). In our sample, the French version of the OBQ-44 had excellent internal consistency ($\alpha = 0.89\text{--}0.92$). Its subscales were moderately inter-correlated ($r_s = 0.41\text{--}0.64$) and highly correlated with the OBQ-44 total score ($r_s = 0.78\text{--}0.90$). The correlations between the subscales and a measure of obsessional and compulsive behaviors (PI-R; see below) are generally higher than with measures of depression and anxiety (BDI, BAI; see below).

Padua Inventory - Revised (PI-R) (van Oppen, Hoekstra, & Emmelkamp, 1995). The PI-R is based on the Padua Inventory (Sanavio, 1988) and assesses obsessive-compulsive behaviour. On the 41 items of the PI-R, scores range from 0 (not at all) to 4 (very much). There are five subscales on the PI-R: Impulse phobia, washing, checking, rumination and precision. The PI-R shows good internal consistency ($\alpha = 0.77\text{--}0.93$ in the OCD sample) (van Oppen et al., 1995). The French version of the PI (60 items) shows excellent validity and satisfactory test-retest correlations. Factor analysis has replicated Sanavio's (1988) original factors (Freeston, Ladouceur, Letarte et al., 1994).

Yale-Brown Obsessive Compulsive Scale (Y-BOCS) (Goodman et al., 1989a; Goodman et al., 1989b). The clinician's version of the Y-BOCS assesses the severity of the OCD symptoms. On the 10 items of the Y-BOCS, scores range from 0 (no symptom) to 4 (extreme symptoms). The original instrument shows excellent interrater reliability for the Y-BOCS total score ($r = 0.98$), and good reliability ($\alpha = 0.88\text{--}0.91$) (Goodman et al., 1989b). The French version (Mollard, Cottraux, & Bouvard, 1989) has excellent internal consistency, and convergent and discriminant validity are satisfactory (Bouvard et al., 1992).

Beck Depression Inventory (BDI) (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). The BDI assesses depressive symptoms. The BDI total score range is

from 0 to 63. The original instrument shows excellent internal consistency (split-half reliability: 0.93). In two studies, correlations between clinician ratings and the BDI scores were 0.65 and 0.67 (Beck et al., 1961). The French version of the BDI shows excellent internal consistency and satisfactory test-retest reliability (Bourque & Baudette, 1982).

Beck Anxiety Inventory (BAI) (Beck, Epstein, Brown, & Steer, 1988). The BAI assesses the severity of anxiety. On each of the 21 items of the BAI, scores range from 0 (not at all) to 3 (severely—I could barely stand it). The original instrument shows high internal consistency ($\alpha = 0.91$), good test-retest reliability (0.75), moderate convergent validity ($r = 0.51$) and good discriminant validity ($r = 0.25$) (Beck et al., 1988). The French version of the BAI shows good internal consistency and satisfactory test-retest stability, convergent and discriminant validity (Freeston, Ladouceur, Thibodeau, Gagnon, & Rhéaume, 1994).

Analyses

ANCOVAs and Analyses of variance (ANOVAs). To investigate if OCD symptom subtypes differed from one another on the OBQ-44, we conducted two series of one-way ANCOVAs with the symptom subtypes (rumination, washing, checking, non-specific [see below]) as independent variables and the OBQ-44 subscales and total score as dependent variables, controlling for anxiety (BAI) and depression (BDI) separately. Subtype differences were also investigated on other clinical measures (PI-R, Y-BOCS, BDI and BAI total scores) using ANOVAs. Data were normally distributed except for Perfectionism/Certainty in the non-specific subtype. Variance was homogeneous for all subscales except for Importance/Control of Thoughts. However, in analyses of variance, the sampling distribution of F remains generally insensitive to minor violations of assumptions (Keppel, 1982).

Regression analyses. We used hierarchical regression analyses to investigate if OBQ-44 belief domains (independent variables) predicted PI-R OCD subscales

(dependent variables) after we controlled for negative mood states (depression and anxiety). We entered the BDI and the BAI in steps 1 and 2, followed by the OBQ-44 subscales in step 3. Only the OBQ-44 subscales correlated to the criterion variable were entered in step 3. The regression analyses were calculated with the data of the total sample ($N = 126$).

OCD symptom subtypes for the ANCOVAs and ANOVAs

Because there is no standard way of subtyping OCD, we relied on the PI-R subscales to determine a participant's predominant OCD symptom subtype (rumination, impulse phobia, washing, checking and precision subtypes) for the ANCOVAs and ANOVAs. Van Oppen et al.'s (1995) revision was used because it assesses the main subtypes of obsessions (except obsessional slowness and hoarding), and because its factor structure is stable across samples (OCD, anxious [other than OCD] and non-clinical) (van Oppen et al., 1995). The criteria for categorizing a participant into an OCD symptom subtype was a mean score greater or equal to 2.0 on at least one of the PI-R subscales and a highest PI-R subscale mean score at least 0.5 greater than any other PI-R subscale mean scores. The 2.0 criteria ensured the inclusion of only participants whose mean subtype score was in the range between "quite a lot" and "very much" on the PI-R subscales (indicating more severe OCD symptoms), and the 0.5 criteria logically implies that people are in a recognizably different category in terms of the PI-R subscales. Fifty-five participants met these criteria. We considered that the participants who were not categorized into an OCD subtype ($n = 71$) formed a non-specific symptom subtype.

Participants in the impulse phobia ($n = 1$) and precision symptom subtypes ($n = 3$) were excluded because of a small sample size. Also, because the rumination subscale contains items identified by Freeston, Ladouceur, Rhéaume et al. (1994) which measure either worry or obsessions, the participant in the rumination symptom subtype who also had a comorbid generalized anxiety disorder diagnosis was excluded, because it was considered that this participant could be more prone to

interpret the rumination items as worry items instead of OCD items. In order to further validate the subtype classification for the participants categorized into one of the three specific symptom subtypes and retained for the ANCOVAs and ANOVAs, the PI-R categorization was compared with the independent evaluators' Y-BOCS interview assessment of primary obsession/compulsion. The comparison yielded a 92% agreement. In the three discordant cases, the primary subtype was still present but accorded a lower clinical priority. These three participants were included in the analyses. The final sample consisted of 121 participants, divided into four symptom subtypes: Rumination ($n = 18$), washing ($n = 18$), checking ($n = 14$) and non-specific ($n = 71$). Demographics of the symptom subtypes are depicted in Table 3. There were no significant differences for the age of participants across symptom subtypes.

 Insert Table 3 here

Results

Scores of symptom subtypes on clinical measures are shown in Table 4.

 Insert Table 4 here

ANCOVAs and ANOVAs

When we controlled for anxiety (BAI), the ANCOVAs were significant for Importance/Control of Thoughts [$F(3,116) = 3.22, p < .05$], but not for Responsibility/Threat Estimation [$F(3,116) = .63, p < .60$], Perfectionism/Certainty [$F(3,116) = .73, p < .54$] and the OBQ-44 total score [$F(3,116) = 1.46, p < .23$]. *Post hoc* comparisons revealed that the participants in the rumination symptom subtype scored significantly higher on Importance/Control of Thoughts than the participants in the washing symptom subtype ($p < .05$).

When we controlled for depression (BDI), the ANCOVAs were significant for Importance/Control of Thoughts [$F(3,116) = 2.68, p < .05$], but not for Responsibility/Threat Estimation [$F(3,116) = .74, p < .53$], Perfectionism/Certainty [$F(3,116) = .39, p < .76$] and the OBQ-44 total score [$F(3,116) = 1.01, p < .39$]. *Post hoc* comparisons revealed that the participants in the rumination symptom subtype showed a tendency to score higher on Importance/Control of Thoughts than the participants in the washing symptom subtype ($p < .10$).

For the ANOVAs on other clinical measures (BDI, BAI, PI-R and Y-BOCS total scores), there were significant symptom subtype differences on the BDI [$F(3,117) = 5.62, p < .01$] and the BAI [$F(3,117) = 4.90, p < .01$] total scores, but no significant differences on the Y-BOCS [$F(3,117) = 1.74, p < .16$] and the PI-R [$F(3,117) = 1.92, p < .13$] total scores. *Post hoc* comparisons revealed that the participants in the rumination symptom subtype scored significantly higher on the BDI total score than the participants in the washing, checking and non-specific symptom subtypes ($p < .01, p < .01$ and $p < .05$, respectively; Bonferroni correction). The participants in the rumination symptom subtype scored significantly higher on the BAI total score than the participants in the checking and non-specific symptom subtypes ($p < .01$ and $p < .05$, respectively; Bonferroni correction) and showed a tendency to score higher on the BAI total score than the participants in the washing symptom subtype ($p < .1$; Bonferroni correction).

Hierarchical regression analyses

The hierarchical regression analyses (see Table 5) revealed that, when controlling for negative mood states (depression and anxiety), Responsibility/Threat Estimation predicted rumination scores. Importance/Control of Thoughts predicted impulse phobia scores. No belief domains predicted washing scores. Perfectionism/Certainty predicted checking scores. Finally, Perfectionism/Certainty predicted precision scores.

Insert Table 5 here

Discussion

The aim of the present study was to empirically investigate specificity of belief domains in OCD symptom subtypes in an OCD sample using ANCOVAs and regression analyses. The current study offers some support for the hypothesis that specific OCD symptom subtypes are associated with specific belief domains. In the ANCOVAs, a high score on Importance/Control of Thoughts was more characteristic of the participants in the rumination symptom subtype than of the participants in the washing subtype when we controlled for anxiety. When we controlled for depression, the participants in the rumination symptom subtype showed a tendency to score higher on Importance/Control of Thoughts than the participants in the washing symptom subtype. It is noteworthy that none of the three specific symptom subtypes (rumination, washing, checking) differed from the non-specific symptom subtype on the OBQ-44 in the ANCOVAs.

Symptom subtype differences were also obtained on other clinical measures. The participants in the rumination symptom subtype scored higher on the BDI total score than the participants in the washing, checking and non-specific symptom subtypes. They also scored higher on the BAI total score than the participants in the checking and non-specific symptom subtypes. Subtype differences on mood have also been observed in the literature (e.g. Calamari et al., 1999, 2004).

In the regression analyses, after controlling for negative mood states, Responsibility/Threat Estimation predicted rumination scores. These results make sense, because the rumination symptom subtype is characterized by uncertainty about one's responsibility in accidents and thinking about low-probability dangers (Sanavio, 1988). Importance/Control of Thoughts predicted impulse phobia scores. These results are consistent with Lee and Kwon's (2003) suggestion that the

overimportance of thoughts and the need to control thoughts belief domains are characteristic of the impulse phobia symptom subtype. The Perfectionism/Certainty belief domain predicted checking and precision scores. These results are not surprising, if the checking symptom subtype is characterized by pathological doubt (uncertainty) and because the clients in the precision symptom subtype believe that their experience is not quite right and is perfectible (Frost, Novara, & Rhéaume, 2002).

Some of the differences between the current study and previous findings (Tables 1 and 2) might be due to use of: OCD versus non clinical population, rationally versus empirically derived belief domains, and different clinical questionnaires. For example, the study of Emmelkamp and Aardema (1999) included belief domains not used in the current study (e.g. inverse inference), and which accounted for a large amount of variance. The links that have been consistently supported throughout studies between the empirically derived belief domains and the OCD symptoms in OCD samples are between Responsibility/Threat Estimation and rumination symptoms, and between Perfectionism/Certainty and precision symptoms.

In the present study, both the ANCOVAs and the regression analyses methods support the possibility of specificity of belief domains in OCD symptom subtypes, but the methods do not yield equivalent results. How can the differences be explained? Regression analyses do not really assess specificity of belief domains in OCD symptom subtypes, because the participants are not categorized into an OCD symptom subtype. As Calamari et al. (1999, 2004) demonstrated, the OCD symptom subtypes are characterized by dominant symptom patterns, but also by significant secondary concerns. These secondary concerns are not taken into account by regression analyses. Recent authors have tentatively concluded that at least some of the main OCD symptom subtypes identified in the literature could be conceptualized according to a categorical rather than dimensional model (McKay et al., 2004). ANCOVAs represent a categorical model, whereas regression analyses represent a dimensional model. In effect, regression analyses evaluate the specificity of belief

domains in OCD *symptoms*, whereas ANCOVAs evaluate the specificity of belief domains in OCD symptom *subtypes*.

A limitation of the present study is that the ANCOVAs did not include the impulse phobia and precision subtypes. However, the results give an empirically based insight into the specificity of empirically derived belief domains in OCD symptom subtypes in a sample of OCD participants, thereby potentially providing a better understanding of the etiology of OCD symptom subtypes. One implication is that treatment response could be enhanced through matching a client with a specific OCD symptom subtype to specific cognitive techniques (e.g. van Oppen & Arntz, 1994). Further clinical research could consider the relationship between belief domains and treatment outcome, because certain belief domains may be more treatment resistant than others.

Acknowledgment

This work was supported by grant number 8920 to the first author from the *Fonds de la recherche en santé du Québec* and by grant number 67059 to the second author from the *Canadian Institutes of Health Research*. Authors wish to thank Annie Taillon for her assistance.

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Table 1 – Empirical support for specificity of rationally derived belief domains in OCD symptoms^a

Belief domains	Tolin et al. (2003) ^b	Emmelkamp and Aardema (1999) [†]
	Non clinical sample (<i>N</i> = 562) Regression analyses	Non clinical sample (<i>N</i> = 305) Regression analyses
Inflated responsibility	None	Precision
Overestimation of threat	Washing	Checking
	Rumination (neutralizing)	Precision
Perfectionism	Precision (ordering)	Precision
		Washing
Intolerance of uncertainty	None	None
Overimportance of thoughts	Rumination (neutralizing)	Rumination
		Checking
		Washing
		Impulse phobia
Need to control thoughts	Impulse phobia (obsessing)	None

^aResults controlled for depression and/or anxiety are reported.

^bBelief domains were derived from the OBQ and symptom subtypes were derived from the Obsessive-Compulsive Inventory-Revised (Foa et al., 2002).

^cBelief domains were derived from the Obsessive-Compulsive Beliefs-Research Inventory (unpublished data), which is a precursor of the OBQ, and symptom subtypes were derived from the PI-R. In this study, Inflated responsibility was considered as Responsibility; Overestimation of threat was considered as Harm/Risk Probability; Perfectionism was considered as Personal Standards; Intolerance of uncertainty was considered as Concern over Mistakes and Decision Making; Overimportance of thoughts was considered as Thought/Action Fusion, Magical

Thinking, Over-Importance Given to Thoughts and Consequences of Having the Thoughts; Need to control thoughts was considered as Control.

Table 2– Empirical support for specificity of empirically derived belief domains in OCD symptoms^a

Belief domains	OCCWG (2005) ^b	Tolin, Brady, and Hannan
	OCD sample ($n = 179$) Regression analyses	(submitted) ^c OCD sample ($N = 99$) Regression analyses
Responsibility/	Washing	Washing
Threat Estimation	Rumination (harming thoughts)	Rumination (mental neutralizing)
Perfectionism/	Precision (grooming)	Precision (ordering)
Certainty	Checking	Impulse phobia (obsessing)
Importance/Control of Thoughts	None	Impulse phobia (obsessing)

^aResults controlled for depression and anxiety are reported.

^bBelief domains were derived from the OBQ-44 and symptom subtypes were derived from a revision of the Padua Inventory (Burns et al., 1996).

^cBelief domains were derived from the OBQ-44 and symptom subtypes were derived from the Obsessive-Compulsive Inventory-Revised.

Table 3 – Demographic variables for the OCD symptom subtypes

OCD subtypes and <i>n</i>	Demographic variables		
	Gender		Mean Age in Years
	Female	Male	
Rumination (<i>n</i> = 18)	7	11	37.33 (SD = 13.91)
Washing (<i>n</i> = 18)	15	3	40.65 (SD = 9.22)
Checking (<i>n</i> = 14)	9	5	38.15 (SD = 11.31)
Non-specific (<i>n</i> = 71)	41	30	39.14 (SD = 11.06)
TOTAL	72 (60%)	49 (40%)	38.97 (SD = 11.22)

Note. SD = Standard deviation.

Table 4– Symptom subtype scores (means and standard deviation [in parentheses])

Measures/ Subtypes	ANCOVAs			OBQ-44	ANOVAs			
	RESP/ THREAT	PERFEC/ CERTAIN	IMPORT/ CTRL THGT		PI-R	Y-BOCS	BDI	BAI
Rumination	75.7 (18.0)	82.0 (19.8)	52.8 ^a (16.4)	210.5 (45.5)	74.0 (23.4)	27.4 (4.8)	23.7 ^{a,b,c} (10.6)	24.7 ^{a,b,c} (8.81)
Washing	62.4 (24.9)	71.3 (24.1)	35.4 ^{a*,A;a†,B} (14.5)	169.1 (57.1)	73.01 (19.2)	30.4 (6.4)	14.0 ^{a,**} (8.8)	16.5 ^{a†} (10.7)
Checking	56.6 (20.1)	73.1 (22.6)	37.0 (6.6)	164.7 (38.4)	64.6 (18.1)	25.9 (5.3)	11.9 ^{b,**} (4.8)	11.8 ^{b,**} (8.8)
Non-specific	67.3 (23.9)	79.4 (22.5)	44.4 (16.7)	191.2 (52.1)	60.2 (30.8)	24.5 (5.5)	17.0 ^{c,*} (9.0)	16.7 ^{c,*} (10.3)
TOTAL	66.6 (23.2)	75.7 (22.3)	41.5 (15.8)	187.7 (51.9)	64.7 (27.5)	25.0 (5.3)	16.9 (9.4)	17.3 (10.5)

Note. RESP/THREAT: Responsibility/Threat Estimation; PERFEC/CERTAIN: Perfectionism/Certainty; IMPORT/CTRL THGT: Importance/Control of Thoughts; OBQ-44: OBQ-44 total score; PI-R: PI-R total score; Y-BOCS: Y-BOCS total score; BDI: BDI total score; BAI: BAI total score.

^{a, b, c} Symptom subtypes who share the same superscript (a, b or c) in the same column differ significantly from one another

* = $p < .05$; ** = $p < .01$; † = trend, $p < .1$

^AWhen controlling for BAI; ^Bwhen controlling for BDI.

Table 5 – Regression analyses results (controlling for negative mood states)

OCD Symptoms	Beta	Adj. R^2	t	$p \leq$
Negative mood states and belief domains				
Rumination				
Depression	.225	.29	3.08	.003
Anxiety	.401	.46	5.35	.001
Responsibility/Threat Estimation	.319	.54	4.85	.001
Impulse phobia				
Depression	.207	.20	2.32	.022
Anxiety	.285	.28	3.17	.002
Importance/Control of Thoughts	.251	.33	3.10	.002
Washing				
Depression	.032	.02	0.31	n.s.
Anxiety	.247	.06	2.38	.019
Checking				
Depression	.021	.04	.21	n.s.
Anxiety	.170	.07	1.69	n.s.
Perfectionism/Certainty	.283	.13	3.09	.002
Precision				
Depression	.144	.09	1.40	n.s.
Anxiety	.142	.10	1.42	n.s.
Perfectionism/Certainty	.217	.13	2.37	.019

Note. n.s. = Not significant.

TROISIÈME ARTICLE¹

Intrusive thoughts, obsessions, and appraisals in obsessive-compulsive disorder: A
critical review

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¹Cet article a été publié dans *Clinical Psychology Review*, 27(3), Julien, D., O'Connor, K. P., & Aardema, F., Intrusive thoughts, obsessions, and appraisals in obsessive-compulsive disorder: A critical review, pp. 366-383, Copyright Elsevier (2007).

Abstract

This article reviews empirical findings on two key premises of the appraisal model of obsessive-compulsive disorder (OCD): (a) Non-clinical populations experience intrusive thoughts (ITs) that are similar in form and in content to obsessions; and (b) ITs develop into obsessions because they are appraised according to dysfunctional beliefs. There is support for the universality of ITs. However, the samples used are not representative of the general population. IT measures do not relate systematically or exclusively to OCD symptom measures, and are not specific enough to exclude other types of intrusive thoughts such as negative automatic thoughts or worries, nor are they representative of all types of obsessions. When general distress is controlled, there is so far no evidence that participants with OCD endorse obsessive belief domains more strongly than anxious participants, and inconclusive evidence that OCD and non-clinical samples differ on the belief domains. Some OCD symptom subtypes are associated with belief domains. Currently, there is no coherent model to offer strong predictions about the specificity of the empirically derived belief domains in OCD symptom subtypes. Cognitive therapy based on the appraisal model is an effective treatment for OCD, although it does not add to the treatment efficacy of behaviour therapy. It is unclear how appraisals turn ITs into obsessions. Implications for future research are discussed.

Key words: Obsessive-compulsive disorder; obsessions; intrusive thoughts; beliefs, cognitive therapy.

Individuals presenting with obsessive-compulsive disorder (OCD) suffer from obsessions (recurrent and persistent thoughts, impulses, or images experienced as intrusive and inappropriate and causing marked anxiety or distress) generally accompanied by compulsions (repetitive behaviours or mental acts done in order to prevent or reduce anxiety or distress caused by obsessions) (American Psychiatric Association [APA], 1994). It has been proposed that non-clinical individuals have thoughts whose content is similar to obsessions (see among others, Freeston & Ladouceur, 1993; Freeston, Rhéaume, & Ladouceur, 1996; Parkinson & Rachman, 1981a, 1981b; Rachman, 1997, 1998; Salkovskis, 1985, 1989, 1999). These thoughts have been variously identified by authors as “cognitive intrusions”, “normal obsessions”, “obsessional thoughts”, and “intrusive thoughts”. Here, we will employ the term “intrusive thoughts” (ITs).

Rachman (1971) proposed a close link between ITs and obsessions on the basis of similar content even though they differ in that obsessions are more frequent and anxiety provoking than ITs. ITs would be experienced by a majority of individuals (Rachman, 1971), but would develop into obsessions only for a minority (Rachman, 1997; Salkovskis, 1999). In particular, one cognitive model of OCD (i.e. the appraisal model) proposes that the interpretation (appraisal) of the presence and content of ITs will determine whether they escalate into obsessions (Freeston, Rhéaume, & Ladouceur, 1996; Rachman, 1997, 1998; Salkovskis, 1985, 1989, 1999). The appraisal of intrusive thoughts is in accordance with pre-existing dysfunctional attitudes or beliefs, which are relatively enduring pan-situational assumptions held by an individual (Obsessive Compulsive Cognitions Working Group [OCCWG], 1997). Hence, the crucial difference between people with OCD and non-clinical individuals would be the presence of OCD-related dysfunctional beliefs. In the absence of OCD-related beliefs, ITs are ignored more easily, preventing escalation into obsessions (Salkovskis, 1989).

The appraisal model of OCD then relies on two key premises: (a) ITs are part of normal experience, implying that obsessions may be on a continuum with normality; and (b) the interpretation given to the presence and content of ITs according to dysfunctional beliefs explains why they escalate into obsessions. Purdon and Clark (1993) have identified three conditions necessary to support the initial premise: Firstly, it should be clearly evident that non-clinical samples experience ITs. Secondly, ITs should show a specific link with clinical obsessions. For example, it is expected that correlations between measures of ITs and OCD would be higher than correlations between measures of ITs and measures of general distress (e.g.: depression, anxiety). Thirdly, ITs should be distinguishable from negative automatic thoughts (NATs) believed to be characteristic of anxiety and depression. In addition to these three conditions identified by Purdon and Clark (1993), a fourth and fifth condition for support of the first premise of the appraisal model is that ITs should be representative of obsessions and show a stable factor structure.

Tolin, Worhunsky, and Maltby (2006) have identified three conditions necessary to confirm the second premise: Firstly, clients with OCD should endorse obsessive belief domains more strongly than patients with anxiety disorders (the specificity hypothesis). Secondly, OCD symptom subtypes (e.g.: washing, checking, impulsive phobia, precision, rumination) should be associated with at least some form of obsessive belief domains (the generality hypothesis). Thirdly, the different obsessive belief domains should be related to OCD symptom subtypes in a meaningful way (the congruence hypothesis). In addition to these three conditions identified by Tolin, Worhunsky, and Maltby (2006), a fourth condition to support the second premise of the appraisal model is that cognitive therapy prove itself an effective treatment for OCD. The aim of this article is to give an up-to-date review of the appraisal model by looking at the empirical findings on its two key premises and the conditions identified to support them.

First Key Premise: Occurrence of ITs is a Universal Phenomenon

First Condition: Universality of ITs in Non-Clinical Samples

According to the appraisal model, the majority of the people experience ITs from time to time. We conducted a review of the literature via PsycINFO database, using such search words as intrusive thoughts, intrusions, cognitive intrusions, unwanted thoughts, and normal obsessions. Thirteen studies investigating the occurrence of ITs in non-clinical populations were found (Edwards & Dickerson, 1987; England & Dickerson, 1988; Freeston, Ladouceur, Thibodeau, & Gagnon, 1991; Niler & Beck, 1989; Parkinson & Rachman, 1981a, 1981b; Purdon & Clark, 1993, 1994; Rachman & de Silva, 1978; Salkovskis & Harrison, 1984; Wells & Morrison, 1994; Yao, Cottraux, & Martin, 1999; Yao, Cottraux, Martin, & Bouvard, 1996). At first glance, the scientific literature supports the universality of ITs: 72 to 100% (mean: 93%) of non-clinical individuals have experienced ITs. It has been shown empirically that the content of ITs and obsessions is similar (Bouvard & Cottraux, 1997; Rachman & de Silva, 1978) and that they may appear in a variety of forms, including thoughts, images, and/or impulses (Freeston, Dugas, Ladouceur, 1996; Freeston, Ladouceur, Letarte, & Rhéaume, 1994; Rachman & Hodgson, 1980). Obsessions seems to be more frequent, anxiety provoking, intense, and difficult to control than ITs (Rachman & de Silva, 1978).

However, despite support for the universality of ITs, studies assessing ITs have limitations that might impact on the estimates of the prevalence of ITs (Clark & O'Connor, 2005; Clark & Purdon, 1995; Clark & Rhyno, 2005). We will focus on the following criteria: the definition of ITs, the methods used to assess them, the reliability of the measures, as well as the internal and external validity of the studies.

IT definition. There is currently no overall consensus on identifying ITs, which have been defined and conceptualized in varying ways. Table 1 illustrates the various labels and definition of ITs in studies assessing their presence, and Table 2

identifies which components authors have included in the definition of the concept they provided, if any.

Insert Tables 1 and 2 here

Consensus on the definition of ITs, or at the very least agreement on necessary and sufficient operational criteria for its identification, seems essential, since a lack of agreement on the definition of ITs may have important consequences for estimations of the prevalence of ITs. While some authors have indeed proposed necessary and sufficient conditions for identifying ITs (e.g.: Rachman & Hodgson, 1980), others (Warren, Gershuny, & Sher, 2002) stress that a too sharp definition of a concept has the disadvantage of excluding certain important aspects by defining out meaningful sources of variation. For example, a strict criterion of ego-dystonicity (i.e., going against one's values) would exclude obsessions that are less clearly ego-dystonic (e.g.: contamination, disease, making mistakes, accidents) (Freeston, Ladouceur, Rhéaume, et al., 1994).

Despite these varying definitions, we can identify several dimensions that have commonly been attributed to ITs. Firstly, as originally pointed out by Rachman and Hodgson (1980), they are generally conceptualized as *unwanted*, although England and Dickerson (1988) appear to take exception to this and view some ITs as agreeable. Secondly, ITs are hardly ever considered a one-time occurrence, but rather refer to thoughts, images, or impulses that have the tendency to repeat themselves. In other words, most authors agree that these thoughts, images, and impulses are *repetitive* in character. Finally, even though not explicitly stated in most definitions (perhaps since it forms part of the term "intrusive thought" itself) is the *intrusive* nature of ITs. That is, they are not considered to form part of the regular stream of consciousness, but rather, are generally considered to interrupt ongoing activity. However, despite some overall agreement on the definition of ITs, characteristics of ITs as a phenomenon are not clearly delineated.

Assessment methods. Two main strategies have been used to assess the presence of ITs: (a) participants record in a diary the content of ITs occurring during a period of time; and (b) participants are given a list of ITs and told to indicate which of these ITs they experienced. For both strategies, it is generally requested that the participants assess their ITs according to various parameters (e.g.: anxiety caused, ease of dismissal). The first strategy is more adapted to the idiosyncratic nature of ITs (Clark & Purdon, 1995). However, Freeston et al. (1991) note that different criteria have been advanced to determine the most representative ITs: high frequency (Clark & Nicki, 1989), greater salience (England & Dickerson, 1988), low controllability and low ease of dismissal (Edwards & Dickerson, 1987; Salkovskis & Harrison, 1984) are some of the suggested criteria. Among the advantages of using the second strategy, there is a possibility of comparing the participants on the same ITs (Freeston et al., 1991) and the possibility of identifying recurring themes in each individual.

Reliability. The reliability of measures can be examined by looking at inter-rater agreement (level of agreement among raters in categorizing if the reported thoughts were ITs or another type of thought), internal consistency, and test-retest reliability. In studies where participants are required to record ITs in a diary, only Wells and Morrison (1994) calculated inter-rater agreement, which only showed a moderate level of agreement among raters ($Kappa=.63$). Also, no mention was made of the qualifications or training of raters. If raters were not experienced clinicians, their ability to determine which of the reported thoughts were ITs might have improved over time, thereby compromising the reliability of the results.

For authors who report the internal consistency of their questionnaire (Edwards & Dickerson, 1987; England & Dickerson, 1988; Freeston et al., 1991; Purdon & Clark, 1993; Salkovskis & Harrison, 1984; Yao et al., 1996), the alpha coefficients vary from .68 to .93, which, according to Freeston et al. (1991), is satisfactory considering the multidimensional nature of ITs's themes.

Clark (1992) is the only author who calculated test-retest reliability indices. The test-retest reliability of his questionnaire was moderate. This result was however expected, because the participants of this study were given a treatment which probably decreased the scores on some ratings (frequency, sadness, and concern caused by ITs, difficulty of ignoring ITs, guilt, and belief dimensions) (Clark, 1992). However, the test-retest was calculated on the total score. Therefore, there exist no test-retest reliability indices for the frequency of occurrence of ITs in the literature.

Internal validity. The main challenge to internal validity, in research measuring the presence of ITs with questionnaires, is researchers' and participants' expectations. Regarding researchers' expectations, participants were informed in some studies (e.g.: Freeston et al., 1991; Salkovskis et Harrison, 1984) that the presence of ITs is a normal phenomenon, thereby potentially coaching the results anticipated by researchers. Researchers' expectations can also be revealed in the participants' consent forms, where the research objectives are generally described. Finally, use of controls for expectations, such as independent and blind inter-rater agreement (where the rater is unaware of researchers' hypotheses) have not been used in studies where participants had to record their ITs in a diary.

Regarding participants' expectations, social desirability could prevent participants from reporting highly reprehensible ITs, especially when a list of ITs is not provided to them (Clark & Purdon, 1995). If researchers informed participants that the experience of ITs is an universal phenomenon, participants may, in order to appear normal or to please the researchers, report an experience of ITs when, in fact, it is not experienced. None of the studies investigating the presence of ITs have included measures of social desirability.

External validity. The main concern with external validity is sample representativeness. IT being considered a universal phenomenon, the participants of the studies should ideally form a sample representative of the whole population. The studies investigating the presence of ITs have primarily been conducted on student

populations (average age of all samples: 24 years old), mainly consisting of women (percentage of men in all samples: 38%). But student controls score significantly higher on measures of general distress than community controls (e.g.: OCCWG, 2003); student years are associated with stress and stress with obsessional symptoms (Warren et al., 2002). The themes found among women are more numerous than among men, as revealed by Purdon and Clark's (1993) factor analyses. The estimate of the prevalence of ITs could then have been inflated because of the type of population, i.e. mainly female students. Consequently, there is a need to replicate the studies estimating the presence of ITs using samples that are more representative of the general population (Warren et al., 2002). It would also be interesting, in further research, to study more precisely the influence of moderating variables such as gender, age and schooling on the occurrence and content of ITs (see Purdon & Clark, 1993).

Second Condition: Specificity of ITs and Clinical Obsessions

According to the appraisal model, obsessions originate in ITs. ITs should then show a specific link with clinical obsessions. Measures of convergent/divergent validity and concomitant/predictive validity would be good indicators as to the specificity of ITs in clinical obsessions.

Convergent and divergent validity. Regarding convergent/divergent validity, correlations between measures of ITs and measures of OCD are expected to be higher than correlations between measures of ITs and measures of general distress. A first group of studies reported that IT measures were more correlated with neurotism, anxiety or depression measures than with OCD measures (see Clark & Hemsley, 1985; Freeston, Ladouceur, Thibodeau, & Gagnon, 1992). A second group of studies found equal correlations between IT, OCD, and general distress measures (see Clark, 1992; Yao et al., 1996). Also, multiple regression analysis indicated that ITs contributed more strongly to anxiety and depression than to OCD (see Freeston et al.,

1992). Hence, convergent and divergent validity of the questionnaires used in these two group of studies is not clearly established.

In a third group of studies (Purdon & Clark, 1993; Yao et al., 1999), the correlations between measures of ITs and measures of OCD were generally higher than the correlations between measures of ITs and measures of anxiety or depression. However, in Purdon and Clark's (1993) study, the correlations between measures of *OCD* and measures of *ITs* were relatively low (.37-.62) and almost equivalent to the correlations between measures of *OCD* and measures of *depression* or *anxiety* (.38-.58). A later study of Purdon and Clark (1994) showed good divergent validity of the instrument measuring ITs with a measure of worry. However, the convergent validity of the questionnaire measuring ITs could not be established because no OCD questionnaires were used. Hence, the results concerning the convergent and divergent validity in these three group of studies are inconsistent. Clark and Purdon (1995) consider that IT measures with inadequate divergent validity are not appropriate for research in OCD. Inadequate convergent/divergent validity implies that ITs may not be more related to OCD symptoms than to general distress. This poses a problem for the appraisal model, because if ITs and obsessions are on the same continuum, then there should be a stronger relationship between ITs and OCD than between ITs and general distress. However, OCD is generally considered to be an anxiety disorder and depression is often a comorbid condition. Strong relationships between ITs and anxiety or depression are thus not surprising. Nevertheless, one would expect ITs to be more strongly correlated to OCD than to general distress.

Concomitant and predictive validity. Regarding concomitant/predictive validity, the correlations between different measures of ITs are expected to be high. Only Yao et al. (1996, 1999) presented concomitant validity indices of the questionnaire measuring ITs. In these studies, correlation between ITs and obsessional thoughts most frequently found in OCD proved to be satisfactory ($r=.74$).

Predictive validity of questionnaires measuring ITs could establish which individuals are most likely to develop OCD. This would demonstrate the clinical utility of these questionnaires, so far undemonstrated since they have rarely been administered to clinical samples (Clark et Purdon, 1995), thereby limiting our understanding of the link between ITs and obsessions (Clark, 1992). Predictive validity has not been considered in any of the studies investigating the presence of ITs.

Third Condition: Distinction between ITs and Other Types of Thoughts

Cognitive intrusions which are not obsessional occur in other psychopathologies, such as posttraumatic stress disorder, generalized anxiety disorder (GAD), depression, insomnia, and psychosis (see Clark, 2005b). These thoughts cannot be regarded as obsession-related because of their content. For example, GAD thoughts are characterized by concerns over everyday life themes (work, school performances; APA, 1994), depressive thoughts are characterized by loss or failure themes, and anxiety thoughts are characterized by danger or vulnerability themes (Clark, 1992). The content of ITs is more ego-dystonic, unacceptable, and associated with loss of control (Clark, 1992; Clark & Purdon, 1995). It is also important to differentiate obsessions from mental compulsions which aim to neutralize the anxiety caused by the obsessions. In order to differentiate ITs from other types of thoughts, it is necessary to consider thought process (e.g.: its repetitive and intrusive nature) as well as content (Clark, 1992; Clark & Claybourn, 1997; Clark & Purdon, 1995). However, except in Yao et al. (1996, 1999), the type of content does not feature in the definitions of ITs and authors only make reference to process (see Table 1). By doing so, some intrusive and unpleasant thoughts whose content is not obsessional in nature may have been inserted into questionnaires measuring ITs. If so, the prevalence estimate of ITs would be inflated. Two kind of intrusive thoughts similar to ITs are particularly relevant: negative automatic thoughts (NATs) and worries (although other types of thoughts have been included in some questionnaires, such as mental tics; see O'Connor, 2005).

NATs. NATs are recurring, involuntary, and intrusive disapproving comments of oneself (e.g.: I am worthless) (Ingram, Atkinson, Slater, Saccuzzo, & Garfin, 1990). According to Clark and his colleagues (Clark, 1992; Clark & Purdon, 1995; Clark & de Silva, 1985; Purdon & Clark, 2001), NATs were inadvertently measured in the majority of studies estimating the presence of ITs (e.g.: loss of a loved one). However, these two concepts can be distinguished theoretically and empirically. Theoretically, NATs have low intrusiveness, are perceived as rational and ego-syntonic (i.e., are in accordance with one's values); they follow the course of normal thoughts, but access to them is difficult. In contrast, ITs are intrusive, perceived as irrational and ego-dystonic; they interrupt the course of thoughts (i.e., they are intrusive) and one can easily access them (Salkovskis, 1985). Clark and Rhyno (2005) have proposed that NATs are more frequent than ITs. Empirically, ITs have been less tied (and with less specificity) to psychopathology than NATs (Clark, 1992). In comparison to the content of NATs, the content of ITs is more ego-dystonic, unacceptable, and involves a loss of control. As mentioned above, depressive NAT themes relate to loss and failure, anxious NAT themes relate to danger and vulnerability. However, Clark (1992) notes that the number of statements per concept in his study (7 items for depressive NATs, 3 for anxiety NATs and 2 for ITs) is too limited to draw final conclusions.

Worries. Worries can be defined as a "chain of thoughts and images, negatively affect-laden and relatively uncontrollable" (Borkovec, Robinson, Pruzinsky, & DePree, 1983, p. 10). Items linked to worries have also been included in studies measuring the presence of ITs. For example, some questionnaires include statements which have as much, or even more, to do with worries than ITs (e.g.: fear of getting sick, fear of mistakes or errors, fear of sexuality, fear of losing an important object). However, ITs and worries can also be distinguished theoretically and empirically. Turner, Beider, and Stanley (1992) have suggested that worries relate more to everyday life concerns, whereas ITs relate to dirt and contamination themes. According to these authors, worries are also less unacceptable, more stimulus-bound,

more resisted, and less intrusive than ITs. They would mainly appear as thoughts, while ITs appear as thoughts, images, or impulses. Ladouceur and Dugas (1999) add that worries are dynamic scenarios and the person who worries believes that worrying reduces the possibility of these scenarios actualizing. On their side, ITs are often static, and the subject is convinced that their presence increases the possibility that these thoughts come true. Empirically, worries and ITs are distinguishable since worries are more often triggered by a stimulus (Langlois, Freeston, & Ladouceur 2000a), they take more often the form of an internal monologue (Langlois et al., 2000a; Wells & Papageorgiou, 1998), and their content is more acceptable (Langlois et al., 2000a; Langlois, Freeston, & Ladouceur, 2000b) than ITs. Worries, on their side, are less resisted (Langlois et al., 2000a; Wells & Morrison, 1994) and less intrusive (Wells & Morrison, 1994) than ITs. ITs are considered to be less disturbing than worries. Also, the emotional disturbance accompanying a thought differs depending on the nature of the thought. For worries, the emotional disturbance is related to perceived negative outcome for real life problems; for ITs, the emotional disturbance is related to what the thought reveals about one's true nature (Clark & Claybourn, 1997).

Purdon and Clark (1994) established good divergent validity between measures of ITs and worries. However, because most studies do not provide the item set of their questionnaire, it becomes difficult to determine if the questionnaires assessing the presence of ITs were free of items measuring worry and so to establish their content validity. Except in Purdon and Clark (1993), ITs were not expert-rated to validate their similarity to obsessions.

The main consequence of a potential inclusion of NATs and worries in questionnaires measuring ITs is that the prevalence estimate of ITs may be incorrect. Indeed, the ego-syntonic character of NATs and worries could have artificially increased the percentage of individuals reporting ITs.

Fourth Condition: Representativeness of ITs

A critical component of studies assessing ITs is for questionnaire items to be representative of the whole concept under investigation (Vallerand, Guay, & Blanchard, 2000). The overrepresentation of some ITs might inflate the prevalence reported in the studies. In this context, we discuss four considerations: the form of ITs, their thematic representativeness, the number of items and the method of selecting items.

Form of ITs. As mentioned previously, ITs generally present themselves in three different forms: thoughts (e.g.: idea, doubt, prohibition), images (mental representation of a situation), or impulses (force or tendency which pushes someone to act). These three forms are not systematically assessed in all studies. For example, ITs appearing as images were not investigated by some researchers (see Niler & Beck, 1989; Rachman & de Silva, 1978; Salkovskis & Harrison, 1984). However, this form of ITs has proven particularly important in distinguishing ITs from worries (Langlois et al., 2000a, 2000b). Any research that does not consider ITs under the form of an image omits a determining characteristic defining ITs.

Thematic representativeness. In studies where a list of ITs is not provided, participants generally have to identify two of their own ITs. This strategy cannot ensure the representativeness of IT themes. It is not established either that individuals are able to distinguish by themselves ITs from other mental phenomena, such as NATs and worries (Clark & Purdon, 1995).

Yao et al. (1996, 1999) listed the main themes examined in studies which had provided a list of ITs to participants. However, in this inventory, all themes specific to obsessions were not represented. Thus, according to Yao et al. (1996, 1999), ITs studied by Rachman and de Silva (1978) and Salkovskis and Harrison (1984) over-represented themes of aggressiveness and sexuality; ITs studied by Purdon and Clark (1993) concerned mostly aggressiveness, sexuality and dirt/contamination/disease; and ITs studied by Yao et al. (1999) related to aggressiveness, sexuality,

perfectionism and fear of losing something (object, health). Other themes identified by some authors (Akhtar, Wig, Varma, Pershad, & Verma, 1975; APA, 1994; Rachman, 1998; Yao et al., 1996) were thus neglected, such as religion, enactment of embarrassing acts, need to order things, and hoarding. Moreover, overvalued ideas in subjects suffering from OCD (Kozak & Foa, 1994; Neziroglu, Stevens, McKay, & Yaryura-Tobias, 2001) were not investigated in these studies. Overvalued ideas are distinct from obsessions with poor insight: They are ideas that are not shared by others, but carry a strong personal investment and whose content is strange or bizarre (O'Dwyer & Marks, 2000) (i.e.: If I do not say certain words, God will think me in league with the devil and will punish me; Other people can take possession of my mind).

Number of items. The number of items used to measure ITs is sometimes limited. For example, seven items were used by Freeston et al. (1991), relating to personal health, embarrassing or painful experience, unacceptable sexual behaviour, verbal aggression, fatal disease to friend or family member, friends or family members having an accident, and an open item for an idiosyncratic IT. Of these six statements, only two were exclusively of an obsessional nature (Clark, 1992). Twelve items were used by Yao et al. (1996, 1999), relating to physical problems, dirt, need to know or to remember, being obscene, hurting self, hurting others, losing an object, losing a close other, worry of mistakes, fear of sexuality, imperfection, and an open item for an idiosyncratic IT.

Method of selecting items. The questionnaire items measuring the presence of ITs were mainly conceived after discussions with non-clinical participants. An alternate strategy, which has not been so far adopted, is to choose items from the obsessions of individuals presenting with OCD, in order to identify the authentic content of obsessions and then investigate whether the non-clinical population experiences cognitive intrusions with obsessional content.

Fifth Condition: Stability of Factor Structure

Exploratory factor analyses are reported in five studies measuring the presence of ITs (see Edwards & Dickerson, 1987; England & Dickerson, 1988; Parkinson & Rachman, 1981a; Purdon & Clark, 1993; Yao et al., 1996). Various extraction methods (principal components analysis, principal axis factoring, Rao's canonical method, maximum likelihood), and rotation methods (Varimax, Oblimin) were used in these studies. In three of these studies (Edwards & Dickerson, 1987; England & Dickerson, 1988; Parkinson & Rachman, 1981a), factor analyses were carried out on parameters relevant to ITs (e.g.: frequency, duration, distress, and acceptability). Factorial structures were not always easy to interpret and did not yield equivalent solutions. For example, the two factors found by Edwards and Dickerson (1987), explaining approximately 70% of the variance, were rather heterogeneous. The first factor was an amalgam of unpleasantness, frequency, duration, and uncontrollability, whereas the second factor included elements of attentional value, intensity, and uncontrollability. The factorial structure found by Parkinson and Rachman (1981a) was similar for all ITs taking the form of thoughts and impulses (5 factors: unpleasantness, controllability, number of intrusions, frequency, and unacceptability), but distinct for ITs taking the form of images (4 factors: unpleasantness/controllability, number of intrusions, unacceptability/discomfort, and control characteristics).

Purdon and Clark (1993) and Yao et al. (1996) carried out factor analyses on the content of ITs. The results of the factor analyses of Purdon and Clark (1993) differed according to the gender of participants. For men, one factor amalgamating sexual and aggressiveness themes explained 32% of the variance. For women, two factors explained 30% of the variance: a first factor regarding sexual and aggressiveness themes, and a second one regarding disease/dirt/contamination themes. In the study conducted by Yao et al. (1996), four factors explained 69% of the variance, namely: (a) fear of loss (health, object, a close one); (b) aggressiveness; (c) fear of sexuality and physical health; and (d) perfectionism. Overall, the results of

these studies are inconclusive: The factorial structures are neither equivalent nor stable across studies, and the variation in the percentage of explained variance is considerable (from 30 to 70%).

Second Key Premise: The Role of Appraisals in the Escalation of ITs into Obsessions

The OCCWG (1997) originally concluded that six rationally derived belief domains were of central importance in OCD: (a) *inflated responsibility* (belief that one has power that is pivotal to bring about or prevent subjectively crucial negative outcomes perceived as essential to prevent and that may have consequences in the real world and/or at a moral level); (b) *overimportance of thoughts* (belief that the mere presence of a thought indicates that it is important); (c) *need to control thoughts* (belief that it is important, possible, and desirable to exert complete control over intrusive thoughts, images, and impulses); (d) *overestimation of threat* (exaggerated belief about the probability or severity of harm); (e) *intolerance of uncertainty* (belief about the necessity for being certain, that one has poor capacity to cope with unpredictable change, and that it is difficult to function adequately in ambiguous situations); and (f) *perfectionism* (belief that there is a perfect solution to every problem, that doing something perfectly is possible and necessary, and that even minor mistakes will have serious consequences).

The *Obsessive Beliefs Questionnaire* (OBQ; OCCWG, 2001, 2003) was developed to assess these six belief domains. However, these theoretically derived belief domains appear to overlap (OCCWG, 2005). High correlations between the OBQ subscales and further analysis on this instrument led the OCCWG to a revision of the OBQ, the OBQ-44, which combines dimensions in three empirically derived belief domains: *Responsibility/Threat Estimation*, *Perfectionism/Certainty*, and *Importance/Control of Thoughts*. The three tandem factors are intuitively understandable and are more empirically robust than the six rationally derived belief domains (OCCWG, 2005). A confirmatory factor analysis on the OBQ-44 in a French

OCD sample replicated the factor structure of the OBQ-44 (Julien, Careau, et al., 2006). However, the factor structure of the OBQ is not consistent across studies. Some studies revealed a single factor structure (Careau, O'Connor, Turgeon, & Freeston, 2003; Faull, Joseph, Meaden, & Lawrence, 2004). Taylor, McKay, and Abramowitz (2005) found that the beliefs domains in the OBQ are hierarchically structured, with three lower-order factors (the three empirically derived belief domains) loading on one higher-order factor. This higher-order factor explained more variance than did the three lower-order factors (22% vs 6-7%) in OBQ scores.

First Condition: The Specificity Hypothesis

According to the specificity hypothesis, it is expected that clients with OCD endorse obsessive belief domains more strongly than patients with anxiety disorders. Table 3 summarizes the studies investigating the status of the specificity hypothesis for the empirically derived belief domains. The studies in Table 3 are limited to the empirically derived belief domains of the OBQ-44, because they have advantages over the rationally derived belief domains of the OBQ (OCCWG, 2005). For findings on the rationally derived belief domains, see OCCWG (2003), Sica et al. (2004), Taylor, Kyrios, Thordarson, Steketee, and Frost (2002), and Tolin, Worhunsky, and Maltby (2006). It appears from Table 3 that clients with OCD endorse belief domain items more strongly than anxious or non-clinical participants when general distress is not controlled. However, support for the specificity hypothesis is less conclusive when controlling for general distress. So far, participants with OCD do not seem to score significantly higher than anxious participants on the belief domains when anxiety or depression are controlled (Tolin, Worhunsky, & Maltby, 2006). Significant belief domain differences between OCD and non-clinical participants were found in one study (Julien, Careau, et al., 2006) when controlling for general distress, but not in another (Tolin, Worhunsky, & Maltby, 2006) when controlling for anxiety.

Therefore, when general distress is controlled, there is currently no evidence that participants with OCD endorse obsessive belief domains more strongly than

anxious participants, and inconclusive evidence that OCD and non-clinical samples differ on the belief domains. These results are problematic for the appraisal model: If OCD and non-clinical participants do not differ in belief domains, then appraisals do not explain why ITs escalate into obsessions; if OCD and other anxious controls do not differ in belief domains, then the model does not explain why OCD individuals develop OCD and not another anxious disorder, and vice versa. Also, a simple cluster analysis has revealed low and high scoring groups on the OBQ-44 total score. It appears that around 55% of the participants with OCD have scores on the OBQ-44 that are similar to those reported by anxious and non-clinical samples (Calamari et al., 2006; Taylor et al., 2006). However, at a recent meeting, the point was raised that clients with OCD need not score high on every OBQ-44 scales, thus clients with a domain specific profile might form a low scoring group on the OBQ-44 total score (P. M. Salkovskis, personal communication, September 23, 2006). But a more complex cluster analysis has revealed that a significant proportion of participants with OCD (26%) did not score high on any of the empirically derived belief domain scales (Calamari et al., 2006; Calamari & Rector, 2006).

 Insert Table 3 here

Second Condition: The Generality Hypothesis

According to the generality hypothesis, it is expected that any OCD symptom subtypes are associated with at least one belief domain. OCD is a heterogeneous psychopathology that can be divided into four or five symptom subtypes (Tolin, Woods, & Abramowitz, 2003), commonly: (a) rumination (impaired control over mental activities, i.e. lower ability to remove undesirable thoughts, difficulties in coping with simple decisions and doubts, uncertainty about one's own responsibility in occasional accidents, ruminative thinking about low-probability dangers, etc.); (b) washing (excessive hand-washing and stereotyped cleaning activities, overconcern with dirt, and worries about unrealistic contaminations, etc.);

(c) checking (checking of doors, gas, and water taps, letters, money, numbers, etc., over and over again); (d) impulsive phobia (urges and worries of loss of control of motor behavior, i.e. urges of violence against animals or things, impulses to kill oneself or others without reason, fear of losing control over antisocial or sexual impulses, etc.); and (e) precision (need to do things in a certain order, to count objects, or to repeat numbers) (van Oppen, Hoekstra, & Emmelkamp, 1995).

Table 4 summarizes the empirical findings obtained by regression analyses and indicates overall that OCD symptom subtypes are associated with belief domains. But results have been equivocal. The links most consistently supported across studies and shown in Table 4 are between Responsibility/Threat Estimation and rumination symptoms, and between Perfectionism/Certainty and precision symptoms. Calamari et al. (2006) also found a relationship between Perfectionism/Certainty and precision symptoms using cluster analysis. As mentioned, a significant number of clients with OCD score within the range of non-clinical or anxious controls, leading some to conclude that belief domains may not play a role in all OCD symptom subtypes (Calamari et al., 2006; Taylor et al., 2006).

 Insert Table 4 here

Third Condition: The Congruence Hypothesis

According to the congruence hypothesis, it is expected that belief domains are related to OCD symptom subtypes in a clinically or theoretically coherent way. All of the links reported between belief domains and symptom subtypes relate to the six theoretically derived belief domains. Rachman and colleagues (Rachman, 1993; Rachman, Thordarson, Shafran, & Woody, 1995) proposed that inflated responsibility is of particular relevance for the checking symptom subtype. The relationship between inflated responsibility and checking symptom subtype has been empirically supported by Tolin, Abramowitz, Brigidi, and Foa (2003). Rachman and

Shafran (1998) suggested that inflated responsibility might be more germane for the checking than the washing symptom subtypes. On the basis of correlation and regression analysis, Yao et al. (1999) concluded that the responsibility belief domain was more associated with aggressive obsessional themes, which may be related to the impulsive phobia symptom subtype. According to Sookman and Pinard (2002), the checking symptom subtype may be more intolerant to uncertainty than the washing symptom subtype. Lee and Kwon (2003) argued that overimportance of thoughts and need to control thoughts would be more characteristic of the impulsive phobia and the rumination symptom subtypes than the washing or the checking symptom subtypes.

Currently, there is no coherent model to offer strong predictions about the specificity of the empirically derived belief domains in OCD symptom subtypes. For example, checking and washing symptoms might be distinguished by inflated responsibility (Rachman & Shafran, 1998) or by intolerance to uncertainty (Sookman & Pinard, 2002). It is unclear which of the empirically derived belief domains (Responsibility/Threat Estimation or Perfectionism/Certainty) differentiate between checking and washing symptoms. As mentioned earlier, the most consistent links between belief domains and symptom subtypes are between Responsibility/Threat Estimation and rumination symptom subtype, and between Perfectionism/Certainty and precision symptom subtype. The relationship between Responsibility/Threat Estimation and rumination symptom subtype is coherent, because the rumination symptom subtype is characterized by uncertainty about responsibility towards accidents and thinking about low-probability dangers (Sanavio, 1988). The relationship between Perfectionism/Certainty and precision symptom subtype also makes sense, because clients with precision symptoms feel obliged to do certain things in a certain order to feel right (Frost, Novara, & Rhéaume, 2002).

Fourth Condition: Efficacy of Cognitive Therapy for OCD

If belief domains play an important role in the etiology and maintenance of OCD symptoms, it might be expected that a treatment targeting these belief domains

would be effective for OCD. On a cautious note, we should however keep in mind that the mechanism of change underlying treatment efficacy may not be the theorized ones. Cognitive therapy (CT) based on the appraisal model for OCD typically uses techniques aimed at modifying the belief domains, including behavioural experiments, which have similar features to exposure, but with the purpose of generating alternate appraisals rather than habituation to anxiety. (These cognitive techniques are described in depth in, among others, Clark, 2004, and Wilhelm & Steketee, 2006.) A manual search of the literature revealed seven papers investigating the efficacy of CT based on the appraisal model (Cottraux et al., 2001; McLean et al., 2001; O'Connor, Aardema, Bouthillier, et al., 2005; O'Connor et al., 2006; van Oppen, de Haan, et al., 1995; Whittal, Thordarson, & McLean, 2005; Wilhelm et al., 2005). In these studies, CT has been found to be an effective treatment of OCD. CT was compared to exposure and response prevention (ERP) in most of these studies. It was expected that CT would enhance treatment response (Steketee, Frost, & Wilson, 2002), would provide a greater change than ERP in belief domains (Yaryura-Tobias, 2002), and would reduce treatment refusal and drop-out rate by addressing other symptoms and belief about oneself (Vogel, Stiles, & Göttestam, 2004). Generally, CT was as effective as, but not more effective than, ERP in OCD symptom reduction, change in belief domains, treatment refusal, and drop-out rate. In one study (O'Connor et al., 2006), CT produced greater change in obsessional and cognitive measures than medication. CT might compare advantageously to ERP because, as noted by Abramowitz, Taylor, and McKay (2005), it does not include prolonged and repeated exposures to the feared stimuli. Fama and Wilhelm (2005) suggest that it might not be useful to compare CT and ERP, because of the overlap between behavioural experiments and exposure. One possibility would be to compare CT without behavioural experiments to ERP, but then again it would be difficult to control for participants' treatment adherence, i.e. to make sure that participants in CT trials without behavioural experiment do not expose themselves to feared stimuli or that participants in ERP trials do not use cognitive restructuring during exposure (Fama & Wilhelm, 2005). In fact, when implemented in clinical settings, CT

generally involves exposure to the feared stimuli (with the aim of challenging faulty appraisals), and ERP generally involves discussions about belief domains (Abramowitz et al., 2005).

Clinical Relevance of ITs to Obsessional Development

Most authors agree that the content of ITs and obsessions is similar. Experienced clinicians have shown difficulty discriminating ITs from obsessions purely on the basis of content (Rachman & de Silva, 1978). However, Warren et al. (2002) point out that in Rachman and de Silva's study, the accuracy of the raters ranged from 68 to 88%, and that the coefficient kappa ranged from .21 to .70. According to them, it could be argued from these figures that some clinicians can differentiate obsessions from ITs reasonably well on the basis of content, especially since the thoughts reported by clients with OCD were considered as obsessions even though they might also have been ITs (because clients with OCD can have both ITs and obsessions). In spite of this, the consensus in the appraisal model, as mentioned, seems to be that there is no difference between ITs and obsessions except that obsessions develop as a function of appraisal. According to Salkovskis (1999):

“The difference between normal intrusive cognitions and obsessional intrusive cognitions lies not in the occurrence or even the (un)controllability of the intrusions themselves, but rather in the interpretation made by obsessional patients of the occurrence and or content of the intrusions.” (p. S31)

Nevertheless, factors other than appraisals have been identified as germane to how ITs develop into obsessions, although even then, these other factors are generally considered to be preceded by appraisals. Purdon and Clark (2000) identify four other potential factors: (a) an increase in salience, (b) an increased need to control thoughts due to metacognitive beliefs (and appraisals), (c) distress due to failure to control obsessions and sensitivity to the presence of obsessions, and (d) neutralization. According to Freeston and Ladouceur (1993), ITs and obsessions are basically the same, except for the strategy used in response to the occurrence of these thoughts

(e.g. no effortful strategy, escape/avoidance, attentive thinking). Also, low OBQ-44 scores are common among clients with OCD (Calamari et al., 2006; Taylor et al., 2006), which implies that factors other than appraisals play a role in the development of OCD symptoms, or that some people with OCD hold belief domains that are not targeted in the OBQ-44 (Calamari et al., 2006). Appraisals may be more important in non-clinical than in OCD individuals. Indeed, Abramowitz, Khandker, Nelson, Deacon, & Rygwall (2006) found that appraisals had more impact on OCD symptoms for non-clinical participants who had originally less OCD symptoms than for non-clinical participants who originally had more OCD symptoms. Thus, in non-clinical participants, appraisals may play a more important role in distress than in individuals with OCD.

It is also unclear whether appraisals are a cause or a consequence of obsessions. A more experimentally based approach might be to see if manipulation of appraisals influences intensity or type of obsessions and/or see if longitudinal studies support, as expected, a similarity of content between ITs and obsessions for people who develop OCD. The PsycINFO database was searched using words that included experimental study, longitudinal study, and the six rationally derived belief domains. In the case of experimentally based design, experimental studies manipulating appraisals have produced effects on compulsive behaviours. Most of the studies were conducted on non-clinical populations (e.g.: Bouchard, Rhéaume, & Ladouceur, 1999; MacDonald & Davey, 2005), which provides little evidence that appraisals turns ITs into obsessions. Experimental studies on clinical samples (e.g.: Arntz, Voncken, & Goosen, in press; Lopatka & Rachman, 1995) did support a causal role of appraisals. However, experimental studies (with clinical or non-clinical samples) mainly manipulated one theoretical belief domain (inflated responsibility) and lacked control for general distress or other belief domains. It seems important to control for these variables. For example, a manipulation of responsibility may also effect the level of anxiety or other belief domains. In this case, it cannot be concluded that a manipulation of responsibility exclusively affects OCD behaviours if anxiety or other

belief domains are not controlled, especially since responsibility seems to be moderated by negative mood (MacDonald & Davey, 2005), mediated by perfectionism (Bouchard et al., 1999), and is linked with overestimation of threat (OCCWG, 2005).

In the case of longitudinal studies, there is little evidence that links the content of ITs to the content of obsessions. Self-themes may determine the importance of the obsessions (Rachman, 1993; Rowa, Purdon, Summerfeldt, & Antony, 2005). In other words, it is not that appraisals make intrusions meaningful rather that self-themes produce meaningful intrusions. However, a prospective study has provided some evidence for a causal role of appraisals in the development of obsessions (Abramowitz et al., 2006). In this study, initial level of appraisals specifically predicted OCD symptoms in participants followed in situations associated with a higher probability of ITs.

Jakes (1996) criticized the suggestion that ITs turn into obsessions as the result of appraisal and neutralization. He argued that the appraisal model minimizes the impact, frequency, and intensity of the obsessions on the subjective response. For example, Jakes notes that someone with infrequent and not very intense impulsive phobia obsessions may very well dismiss the impulses, but would have a normal subjective response of responsibility and guilt (similar to the experience of an individual presenting with impulsive phobia symptoms) should he experience these impulses with the frequency and intensity of a client with OCD. According to Jakes, the processes involved in ITs may be present at a greater degree in obsessions. He also proposes that appraisals and neutralization have no role whatsoever in the process of ITs: they are responses of vulnerable individuals to ITs. He concludes that the appraisals themselves require an explanation.

Discussion

The aim of this article was to review two key premises of the appraisal model of OCD, namely that ITs are part of normal experience and that the interpretation given to the presence and content of ITs according to dysfunctional belief domains explains why ITs escalate into obsessions. Clearly, non-clinical populations present ITs similar to some obsessions encountered in OCD. However, ITs may not be that frequent, and the most common ITs seem to occur not more than a few times a year (Purdon & Clark, 1994). In a study reported in Clark and O'Connor (2005), only 11% of cognitive intrusions (ITs and others) of a non-clinical sample included obsessional themes.

Other studies are necessary in order to confirm that ITs are representative of all types of obsessions. If certain types of obsessions do not have an IT equivalent, then processes other than the interpretation given to the content and the occurrence of ITs may distinguish non-clinical and OCD individuals, at least for some types of obsessions. Even if new studies confirm that the great majority of the non-clinical population experiences ITs that are similar to all kinds of obsessions, an additional parameter to consider is the context in which ITs and obsessions occur, and in particular if they occur in the same or different contexts. According to O'Connor, Aardema, and Pélissier (2005), obsessions occur in inappropriate contexts, thus explaining why they are more frequent than ITs. For example, a non-clinical individual could have the thought "There are germs on the door knob" in an appropriate context, after seeing someone sneeze in his hand and then touch the door knob. An individual with OCD could simply have the same thought triggered by an internal narrative remote from the current context. A recent study partly supports this hypothesis: In non-clinical participants, ITs of low and medium scorers on a measure of OCD symptoms occurred more frequently in an appropriate context than in an inappropriate context, whereas ITs of high scorers occurred as often in an appropriate context than in an inappropriate context (O'Connor, Julien, & Aardema, 2006).

Belief domains seem to be related to OCD, but other inference processes not included in the OBQ-44 could play a role in the etiology of OCD (Emmelkamp, 2002). So far, the research on the belief domains relies mostly on retrospective self-report questionnaires, which cannot address the causal direction of the relationship between belief domains and OCD (Clark, 2002). Other assessment strategies (e.g.: semi-structured interview, think-aloud methods, thought listing) might be of interest. There is little congruence between assessment strategies (Clark, 1988), so to rely nearly exclusively on one method (i.e., self-report questionnaires) might give a partial view of belief domains. It would also be interesting to follow intrusions long term, with more longitudinal studies, especially to investigate if the content of ITs is related to the content of obsessions in those who develop OCD. Also, the content of obsessions seems to change over time for many clients with OCD (i.e., clients with OCD concerned with contamination obsessions at one time in their life may at a later time become preoccupied with verification fears; Summerfeldt, Antony, & Swinson, 2005). Longitudinal studies would allow us to examine if the change in content of obsessions is related to a change in belief domains (because of the generality hypothesis) or in self themes, and if so, to ask whether those changes relate to a trigger in the participant's life.

It is too soon to conclude whether targeting changes in belief domains is significant for treating OCD (Clark, 2002). Rather, ERP may provide optimal conditions to disconfirm belief domains (Steketee et al., 2002). Also, it is not yet clear if changes in belief domains precede or follow changes in OCD symptoms (Steketee et al., 2002), or if these changes in belief domains are an artefact of changes in mood states (Emmelkamp, 2002; Steketee et al., 2002). Given the lack of evidence for the extra benefit of adding CT to ERP in the reduction of OCD symptoms, the fact that belief domains can be modified in the absence of CT, and that CT does not reduce drop-out rates, should CT be dismissed for OCD? According to Clark (2005a), such a conclusion is premature, for four reasons. First, cognitive therapy is approximately as effective as ERP for reducing OCD symptoms. Second, more

controlled studies are needed to examine the effect of adding CT to ERP. Third, a combination of CT and ERP might be more effective for specific symptom subtypes, such as rumination or hoarding. Fourthly, CT might have a positive effect on relapse prevention. Therefore, CT still has a role in the treatment of OCD, especially if it proves to be as effective as ERP, but without requiring the participants to be exposed to the feared stimuli for long periods of time.

An alternative hypothesis to the appraisal model is that ITs and obsessions with similar content are in fact unrelated phenomena. In this case there is no continuum or progression of ITs into obsessions but rather obsessions develop according to processes completely distinct from the processes producing ITs. In this case, the content of obsessions itself could become a target for treating OCD. Whilst Steketee (1999) advises against treating the content of obsessions in therapy, Trinder and Salkovskis (1994) stress the importance of considering the content of certain types of obsessions during therapy, such as over-valued ideas. Thus, targeting obsessions as well as dysfunctional beliefs could improve the effectiveness of OCD treatment (O'Connor, Aardema, Bouthillier, et al., 2005).

The presence of ITs is pivotal to the appraisal model of OCD. In consequence, it seems important in future research to replicate the basic findings of universality of ITs with a more robust methodology to help confirm or alternatively qualify the model. The measure with soundest psychometric properties seems to be the one developed by Purdon and Clark (1993), but their measure is not representative of all obsessions because it omits themes such as the fear of losing something, the need to put things in a certain order, hoarding, perfectionism, and overvalued ideas. A new questionnaire measuring the presence of obsessional themes in the non-clinical population is desirable. The items of the questionnaire could be based on the obsessions of clients with OCD instead of on the ITs of non-clinical participants. Ideally, this questionnaire would be expert-rated to be representative of all obsessions and its items would not reflect any concept other than obsessions. This could improve convergent/divergent validity of the measure, because so far it is not clear that ITs are

more related to OCD symptoms than to depression or anxiety. The factorial structure of such a questionnaire would likely be more satisfactory and stable than the current questionnaires since themes would be more anchored in existing OCD symptom subtypes. It would also be important that this questionnaire be administered to a representative sample of the non-clinical population, and on whom its temporal stability would be evaluated. Comparisons of context of occurrence of ITs and obsessions are of interest. Longitudinal and experimental designs are needed to confirm, clarify or expand our actual knowledge in the OCD field; knowledge that relies mostly on self-report questionnaires. Additional empirical evidence is needed to support the specificity of belief domains in OCD. The effect of mediators such as gender or age merits more attention. Regarding treatment efficacy, a complete dismantling design (comparing CT, ERP, and a combination of CT and ERP) could be informative and permit conclusions on the most effective ingredient of treatment.

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Acknowledgments

This work was supported by grant number 8920 to the first author from the *Fonds de la recherche en santé du Québec* and by grant number 67059 to the second author from the *Canadian Institutes of Health Research*. The authors would like to thank Anick Laverdure for the translation of parts of the article.

Table 1. Labels and definitions of the concept of IT encountered in studies investigating ITs

Authors	Concept label	Definition
Edwards and Dickerson (1987)	Intrusive thoughts	Thought, image or impulse that (a) interrupts an ongoing activity, (b) is of internal attribution, and (c) is difficult to control.
England and Dickerson (1988)	Intrusive thoughts	Repetitive, spontaneous thoughts. They may be pleasant or unpleasant images, impulses or ideas.
Freeston, Ladouceur, Thibodeau and Gagnon (1991)	Cognitive intrusions	Thoughts, images or impulses that occur spontaneously, that are experienced by most people, and that are not a sign of madness.
Parkinson and Rachman (1981a)	Intrusive, unwanted thoughts	Repetitive thoughts, images or impulses that are unacceptable and/or unwanted.
Parkinson and Rachman (1981b)	Intrusive, unwanted thoughts	Repetitive thoughts, images or impulses that are unacceptable and/or unwanted, and are attributed to an internal source.
Rachman and de Silva (1978)	Obsessions (normal and abnormal)	Repetitive, unwanted, intrusive thoughts of internal origin.
Salkovskis and Harrison (1984)	Normal obsessions	Unpleasant, unwanted thoughts and impulses, experienced by many people and not a sign of madness.
Wells and Morrison (1994)	Obsessional thoughts	Spontaneous, quick and sometimes recurrent thought that is unacceptable and/or unwanted.

Authors	Concept label	Definition
Yao, Cottraux and Martin (1999)	Intrusive thoughts	Repetitive, unpleasant and involuntary thoughts, images or impulses which can appear brutally in conscience. They are regarded as irrational and unrealistic; they do not correspond to personality and can be difficult to control.
Yao, Cottraux, Martin and Bouvard (1996)	Intrusive thoughts	Repetitive, unpleasant and involuntary thoughts, images or impulses which can appear brutally in conscience. They are regarded as irrational and unrealistic; they do not correspond to personality and can be difficult to control.

Table 2. Components of ITs included by authors in their definition of ITs

	Edwards and Dickerson (1987b)	England and Dickerson (1988)	Freeston et al. (1991)	Parkinson and Rachman (1981a)	Parkinson and Rachman (1981b)	Rachman and de Silva (1978)	Salkovskis and Harrison (1984)	Wells and Morrison (1994)	Yao, Cottraux and Martin (1999)	Yao, Cottraux, Martin an Bouvard (1996)
Conduct										
Thoughts (ideas)	X	X	X	X	X	X	X	X	X	X
Impulses	X	X	X	X	X		X		X	X
Images	X	X	X	X	X				X	X
Characteristics										
Repetitive		X		X		X		X	X	X
Unwanted (spontaneous, involuntary)		X	X	X	X	X	X	X	X	X
Intrusive (interrupts, appears brutally)	X					X		X	X	X
Internal attribution	X			X	X	X				

	Edwards and Dickerson (1987b)	England and Dickerson (1988)	Freeston et al. (1991)	Parkinson and Rachman (1981a)	Parkinson and Rachman (1981b)	Rachman and de Silva (1978)	Salkovskis and Harrison (1984)	Wells and Morrison (1994)	Yao, Cottraux and Martin (1999)	Yao, Cottraux, Martin an Bouvard (1996)
Pleasant		X								
Unpleasant		X					X		X	X
Difficult to control	X								X	X
Unacceptable				X	X			X	X	X
Irrational									X	X
Unrealistic									X	X
Egodystonic									X	X
Common (experienced by most people)			X							
Normal (not a sign of madness)			X							

Table 3. Empirical status for the specificity hypothesis

	OCCWG (2005)	Tolin, Worhunsky, and Maltby (2006)		Julien, Careau, et al. (2006)		
	Without controlling	Without controlling	Controlling for depression	Controlling for anxiety	Without control	Controlling for depression and anxiety ^a
Resp/Threat	OCD>AC>NCC	OCD, AC>NCC	OCD=AC=NCC	OCD=AC=NCC	OCD>AC>NCC	OCD>NCC
Perf/Cert	OCD>AC>NCC	OCD>AC>NCC	OCD>NCC	OCD=AC=NCC	OCD>AC, NCC	OCD>NCC
Imp/Ctrl Thgts	OCD, AC>NCC	OCD>AC>NCC	OCD>NCC	OCD=AC=NCC	OCD>AC>NCC	OCD>NCC

Note. OCD : Obsessive-compulsive disorder; AC : Anxious controls (other than OCD); NCC: Non-clinical controls; Resp/Threat: Responsibility/Threat Estimation; Perf/Cert: Perfectionism/Certainty; Imp/Ctrl Thgts: Importance/Control of Thoughts.

^aThe AC group was not included in this analysis because of a small sample size.

Table 4. Empirical support for specificity of empirically derived belief domains in OCD symptoms

	OCCWG (2005) ^a	Tolin, Brady, and Hannan (2006) ^b	Julien, O'Connor, et al. (2006)
Belief domains	OCD sample (<i>n</i> =179) Regression analyses	OCD sample (<i>N</i> =99) Regression analyses	OCD sample (<i>N</i> =126) Regression analyses
Resp/Threat	Washing Rumination (harming thoughts)	Washing Rumination (mental neutralizing)	Rumination
Perf/Cert	Precision (grooming) Checking	Precision (ordering) Impulsive phobia (obsessing)	Precision Checking
Imp/Ctrl Thgts	None	Impulsive phobia (obsessing)	Impulsive phobia

Note. Results controlled for depression and anxiety are reported.

^aBelief domains were derived from the OBQ-44 and OCD symptom subtypes were derived from a revision of the Padua Inventory (Burns, Keortge, Formea, & Sternberger, 1996). ^bBelief domains were derived from the OBQ-44 and OCD symptom subtypes were derived from the Obsessive-Compulsive Inventory-Revised.

QUATRIÈME ARTICLE

Intrusions related to obsessive-compulsive disorder:

A question of content or context?

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Abstract

The aim of the current study was to investigate whether intrusive thoughts, images, or impulses of individuals with obsessive-compulsive disorder (OCD) and non-clinical individuals differed in content and in context of occurrence. A questionnaire was developed to assess content and context of cognitive intrusions. The questionnaire showed good content validity and excellent convergent/divergent validity regarding frequency of intrusions, even when controlling for general distress. Test-retest reliability was moderate. The results suggest that OCD and non-clinical individuals experience intrusions which are similar in content, but differ in their context of occurrence. Analyses of variance and covariance controlling for anxiety and depression in separate analyses generally revealed that the intrusions of the OCD sample were significantly less likely to be triggered by observations in the here and now than the intrusions of the non-clinical sample. These results were replicated when non-clinical participants who scored high on a measure of OCD symptomatology were pooled with participants with OCD and compared to the low scoring non-clinical sample. The implications of the results for cognitive models of OCD are discussed.

Keywords: Obsessive-compulsive disorder, obsessions, cognitive intrusions, intrusive thoughts, context

Obsessional intrusions are a major characteristic of obsessive-compulsive disorder (OCD), and are defined as persistent thoughts, images, or impulses experienced as intrusive, inappropriate, and causing marked anxiety or distress (American Psychiatric Association [APA], 1994). Around 80 to 99% of non-clinical individuals experience intrusive thoughts, images, or impulses that are similar in content to individuals suffering from OCD (Purdon & Clark, 1993; Rachman & de Silva, 1978; Salkovskis & Harrison, 1984). We will employ the term “cognitive intrusions” to refer to non-clinical intrusive thoughts, images, or impulses that are similar in content to obsessions. Current cognitive models of OCD argue that since OCD and non-clinical individuals both experience similar intrusions, a key feature in the etiology of OCD is not the intrusions *per se* but how they are appraised (Obsessive Compulsive Cognitions Working Group [OCCWG], 1997; Rachman, 1998; Salkovskis, 1985). The universality of intrusions in clinical and non-clinical individuals alike is thus a key premise of current cognitive models of OCD. People who appraise the occurrence and content of their cognitive intrusions as significant and meaningful on the basis of particular dysfunctional beliefs would develop OCD: the cognitive intrusions would escalate into obsessions. In contrast, non-clinical individuals would not consider the occurrence and content of cognitive intrusions to have a special significance, and therefore these cognitive intrusions would be easily dismissed (Rachman, 1998; Salkovskis, 1989).

The hypothesis that cognitive intrusions are a universal phenomenon in non-clinical populations has considerable empirical support (Edwards & Dickerson, 1987; England & Dickerson, 1988; Freeston, Ladouceur, Thibodeau, & Gagnon, 1991; Niler & Beck, 1989; Parkinson & Rachman, 1981a, 1981b; Purdon & Clark, 1993, 1994; Rachman & de Silva, 1978; Salkovskis & Harrison, 1984; Wells & Morrison, 1994; Yao, Cottraux, & Martin, 1999; Yao, Cottraux, Martin, & Bouvard, 1996). These studies suggest that the content of the cognitive intrusions is similar to the content of obsessions. On a discordant note, Rassin, Cougle, and Muris (in press) and Rassin and Muris (2006) found content differences between the intrusions of OCD

and non-clinical participants, and studies assessing cognitive intrusions by means of questionnaires in non-clinical samples have important limitations that might impact on the estimates of the prevalence of cognitive intrusions (Clark & Purdon, 1995; Julien, O'Connor, & Aardema, 2007). Major limitations include a confusion between cognitive intrusions and other types of intrusive thoughts, lack of thematic representativeness, inconsistent methods of selecting items, and poor: convergent/divergent validity, test-retest reliability, and external validity (Julien et al., 2007).

Regarding the confusion between cognitive intrusions and other types of intrusive thoughts, cognitive intrusion questionnaires have potentially included negative automatic thoughts and worries, which might have inflated the estimation of the prevalence of cognitive intrusions: The ego-syntonic character of negative automatic thoughts and worries could have artificially inflated the percentage of individuals reporting these kinds of cognitive intrusions. Concerning thematic representativeness, it is critical that the questionnaire items be representative of the range of obsessional themes. Some obsessional themes which have been neglected in the item set include: religion, enactment of embarrassing acts, need to order things, hoarding, perfectionism and overvalued ideas (OVI). Therefore, it is not known whether all of the obsessional themes appear equally in the intrusions of non-clinical population. If not, then factors other than appraisals must account for obsessions, at least when there is no equivalence of content.

With regard to methods of selecting items, cognitive intrusion items were mainly derived from non-clinical participants. An alternate strategy is to collect items from the obsessions of individuals with OCD, in order to identify the authentic content of obsessions and then investigate whether non-clinical individuals experience cognitive intrusions similar to obsessions.

Concerning convergent/divergent validity, if cognitive intrusions and obsessions are on one continuum, then measures of cognitive intrusion should be

more strongly correlated with measures of OCD symptomatology than with measures of general distress. In five out of seven studies that investigated the convergent/divergent validity of cognitive intrusion questionnaires, these questionnaires were not more strongly related with OCD symptomatology than with general distress (Julien et al., 2007). Also, the convergent/divergent validity of cognitive intrusion questionnaires controlling for general distress was not investigated systematically. Test-retest reliability for self-reported frequency of cognitive intrusions also needs to be established.

As to external validity, the estimate of the prevalence of cognitive intrusions comes principally from student participants (mainly women), which represent only a selective part of the population. This could affect the estimation of the prevalence of cognitive intrusions, because student controls show more general distress than community controls (e.g. OCCWG, 2003), and because factor structures differ according to the gender of participants, women showing more impulse phobia and contamination themes, men showing more impulse phobia themes (Purdon & Clark, 1993).

Considering that the universality of cognitive intrusions is pivotal to current cognitive models of OCD, it seems important to replicate the basic hypothesis of the universality of cognitive intrusions with a methodology conceived to confirm or alternatively qualify the models (Julien et al., 2007). If cognitive intrusions and obsessions (or even a subtype of obsessions) differ in content, it seems important to explain how the less common obsessions develop (Rassin & Muris, 2006). Content is one parameter considered in defining normality. Another recognized parameter is frequency. Perhaps an even more important factor in differentiating cognitive intrusions and obsessions is the context in which they occur. Traditionally, obsessions are considered as being of internal origin, not triggered by a stimulus in the environment. In contrast with this claim, two studies found in non-clinical samples that only a small proportion of the cognitive intrusions (23–44%) were spontaneously-arising. In the first study, Parkinson and Rachman (1981a) found that

31% of intrusive thoughts, 23% of intrusive impulses, and 44% of intrusive images of non-clinical individuals were spontaneously-arising. In the second study, Lee, Lee, Kim, Kwon, and Telch (2005) found that 31% of the cognitive intrusions were not stimuli-bound. These results suggests that a high proportion of cognitive intrusions are triggered by an identifiable external stimuli or situation. The hypothesis that the obsessions of individuals with OCD arise spontaneously has never been satisfactorily demonstrated (Parkinson & Rachman, 1981a), and Aardema and O'Connor (2007) have argued that obsessions never arrive spontaneously. One parameter to consider in the relationship between intrusions and context of occurrence is the thematic content of the intrusions (contamination, checking, impulse phobia, rumination, symmetry, OVI). Lee and Kwon (2003) have proposed that sexual, aggressive, and immoral thoughts or impulses are not stimulus-triggered (autogenous obsessions), whereas obsessions about contamination, mistake, accident, and asymmetry are more prone to be stimulus-bound (reactive obsessions). So far, no studies have investigated the relationship between thematic content of obsessions and their context of occurrence.

Another issue is that clients with OCD can experience both types of intrusions, i.e. cognitive intrusions and obsessions (Warren, Gershuny, & Sher, 2002). An alternative hypothesis to current cognitive models of OCD is that cognitive intrusions and obsessions with similar content are unrelated phenomena. In this case, there is no continuum or progression of cognitive intrusions into obsessions but rather obsessions develop according to processes completely distinct from the processes producing cognitive intrusions. In addition to appraisals, another parameter to consider is thus the context in which cognitive intrusions and obsessions occur, and in particular, if they occur in the same or different contexts. Obsessions can be triggered by external and internal stimuli (Rachman, 1998). One hypothesis is that cognitive intrusions occur in appropriate contexts, whereas obsessions occur in inappropriate contexts (O'Connor, Aardema, & Pélissier, 2005). For example, a non-clinical individual could have the cognitive intrusion "There are germs on the door knob" after seeing someone sneeze in his hand and then touch the door knob (appropriate

context). An individual with OCD could simply have the obsession “There are germs on the door knob” triggered by an internal narrative remote from the current context (inappropriate context) (Julien et al., 2007).

Three types of relationship between the content of an intrusion and the context in which it occurred can be identified (O’Connor, Julien, & Aardema, 2006). Firstly, the content of an intrusion (its theme) can be *directly* linked to something that was observed with the senses (sight, hearing, smelling, tasting, touching) at the time the intrusion occurred; there is information in the context which relates to the content of the intrusion. For example, after having extinguished a cigarette and observing that the cigarette butt is red instead of grey and that it is still smoking, someone could have the thought “I may not have extinguished my cigarette properly”. Secondly, the content of an intrusion can be *indirectly* linked to observations in the context in which the intrusion arose. In indirect links, the content of the intrusion is not triggered by clear and precise information from its context of occurrence. For example, after having put a cigarette out, someone could have the thought “I may not have extinguished my cigarette properly”, but without any information suggesting that that the cigarette might not have been extinguished properly. In this case, there is a link between the content of the intrusion and the situation in which it occurred (the person sees a cigarette), but the link is indirect, because there is no clear information suggesting that the cigarette was not extinguished properly. Thirdly, the content of an intrusion could show *no link* with the context of occurrence of the intrusion. For example, someone could have the thought “I may not have extinguished my cigarette properly” whilst walking to work (O’Connor et al., 2006).

The aims of the current study are (a) to develop a new measure of intrusive thoughts, images, and impulses related to OCD that overcomes the limitations of previous questionnaires, and investigate its psychometric properties; (b) to investigate the normality of cognitive intrusions; (c) to explore differences in the context of occurrence of intrusions between OCD and non-clinical individuals; and (d) to examine the relationship between the thematic content of the intrusions and their

context of occurrence. We hypothesized that the vast majority of non-clinical participants will experience cognitive intrusions, but that their cognitive intrusions will more likely be directly linked to a trigger in the environment, whereas the obsessional preoccupations of clients with OCD will more likely be indirectly linked or not linked at all to their context of occurrence.

Method

Participants

The samples consisted of participants with OCD ($N = 24$) and non-clinical participants ($N = 90$). Diagnosis for the participants with OCD was based on semi-structured interview (*Structured Clinical Interview for the DSM-IV*, First, Spitzer, Gibbon, & Williams, 1996) or clinical interview by a trained psychiatrist using DSM-IV criteria (APA, 1994). The diagnosis was subsequently confirmed by an experienced clinical psychologist. Inclusion criteria were (a) a primary diagnosis of OCD; (b) no evidence of current substance abuse; and (c) no evidence of current or past schizophrenia, bipolar disorder or organic mental disorder. The non-clinical participants were mainly company employees, adults taking night classes and psychology students.

Measures

Intrusions Inventory (II). The II is divided into two sections. The first section (Part A) assesses the occurrence of intrusions; the second section (Part B) assesses the context of occurrence of intrusions. For the development of Part A, 89 items were initially selected from the files of participants with OCD and from previous cognitive intrusion questionnaires. Intrusions which could have been confused with negative automatic thoughts (e.g. loss of a loved one) and worries (e.g. fear of mistakes or errors, fear of sexuality, fear of losing an important object) were not selected in the item set or were rephrased in order to reflect obsessional preoccupations. The 89 items were initially expert-rated according to their relevance to obsessions by six

clinicians specialized in OCD on a scale from 1 to 9. Anchor points were: 1: absence of relevance; 2-3: low relevance; 4-5: moderate relevance; 6-7: high relevance; and 8-9: very high relevance. Experts were invited to comment on each item and to add additional items. Following their comments, an updated set of 100 items was expert-rated by a second team of five clinicians specialized in OCD. Overall, the mean score for the raters was 6.38 (range: 5.24 – 7.42), and the mean score for the items was 6.38 (range: 2.55 – 8.33). Sixty-eight items were finally selected for Part A of the II based on expert ratings. Items whose mean score was one standard deviation above the moderate range (i.e., whose mean score was above 5.78) were selected, with the exception of OVI items which were included if the mean score was one standard deviation over the weak range (i.e., whose mean score was above 4.28), to ensure that the OVI items were represented in the II. The lower mean score of OVI items might indicate that the OVI theme is less common than the other obsessional themes and was thus considered as less representative by the raters, but OVI is nevertheless considered a part of OCD (O'Dwyer & Marks, 2000). Intrusions were defined as thoughts, mental images and/or impulses (or thoughts that one could act by impulse) that some individuals experience from time to time, that can appear abruptly, repetitively and against one's will into the conscious stream, and can be judged to be unacceptable by the individual. The participants were then asked to indicate at what frequency they experienced the intrusions of the item set. On each of the 68 items of Part A of the II, scores range from 0 (never) to 4 (always). The total score of Part A of the II ranges from 0 to 272.

Part B of the II begins with a description of the three hypothesized type of links (direct link, indirect link and no link) between the intrusions and their context of occurrence. Three examples are provided for each type of link. To further ensure that the participants could discriminate between the three type of links, the participants completed a comprehension test in which they indicated in six scenarios the type of links (direct, indirect, no link) between the intrusions and their context of occurrence. For example,

“You lock your front door house and go out to make some errands on foot. On the way back, you realize that you do not feel your keys in your pocket pants, where you normally keep them. You have the following intrusion: ‘Thought that I might have left my keys somewhere’. What is the link between the content of this intrusion and the situation in which this intrusion occurred? [Direct link, Indirect link, or No link]”.

The links were unequivocal in three of the scenarios, and more equivocal in the three other scenarios. Answers were provided in the II after the comprehension test. Participants were asked to review the description of the three type of links if they were unsure of the answers. Participants then were asked to select the three most disturbing intrusions they experienced in their life and to indicate (a) the context of occurrence of each of the three intrusions (Direct Link, Indirect Link or No Link with its context of appearance); (b) if each of the three intrusion was dependent on the mood state of participants (Yes or No); and (c) how disturbing was each of these three intrusions (Not at All, Moderately, Highly). A pilot study in six non-clinical participants established the feasibility of the project.

Padua Inventory (PI) (Sanavio, 1988). The PI assesses obsessive-compulsive behaviour. The PI total score ranges from 0 to 240. The English version of the PI showed good reliability (α -coefficient was .90 for men and .94 for women) and satisfactory test-retest correlations ($r_s = .78$ for men and .83 for woman). The French version of the PI shows excellent validity and satisfactory test-retest correlations. Factor analysis has replicated the original factors (Freeston, Ladouceur, Letarte, et al., 1994). The factor solution of Freeston, Ladouceur, Letarte, et al. (1994) was used for the present study.

Inferential Confusion Questionnaire (ICQ) (Aardema, O'Connor, Emmelkamp, Marchand, & Todorov, 2005). The ICQ assesses a reasoning process believed to be involved in OCD, inferential confusion, in which an imagined possibility is taken as an actual probability and acted on as if it were true. The ICQ total score range is from 15 to 75. The French version of the ICQ discriminates between OCD, anxious, and non-clinical groups. In an OCD sample, correlations

between the ICQ and the PI total score ($r = .52$) were higher than correlations between the ICQ and a measure of depression ($r = .33$), but nearly equals to correlations between the ICQ and a measure of general anxiety ($r = .48$), showing partial support for the convergent/divergent validity of the ICQ. The ICQ remained significantly correlated with the PI total score ($r = .29$) when controlling for beliefs related to OCD, anxiety, and depression (Aardema et al., 2005).

Beck Anxiety Inventory (BAI) (Beck, Epstein, Brown, & Steer, 1988). The BAI assesses the severity of anxiety. The BAI total score ranges from 0 to 63. The English version of the BAI shows high internal consistency ($\alpha = .91$), good test-retest reliability ($r = .75$), moderate convergent validity ($r = .51$), and good divergent validity ($r = .25$) (Beck et al., 1988). The French version of the BAI shows good internal consistency and satisfactory test-retest validity, convergent and divergent validity (Freeston, Ladouceur, Thibodeau, Gagnon, & Rhéaume, 1994).

Beck Depression Inventory (BDI) (Beck, Rush, Shaw, & Emery, 1979). The BDI assesses depressive symptoms. The BDI total score ranges from 0 to 63. The psychometric properties of the English version of the BDI are well established (see Beck, Steer, & Garbin, 1988). The French version of the BDI shows excellent internal consistency and satisfactory test-retest reliability (Bourque & Baudette, 1982).

Procedure and Analyses

Quantitative measure of context. The participants with OCD were consecutive referrals for treatment. They completed the questionnaires at the pre-treatment phase. In Part B of the II, the participants were asked to select their three most disturbing intrusions and identify their context of occurrence on a categorical scale (direct, indirect, and no link). The answers of the participants for their first, second, and third intrusions were computed in SPSS (*Statistical Package for the Social Sciences*) 15.0 into three separate variables (C1, C2, and C3, respectively). To

increase the power of the analysis, we decided to combine the three variables into one variable and conduct one Chi Square analysis on the composite variable instead of three Chi Square analyses on C1, C2, and C3 separately. A criterion to allow the pooling of C1, C2, and C3 into one variable is that the three variables must be independent from one another (i.e., they must not be significantly correlated). However, the contexts were not independent, as the correlations between two of the three contexts identified were significant ($r_1 = .4, p < .01$; $r_2 = .25, p < .05$; $r_3 = .12, p > .1$). Therefore, to facilitate group comparisons, we transformed the categorical scale of the context into a quantitative scale by attributing a value to each type of context (direct = 1; indirect = 2; no link = 3), and by adding the three scores (C1, C2, C3) of each participant, forming a new variable representing a continuum between direct link and no link. This new variable ranged from 3 to 9; the lower the score, the more the intrusions showed a direct link; the higher the score, the more the intrusions showed an indirect or a remote link. The groups were then compared by analyses of variances (ANOVAs) and analyses of covariance (ANCOVAs), controlling for anxiety (BAI), depression (BDI), and inferential confusion (ICQ) in separate analyses. The significance level was set at .0125 (.05/4) to correct for the number of comparisons.

Combining the OCD group with non-clinical participants who scored high on the PI. The non-clinical participants were not diagnostically screened for psychopathology. In order to protect against the confound that some non-clinical participants could present with OCD, we excluded two non-clinical participants (corresponding approximately to the prevalence of OCD) who had the highest scores on the PI total score when comparing OCD and non-clinical groups. Because of the small sample size of the OCD group, we conducted further analyses by comparing a group composed of the participants with OCD and the top third non-clinical scorers on the PI total score to the remaining non-clinical participants, considered as low scorers on the PI. The two groups compared contained approximately equal numbers in each group (for OCD+high scorers on the PI, $N = 54$; for low scorers on the PI,

$N = 59$). The participants with OCD and the non-clinical participants who scored high on the PI did not differ significantly on the two scales of the II, nor on the PI, BAI and ICQ. However, the participants with OCD scored higher on the BDI than non-clinical high scorers on the PI. Overall, these results suggested that the data of the participants with OCD and of non-clinical participants who scored high on the PI could be pooled. The two non-clinical participants who were taken out of the analyses comparing OCD and non-clinical samples were reintegrated in the analyses comparing OCD+high scorers on the PI and low scorers on the PI. The significance level was set at .0125 (.05/4) to correct for the number of comparisons.

Thematic content. To investigate if the OCD symptom subtypes of intrusion differed in their context of occurrence, we categorized each of the three intrusions (CI1, CI2, and CI3) selected by the OCD and non-clinical participants in Part B of the II into washing, checking, impulse phobia, symmetry, rumination, hoarding, or OVI theme on the basis of the content of the intrusion. We examined if for each participant the thematic content of the three intrusions selected in Part B of the II were different or identical. Chi Square analyses revealed how many of the intrusions had similar thematic content and how many were different for each comparison (i.e., CI1 vs CI2, CI1 vs CI3, and CI2 vs CI3). The Chi Square analyses revealed that the three intrusions selected in Part B of the II contained distinct thematic content, and were thus independent from one another: for CI1-CI2, $\chi^2(1) = 23.28, p < .01$; for CI1-CI3, $\chi^2(1) = 4.76, p < .05$; and for CI2-CI3, $\chi^2(1) = 5.76, p < .05$. Therefore, instead of calculating three separate Chi Squares with 113 entries each (the sample size of the total sample, 24 + 89), we combined the thematic content of the three intrusions into a composite variable to increase the power of the analyses and calculated one Chi Square with 339 entries (3 x 113) to investigate the relationship between thematic content of the intrusions and their context of appearance.

Results

Group Comparisons on Demographic Variables, Clinical Measures, and Universality of Cognitive Intrusions

Table 1 presents participants information and group comparisons on age, number of intrusions, and total scores on the II, PI, ICQ, BAI and BDI. BDI scores were transformed by a square root correction to normalize the distribution of the residuals. The participants with OCD were significantly older than the non-clinical participants. All non-clinical participants reported experiencing cognitive intrusions in their life. One participant with OCD reported no experience of any of the 68 intrusion described in the II. Each item of the II was experienced by at least one OCD and one non-clinical participant. OCD and non-clinical participants did not differ on the number of intrusions they experienced at least once in their life, and participants with OCD experienced intrusions more often than the non-clinical participants, as suggested by significant higher scores on Part A of the II. OCD and non-clinical participants also did not differ on the thematic content of their intrusions (experienced at least once in their life). Participants with OCD also scored higher than non-clinical participants on PI, ICQ and BDI scores, and showed a trend towards higher score than the non-clinical participants on the BAI (see Table 1).

 Table 1 about here

Validation of the II

Intercorrelations. The occurrence of intrusions was significantly correlated with the quantitative measure (see section 0) of context ($r = .27, p < .05$) and distress of intrusions ($r = .43, p < .001$). The quantitative measure of context and distress of intrusions were also significantly correlated ($r = .35, p < .01$).

Convergent and divergent validity. To investigate the convergent and divergent validity of the II, we examined if the correlations between the II (Part A) and a measure of OCD symptomatology (PI) and a validated measure on reasoning process specific to OCD (ICQ) were significant and higher than correlations between the II (Part A) and measures of general distress (BAI and BDI). Table 2 presents the zero-order and partial correlations. For the zero-order correlations, the correlations between the II (Part A) and the other clinical measures were all significant. The correlations between the II (Part A) and measures related to OCD ($r_s = .80$ [PI] and $.73$ [ICQ]) were higher than between the II (Part A) and measures of general distress ($r_s = .41$ [BAI] and $.54$ [BDI]). The quantitative measure of context was significantly correlated with OCD related and depression measures, but not with the measure of anxiety. The distress of intrusions was significantly correlated with the PI, ICQ, BAI, and BDI. We calculated paired *t*-tests between correlation coefficients to investigate if the correlations between the II (Part A) and measures related to OCD were significantly different from the correlations between the II (Part A) and measures of general distress. To correct for the number of comparisons, the significance level was fixed at $p < .01$. The *t*-tests revealed that the correlations between the II (Part A) and measures related to OCD were significantly higher than the correlations between the II (Part A) and measures of general distress (all $p_s < .01$).

 Table 2 about here

A conservative test of the II was examined by calculating partial correlations between the II and measures related to OCD while controlling for general distress, and between the II and measures of general distress while controlling for measures related to OCD (see Table 2). When measures of general distress were partialled out, correlations between the II (Part A) and measures related to OCD remained strong and significant ($r_s = .59$ [PI] and $.47$ [ICQ]). When measures related to OCD were partialled out, the correlation between the II (Part A) and the BAI decreased markedly ($r = .01$) and was no longer significant, but the correlation between the II (Part A) and

the BDI remained significant ($r = .42$). The quantitative measure of context and distress of intrusions were no longer significantly correlated with the PI and ICQ when controlling for general distress, nor with the BAI and BDI when controlling for measures related to OCD.

Test-retest reliability. Six to eight week test-retest reliability indices were available for eleven non-clinical participants. For Part A of the II, the temporal validity was moderate ($r = .64, p < .05$). For Part B of the II, the participants were asked to indicate the context of occurrence of the same three intrusions they had selected the first time they completed the questionnaire (items were provided to them). Kappa indices (k) were used to investigate the temporal validity of the context (categorical variable) of the three intrusions selected in Part B of the II.¹ The kappa indices for the context of occurrence of intrusions were in the slight ($k = .18$) and fair ($k_s = .29$ and $.31$) agreement ranges. One hypothesis for this low degree of agreement may be that some participants did not fully master the criteria for categorizing content. To test this hypothesis, we controlled for degree of comprehension by selecting participants who correctly identified at least five out of the six contexts of occurrence of intrusions on the comprehension test of the II and calculated test-retest indices for these participants. Seven participants met this criteria. Test-retest indices of the context of intrusions improved, falling into the fair ($k = .30$), moderate ($k = .46$), and substantial ($k = .70$) levels of agreement. In the eleven participants who completed the test-retest, the kappa indices for the dependency of intrusions on mood states were in the slight ($k = .13$), fair ($k = .39$), and moderate ($k = .44$) agreement ranges. The test-retest correlations for the distress of intrusions (a three-point Likert scale) were significant ($r = .46, p < .05$), indicating moderate temporal validity. Taken together, the test-retest of Part B of the II suggests that the observed agreement was greater than chance agreement, although falling mainly into the slight and fair

¹ The following guidelines were used: $k < .00$ means poor degree of agreement beyond chance; k ranging from 0 to .20 means slight degree of agreement beyond chance; k ranging from .21 to .40 means fair degree of agreement beyond chance; k ranging from .41 to .60 means moderate degree of agreement beyond chance; k ranging from .61 to .80 means substantial degree of agreement beyond chance; and $k > .81$ means almost perfect degree of agreement beyond chance (Landis & Koch, 1977).

degree of agreement. The test-retest indices for the context improved when we controlled for degree of comprehension of context categorization.

Context of Intrusions

OCD and non-clinical samples. For the OCD group, the context of intrusions was analyzed for 53 intrusions. Of these 53 intrusions, 16 (30.19%) were directly linked to their context of occurrence, 28 (52.83%) were indirectly linked, and 9 (16.98%) were not linked to any trigger in the environment at the time they occurred. For the non-clinical sample, 231 intrusions were analyzed. Of these 231 intrusions, 131 (56.71%) were directly linked to their context of occurrence, 80 (34.63%) were indirectly linked, and 20 (8.66%) were not related to any trigger in the environment at the time they occurred. Thus, in the total sample (OCD and non-clinical samples), 51.14% of the intrusions were directly linked to their context of occurrence, 37.76% were indirectly linked, and 10.14% were not linked to any trigger in the environment at the time they occurred.

To investigate if the context of intrusions differed between OCD and non-clinical participants, we conducted ANOVAs in a first series of analyses comparing the OCD and the non-clinical samples on the context of occurrence of intrusions. In a second series of analysis, the groups were compared by ANCOVAs, controlling for anxiety, depression, and inferential confusion in separate analyses. The ANOVAs and the ANCOVAs (see Table 3) revealed that the intrusions of the OCD sample were significantly less likely to show a direct link than the intrusions of the non-clinical sample both with or without controls for anxiety or depression. However, the groups did not differ when inferential confusion was partialled out, although the results approached significance.

The participants in the non-clinical group showed a tendency towards more accurate answers on the comprehension test than the participants in the OCD group ($F[1, 110] = 3.01, p < .1$). However, the context of the three intrusions selected in Part B of the II showed limited evidence of test-retest reliability, but test-retest

reliability improved when a stringent criterion for level of comprehension was selected (i.e., correct categorization of at least five out of the six contexts of occurrence of intrusions on the comprehension test). However, this criterion reduced the number of participants from 11 to 7. Therefore, we decided to control for level of comprehension by restricting analyses to a subsample of participants who correctly identified three out of the three unequivocal contexts on the comprehension test. This criterion was considered sufficient to control for level of comprehension. The analyses revealed that the intrusions of the OCD sample were significantly less likely to show a direct link than the intrusions of the non-clinical sample both with and without controlling for anxiety. However, there were no group differences when depression and inferential confusion were partialled out, but the results showed a trend towards significance.

 Table 3 about here

OCD+high PI scorer sample and low PI scorer sample. We created a group composed of participants with OCD and of non-clinical participants who scored high on the PI (the OCD+high PI scorer group) and compared this group to the remaining non-clinical participants (considered as low scorers on the PI) on the context of occurrence of intrusions. The ANOVAs and the ANCOVAs partialling out anxiety, depression, and inferential confusion in separate analyses (see Table 4) revealed that the intrusions of the OCD+high PI scorer sample were significantly less likely to show a direct link than the intrusions of the low PI scorer sample both with or without controlling for anxiety or depression, but not when inferential confusion was partialled out (although the results were near significance). The participants in the low PI scorer group showed a tendency towards more accurate answers on the comprehension test than the participants in the OCD+high PI scorer group ($F[1, 110] = 2.77, p < .1$). We reconducted the analyses controlling for comprehension on a subsample of participants who correctly identified three out of the three unequivocal contexts on the comprehension test. The results of the ANOVAs and the ANCOVAs

were replicated, i.e. the intrusions of the OCD+high PI scorer sample were significantly less likely to show a direct link than the intrusions of the low PI scorer sample both without control and when controlling for anxiety or depression, but not when inferential confusion was partialled out (although the results were nearly significant).

 Table 4 about here

Relationship between Thematic Content of Intrusions and Context.

The results for the relationship between the thematic content of the intrusions and their context of occurrence are depicted in Table 5. The context of occurrence differed significantly according to the thematic content of the intrusions ($\chi^2(12) = 23.38, p < .05$). As shown in Table 5, symmetry and hoarding intrusions were triggered more frequently by direct links than by indirect links.

 Table 5 about here

Discussion

The aims of the current study were to develop a new measure of intrusive thoughts, images, and impulses related to OCD (the II) and to investigate its psychometric properties; to explore differences in the context of occurrence of intrusions between participants with OCD and non-clinical individuals; and to examine the relationship between thematic content of the intrusions and their context of occurrence. The II includes thematic content of obsessions which have been neglected by other intrusion inventories, such as enactment of embarrassing acts, symmetry, hoarding, and OVI (Julien et al., 2007). In the total sample (OCD and non-clinical), zero-order correlations revealed that the correlations between the II (Part A) and the other clinical measures were all significant. The II (Part A) was significantly

more strongly correlated with measures related to OCD (PI and ICQ) than with measures of general distress (BAI and BDI). The quantitative measure of context was significantly correlated with the PI, ICQ, and BAI, but not with the BDI, and the distress of intrusions was significantly correlated with the PI, ICQ, BAI, and BDI. When measures of general distress were partialled out, correlations between the II (Part A) and measures related to OCD remained strong and significant, but the quantitative measure of context and distress of intrusions were no longer significantly correlated with measures related to OCD. When measures related to OCD were partialled out, the correlation between the II (Part A) and the BAI decreased markedly and was no longer significant, but the II (Part A) was still highly correlated with the BDI; the quantitative measure of context and distress of intrusions were no longer significantly correlated with general distress. Taken together, the results support the convergent/divergent validity of the II (Part A), and which compares advantageously to previous measures of cognitive intrusions. Moreover, the relationships between the II (Part A) and measures related to OCD was independent of general distress. This latter point was not systematically investigated in other studies of measures of cognitive intrusions. However, the partial correlations revealed that the quantitative measure of context and distress of intrusions did not show a specific relationship with measures related to OCD.

The II showed moderate test-retest reliability for its Part A (on occurrence of intrusions) and for distress of intrusions, and low test-retest reliability for the context of occurrence of intrusions. The low test-retest reliability on the context may be accounted for by the small sample size ($n = 11$), a relatively long length of time between the test and the retest (6 to 8 weeks) or because some participants did not fully master the criteria for categorizing context. That latter hypothesis was supported by an improvement in the test-retest reliability on the context in a subsample of participants who had a clear understanding of the categorization into direct, indirect or no link (as defined by five or six out of six correct answers on the comprehension

test) although again the small sample size ($n = 7$) may confound the results. The test-retest reliability of the II therefore needs further support.

All non-clinical participants reported experiencing cognitive intrusions at least once in their life, but one participant with OCD reported no experience of any of the 68 items described in the II. Otherwise, each item of the II was experienced by at least one OCD and one non-clinical participant. OCD and non-clinical participants did not differ on the number of intrusions they experienced at least once in their life (regardless of taking into consideration the thematic content of the intrusions), but participants with OCD experienced intrusions more often than non-clinical participants. However, the mean number of items endorsed by the non-clinical participants (about 29 items out of 68) contrasts with the mean number of items endorsed by the non-clinical participants on another measure of cognitive intrusions (the *Obsessional Intrusions Inventory* [OII]; Purdon & Clark, 1993), where the participants endorsed about 7 to 8 items out of 52. The II may be more representative of the obsessional intrusion spectrum than the OII and therefore captures a larger area of the thematic content of the intrusions experienced by the non-clinical population.

The current study supports the hypothesis that the occurrence of cognitive intrusions is a universal phenomenon, even when the cognitive intrusions are more representative of all types of obsessions and do not include worry and negative automatic thoughts. However, recent studies (Rassin et al., in press; Rassin & Muris, 2006) found significant content differences between non-clinical and clinical intrusions. These discrepancies may be explained by different methodologies used to assess the normality of cognitive intrusions. In the current study, the participants reported the intrusions they experienced on a list of intrusions. Rassin et al. (in press) compared the number of normal obsessions (i.e., experienced by non-clinical individuals) to the number of abnormal obsessions (i.e., experienced by individuals with OCD) endorsed by non-clinical participants. Rassin and Muris (2006) asked participants to categorize a list of intrusions into normal or abnormal obsessions and

investigated the accuracy of the categorization based on the provenance of the intrusion (i.e., from OCD or non-clinical individuals).

In the current study, around 30% of the intrusions of the participants with OCD were directly linked and 53% were indirectly linked to a trigger in the environment at the time they occurred. Only 17% of the intrusions of participants with OCD showed no relationship with their context of occurrence, contrasting with the traditional view that obsessions come out of the blue and intrude into one's mind. Symmetry and hoarding intrusions seem to be triggered more frequently by direct links than by indirect links. The small percentage of spontaneously-arising obsessions and the limited number of thematic content of the intrusions (symmetry and hoarding) that were directly linked to their context of occurrence calls into question part of the autogenous/reactive model of obsessions proposed by Lee and Kwon (2003), at least regarding the difference in origin (spontaneously arising versus stimulus-bound) of autogenous and reactive obsessions. Riskind, Ayers, and Wright (2007) also found a lack of support for spontaneously arising impulsive phobic intrusions.

Another outcome of the current study is that the non-clinical participants showed a tendency towards more accurate answers on the comprehension test than the participants in the OCD group. Similarly, the participants in the low PI scorer group showed a tendency towards more accurate answers on the comprehension test than the participants in the OCD+high PI scorer group. These results suggest that participants with OCD or who score high on the PI may be more prone to confuse the context of occurrence of intrusions than participants who show less OCD symptoms (as measured by the PI). This would make sense in terms of the inferential confusion model of obsessional preoccupations, where the person is hypothesized to confuse remote and direct sources of information (O'Connor et al., 2005).

ANOVAs and ANCOVAs controlling for anxiety, depression, and inferential confusion were conducted in separate analyses. The analyses revealed that the intrusions of the OCD sample were significantly less likely to show a direct link than

the intrusions of the non-clinical sample both with and without controlling for anxiety or depression. However, there were no group differences when inferential confusion was partialled out. When controlling for degree of comprehension of context categorization (by selecting participants who correctly identified three out of the three unequivocal context in the comprehension test), the analyses revealed that the intrusions of the OCD sample were significantly less likely to show a direct link than the intrusions of the non-clinical sample both with and without controlling for anxiety, but there were no group differences when depression and inferential confusion were partialled out. We created a group composed of participants with OCD and of non-clinical participants who scored high on the PI and compared this group to the remaining non-clinical participants (considered as low scorers on the PI) on the context of occurrence of intrusions. The ANOVAs and the ANCOVAs controlling for anxiety, depression, and inferential confusion in separate analyses revealed that the intrusions of the OCD+high PI scorer group were significantly less likely to show a direct link than the intrusions of the low PI scorer group even when controlling for anxiety or depression, but not when controlling for inferential confusion. These outcomes were replicated when controlling for degree of comprehension of context categorization.

Taken together, the results of the current study suggest that the intrusions of the non-clinical participants and of the participants with OCD were similar in content. However, the intrusions of non-clinical participants were more likely triggered by something observed in the here and now, with the senses, whereas those of participants with OCD were less triggered by direct cues in the environment. Controlling for anxiety and depression generally had no impact on the outcomes, but there were no group differences in context when inferential confusion was partialled out. This finding make sense, since a high score on inferential confusion implies that an imagined possibility taken out of context is superimposed on reality.

In addition to appraisals of intrusions, the current study suggests that the context of occurrence of intrusions may differ for participants with OCD compared to

non-clinical participants. Obsessions may not intrude into the conscious stream of an individual with OCD, but may result from an internal trigger. For example, an individual with OCD may think “Maybe there was some bacteria in my father’s hospital room, and maybe my mother did not wash her hands properly after she visited him”, and then experiences the non-intruding obsessive thought “I can be contaminated if my mother touches me”. One important clinical implication of a difference in context of occurrence of intrusions is that, in contrast to the traditional view, the content of obsessions may be a valid target in therapy (O’Connor, 2002).

Strengths of the current studies include use of a non-clinical sample more representative of the general population than in other studies; the development of a new measure of intrusive thoughts, images, and impulses related to OCD with sound convergent/divergent validity properties; and a comparison of a novel parameter in the study of intrusions, i.e. the context of occurrence of intrusions. Limitations include a small OCD sample size, a small non-clinical subsample who completed the test-retest, and low test-retest reliability for the context section of the II. In addition to these limitations, clinical generalizability of findings could benefit the inclusion of an anxious control group.

Acknowledgment

This work was supported by fellowship grants from the *Fonds de la recherche en santé du Québec* to the first author, and from the Canadian Institutes of Health Research to the second author. Authors wish to thank Isabelle Tremblay and Rachel Boisjoli for their help in data collection, and Anick Laverdure and Audrey Bertrand for data management.

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Table 1. Group comparisons on demographics and measures

	OCD	NCC ^a	<i>F</i>	Significant post hoc comparisons
% women	61%	67%	-	-
Age	36.33 (7.85)	29.33 (10.20)	9.71**	OCD > NCC
Number of intrusions	29.25 (16.77)	28.80 (10.60)	.03	OCD = NCC
II (Part A)	70.84 (51.92)	48.41 (22.10)	9.83**	OCD > NCC
PI	53.11 (26.77)	27.40 (17.33)	30.27***	OCD > NCC
ICQ	47.95 (20.38)	35.85 (13.24)	10.61**	OCD > NCC
BAI	13.17 (9.86)	9.63 (7.69)	3.43	OCD = NCC (but trend towards higher scores, $p < .1$)
BDI	18.91 (11.73)	6.22 (4.89)	57.75***	OCD > NCC

^aNCC = non-clinical controls

** $p < .01$, *** $p < .001$

Table 2. Zero-order and partial correlations between II and other questionnaires

	PI	ICQ	BAI	BDI
Zero-order correlations				
II (Part A)	.80***	.73***	.41***	.54***
II (Part B – quantitative measure of context)	.25*	.27*	.10	.26*
II (Part B – distress)	.49***	.40***	.30**	.42***
Partial correlations				
	Controlled for general distress measures (BAI and BDI)		Controlled for OCD measures (PI and ICQ)	
II (Part A)	.59***	.47***	.01	.42***
II (Part B – quantitative measure of context)	.24	.19	-.05	.09
II (Part B – distress)	.20	.20	.11	.16

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 3. Group comparisons (OCD and non-clinical controls) on context (quantitative scale)

	OCD	NCC ^a	<i>F</i>	<i>p</i>	Partial η^2
ANOVAs	5.59 (1.73) <i>n</i> = 17	4.42 (1.24) <i>n</i> = 72	10.42**	.002*	.11
ANCOVAs					
Controlling for BAI	5.59 (1.73) <i>n</i> = 17	4.38 (1.21) <i>n</i> = 68	10.62**	.002*	.12
Controlling for BDI	5.73 (1.71) <i>n</i> = 15	4.35 (1.17) <i>n</i> = 66	8.27**	.005*	.10
Controlling for ICQ	5.53 (1.85) <i>n</i> = 15	4.40 (1.20) <i>n</i> = 68	5.47*	.022	.06

Note. The numbers under the OCD and the NCC columns correspond to the scores on context (quantitative scale). Standard deviations are in parenthesis.

^aNCC: Non-clinical controls.

* significant at $p < .0125 (.05/4)$

Table 4. Group comparisons (OCD+high PI scorer and Low PI scorer) on context (quantitative scale)

	OCD+high PI scorer	Low PI scorer	<i>F</i>	<i>p</i>	Partial η^2
ANOVAs	5.24 (1.48) <i>n</i> = 41	4.20 (1.15) <i>n</i> = 49	14.02***	.001*	.14
ANCOVAs					
Controlling for BAI	5.18 (1.48) <i>n</i> = 39	4.23 (1.16) <i>n</i> = 47	10.63**	.002*	.11
Controlling for BDI	5.28 (1.45) <i>n</i> = 36	4.15 (1.09) <i>n</i> = 46	9.70**	.003*	.11
Controlling for ICQ	5.19 (1.49) <i>n</i> = 36	4.23 (1.15) <i>n</i> = 48	5.29*	.024	.06

Note. The numbers under the OCD+high PI scorer and the Low PI scorer columns correspond to the scores on context (quantitative scale). Standard deviations are in parenthesis.

* significant at $p < .0125$ (.05/4)

Table 5. Occurrence of thematic content of the intrusions in type of context

	Direct Link	Indirect Link	No Link	Total
Washing	18 (46%)	19 (49%)	2 (5%)	39 (100%)
Checking	58 (55%)	40 (38%)	8 (8%)	106 (101%)
Impulse phobia	7 (39%)	7 (39%)	4 (22%)	18 (100%)
Symmetry	15 (68%)	3 (14%)	4 (18%)	22 (100%)
Rumination	2 (22%)	5 (56%)	2 (22%)	9 (100%)
Hoarding	13 (81%)	1 (6%)	2 (13%)	16 (100%)
OVI	17 (55%)	12 (39%)	2 (6%)	31 (100%)

Note. In parenthesis, the percentage of occurrence by thematic content of the cognitive intrusions.

CONCLUSION

Contexte de la thèse

Les individus présentant un trouble obsessionnel-compulsif (TOC) sont aux prises avec des obsessions, généralement accompagnées de compulsions. Cependant, la vaste majorité des individus non cliniques présentent eux aussi des intrusions dont le contenu et la forme sont similaires aux obsessions. Nous nommerons « intrusions cognitives » les pensées, images, et impulsions non cliniques qui sont similaires aux obsessions des individus présentant le TOC. Les modèles cognitifs récents du TOC suggèrent donc que ce ne sont pas les pensées, images ou impulsions intrusives qui sont problématiques pour les individus présentant le TOC, mais plutôt la signification que ces individus leur accordent (Freeston, Rhéaume, & Ladouceur, 1996; Rachman, 1997, 1998; Salkovskis, 1985, 1989, 1999). Pour les individus présentant un TOC, cette interprétation s'effectuerait sur la base de croyances dysfonctionnelles (attitudes dysfonctionnelles ou des pensées irrationnelles relativement stables et générales entretenues par les individus) provenant de l'expérience passée (Obsessive Compulsive Cognitions Working Group [OCCWG], 1997). Ces croyances dysfonctionnelles feraient en sorte que les intrusions cognitives se développent en obsessions. Le sens donné aux intrusions cognitives puis aux obsessions sur la base des croyances dysfonctionnelles provoquerait de l'anxiété et pousserait les individus présentant le TOC à faire des compulsions qui réduiraient à court terme l'anxiété ressentie. Cette diminution du niveau d'anxiété inciterait les individus présentant le TOC à émettre de nouveau leurs compulsions aux prochaines manifestations de pensées, images ou impulsions intrusives. De leur côté, les individus non cliniques ne partageraient pas les croyances dysfonctionnelles des individus présentant le TOC et ignoreraient alors plus facilement leurs intrusions cognitives (Rachman, 1997; Salkovskis, 1989).

Les modèles cognitifs récents du TOC reposent donc sur deux prémisses principales (Hallam & O'Connor, 2002) : (1) la présence d'intrusions cognitives similaires aux obsessions est un phénomène normal, présent chez la majorité des

individus non cliniques; et (2) la façon dont les intrusions cognitives sont interprétées diffère pour les individus non cliniques et présentant un TOC et déterminera si les intrusions cognitives se développeront ou non en obsessions.

Bien que plusieurs études suggèrent que 78 à 100% des individus non cliniques présentent des intrusions cognitives similaires aux obsessions (p. e. : Purdon & Clark, 1993; Rachman & de Silva, 1978; Salkovskis & Harrison, 1984), des limites importantes à ces études ont été relevées par Clark et Purdon (1995), limites susceptibles d'avoir faussé l'estimation de la prévalence des intrusions cognitives. L'*Obsessive Beliefs Questionnaire* (OBQ; OCCWG, 2005), un questionnaire mesurant les croyances dysfonctionnelles, est disponible, mais sa version française n'est pas validée. Ceci s'avère important, en raison des différences rapportées entre les nationalités (p. ex. : américaine, française, grecque) pour l'OBQ (OCCWG, 2005). Également, les individus présentant le TOC ne semblent pas entretenir davantage les croyances dysfonctionnelles que des individus présentant un trouble anxieux autre que le TOC ou que des individus non cliniques lorsque l'influence de la dépression et de l'anxiété est contrôlée (Tolin, Worhunsky, & Maltby, 2006). Les liens entre les croyances dysfonctionnelles et les sous-types du TOC doivent encore être établis. Finalement, une explication alternative aux modèles cognitifs du TOC proposent que les intrusions cognitives et les obsessions ne sont pas des phénomènes reliés, mais plutôt des phénomènes provenant de processus complètement différents, les intrusions cognitives étant provoquées par des stimuli présents dans l'ici et maintenant, les obsessions découlant d'un discours interne que se tient l'individu (O'Connor, Aardema, & Pélissier, 2005).

Objectifs et hypothèses de la thèse

Cette thèse avait donc pour objectif global d'évaluer quelques aspects des modèles cognitifs récents du TOC. Plus précisément, un premier objectif consistait à valider la version française de l'OBQ. Deuxièmement, nous voulions vérifier l'hypothèse selon laquelle les croyances dysfonctionnelles sont entretenues davantage

par des individus présentant le TOC que par des participants présentant un trouble panique avec ou sans agoraphobie et que des individus non cliniques. Un troisième but était d'examiner l'hypothèse selon laquelle certaines croyances dysfonctionnelles jouent un rôle plus important pour certains sous-types du TOC que pour d'autres. En quatrième lieu, nous voulions évaluer de façon critique les modèles cognitifs récents du TOC en procédant à une revue de la littérature. Cinquièmement, nous voulions créer un questionnaire mesurant les pensées, images et impulsions intrusives reliées au TOC qui pallierait les limites des précédents questionnaires identifiées dans la revue de la littérature et vérifier l'hypothèse de la normalité des intrusions cognitives. Le dernier objectif était d'examiner l'hypothèse suggérant que le contexte d'apparition des pensées, images et impulsions intrusives des individus non cliniques et présentant le TOC diffère.

Principaux résultats

La version française de l'OBQ présente une bonne stabilité temporelle. Les facteurs correspondent à ceux de la version originale : (a) responsabilité/estimation du danger, (b) importance/contrôle des pensées, et (c) perfectionnisme/intolérance à l'incertitude. La validité convergente et divergente de l'instrument est satisfaisante. Des analyses de variance indiquent que les participants présentant le TOC endossent significativement plus les croyances dysfonctionnelles que les participants présentant un trouble panique et que les participants non cliniques. Des analyses de covariance (contrôlant pour l'anxiété et la dépression) comparant les participants présentant le TOC et les participants non cliniques révèlent que les premiers endossent significativement plus les croyances dysfonctionnelles reliées au TOC que les derniers. L'hypothèse selon laquelle les croyances dysfonctionnelles sont spécifiques au TOC est donc soutenue.

L'importance des croyances dysfonctionnelles varie cependant selon le sous-type du TOC présenté, confirmant ainsi une des hypothèses de recherche. Des analyses de covariance (contrôlant pour l'anxiété) révèlent en effet que les

participants catégorisés dans le sous-type de rumination présentent davantage les croyances reliées à l'importance/contrôle des pensées que les participants catégorisés dans le sous-type de contamination. Des analyses de régressions contrôlant pour l'anxiété et la dépression suggèrent que les croyances reliées à la responsabilité/estimation du danger sont associées au sous-type de rumination, que les croyances reliées au perfectionnisme/intolérance à l'incertitude sont en lien avec les sous-types de vérification et de symétrie, et que les croyances reliées à l'importance/contrôle des pensées sont associées au sous-type de phobie d'impulsion. Les différences entre les résultats obtenus à l'aide des analyses de covariance et des régressions peuvent s'expliquer par le fait que les analyses de covariance représentent un modèle catégoriel, alors que les régressions représentent un modèle dimensionnel.

Notre revue de la littérature concernant les modèles cognitifs récents du TOC suggère que, bien que les croyances dysfonctionnelles semblent spécifiques au TOC, une proportion significative de participants présentant le TOC (entre 26 et 55%) obtiennent des résultats à l'OBQ qui sont similaires à ceux des individus non-cliniques. Aussi, les résultats d'une étude (Abramowitz, Khandker, Nelson, Deacon, & Rygwall, 2006) suggèrent que les croyances dysfonctionnelles pourraient jouer un rôle plus important pour les individus non cliniques que pour les individus présentant le TOC dans le niveau de détresse ressenti. Les études longitudinales et expérimentales portant sur les modèles cognitifs récents du TOC sont présentement en nombre limité, ont généralement été effectuées sur des échantillons non cliniques, et l'on pouvait y noter une absence de contrôle pour des variables pertinentes.

Les questionnaires antérieurs portant sur les intrusions cognitives comportent des limites, notamment au niveau de la validité (de contenu, convergente, divergente, interne et externe). Un nouveau questionnaire mesurant les pensées, images et impulsions intrusives reliées au TOC a donc été développé. Ce questionnaire semble combler certaines lacunes des questionnaires précédents. En effet, ce questionnaire semble davantage représentatif de l'ensemble des obsessions en incluant notamment des énoncés portant sur les idées surévaluées et en ayant été développé en partie à

l'aide des obsessions présentées par des individus répondant aux critères diagnostics du TOC. Aussi, l'examen des corrélations suggère que ce questionnaire est davantage relié aux questionnaires mesurant les problématiques obsessionnelles qu'aux questionnaires portant sur l'anxiété et la dépression. Les corrélations partielles suggèrent que le lien entre ce questionnaire et ceux mesurant les problématiques obsessionnelles est indépendant de l'anxiété et de la dépression. Dans notre échantillon, davantage représentatif que celui des autres études, 100% des participants non cliniques ont présenté des intrusions cognitives, supportant ainsi l'hypothèse selon laquelle la présence d'intrusions cognitives constitue un phénomène normal.

Bien que les pensées, images et impulsions intrusives des individus présentant le TOC et des individus non cliniques aient un contenu similaire, le contexte dans lequel elles se produisent semble différer. La présente thèse suggère en effet que les intrusions des individus non cliniques sont davantage provoquées par des éléments présents dans l'environnement au moment où elles se produisent que celles des individus présentant le TOC. Ceci implique que les croyances dysfonctionnelles ne sont pas le seul paramètre qui distingue les individus présentant le TOC des individus non cliniques. Une hypothèse pour expliquer que les intrusions des individus présentant le TOC soient plus fréquentes et moins provoquées par des éléments présents dans l'environnement que celles des individus non cliniques est qu'elles proviennent d'un discours interne faisant appel à des éléments qui dépassent la réalité de l'ici et maintenant. Par exemple, un individu présentant le TOC pourrait constater avec ses yeux et ses mains que les ronds du poêle sont éteints, mais conclure qu'ils sont peut-être quand même allumés à partir d'un scénario qui n'a rien à voir avec ce que les sens indiquent.

Principales limites et forces de la thèse

Certaines limites viennent cependant restreindre la portée des résultats présentés dans cette thèse. Ainsi, la taille modeste des échantillons pour les

participants présentant un trouble panique avec ou sans agoraphobie (1^{er} article) et pour les participants catégorisés dans le sous-type de phobie d'impulsion et de précision (2^e article) a limité le nombre d'analyses possibles. Aussi, il aurait été préférable d'obtenir d'avantage de participants présentant le TOC pour l'étude comparant le contexte d'apparition des intrusions (4^e article). Idéalement, des échantillons différents auraient été utilisés pour la validation des questionnaires et pour les comparaisons entre groupes (1^{er} et 4^e article). De manière générale, les échantillons étaient peu représentatifs de la population générale (p. ex. : principalement constitués de femmes, d'étudiants). La validité temporelle de l'*Inventaire des intrusions* (4^e article) doit être examinée dans un échantillon plus large de participants non cliniques, et également dans un échantillon d'individus présentant le TOC. Finalement, les études empiriques étaient de nature corrélationnelle et non expérimentale.

Malgré ces limites, cette thèse contribue à supporter et nuancer les modèles cognitifs récents du TOC. En raison des différences entre les nationalités sur l'OBQ, il semblait essentiel de valider la version française de ce questionnaire. Aussi, il était primordial pour les modèles cognitifs du TOC que les croyances dysfonctionnelles soient spécifiques aux individus présentant le TOC comparativement aux individus non cliniques, indépendamment du niveau d'anxiété et de dépression. Pour la première fois, une méthode pour déterminer empiriquement le sous-type du TOC d'un individu a été présentée. Une autre innovation de cette thèse est que les liens entre les sous-types du TOC et les croyances dysfonctionnelles ont été examinés selon un modèle statistique catégoriel et non dimensionnel. Un questionnaire portant sur les intrusions cognitives palliant d'importantes limites a été créé, et il appert malgré tout de ce questionnaire que les participants non cliniques présentent des intrusions cognitives similaires aux obsessions. Finalement, un nouveau paramètre, le contexte d'apparition des intrusions, semble devoir être considéré dans l'étude des pensées, images ou impulsions intrusives.

Implications et recommandations

Bien que les articles empiriques supportent généralement les modèles cognitifs récents du TOC, ceux-ci rencontrent cependant certains problèmes. Jusqu'ici, il ne semble pas que les participants présentant le TOC endossent significativement plus les croyances dysfonctionnelles que les participants présentant un trouble anxieux autre que le TOC, lorsque l'on contrôle pour l'anxiété et la dépression. Ceci est problématique pour les modèles cognitifs récents du TOC, car si d'autres études le confirment, ces modèles ne peuvent expliquer pourquoi certains individus développeront le TOC, alors que d'autres développeront un autre trouble anxieux. D'autres études sont donc nécessaires à ce sujet. Aussi, le fait qu'une proportion importante d'individus présentant le TOC obtiennent des résultats similaires à ceux des individus non cliniques à l'OBQ et que les croyances dysfonctionnelles de l'OBQ ne semblent pas être pertinentes pour tous les sous-types du TOC peut impliquer que des croyances dysfonctionnelles autres que celles mesurées par l'OBQ jouent un rôle dans le développement du TOC, ou qu'un phénomène différent des croyances dysfonctionnelles soit à l'origine du TOC de certains individus. Par exemple, plusieurs clients rencontrés en clinique soulignent que l'accomplissement de compulsions leur donne l'impression d'avoir le contrôle dans un domaine de leur vie. Ce besoin de contrôle peut masquer par exemple un trait de personnalité ou une façon inadaptée de gérer l'anxiété apprise dans le passé. Il y a donc lieu d'élargir le champ des croyances dysfonctionnelles qui pourraient être impliquées dans le TOC, ou de regarder vers une avenue autre que les croyances dysfonctionnelles. Par leur centration presque exclusive sur les croyances dysfonctionnelles, les modèles cognitifs récents du TOC négligent d'autres paramètres qui peuvent être en jeu dans le TOC, comme par exemple le contexte d'apparition des obsessions (O'Connor et al., 2005), l'impact de la fréquence des obsessions sur la façon d'y faire face (Jakes, 1996) et la détresse reliée à l'incapacité de contrôler les obsessions (Purdon & Clark, 2000). À tout le moins, les modèles cognitifs récents du TOC doivent être nuancés.

Les recherches étant équivoques à ce sujet, d'autres études doivent être effectuées pour préciser les liens entre les croyances dysfonctionnelles et les sous-types du TOC. Comme les techniques pour contrer les croyances dysfonctionnelles diffèrent d'une croyance à l'autre, préciser les liens entre les sous-types du TOC et les croyances dysfonctionnelles pourrait améliorer le traitement du TOC, en aiguillant le thérapeute vers certaines techniques plutôt que d'autres selon le sous-type présenté par le client. Cependant, il n'y a pas de manière établie pour déterminer le sous-type du TOC que présente un individu. Avec les critères que nous avons utilisés dans le 2^e article, 56% des participants présentant le TOC n'ont pu être catégorisés dans un sous-type dominant, ce qui peut soulever des questions quant à l'existence même des sous-types du TOC. L'expérience clinique montre en effet que la majorité des clients manifestent des obsessions ou des compulsions appartenant à plus d'un sous-type, et il n'est pas rare de constater que le contenu des obsessions change au cours de l'existence d'un même individu (p. ex. quelqu'un préoccupé par la contamination à une période de sa vie devient préoccupé par la vérification à une autre période; Summerfeldt, Antony, & Swinson, 2005). À ce sujet, il serait intéressant de vérifier si un changement au niveau du contenu des obsessions d'un même individu est relié à une modification des croyances dysfonctionnelles, ou si un événement de vie peut expliquer pourquoi une nouvelle obsession a été développée plutôt qu'une autre.

Le développement de thérapies cognitives basées sur la restructuration des croyances dysfonctionnelles ne semble pas améliorer l'efficacité du traitement du TOC. Cependant, le traitement cognitif du TOC semble aussi efficace que le traitement behaviorale du TOC, avec l'avantage de ne pas exposer le client au stimulus anxiogène pour une période de temps prolongée. Il serait également intéressant d'examiner la relation entre les croyances dysfonctionnelles et l'efficacité thérapeutique, certaines croyances dysfonctionnelles pouvant être plus résistantes au changement que d'autres. La preuve devrait également être établie que les modifications au niveau des croyances dysfonctionnelles ne sont pas un artéfact d'un changement au niveau de l'état émotionnel.

Jusqu'ici, le soutien empirique des modèles cognitifs récents du TOC repose principalement sur la passation de questionnaires, où les participants doivent indiquer s'ils présentent ou non des pensées à partir d'une liste d'énoncés établie par les chercheurs. Cette méthode comporte plusieurs avantages. Elle permet de recueillir des données rapidement et est facile à administrer. Les résultats se comptabilisent rapidement et aisément (sans recourir à un accord inter-juges). Cette méthode permet aussi d'établir des normes cliniques et non cliniques, et de comparer les résultats obtenus par différentes études (Glass & Arnkoff, 1997). C'est aussi une méthode simple pour évaluer le changement thérapeutique (Clark, 1997). Cette méthode n'est toutefois pas sans inconvénients. Elle rend mal la nature idiosyncrasique des pensées d'un individu. Puisqu'elle repose sur le souvenir, cette méthode est sujette aux distorsions de la mémoire, les participants pouvant répondre selon ce qu'ils croient avoir pensé plutôt que de rapporter leurs pensées véritables (Glass & Arnkoff, 1997). Aussi, les réponses peuvent être influencées par le fait que les participants soient en accord ou non avec l'énoncé (plutôt que par le fait d'avoir présenté ou non l'énoncé), par le fait que les participants aient eu une pensée semblable à celle indiquée dans l'énoncé, ou par l'état émotionnel des participants au moment de remplir le questionnaire. Cette méthode ne permet pas non plus de suivre l'enchaînement des pensées d'un individu, par exemple de suivre son raisonnement ou le discours qu'il se tient dans sa tête (Haaga, 1997). Finalement, cette méthode évalue principalement la fréquence des pensées. Des paramètres importants (tels que l'impact émotionnel des pensées, le degré de conviction envers les pensées et le degré de contrôle des pensées) sont présentement négligés (Clark, 1988).

D'autres méthodes que celle basée sur les questionnaires s'offrent aux chercheurs, comme par exemple l'identification des pensées durant ou après une tâche, ou lors d'un signal sonore. La validité de la méthode reposant sur les questionnaires est fortement plus établie que celle de ces autres méthodes (Clark, 1988), notamment au niveau de la validité de critère et de la validité discriminante (Glass & Arnkoff, 1997). Il est cependant important de diversifier l'utilisation des

méthodes de recherche, notamment parce que les recherches actuelles sur le TOC reposent principalement sur des questionnaires, et que des études (portant sur d'autres sujets que le TOC) démontrent une absence de congruence entre les résultats obtenus par les différentes méthodes de recherches discutées ici (Clark, 1997). Selon Clark (1997), il s'avère cependant futile de déterminer quelle est la meilleure méthode pour analyser les pensées, puisque la méthode de choix dépend de l'objectif visé par une recherche. Ainsi, l'utilisation de questionnaires peut être la méthode à privilégier pour celui qui cherche à étudier l'efficacité d'une thérapie, tandis qu'il pourrait être préférable de recourir à l'identification des pensées durant une situation pour celui qui cherche à saisir le lien entre les pensées et les émotions.

Même s'il semble que les croyances dysfonctionnelles soient pertinentes dans l'étude du TOC, trois questions demeurent. Premièrement, les croyances dysfonctionnelles sont-elles la cause ou la conséquence du TOC? Deuxièmement, la modification des croyances dysfonctionnelles est-elle reliée à une réduction des obsessions et des compulsions (Clark, 2002)? Troisièmement, cette modification des croyances dysfonctionnelles précéderait-elle ou serait-elle une conséquence de la diminution des comportements TOC (Steketee, Frost, & Wilson, 2002)? Pour répondre à ces questions, des devis de recherche autres que les devis corrélationnels devront être implantés, comme par exemple des devis expérimentaux et longitudinaux, qui pourraient observer tant l'impact qu'a une manipulation d'une situation sur les pensées que regarder l'impact d'une manipulation des pensées sur les résultats d'un questionnaire (Haaga, 1997). Il serait également crucial pour les modèles cognitifs du TOC de vérifier longitudinalement si le contenu des intrusions cognitives d'un individu à risque de développer le TOC est relié au contenu de ses obsessions s'il s'avère qu'il développe cette problématique.

Il appert de ce qui précède qu'il existe certains problèmes avec les modèles cognitifs récents du TOC. D'autres avenues doivent alors être explorées. Une hypothèse alternative aux modèles cognitifs récents du TOC est que les croyances dysfonctionnelles ne jouent pas de rôle dans l'apparition des obsessions, mais

qu'elles n'apparaissent qu'après coup. Aussi, les individus présentant le TOC peuvent avoir à la fois des intrusions cognitives et des obsessions. Une seconde hypothèse alternative aux modèles cognitifs récents du TOC propose que les intrusions cognitives et les obsessions, bien que de contenu similaire, sont des phénomènes qui ne sont pas reliés entre eux et qu'ils découlent de processus complètement différents et indépendants (O'Connor et al., 2005). Tel que discuté ci-dessus, ce modèle suggère que les obsessions ne surgissent pas spontanément à l'esprit mais sont l'aboutissement d'un scénario qu'élabore l'individu. Contrairement à ce qu'avancent les modèles cognitifs récents du TOC, le contenu même de l'obsession pourrait devenir une cible d'intervention selon ce modèle. D'autres études sont nécessaires pour évaluer ce modèle. Par exemple, le lien entre le contexte d'apparition et le contenu des intrusions pourrait être examiné de manière expérimentale.

Plusieurs défis attendent donc les modèles cognitifs récents du TOC. Nous espérons que cette thèse soit parvenue à contribuer aux connaissances sur le TOC et à donner des pistes d'orientation pour les recherches futures.

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APPENDICES

APPENDICE 1 :

Copie de l'OBQ (versions anglaise et française) et de l'II

OBQ-87
Score Key

U=Tolerance for Uncertainty
T=Threat Estimation
C=Control of Thoughts
I=Importance of Thoughts
R=Responsibility
P=Perfectionism

Use the following scale:

	1	2	3	4	5	6	7				
	disagree very much	disagree moderately	disagree a little	neither agree nor disagree	agree a little	agree moderately	agree very muc				
I	1. Having bad thoughts or urges means I'm likely to act on them.					1	2	3	4	5	6
C	2. Having control over my thoughts is a sign of good character.					1	2	3	4	5	6
U	3. If I am uncertain, there is something wrong with me.					1	2	3	4	5	6
R	4. If I imagine something bad happening, then I am responsible for making 1 sure that it doesn't happen.					1	2	3	4	5	6
C	5. If I don't control my unwanted thoughts, something bad is bound to happen.					1	2	3	4	5	6
T	6. I often think things around me are unsafe.					1	2	3	4	5	6
R	7. When I hear about a tragedy, I can=t stop wondering if I am responsible in some way.					1	2	3	4	5	6
C	8. Whenever I lose control of my thoughts, I must struggle to regain control.					1	2	3	4	5	6
T	9. I am much more likely to be punished than are others.					1	2	3	4	5	6
U	10. If I=m not absolutely sure of something, I=m bound to make a mistake.					1	2	3	4	5	6

	1	2	3	4	5	6	7					
	disagree very much	disagree moderately	disagree a little	neither agree nor disagree	agree a little	agree moderately	agree very much					
P	11. There is only one right way to do things.					1	2	3	4	5	6	7
C	12. I would be a better person if I gained more control over my thoughts.					1	2	3	4	5	6	7
P	13. Things should be perfect according to my own standards.					1	2	3	4	5	6	7
I	14. The more distressing my thoughts are, the greater the risk that they will come true.					1	2	3	4	5	6	7
C	15. I can have no peace of mind as long as I have intrusive thoughts.					1	2	3	4	5	6	7
T	16. Things that are minor annoyances for most people seem like disasters for me.					1	2	3	4	5	6	7
C	17. I must know what is going on in my mind at all times so I can control my thoughts.					1	2	3	4	5	6	7
I	18. The more I think of something horrible, the greater the risk it will come true.					1	2	3	4	5	6	7
P	19. In order to be a worthwhile person, I must be perfect at everything I do.					1	2	3	4	5	6	7
R	20. When I see any opportunity to do so, I must act to prevent bad things from happening.					1	2	3	4	5	6	7
R	21. It is ultimately my responsibility to ensure that everything is in order.					1	2	3	4	5	6	7
P	22. If I fail at something, I am a failure as a person.					1	2	3	4	5	6	7
R	23. Even if harm is very unlikely, I should try to prevent it at any cost.					1	2	3	4	5	6	7
I	24. For me, having bad urges is as bad as actually carrying them out.					1	2	3	4	5	6	7
R	25. I must think through the consequences of even my smallest actions.					1	2	3	4	5	6	7
U	26. If an unexpected change occurs in my daily life, something bad will happen.					1	2	3	4	5	6	7
R	27. If I don't act when I foresee danger, then I am to blame for any consequences.					1	2	3	4	5	6	7

	1	2	3	4	5	6	7
	disagree very much	disagree moderately	disagree a little	neither agree nor disagree	agree a little	agree moderately	agree very much
P 6 7	28. If I can't do something perfectly, I shouldn't do it at all.					1	2 3 4 5
C	29. I must be ready to regain control of my thinking whenever an intrusive thought or image occurs.					1	2 3 4 5 6 7
T	30. Bad things are more likely to happen to me than to other people					1	2 3 4 5 6 7
P	31. I must work to my full potential at all times.					1	2 3 4 5 6 7
U	32. It is essential for me to consider all possible outcomes of a situation.					1	2 3 4 5 6 7
P	33. Even minor mistakes mean a job is not complete.					1	2 3 4 5 6 7
I	34. If I have aggressive thoughts or impulses about my loved ones, this means I may secretly want to hurt them.					1	2 3 4 5 6 7
U	35. I must be certain of my decisions.					1	2 3 4 5 6 7
P	36. If someone does a task better than I do, that means I failed the whole task.					1	2 3 4 5 6 7
C	37. If I have an intrusive thought while I'm doing something, what I'm doing will be ruined.					1	2 3 4 5 6 7
R	38. In all kinds of daily situations, failing to prevent harm is just as bad as deliberately causing harm.					1	2 3 4 5 6 7
T	39. Avoiding serious problems (for example, illness or accidents) requires constant effort on my part.					1	2 3 4 5 6 7
T	40. Small problems always seem to turn into big ones in my life.					1	2 3 4 5 6 7
R	41. For me, not preventing harm is as bad as causing harm.					1	2 3 4 5 6 7
P	42. I should be upset if I make a mistake.					1	2 3 4 5 6 7
R	43. I should make sure others are protected from any negative consequences of my decisions or actions.					1	2 3 4 5 6 7
C	44. If I exercise enough will-power, I should be able to gain complete					1	2 3 4 5 6 7

control over my mind.		1	2	3	4	5	6	7
		disagree very much	disagree moderately	disagree a little	neither agree nor disagree	agree a little	agree moderately	agree very much
P	45. For me, things are not right if they are not perfect.						1 2 3 4 5 6 7	
I	46. Having nasty thoughts means I am a terrible person.						1 2 3 4 5 6 7	
R	47. I often believe I am responsible for things that other people don't think are my fault.						1 2 3 4 5 6 7	
I	48. If an intrusive thought pops into my mind, it must be important.						1 2 3 4 5 6 7	
I	49. Thinking about a good thing happening can prevent it from happening.						1 2 3 4 5 6 7	
T	50. If I do not take extra precautions, I am more likely than others to have or cause a serious disaster.						1 2 3 4 5 6 7	
P	51. If I don't do as well as other people, that means I am an inferior person.						1 2 3 4 5 6 7	
T	52. I believe that the world is a dangerous place.						1 2 3 4 5 6 7	
U	53. In order to feel safe, I have to be as prepared as possible for anything that could go wrong.						1 2 3 4 5 6 7	
C	54. To avoid disasters, I need to control all the thoughts or images that pop into my mind.						1 2 3 4 5 6 7	
I	55. I should not have bizarre or disgusting thoughts.						1 2 3 4 5 6 7	
P	56. For me, making a mistake is as bad as failing completely.						1 2 3 4 5 6 7	
U	57. It is essential for everything to be clear cut, even in minor matters.						1 2 3 4 5 6 7	
I	58. Having a blasphemous thought is as sinful as committing a sacrilegious act.						1 2 3 4 5 6 7	
C	59. I should be able to rid my mind of unwanted thoughts.						1 2 3 4 5 6 7	
U	60. I should be 100% certain that everything around me is safe.						1 2 3 4 5 6 7	
T	61. I am more likely than other people to accidentally cause harm to myself or to others.						1 2 3 4 5 6 7	

	1	2	3	4	5	6	7					
	disagree very much	disagree moderately	disagree a little	neither agree nor disagree	agree a little	agree moderately	agree very much					
R	62. For me, even slight carelessness is inexcusable when it might affect other people.					1	2	3	4	5	6	7
U	63. If something unexpected happens, I will not be able to cope with it.					1	2	3	4	5	6	7
I	64. Having bad thoughts means I am weird or abnormal.					1	2	3	4	5	6	7
P	65. I must be the best at things that are important to me.					1	2	3	4	5	6	7
I	66. Having an unwanted sexual thought or image means I really want to do it.					1	2	3	4	5	6	7
R	67. If my actions could have even a small effect on a potential misfortune, I am responsible for the outcome.					1	2	3	4	5	6	7
T	68. Even when I am careful, I often think that bad things will happen.					1	2	3	4	5	6	7
C	69. Having intrusive thoughts means I'm out of control.					1	2	3	4	5	6	7
U	70. It is terrible to be surprised.					1	2	3	4	5	6	7
R	71. Even if I think harm is very unlikely, I should still try to prevent it.					1	2	3	4	5	6	7
T	72. Harmful events will happen unless I am very careful.					1	2	3	4	5	6	7
U	73. I should go to great lengths to get all the relevant information before I make a decision.					1	2	3	4	5	6	7
P	74. I must keep working at something until it's done exactly right.					1	2	3	4	5	6	7
C	75. Being unable to control unwanted thoughts will make me physically ill.					1	2	3	4	5	6	7
I	76. Having violent thoughts means I will lose control and become violent.					1	2	3	4	5	6	7
R	77. To me, failing to prevent a disaster is as bad as causing it.					1	2	3	4	5	6	7
P	78. If I don't do a job perfectly, people won't respect me.					1	2	3	4	5	6	7

	1	2	3	4	5	6	7
	disagree very much	disagree moderately	disagree a little	neither agree nor disagree	agree a little	agree moderately	agree very much
T	79. Even ordinary experiences in my life are full of risk.					1	2 3 4 5 6 7
T	80. When things go too well for me, something bad will follow.					1	2 3 4 5 6 7
R	81. If I take sufficient care, I can prevent any harmful accident from occurring.					1	2 3 4 5 6 7
T	82. When anything goes wrong in my life, it is likely to have terrible effects.					1	2 3 4 5 6 7
I	83. Having a bad thought is morally no different than doing a bad deed.					1	2 3 4 5 6 7
P	84. No matter what I do, it won't be good enough.					1	2 3 4 5 6 7
U	85. I often think that I will be overwhelmed by unforeseen events.					1	2 3 4 5 6 7
C	86. If I don't control my thoughts, I'll be punished.					1	2 3 4 5 6 7
U	87. I need the people around me to behave in a predictable way.					1	2 3 4 5 6 7

Revised June 1, 1998 - obq-87 scorekey.doc

Questionnaire sur les croyances obsessionnelles (QCO-87)

Cet inventaire énumère différentes attitudes ou croyances que les gens peuvent avoir. Lisez chaque énoncé attentivement et décidez jusqu'à quel point vous êtes en accord ou en désaccord avec chacun d'entre eux.

Vous devez choisir le numéro qui décrit le mieux ce que vous pensez. Chaque personne étant différente, il n'y a pas de bonne ou de mauvaise réponse.

Pour décider si un énoncé donné représente bien votre façon de voir les choses, fiez-vous simplement à ce que vous pensez la plupart du temps.

Veillez utiliser l'échelle suivante:

1	2	3	4	5	6	7
Tout à fait en désaccord	Modérément en désaccord	Un peu en désaccord	Ni en accord ni en désaccord	Un peu en accord	Modérément en accord	Tout à fait en accord

En choisissant vos cotes, essayez d'éviter d'utiliser le point milieu de l'échelle (4). Indiquez plutôt jusqu'à quel point vos propres croyances et attitudes sont en accord ou en désaccord avec chaque énoncé.

	Énoncés							Cote							
1.	Avoir de mauvaises pensées ou impulsions veut dire que je pourrais passer à l'acte.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
2.	Avoir le contrôle de mes pensées est un signe que je suis une bonne personne.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
3.	Si je suis incertain(e), cela veut dire qu'il y a quelque chose qui ne va pas en moi, dans ma personne.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
4.	Si j'imagine que quelque chose de mal arrive, alors c'est ma responsabilité de m'assurer que cela ne se produise pas.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
5.	Si je ne contrôle pas mes pensées indésirables, quelque chose de mal se produira sous peu.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
6.	Je pense souvent que les choses autour de moi sont dangereuses.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
7.	Quand j'entends qu'il s'est produit une tragédie, je ne peux pas arrêter de me demander si j'en suis responsable d'une façon ou d'une autre.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
8.	Si je perds le contrôle de mes pensées, je dois tout faire pour reprendre le contrôle.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
9.	Si je me compare aux autres, il y a beaucoup plus de risque que je sois puni(e).	1	2	3	4	5	6	7	1	2	3	4	5	6	7

	1	2	3	4	5	6	7					
	Tout à fait en désaccord	Modérément en désaccord	Un peu en désaccord	Ni en accord ni en désaccord	Un peu en accord	Modérément en accord	Tout à fait en accord					
10.	Si je ne suis pas absolument certain(e) de quelque chose, c'est sûr que je vais faire une erreur.					1	2	3	4	5	6	7
11.	Il existe une seule bonne façon de faire les choses.					1	2	3	4	5	6	7
12.	Je serais une meilleure personne si j'avais plus de contrôle sur mes pensées.					1	2	3	4	5	6	7
13.	Les choses devraient être parfaites selon mes propres critères.					1	2	3	4	5	6	7
14.	Plus mes pensées sont dérangeantes, plus elles risquent de se réaliser.					1	2	3	4	5	6	7
15.	Je ne peux avoir l'esprit en paix tant que j'ai des pensées intrusives.					1	2	3	4	5	6	7
16.	Les choses qui sont légèrement agaçantes pour la plupart des gens m'apparaissent comme des tragédies.					1	2	3	4	5	6	7
17.	Je dois savoir en tout temps ce qui se passe dans mon esprit afin de pouvoir contrôler mes pensées.					1	2	3	4	5	6	7
18.	Plus je pense à quelque chose d'horrible, plus cela risque de se produire.					1	2	3	4	5	6	7
19.	Pour être une personne qui a de la valeur, je dois être parfait(e) dans tout ce que je fais.					1	2	3	4	5	6	7
20.	Dès que j'en ai l'occasion, je dois agir pour empêcher que de mauvaises choses se produisent.					1	2	3	4	5	6	7
21.	Enfin de compte, c'est à moi que revient la responsabilité de m'assurer que tout est en règle.					1	2	3	4	5	6	7
22.	Si j'échoue dans quelque chose, je suis un échec en tant que personne.					1	2	3	4	5	6	7
23.	Même si le danger est très improbable, je devrais essayer de le prévenir à n'importe quel prix.					1	2	3	4	5	6	7
24.	Pour moi, avoir de mauvaises impulsions est aussi mal que de passer à l'acte.					1	2	3	4	5	6	7
25.	Je dois penser aux conséquences de mes actions et même de mes moindres gestes.					1	2	3	4	5	6	7
26.	Si un changement inattendu survient dans mon quotidien cela veut dire que quelque chose de mal va arriver.					1	2	3	4	5	6	7
27.	Si je n'interviens pas quand je perçois un danger, alors je serai à blâmer pour toute conséquence.					1	2	3	4	5	6	7

	1	2	3	4	5	6	7					
	Tout à fait en désaccord	Modérément en désaccord	Un peu en désaccord	Ni en accord ni en désaccord	Un peu en accord	Modérément en accord	Tout à fait en accord					
28.	Si je ne peux pas faire quelque chose parfaitement, je ne devrais pas le faire du tout.					1	2	3	4	5	6	7
29.	Je dois être en mesure de reprendre le contrôle de mes pensées lorsqu'une pensée ou une image intrusive survient.					1	2	3	4	5	6	7
30.	Il y a plus de chances que des malheurs à moi arrivent plutôt qu'aux autres.					1	2	3	4	5	6	7
31.	Je dois donner mon plein rendement en tout temps.					1	2	3	4	5	6	7
32.	C'est essentiel pour moi de considérer toutes les conséquences possibles d'une situation donnée.					1	2	3	4	5	6	7
33.	Même les erreurs mineures veulent dire qu'un travail n'est pas terminé.					1	2	3	4	5	6	7
34.	Si j'ai des pensées agressives ou des impulsions à propos d'être chers, cela veut dire que je peux secrètement vouloir les blesser.					1	2	3	4	5	6	7
35.	Je dois être sûr(e) de mes décisions.					1	2	3	4	5	6	7
36.	Si quelqu'un fait mieux une tâche que moi, cela veut dire j'ai échoué dans toute la tâche.					1	2	3	4	5	6	7
37.	Si j'ai une pensée intrusive pendant que je fais quelque chose, ce que je suis en train de faire est gâché.					1	2	3	4	5	6	7
38.	Dans toutes sortes de situations quotidiennes, ne pas réussir à prévenir le danger est aussi mauvais que de faire délibérément du mal aux autres.					1	2	3	4	5	6	7
39.	Tenter d'éviter que des problèmes sérieux (par exemple, une maladie ou un accident) ne surviennent requiert un effort constant de ma part.					1	2	3	4	5	6	7
40.	Dans ma vie, les petits problèmes semblent toujours devenir des gros problèmes.					1	2	3	4	5	6	7
41.	Pour moi, ne pas prévenir le danger est aussi mal que de causer du tort.					1	2	3	4	5	6	7
42.	Je devrais être fâché(e) si je fais une erreur.					1	2	3	4	5	6	7
43.	Je devrais m'assurer que les autres sont protégés contre toute conséquence négative résultant de mes décisions ou actions.					1	2	3	4	5	6	7
44.	Si j'exerce assez de volonté, je devrais être en mesure d'avoir le parfait contrôle de mon esprit.					1	2	3	4	5	6	7

	1	2	3	4	5	6	7
	Tout à fait en désaccord	Modérément en désaccord	Un peu en désaccord	Ni en accord ni en désaccord	Un peu en accord	Modérément en accord	Tout à fait en acco
45. Pour moi, les choses ne sont pas correctes si elles ne sont pas parfaites.	1	2	3	4	5	6	7
46. Avoir des pensées obscènes, agressives ou violentes veut dire que je suis une mauvaise personne.	1	2	3	4	5	6	7
47. Je crois souvent être responsable de choses pour lesquelles d'autres gens pensent que ce n'est pas de ma faute.	1	2	3	4	5	6	7
48. Si une pensée intrusive survient dans mon esprit, ça doit être important.	1	2	3	4	5	6	7
49. Penser à de bonnes choses peut empêcher qu'elles se produisent.	1	2	3	4	5	6	7
50. Si je ne prends pas de précautions supplémentaires, j'ai plus de chance que les autres d'être victime d'une tragédie ou encore d'en provoquer une.	1	2	3	4	5	6	7
51. Si je ne fais pas aussi bien que les autres, cela veut dire que je suis une personne inférieure.	1	2	3	4	5	6	7
52. Je crois que le monde est un endroit dangereux.	1	2	3	4	5	6	7
53. Pour me sentir en sécurité, il faut que je sois le mieux préparé possible à tout ce qui pourrait aller mal.	1	2	3	4	5	6	7
54. Pour éviter les tragédies, j'ai besoin de contrôler toutes les pensées ou images qui surviennent à mon esprit.	1	2	3	4	5	6	7
55. Je ne devrais pas avoir de pensées bizarres ou dégoûtantes.	1	2	3	4	5	6	7
56. Pour moi, faire une erreur est aussi mal que d'échouer complètement.	1	2	3	4	5	6	7
57. C'est essentiel que tout soit clair et net, même les détails mineurs.	1	2	3	4	5	6	7
58. Avoir des pensées blasphématoires est aussi péché que de commettre un sacrilège.	1	2	3	4	5	6	7
59. Je devrais être capable de débarrasser mon esprit des pensées indésirables.	1	2	3	4	5	6	7
60. Je devrais être certain(e) à 100% que toute chose autour de moi est sans danger.	1	2	3	4	5	6	7
61. Ça m'arrive plus souvent qu'aux autres personnes de me faire mal accidentellement ou de faire mal aux autres.	1	2	3	4	5	6	7

	1	2	3	4	5	6	7
	Tout à fait en désaccord	Modérément en désaccord	Un peu en désaccord	Ni en accord ni en désaccord	Un peu en accord	Modérément en accord	Tout à fait en accord
62. Pour moi, même la moindre imprudence est inexcusable quand elle pourrait affecter d'autres personnes.	1	2	3	4	5	6	7
63. Si quelque chose d'inattendu survient, je ne serai pas capable d'y faire face.	1	2	3	4	5	6	7
64. Avoir de mauvaises pensées veut dire que je suis bizarre ou anormal(e).	1	2	3	4	5	6	7
65. Je dois être le(a) meilleur(e) dans les choses qui sont importantes pour moi.	1	2	3	4	5	6	7
66. Avoir une pensée ou une image sexuelle indésirable veut dire que je veux vraiment le faire.	1	2	3	4	5	6	7
67. Si mes gestes pouvaient avoir ne serait-ce qu'un petit effet sur la survenue d'un malheur, j'en serais responsable.	1	2	3	4	5	6	7
68. Même lorsque je suis prudent(e), je pense souvent que de mauvaises choses vont arriver.	1	2	3	4	5	6	7
69. Avoir des pensées intrusives veut dire que j'ai perdu le contrôle.	1	2	3	4	5	6	7
70. C'est terrible d'être pris(e) au dépourvu.	1	2	3	4	5	6	7
71. Même si je pense que le danger est très improbable, je devrais quand même essayer de le prévenir.	1	2	3	4	5	6	7
72. Des événements dangereux vont se produire si je ne suis pas prudent(e).	1	2	3	4	5	6	7
73. Je devrais prendre les grands moyens pour recueillir toute l'information pertinente avant de prendre une décision.	1	2	3	4	5	6	7
74. Je dois continuer à travailler sur quelque chose tant que ce n'est pas fait exactement comme il faut.	1	2	3	4	5	6	7
75. Être incapable de contrôler mes pensées indésirables me rendra physiquement malade.	1	2	3	4	5	6	7
76. Avoir des pensées violentes veut dire que je vais perdre le contrôle et devenir violent(e).	1	2	3	4	5	6	7
77. Pour moi, ne pas réussir à prévenir une tragédie est aussi mal que de la provoquer.	1	2	3	4	5	6	7
78. Si je ne fais pas un travail parfaitement, les gens ne me respecteront pas.	1	2	3	4	5	6	7

	1	2	3	4	5	6	7
	Tout à fait en désaccord	Modérément en désaccord	Un peu en désaccord	Ni en accord ni en désaccord	Un peu en accord	Modérément en accord	Tout à fait en accord
79. Même les expériences ordinaires de ma vie sont pleines de risques.	1	2	3	4	5	6	7
80. Quand les choses vont trop bien pour moi, quelque chose de mal va suivre.	1	2	3	4	5	6	7
81. Si je prends suffisamment de précautions, je peux empêcher que tout accident dangereux se produise.	1	2	3	4	5	6	7
82. Quand quelque chose va mal dans ma vie, cela aura probablement des effets terribles.	1	2	3	4	5	6	7
83. Avoir une mauvaise pensée n'est pas différent moralement de commettre une mauvaise action.	1	2	3	4	5	6	7
84. Peu importe ce que je fais, ça ne sera pas assez bon.	1	2	3	4	5	6	7
85. Je pense souvent que je serai dépassé(e) si des événements imprévus survenaient.	1	2	3	4	5	6	7
86. Si je ne contrôle pas mes pensées, je serai puni(e).	1	2	3	4	5	6	7
87. J'ai besoin que les gens autour de moi se comportent de façon prévisible.	1	2	3	4	5	6	7

Inventaire des intrusions Partie A

Les **intrusions** sont des **pensées**, des **images mentales** et/ou des **impulsions** (ou pensées évoquant la possibilité d'agir impulsivement) dont certains individus font l'expérience à l'occasion. Elles peuvent **apparaître brusquement** dans la conscience, de façon **répétitive**, **contre la volonté** de l'individu, et **peuvent être jugées inacceptables** par l'individu.

Ce questionnaire porte sur les intrusions. Veuillez indiquer, en vous basant sur l'échelle ci-dessous, à quelle fréquence vous avez fait l'expérience des intrusions suivantes.

	0	1	2	3	4
	Jamais	Rarement	Parfois	Souvent	Toujours
1. Impulsion de sacrer à haute voix en public sans raison apparente.	0	1	2	3	4
2. Pensée qu'il est possible que je sois contaminé si je touche les sécrétions corporelles (ex. : sueur, salive, urine, sperme) d'une autre personne.	0	1	2	3	4
3. Impulsion de faire une scène en public sans raison apparente.	0	1	2	3	4
4. Pensée qu'il est nécessaire que je range les choses en ordre.	0	1	2	3	4
5. Pensée que les portes ou les fenêtres n'ont peut-être pas été bien fermées.	0	1	2	3	4
6. Pensée que je peux être contaminé en utilisant les toilettes publiques.	0	1	2	3	4
7. Pensée que le gaz, l'eau ou l'électricité ne sont peut-être pas bien fermés.	0	1	2	3	4
8. Pensée d'avoir peut-être commis un crime sans m'en souvenir.	0	1	2	3	4
9. Pensée que je dois suivre une séquence pour m'assurer que certaines actions sont faites correctement.	0	1	2	3	4

	0	1	2	3	4
	Jamais	Rarement	Parfois	Souvent	Toujours
10. Impulsion de réaliser des actes sexuels allant à l'encontre de mon code moral.	0	1	2	3	4
11. Pensée que je devrais garder des vêtements qui ne servent pas ou qui n'ont jamais servi.	0	1	2	3	4
12. Pensée qu'une chanson que j'entends à la radio contient un message qui m'est spécifiquement destiné.	0	1	2	3	4
13. Pensée que j'ai peut-être jeté quelque chose d'important ou ayant de la valeur.	0	1	2	3	4
14. Pensée que je dois suivre exactement la même routine quand je m'habille, me lave ou me couche.	0	1	2	3	4
15. Impulsion de diriger la voiture hors de la route sans le vouloir réellement.	0	1	2	3	4
16. Pensée qu'un objet touché par quelqu'un risque de me contaminer.	0	1	2	3	4
17. Pensée que je pourrais commettre un péché.	0	1	2	3	4
18. Pensée que je dois nécessairement remettre les objets ou les meubles exactement là où ils étaient.	0	1	2	3	4
19. Pensée qu'il est possible que j'aie posté une lettre sans avoir mis de timbre sur l'enveloppe.	0	1	2	3	4
20. Pensée que j'ai peut-être laissé mes clefs quelque part.	0	1	2	3	4
21. Pensée qu'il est possible que j'aie fait une erreur en remplissant un chèque.	0	1	2	3	4
22. Pensée qu'il y a peut-être des dangers qui ne sont pas apparents.	0	1	2	3	4
23. Impulsion de me jeter spontanément dans le vide (ex. : du haut d'un pont, d'un toit).	0	1	2	3	4
24. Pensée que le plancher est peut-être sale ou poussiéreux.	0	1	2	3	4

	0	1	2	3	4
	Jamais	Rarement	Parfois	Souvent	Toujours
25. Impulsion de me jeter spontanément devant une voiture.	0	1	2	3	4
26. Impulsion de pousser quelqu'un sous une voiture sans raison apparente.	0	1	2	3	4
27. Impulsion de faire du mal à un membre de ma famille sans raison particulière.	0	1	2	3	4
28. Pensée que la sonnerie du réveille-matin n'a peut-être pas été mise en fonction.	0	1	2	3	4
29. Pensée que j'ai peut-être fait une erreur dans une lettre que j'ai écrite.	0	1	2	3	4
30. Pensée que les appareils électriques (ex. : laveuse, sècheuse) n'ont peut-être pas été arrêtés correctement.	0	1	2	3	4
31. Pensée que j'ai peut-être fait une erreur en écrivant l'adresse sur une enveloppe.	0	1	2	3	4
32. Pensée que je suis physiquement sale après avoir eu une mauvaise pensée.	0	1	2	3	4
33. Impulsion d'étouffer un membre de ma famille sans raison apparente.	0	1	2	3	4
34. Pensée que je ne devrais pas jeter de papiers inutiles.	0	1	2	3	4
35. Impulsion de diriger la voiture sur une autre auto sans raison apparente.	0	1	2	3	4
36. Pensée que je peux être contaminé en utilisant les téléphones publics.	0	1	2	3	4
37. Pensée que j'ai peut-être mal éteint ma cigarette.	0	1	2	3	4
38. Impulsion de faire du mal à un enfant sans raison apparente.	0	1	2	3	4
39. Pensée que les robinets ne sont peut-être pas bien fermés.	0	1	2	3	4

	0	1	2	3	4
	Jamais	Rarement	Parfois	Souvent	Toujours
40. Impulsion d'attaquer un parfait étranger sans raison apparente.	0	1	2	3	4
41. Pensée que je peux provoquer ma mort ou celle des autres par la force de la pensée.	0	1	2	3	4
42. Impulsion de m'infliger des blessures sans raison particulière.	0	1	2	3	4
43. Pensée que je peux être contaminé pour avoir eu une mauvaise pensée.	0	1	2	3	4
44. Image mentale sexuelle contraire à ma religion.	0	1	2	3	4
45. Pensée qu'il y a quelque chose qui ne va absolument pas dans mon apparence physique.	0	1	2	3	4
46. Pensée que des parfaits étrangers peuvent utiliser contre moi des erreurs que j'ai commises.	0	1	2	3	4
47. Pensée que je suis peut-être d'une autre orientation sexuelle que celle que je crois être.	0	1	2	3	4
48. Impulsion de diriger la voiture sur des piétons sans raison particulière.	0	1	2	3	4
49. Pensée qu'un objet venant de l'extérieur de ma maison peut me contaminer.	0	1	2	3	4
50. Pensée que j'ai peut-être laissé les portières de l'auto débarrées.	0	1	2	3	4
51. Pensée que la porte du réfrigérateur ou du congélateur n'a peut-être pas été bien fermée.	0	1	2	3	4
52. Pensée que j'ai été contaminé par des forces invisibles.	0	1	2	3	4
53. Pensée qu'un parfait étranger me juge.	0	1	2	3	4
54. Pensée que les lumières n'ont peut-être pas été bien éteintes.	0	1	2	3	4
55. Image mentale dans laquelle j'abuse sexuellement d'un enfant.	0	1	2	3	4

	0 Jamais	1 Rarement	2 Parfois	3 Souvent	4 Toujours
56. Pensée que je pourrais contracter une maladie grave (ex. sida).	0	1	2	3	4
57. Pensée qu'il y a des organisations qui complotent contre moi.	0	1	2	3	4
58. Impulsion de me mettre à insulter des personnes sans raison.	0	1	2	3	4
59. Impulsion de poignarder un membre de ma famille spontanément.	0	1	2	3	4
60. Pensée que j'ai un message important à livrer au monde entier.	0	1	2	3	4
61. Impulsion de mettre ma relation avec mon/ma conjoint(e) en péril en lui causant du tort.	0	1	2	3	4
62. Pensée que le four ou les calorifères n'ont peut-être pas été bien éteints.	0	1	2	3	4
63. Pensée que je peux être contaminé simplement en passant près d'une personne sale.	0	1	2	3	4
64. Pensée que mon/ma conjoint(e) me trompe.	0	1	2	3	4
65. Impulsion de poser des actes sexuels que je trouve personnellement dégoûtants.	0	1	2	3	4
66. Impulsion de me conduire de façon déplacée en public sans raison valable.	0	1	2	3	4
67. Pensée que j'ai peut-être quitté ma maison ou mon appartement sans barrer la porte.	0	1	2	3	4
68. Pensée que je peux être contaminé si je touche une poignée de porte.	0	1	2	3	4

Inventaire des intrusions Partie B

Cette seconde partie concerne le contexte d'apparition d'une intrusion. Il existe trois types de lien entre le contenu d'une intrusion et le contexte dans lequel l'intrusion survient.

Premièrement, le contenu d'une intrusion (son thème) peut être **relié directement** à quelque chose que vous avez **observé avec vos sens** (vue, ouïe, odorat, goût, toucher) au moment où l'intrusion est survenue. En voici quelques exemples :

Observation avec les sens	Lien direct	Intrusions
Exemple 1. Un ami qui a le rhume tousse dans sa main puis tourne une poignée de porte.	→	Pensée que je peux être contaminé si je touche une poignée de porte.
Exemple 2. Vous avez écrasé votre cigarette, mais elle émet encore de la fumée et vous voyez de la rougeur sur le bout du mégot.	→	Pensée que j'ai peut-être mal éteint ma cigarette.
Exemple 3. Un bruit vous fait sursauter alors que vous tranchez des légumes et vous vous coupez un doigt. Il saigne abondamment.	→	Pensée que je pourrais m'infliger des blessures sans raison particulière suite à une impulsion.

Dans les exemples 1 à 3, il y a un lien direct entre le contenu des intrusions et des indices que vous avez observés avec vos sens au moment où les intrusions sont survenues.

Deuxièmement, le contenu d'une intrusion peut être **relié indirectement** à quelque chose que vous avez **observé avec vos sens** au moment où l'intrusion est survenue. En voici quelques exemples :

Observation avec les sens	Lien indirect	Intrusions
Exemple 4. Vous voyez une poignée de porte.	→	Pensée que je peux être contaminé si je touche une poignée de porte.
Exemple 5. Vous regardez le mégot de cigarette que vous venez d'éteindre.	→	Pensée que j'ai peut-être mal éteint ma cigarette.
Exemple 6. Vous voyez un couteau.	→	Pensée que je pourrais m'infliger des blessures sans raison particulière suite à une impulsion.

Dans les exemples 4 à 6, le contenu des intrusions est relié indirectement à quelque chose que vous avez observé avec vos sens au moment où les intrusions sont survenues. Ainsi, dans l'exemple 4, il y a un certain lien entre la perception d'une poignée de porte et le contenu de l'intrusion. Cependant, ce lien est indirect, car il n'y a pas d'indice au moment où l'intrusion est survenue menant directement à la conclusion qu'il y a des microbes sur la poignée de porte.

Troisièmement, le contenu d'une intrusion peut n'avoir aucun lien avec la situation dans laquelle l'intrusion est survenue. En voici quelques exemples :

Situation	Absence de lien	Intrusions
Exemple 7. Vous êtes dans votre lit.		Pensée que je peux être contaminé si je touche une poignée de porte.
Exemple 8. Vous vous peignez.		Pensée que j'ai peut-être mal éteint ma cigarette.
Exemple 9. Vous lisez un livre.		Pensée que je pourrais m'infliger des blessures sans raison particulière suite à une impulsion.

Dans les exemples 7 à 9, il n'y a aucun lien, direct ou indirect, entre le contenu des intrusions et la situation dans laquelle ces intrusions sont survenues.

En résumé, le contenu d'une intrusion est **relié directement** à quelque chose que vous avez observé avec vos sens **si des indices justifient le contenu de l'intrusion**. Le contenu d'une intrusion est **relié indirectement** à quelque chose que vous avez observé avec vos sens **s'il y a un certain lien** entre le contenu de l'intrusion et la situation dans laquelle l'intrusion est survenue, **mais** que le **contenu n'est pas justifié par des indices clairs et précis** présents dans la situation. Finalement, il y a **absence de lien** entre le contenu de l'intrusion et la situation dans laquelle l'intrusion est survenue lorsque le contenu de l'intrusion n'est **aucunement relié** à cette situation.

* * *

Faites l'exercice suivant (encerclez vos réponses).

Situation 1

C'est l'hiver et vous attendez à côté d'une cabine téléphonique que l'individu qui s'y trouve ait terminé son appel. Vous entendez l'individu tousser vigoureusement à plusieurs reprises. L'individu sort de la cabine en sueurs et en se mouchant. Vous sentez que le combiné du téléphone est collant lorsque vous l'empoignez. Vous avez l'intrusion suivante : « Pensée que je peux être contaminé en utilisant les téléphones publics ».

Quel est le lien entre le contenu de cette intrusion et la situation dans laquelle cette intrusion est survenue?	Lien direct	Lien indirect	Absence de lien
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Situation 2

Vous êtes sur le toit d'une maison. Vous perdez l'équilibre et passez près de tomber du toit. Vous avez l'intrusion suivante : « Impulsion de me jeter spontanément dans le vide ».

Quel est le lien entre le contenu de cette intrusion et la situation dans laquelle cette intrusion est survenue?	Lien direct	Lien indirect	Absence de lien
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Situation 3

Vous voyez un enfant. Vous avez l'intrusion suivante : « Impulsion de faire du mal à un enfant sans raison apparente ».

Quel est le lien entre le contenu de cette intrusion et la situation dans laquelle cette intrusion est survenue?	Lien direct	Lien indirect	Absence de lien
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Situation 4

Vous êtes sur le trottoir et regardez le toit d'une maison. Vous avez l'intrusion suivante : « Impulsion de me jeter spontanément dans le vide ».

Quel est le lien entre le contenu de cette intrusion et la situation dans laquelle cette intrusion est survenue?	Lien direct	Lien indirect	Absence de lien
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Situation 5

Vous marchez tranquillement dans la rue. Vous avez l'intrusion suivante : « Pensée d'avoir peut-être commis un crime sans m'en souvenir ».

Quel est le lien entre le contenu de cette intrusion et la situation dans laquelle cette intrusion est survenue?	Lien direct	Lien indirect	Absence de lien
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Situation 6

Vous barrez la porte de votre maison et allez faire quelques commissions à pied. Sur le chemin du retour, vous vous apercevez que vous ne sentez pas vos clés dans la poche de votre pantalon, là où vous les mettez habituellement. Vous avez l'intrusion suivante : « Pensée que j'ai peut-être laissé mes clés quelque part ».

Quel est le lien entre le contenu de cette intrusion et la situation dans laquelle cette intrusion est survenue?	Lien direct	Lien indirect	Absence de lien
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Les réponses sont les suivantes :

- Situation 1 : Lien direct
- Situation 2 : Lien direct
- Situation 3 : Lien indirect
- Situation 4 : Lien indirect
- Situation 5 : Absence de lien
- Situation 6 : Lien direct

Veillez consulter à nouveau les instructions si vous n'êtes pas certain des réponses.

* * *

En plus de ce qui peut être ou non observé avec les sens, l'apparition d'une intrusion peut dépendre de votre **humeur**, de l'état émotionnel dans lequel vous vous trouvez. **Par exemple**, il est possible que vous ayez l'intrusion « Pensée que je peux être contaminé si je touche une poignée de porte » plus souvent lorsque vous êtes nerveux que lorsque vous êtes détendu; il est possible que vous ayez l'intrusion « Impulsion de m'infliger des blessures sans raison particulière » quand vous êtes en colère, mais non lorsque vous êtes calme.

* * *

Maintenant, nous voudrions que vous choisissiez **trois des intrusions dont vous avez fait l'expérience** (c.-à-d. où vous avez répondu « Rarement », « Parfois », « Souvent » ou « Toujours » dans la partie A du présent questionnaire) pour répondre aux questions de la page suivante.

Si vous avez fait l'expérience de plus de trois intrusions, choisissez les trois intrusions que vous jugez les plus préoccupantes ou les plus dérangeantes.

Si vous avez fait l'expérience de trois intrusions ou moins, veuillez ne prendre que ces intrusions.

Si une même intrusion s'est présentée à vous à plus d'une reprise et que son contenu est parfois relié directement, parfois indirectement ou parfois non relié (absence de lien) à quelque chose que vous avez observé avec les sens, veuillez considérer la situation qui s'applique le plus souvent.

Dans tous les cas, assurez-vous d'indiquer le numéro des énoncés correspondant aux intrusions retenues.

Enfin, **si vous n'avez fait l'expérience d'aucune intrusion**, ne remplissez pas la page suivante et passez au prochain questionnaire.

Énoncé # _____			
Quel est le lien entre le contenu de cette intrusion et la situation dans laquelle cette intrusion est survenue?	Lien direct	Lien indirect	Absence de lien
Si vous avez répondu « Lien indirect » à la question précédente, avez-vous déjà fait l'expérience de cette intrusion même si vos sens vous indiquaient le contraire (par exemple, vous avez l'impression d'avoir les mains sales même si elles vous apparaissent propres)? Si vous n'avez pas répondu « Lien indirect » , n'encerclez rien et passez à la question suivante.	Oui	Non	–
Cette intrusion est-elle dépendante de votre humeur?	Oui	Non	–
À quel point étiez-vous dérangé par cette intrusion?	Pas du tout	Moyennement	Beaucoup
Énoncé # _____			
Quel est le lien entre le contenu de cette intrusion et la situation dans laquelle cette intrusion est survenue?	Lien direct	Lien indirect	Absence de lien
Si vous avez répondu « Lien indirect » à la question précédente, avez-vous déjà fait l'expérience de cette intrusion même si vos sens vous indiquaient le contraire? Si vous n'avez pas répondu « Lien indirect » , n'encerclez rien et passez à la question suivante.	Oui	Non	–
Cette intrusion est-elle dépendante de votre humeur?	Oui	Non	–
À quel point étiez-vous dérangé par cette intrusion?	Pas du tout	Moyennement	Beaucoup
Énoncé # _____			
Quel est le lien entre le contenu de cette intrusion et la situation dans laquelle cette intrusion est survenue?	Lien direct	Lien indirect	Absence de lien
Si vous avez répondu « Lien indirect » à la question précédente, avez-vous déjà fait l'expérience de cette intrusion même si vos sens vous indiquaient le contraire? Si vous n'avez pas répondu « Lien indirect » , n'encerclez rien et passez à la question suivante.	Oui	Non	–
Cette intrusion est-elle dépendante de votre humeur?	Oui	Non	–
À quel point étiez-vous dérangé par cette intrusion?	Pas du tout	Moyennement	Beaucoup

APPENDICE 2 :

Documents administratifs relatifs au premier article