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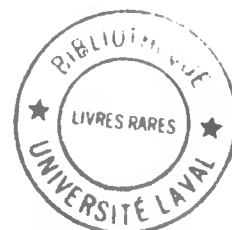
**DE L'HYPONCONDRIE À L'ANXIÉTÉ FACE À LA SANTÉ**

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## AVANT-PROPOS

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## RÉSUMÉ

Jusqu'à récemment, l'hypocondrie était considérée comme un trouble résistant au traitement. Cependant, des études récentes démontrent que l'approche cognitive-comportementale serait une alternative psychothérapeutique prometteuse. Les trois études présentées ici ont pour objectif l'avancement des connaissances et l'amélioration des interventions psychothérapeutiques auprès de cette population. L'ensemble du travail considère l'hypocondrie dans une perspective plus large, celle de l'anxiété face à la santé. La première étude analogue démontre que l'intrusion cognitive concernant la santé serait particulièrement égosyntone. L'étude nous rappelle par ailleurs que la façon de gérer une intrusion face à la santé (par exemple, chasser la pensée ou chercher des solutions) serait reliée à l'interprétation que fait l'individu de cette intrusion. La deuxième étude clinique présente, parmi une vaste étendue de processus, ceux qui expliquent une part significative de la tendance à s'inquiéter pour la maladie. Parmi ces processus, on note la présence de la tendance à interpréter les symptômes physiques comme des anomalies organiques, l'évitement cognitif, l'amplification somato-sensorielle et l'intolérance à l'incertitude. Les applications cliniques ressorties des deux premières études sont finalement considérées dans un essai clinique. Un traitement de l'inquiétude excessive a été adapté pour cibler l'hypocondrie. Le traitement adapté s'est avéré efficace puisque les six participants présentaient un haut niveau de fonctionnement un an après la fin de l'intervention. Les trois études supportent l'idée que l'approche cognitive-comportementale serait une intervention et une conceptualisation de choix dans le traitement de l'anxiété face à la santé.

## RÉSUMÉ

Jusqu'à récemment, l'hypocondrie était considérée comme un trouble résistant au traitement. Cependant, des études récentes démontrent que l'approche cognitive-comportementale serait une alternative psychothérapeutique prometteuse. Il n'en demeure pas moins que nous n'avons pas une connaissance parfaite de ce sujet. Les trois études présentées ici ont pour objectif l'avancement des connaissances et l'amélioration des interventions psychothérapeutiques auprès de cette population. L'ensemble du travail considère l'hypocondrie dans une perspective plus large, celle de l'anxiété face à la santé. La première étude analogue démontre que l'intrusion cognitive concernant la santé possède des points communs avec d'autres intrusions comme l'inquiétude et l'intrusion obsessionnelle. Cependant, celle-ci possède aussi des caractéristiques qui lui sont propres. En effet, l'intrusion cognitive concernant la santé serait particulièrement égosyntone. Ceci signifie que, comparativement à l'obsession et l'inquiétude, l'intrusion concernant la santé serait considérée comme étant davantage acceptable et normale. L'intervention devra donc cibler les fausses croyances qui pourraient amener un individu à interpréter ainsi ses intrusions concernant la santé. L'étude nous rappelle par ailleurs que la façon de gérer une intrusion concernant la santé (par exemple, chasser la pensée ou chercher des solutions) est reliée à l'interprétation que fait l'individu de cette intrusion, par exemple, sa probabilité, son réalisme, sa cohérence avec le système de croyance. L'intervenant devrait accorder encore plus d'importance aux mécanismes de maintien de l'intrusion que l'on retrouve souvent dans les modes de gestion de l'intrusion (évitement cognitif, résolution de problèmes inefficace...). La deuxième étude clinique présente, parmi une vaste étendue de processus, ceux qui expliquent une part significative de la tendance à s'inquiéter pour la maladie. Parmi les différents processus mesurés, deux processus déjà reconnus comme étant des facteurs impliqués dans l'hypocondrie se sont avérés

des prédicteurs significatifs de la tendance à s'inquiéter pour la maladie. Ces processus sont l'amplification somato-sensorielle et l'interprétation pathophysiologique d'un symptôme physique. Par ailleurs, deux autres processus habituellement associés à d'autres troubles anxieux, notamment le Trouble d'anxiété généralisée et le Trouble obsessionnel-compulsif, se sont aussi avérés des prédicteurs de la tendance à s'inquiéter pour la maladie. Nous parlons de l'intolérance à l'incertitude et de l'évitement cognitif. Les applications cliniques ressorties des deux premières études sont enfin considérées dans un essai clinique ciblant l'hypocondrie. Un traitement de l'inquiétude excessive a été adapté pour cibler l'hypocondrie. Le traitement adapté s'est avéré efficace puisque les six participants présentaient un haut niveau de fonctionnement un an après la fin de l'intervention. Le traitement de l'inquiétude excessive de la maladie a eu un impact sur la mesure principale de symptôme (échelle d'inquiétude pour la maladie). Cet impact s'est maintenu 6 mois et un an après la fin de l'intervention. On observe aussi un changement sur plusieurs mesures de processus à la fin de l'intervention comme aux suivis. Dans l'ensemble, les trois études nous aident à comprendre davantage le phénomène de l'anxiété face à la santé et elles supportent que l'approche cognitive-comportementale serait une intervention et une conceptualisation intéressante dans le traitement de l'anxiété face à la santé.

## ABSTRACT

Until recently, Hypochondriasis was considered as particularly resistant to treatment. However, recent studies demonstrated that cognitive-behavioral treatment is a promising approach for the treatment of this disorder. The three present studies want to enhance our comprehension of this disorder and enhance the clinical interventions. The first study examines whether illness intrusions can be distinguished from obsessional intrusions and worries. It also assesses the possible relationship between strategies, thought characteristics and appraisal of illness intrusions. The comparisons of intrusions showed that illness intrusions share characteristics of worry and obsessional intrusions, but also have their own characteristics. Illness intrusions seem to be particularly egosyntonic. Results support the idea that there are specific links between the evaluation of cognitive intrusions and the way they are processed. Illness intrusions may sometimes be conceptualized as either obsessions or worries. This study demonstrated that the category of an intrusive thought may not be as important as the way it is processed. It seems more important to consider appraisal of the disturbing thought and the way in which the person subsequently reacts and behaves. The second study tests the implication of different processes associated to anxiety disorders in the context of health anxiety. Results confirm the implication of two variables recognized as significant components of health anxiety: somatosensory amplification and physiological interpretation of symptoms. It also demonstrates that two processes associated to Generalized Anxiety Disorder, cognitive avoidance and intolerance to uncertainty, are implicated in health anxiety. The last study proposes an adaptation of a Generalized Anxiety Disorder treatment and tests its application for Hypochondriasis. Six hypochondriacal patients participated in a multiple baseline single case design. Treatment targeted the following components: 1) awareness of worry, 2) intolerance of uncertainty toward health, 3) faulty beliefs regarding worry

and anxiety, 4) cognitive avoidance and relapse prevention of reassurance or avoidance behaviors, 5) poor orientation to physical symptoms and problems, and 6) relapse prevention. Following treatment, none of the six patients met criteria for Hypochondriasis. Results confirmed that a treatment targeting excessive worry is effective for Hypochondriasis. All participants reached a high endstate functioning at 1 year follow up. The clinical implications of these results are discussed.

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## **CHAPITRE 1**

### **INTRODUCTION GÉNÉRALE**

La définition de l'hypocondrie a évolué à travers le temps. Dans un relevé de littérature, Kenyon (1965) a retrouvé 18 significations différentes au terme. Un grand nombre de théories ont été proposées pour expliquer le phénomène dans le dernier siècle: il a été abordé comme une dépression masquée, une manifestation de l'anxiété, une phobie de la maladie, une tendance à amplifier les sensations physiologiques et un état transitoire entre la névrose et la psychose (Kellner, 1992). Pour le moment, le DSM-IV définit l'hypocondrie comme la préoccupation, la peur d'avoir ou de contracter une maladie sérieuse. Cette préoccupation est basée sur l'interprétation erronée d'un ou de plusieurs signes ou symptômes physiologiques (APA, 1994). Une telle définition du problème peut donner l'impression que nous avons un point de référence commun et objectif, mais ce n'est pourtant pas le cas pour plusieurs raisons que nous discuterons ici.

Le DSM-IV propose des critères très précis pour ce trouble mais il s'avère que le monde médical utilise le terme hypocondrie d'une façon plus générale. À ce moment, il serait plus précis de parler de syndrome hypocondriaque. Il s'agit ici d'un terme plus global qui inclut tous les individus qui persistent à chercher la pathologie organique associée à leurs symptômes physiques, peu importe le degré de conviction, la peur qui y est associée, la durée de l'épisode et la sévérité. Ce syndrome peut se retrouver à la fois dans les troubles anxieux, le trouble dépressif ou le Trouble de somatisation (Schmidt, 1994). Certains auteurs remettent en question la validité du trouble d'hypocondrie comme syndrome indépendant puisqu'il apparaît souvent en combinaison avec d'autres psychopathologies. Il faut aussi noter que l'hypocondrie partage plusieurs similarités avec d'autres troubles que ce soit sur le plan de la rassurance, des comportements de vérification, du doute, de l'inquiétude excessive et de l'interprétation erronée de symptômes physiques. Ainsi, le chevauchement avec les manifestations des autres pathologies ne fait que rendre plus complexe le diagnostic

différentiel de l'hypocondrie et nourrit par le fait même l'idée qu'il ne s'agit pas d'un syndrome indépendant.

### L'hypocondrie en tant que syndrome et en tant que trouble de l'axe I

Du point de vue nosologique, le terme hypocondrie réfèrera tantôt à un syndrome, tantôt à un diagnostic précis, tantôt à une pathologie primaire ou secondaire. Selon certains auteurs, le syndrome hypocondriaque peut être divisé en deux catégories (Barsky, Whyshak & Klerman, 1992): l'hypocondrie primaire ou secondaire. L'hypocondrie primaire ferait référence au diagnostic du DSM-IV. Donc, il s'agit d'un diagnostic indépendant qui possède ses propres critères. L'hypocondrie secondaire, quant à elle, peut se manifester à l'intérieur d'un autre trouble psychiatrique (un trouble anxieux, une dépression, la schizophrénie) ou dans un état transitoire suite à du stress ou à un problème médical.

Un premier exemple de manifestation du syndrome hypocondriaque est bien représenté par les cas d'hypocondrie moins sévères et de durée limitée dans le temps. Nous parlons ici des individus qui présentent des craintes excessives pour une maladie, mais de façon ponctuelle, suite à la rémission d'une maladie ou suite à une période de stress. L'expérience hypocondriaque de certains étudiants de médecine fait aussi partie de cette catégorie (Hunter, Lohrenz & Schwartzman, 1964; Kellner, Wiggins & Pathak, 1986). En effet, on observe que certains étudiants sont, pendant leur formation, particulièrement préoccupés par leurs symptômes physiques. Cette manifestation temporaire du syndrome a été le thème de quelques recherches (Barsky, Wyshak & Kleirman, 1990b; Barsky, Cleary, Sarnie & Klerman, 1993) et a été surnommée l'hypocondrie transitoire. Cette hypocondrie transitoire fait partie du syndrome hypocondriaque puisque les individus touchés par ces symptômes ne rencontrent pas les critères du DSM-IV.

L'hypocondrie primaire a été remise en question, mais des études ont démontré qu'il est possible de retrouver plusieurs cas où l'individu ne souffre d'aucune autre pathologie (Kenyon, 1964; Pylowsky, 1970). Tout de même, la place de l'hypocondrie primaire n'est pas si évidente et certains se demandent si elle existe vraiment (Barsky et al., 1992). Le DSM-IV souligne que le diagnostic d'hypocondrie doit être indépendant et qu'il ne doit pas être considéré s'il se manifeste à l'intérieur d'un Trouble panique puisqu'il s'agit d'une forme d'hypocondrie secondaire. Cependant, il n'est pas facile de déterminer si oui ou non la manifestation hypocondriaque est totalement dépendante de l'autre trouble. L'hypocondrie a été conceptualisée comme un phénomène secondaire aux attaques de panique (Fava, Grandi, Saviotti & Conti, 1990; Noyes, Reich, Clancy & O'Gorman, 1986), mais des auteurs considèrent que l'hypocondrie peut-être diagnostiquée même si elle se manifeste avec le Trouble panique (Fava et al., 1990). Le problème se retrouve aussi dans certains cas de dépression. En effet, on observe souvent des manifestations hypocondriaques chez les individus souffrant de dépression; les patients déprimés hospitalisés ou en chirurgie présentent davantage de symptômes hypocondriaques que les patients non déprimés (Fava, Pylowsky, Pierfederici, Bernardi, Pathak, 1982). Il s'avère complexe de prouver quel trouble est précurseur de l'autre, donc, lequel est primaire et lequel est secondaire. D'une part, la dépression peut impliquer des manifestations hypocondriaques et d'autre part l'hypocondrie et l'interférence qui lui est associée rendent aussi l'individu plus susceptible à la dépression. Cependant, les patients déprimés ont une attitude différente des personnes souffrant d'hypocondrie: ils auraient tendance à croire qu'ils méritent la maladie et que leur cause est sans espoir. Pourquoi tant vouloir reconnaître l'hypocondrie comme trouble primaire ou secondaire? Parce que des auteurs considèrent que l'hypocondrie secondaire peut disparaître en ne traitant que le trouble primaire (Kellner, 1986). Les comportements hypocondriaques ne seraient que des manifestations associées au trouble précurseur. Des études ont démontré des baisses dans les manifestations hypocondriaques lors de l'utilisation de traitements exclusivement centrés sur le Trouble panique ou l'agoraphobie (Fava et al., 1990;

Noyes et al., 1986). Il ne semble pas y avoir d'études qui démontrent que le traitement unique du trouble primaire est aussi efficace qu'un traitement qui inclut à la fois des éléments pour le trouble primaire et pour les manifestations secondaires de l'hypocondrie.

### Prévalence et coût sociaux

La prévalence de l'hypocondrie en tant que trouble primaire est difficile à estimer parce que les limites nosologiques entre ce trouble et d'autres troubles psychiatriques sont floues. De plus, la limite entre le trouble clinique et la préoccupation normale n'est pas clairement définie (Barsky, Wyshak, Klerman & Latham, 1990a). Les résultats des études de prévalence antérieures sont difficilement interprétables pour plusieurs raisons: les échantillons sont non représentatifs, les critères diagnostiques inconstants et la prévalence à vie et courante n'est pas différenciée. Une seule étude valide présente la prévalence à six mois en consultation médicale et évalue que 4.2 à 6.3% de la population consultante rencontre tous les critères diagnostiques du DSM-III-R (Barsky et al., 1990a). Par contre, ce taux de prévalence n'inclut pas l'hypocondrie davantage caractérisée par l'évitement, c'est-à-dire la phobie de la maladie. Selon ces auteurs, la prévalence dans la population générale serait plus faible puisque les hypocondriaques gravitent autour du milieu médical. Les coûts sociaux de l'anxiété face à la santé sont difficilement évaluables pour les mêmes raisons que la prévalence. Une autre étude affirme que l'hypocondrie constitue à elle seule 4 à 9% des cas de la pratique médicale générale (Barsky et al., 1990b). Enfin, une étude récente multisite de niveau international estime que l'hypocondrie touche 0.8 à 1.5% de la population générale (Gureje et al., 1997). Étant donné que les gens qui souffrent d'hypocondrie consultent de façon périodique et qu'on les rencontre à différents niveaux du système médical, il semble évident que la problématique implique des coûts sociaux importants.

## Les problèmes associés au diagnostic d'hypocondrie

Certes, la distinction entre l'hypocondrie primaire et les autres manifestations du syndrome hypocondriaque est complexe, mais la nature même du diagnostic primaire est aussi une source de problèmes. Le DSM-IV (APA, 1994) définit l'hypocondrie selon six critères: (a) préoccupation centrée sur la peur d'avoir ou de contracter une maladie sérieuse, basée sur l'interprétation erronée d'un ou de plusieurs signes ou symptômes physiologiques; (b) la préoccupation persiste malgré une évaluation médicale appropriée et rassurante; (c) la crainte ne revêt pas une intensité délirante et ne se limite pas à l'apparence extérieure; (d) la préoccupation cause une détresse significative ou une interférence sur le fonctionnement social, occupationnel ou dans d'autres domaines importants; (e) la durée de l'interférence est d'au moins 6 mois; (f) le trouble ne doit pas être mieux expliqué par un autre trouble comme le Trouble d'anxiété généralisée, le Trouble obsessionnel-compulsif, le Trouble panique, un épisode dépressif majeur ou un autre Trouble somatoforme. Malgré ces critères relativement précis, le clinicien se retrouve malgré tout confronté à des questions importantes. Qu'est-ce qu'une maladie sérieuse (critère a)? Qu'est qu'une évaluation appropriée et une bonne assurance (critère b)? Sur quels critères se base-t-on pour considérer une croyance comme étant délirante (critère c)? À partir de quand l'interférence est-elle clinique (critère d)? Que faire si un critère diagnostic du Trouble d'anxiété généralisée et du Trouble obsessionnel-compulsif souligne lui aussi que le diagnostic ne doit pas être considéré si le trouble est mieux expliqué par l'hypocondrie (critère f)? Ces questions démontrent à elles seules à quel point le diagnostic d'hypocondrie est imprécis.

Le diagnostic cause aussi des problèmes parce qu'il semble manquer de spécificité. En effet, il existerait différents types d'hypocondriaques. On observe des différences majeures entre les individus qui rencontrent les critères diagnostiques. Certains sont davantage caractérisés par la conviction d'être atteint de la maladie alors

que pour d'autres, la crainte se manifeste davantage sous forme de doute et de besoin de rassurance. Certains cas sont davantage de type anxieux alors que d'autres seraient plutôt dépressifs. Dans un de ses articles, Starcevik (1990) propose trois types d'hypocondrie. Dans le premier type, l'hypocondrie caractérisée par le trouble de personnalité, se manifeste par un rejet presque systématique de la rassurance et ce, en grande partie à cause du trouble de personnalité. Dans le deuxième type, le trouble d'anxiété est sous-jacent à l'hypocondrie. Dans ces cas, la rassurance permet de diminuer la peur ou l'inquiétude rapidement. Ces personnes auraient tendance à garder le même médecin, mais ils le visiteraient à la moindre inquiétude et au moindre symptôme. Ils seraient davantage caractérisés par un doute face à leur propre corps et non par le doute face à la compétence ou les dires du médecin. Le troisième type, la dépression cachée, concerne ceux qui ont besoin de consulter les médecins à répétition. Dans ces cas, la rassurance permet de redonner confiance en soi et en leur propre corps. Ces classifications nous poussent à croire que le diagnostic d'hypocondrie pourrait être divisé en sous-catégories. D'autres catégories ont aussi été proposées: l'hypocondrie de type obsessionnelle-compulsive (Barsky, 1992), la phobie de la maladie (Marks, 1987). Certains auteurs ont même stipulé que le Trouble panique pourrait être abordé comme une forme très intense d'hypocondrie (Noyes et al.; 1986). Schmidt (1994) a aussi proposé des sous-catégories à l'hypocondrie: a) l'hypocondrie générale, b) la phobie de la maladie, c) le Trouble panique et d) l'hypocondrie transitoire.

Le diagnostic d'hypocondrie selon le DSM-IV manquerait de spécificité mais il serait aussi trop restrictif. En effet, il est difficile de savoir à partir de quand et sur la base de quels critères la psychopathologie est présente: à quel moment et sur la base de quels critères une réaction face à des symptômes physiques devient-elle excessive? Ici, le critère soulignant l'interférence d'au moins six mois prend toute son importance; on considère que la préoccupation devient pathologique lorsqu'elle atteint ce niveau. Mais que fait-on de tous les autres cas qui n'ont pas encore atteint 6 mois d'interférence? Une étude de prévalence multisite internationale de l'hypocondrie supporte l'idée que

les critères diagnostiques du DSM-IV seraient trop restrictifs et qu'ils laisseraient de côté un grand nombre d'individus qui souffrent de leur préoccupation face à la maladie (Gureje, ÜstÜn & Simon, 1997). Un grand nombre de sujets sont exclus parce qu'ils acceptent jusqu'à un certain point la rassurance médicale. Les auteurs proposent même qu'un minimum de trois critères respecterait mieux la réalité hypochondriaque: 1) la préoccupation face à la maladie, 2) la détresse et 3) la consultation médicale excessive. En effet, certains individus peuvent être excessivement préoccupés et être portés à consulter de façon excessive à la moindre anomalie physiologique mais tout en acceptant l'explication médicale. Il s'agirait ici du type d'hypocondriaque qui craint toutes les maladies graves. Si l'on se fie aux critères stricts du DSM-IV, ces individus ne souffriraient pas d'hypocondrie primaire. De quoi souffrent-ils ? On peut répondre en partie à cette question en soulignant que les individus excessivement préoccupés par la santé mais qui sont réassurés par le médecin ont significativement plus souvent un diagnostic d'anxiété généralisée (Gureje, ÜstÜn & Simon, 1997).

L'hypocondrie peut souvent être sous-diagnostiquée en raison de ses critères trop restrictifs mais aussi en raison du chevauchement que l'on retrouve entre ce trouble et d'autres pathologies où les symptômes somatiques sont impliqués. C'est d'ailleurs le cas de la somatisation en général. Les praticiens sont trop tentés de traiter un symptôme fonctionnel sans vérifier l'implication des troubles de l'humeur ou des troubles anxieux. Des études ont démontré la comorbidité de l'hypocondrie avec les troubles anxieux (Barsky et al, 1992; Noyes, Kathol, Fisher, Phillips, Suelzer & Woodman, 1994; ) et dépressifs (Barsky et al, 1992; Noyes & al., 1994; Kenyon, 1964). On a même proposé que l'hypocondrie pourrait être inhérente à l'anxiété (Noyes et al.; 1986 ; Noyes, 1999). Cependant, il faut être prudent lorsqu'on observe les fortes relations entre la dépression, l'anxiété et la somatisation en général. Un bon nombre de mesures se recoupent au niveau des symptômes et il peut s'avérer tout à fait normal de retrouver de fortes relations entre les mesures. C'est souvent le cas des symptômes proposés pour le Trouble panique, l'anxiété généralisée, la dépression et la

somatisation. Par ailleurs, la présence de symptômes somatiques obscurcit la capacité du médecin à reconnaître l'anxiété, la dépression, les troubles de personnalité et l'alcoolisme (Katon, Williamson & Ries, 1981; Oxman, Harrigan & Kues, 1983). Enfin, il demeure que le diagnostic d'hypocondrie laisse de côté un nombre important d'individus qui souffrent d'une forme différente d'anxiété face à la santé et omet de faire la distinction entre des types bien particuliers d'hypocondrie primaire.

Une autre limite importen du diagnostique est liée au fait qu'il peut toujours arriver que le aptient souffre réellement d'une condition inexpliquée malgré une évaluation médiale très poussée. Dans certains cas, il peut arriver ce ne soit pas l'interprétation du patient qui fait défaut mais que ce soit la science médicale qui possède ses limites.

#### L'hypocondrie et les troubles anxieux.

On retrouve un chevauchement substantiel entre les critères précis de l'hypocondrie et ceux des troubles anxieux dans le DSM-IV. Tout d'abord, ce trouble est caractérisé par des préoccupations morbides déplaisantes à propos de la santé, manifestation que l'on observe aussi dans le trouble d'anxiété généralisée. Comme dans le Trouble panique, on retrouve aussi une forte tendance à interpréter des sensations physiologiques d'une façon catastrophique. Ce trouble est aussi caractérisé par des comportements compulsifs comme la vérification et la recherche de rassurance également retrouvées dans le Trouble obsessionnel-compulsif. Ainsi, il semble évident que la place de l'hypocondrie dans les Troubles somatoformes peut être remise en question. Plusieurs auteurs affirment que ce Trouble somatoforme serait mieux classé dans la catégorie des troubles anxieux (Fallon, Klein & Liebowitz, 1993; Schimdt, 1994, Noyes, 1999).

#### L'hypocondrie et le Trouble d'anxiété généralisée (TAG)

Est-il possible de trouver une différence entre la préoccupation face à la maladie d'un hypocondriaque et celle d'une personne souffrant du TAG? Dans la positive, la distinction sera probablement très subtile. Dans le TAG, l'anxiété excessive et l'inquiétude concernent plusieurs thèmes. Pour l'hypocondrie, le sujet de l'inquiétude concerne un seul thème, la maladie (Barsky, 1996). Donc, une différence importante entre les deux troubles semble être l'étendue des thèmes d'inquiétudes. Des études démontrent la prévalence de l'inquiétude face à la santé dans le TAG, mais les résultats sont contradictoires. Craske, Rapee, Jackel et Barlow (1989) démontrent que l'inquiétude face à la santé prend une place significativement plus importante dans le TAG (30.6%) comparativement à un groupe contrôle (2.2%). Par contre, Shadick, Roemer, Hopkins et Borkovec (1991) observent que seulement 3% des gens souffrant du TAG notent la présence d'inquiétudes face à la santé comparativement à 25% chez les sujets non anxieux. Sanderson et Barlow (1990) observent que 14 % des cas TAG notaient des inquiétudes face à la santé. Doucet et al. (1994) démontrent que cette inquiétude est la plus fréquente chez les personnes âgées (61,7%) et que ces mêmes inquiétudes prennent la quatrième position chez les adolescents (26%). Enfin, Freeston et al. (1994a) démontrent que 61% d'un échantillon d'étudiants avaient des inquiétudes face à leur santé et pour 19,9% des participants, c'était l'inquiétude la plus importante. Par ailleurs, on observe un autre point commun entre l'hypocondrie et le TAG: l'interprétation erronée des symptômes physiques. En effet, l'interprétation erronée, très souvent catastrophique, semble aussi déclencher des inquiétudes chez les gens qui souffrent d'anxiété généralisée et ne serait pas nécessairement spécifique à l'hypocondrie. À notre connaissance, il n'existe pas d'études comparant ce processus chez les gens qui souffrent du TAG ou d'hypocondrie. Enfin, il faut souligner à nouveau les résultats de l'étude de prévalence internationale de l'hypocondrie (Gureje et al., 1997) qui révèlent un nombre significativement plus élevé de diagnostics d'anxiété généralisée chez les individus qui sont réassurés par les médecins. De plus, il est important de considérer que le TAG possède la prévalence à vie la plus élevée

comme condition comorbide à l'hypocondrie (Barsky et al., 1992). Ces résultats mettent en évidence la forte relation entre l'hypocondrie et le TAG.

### L'hypocondrie et le Trouble obsessionnel-compulsif (TOC)

Il est évident que les patients hypocondriaques partagent aussi des similarités avec le TOC d'un point de vue comportemental. Un relevé de littérature de Barsky (1992) met en évidence ces similarités. La plupart des comportements identifiés sont la vérification-palpation, la vérification et rassurance dans la littérature médicale et la recherche de rassurance auprès des médecins et des proches. Comme la compulsion dans le TOC, il est difficile de résister à ces comportements hypocondriaques: ils sont excessifs et sont effectués dans le but de réduire l'anxiété et de soulager l'inconfort. Bien que les comportements soient similaires pour l'hypocondrie et le TOC, l'obsession et la peur de la maladie comportent tout de même des différences. En effet, contrairement à la personne qui souffre d'un Trouble obsessionnel-compulsif, l'individu hypocondriaque ne tente pas de résister à ses intrusions face à la maladie ou la santé. Cette peur est, selon ce dernier, justifiée et réaliste et cela explique son besoin de consulter les spécialistes. Les obsessionnels, de leur côté, sont réputés pour essayer de résister à leurs obsessions et considèrent celles-ci comme étant inacceptables parce qu'il s'agirait d'une preuve de leur anormalité. Le fait de s'inquiéter ou de se préoccuper de sa santé peut très souvent être vu comme viable et utile pour éviter la venue de problèmes réels ou de complications, d'aggravations. Il semble socialement plus accepté qu'une personne s'acharne à prouver qu'elle souffre d'une maladie physique plutôt que de prouver qu'elle souffre d'obsessions. Enfin, selon Barsky (1992), l'expérience clinique suggérerait qu'il existe un sous-groupe d'hypocondriaques qui serait plus près des troubles anxieux en général et du TOC en particulier. Toutes ces évidences nous mènent à considérer l'hypocondrie comme une condition liée au TOC, particulièrement au niveau comportemental.

## L'hypocondrie et le Trouble Panique

La théorie cognitive suggère que les attaques de panique répétées peuvent être expliquées par une tendance à interpréter de façon erronée les sensations physiologiques. Les patients interprètent leurs sensations internes comme le signe d'un danger imminent pour l'intégrité physique ou mentale (Clark, 1986). De la même façon, l'hypocondriaque interprète des sensations physiologiques internes comme le signe d'un danger physique mais la conséquence, ici la maladie, n'est pas aussi imminente que dans le cas de la panique. La rassurance médicale que recherchent les hypocondriaques peut être expliquée par le fait que la conséquence n'est pas immédiate. Ainsi, ces patients ont l'impression qu'ils peuvent encore intervenir et doivent intervenir pour sauver leur vie. Donc, une première distinction entre les hypocondriaques et les gens qui souffrent du Trouble panique concerne le temps d'arrivée de la catastrophe (Salkovskis & Clark, 1993). Une autre distinction concerne le type de symptômes somatiques impliqués. Les symptômes paniques sont automatiquement exacerbés et peuvent provoquer des réactions en chaîne sans médiation cognitive: hyperventilation, étourdissement, palpitations (Salkovskis & Clark, 1993). Les symptômes impliqués dans l'hypocondrie ne créent habituellement pas ce genre de réaction (e.g. une douleur ou une rougeur à la peau) et s'ils la provoquent, ce n'est pas le symptôme en soi qui en est responsable mais l'interprétation catastrophique. Cependant, cette distinction est valide dans les cas les plus purs. Les préoccupations hypocondriaques ont été identifiées dans approximativement 50% à 70% des cas de Trouble panique (Buglass, Henderson, Kreitman & Presley, 1977; Sheehan, Ballenger & Jacobsen, 1980). Même s'il existe des critères de distinction entre les gens qui souffrent de panique ou d'hypocondrie, il semble y avoir un chevauchement substantiel qui soulève la possibilité que, pour certains cas d'hypocondrie, le problème serait près d'un Trouble panique.

## Aborder la question de l'hypocondrie différemment

Les critiques sont nombreuses quant à la classification de l'hypocondrie proposée par le DSM-IV. Ce diagnostic semble du type tout ou rien. D'un côté, beaucoup de cas sont exclus parce qu'ils ne rencontrent pas les critères de temps ou d'intensité (six mois) et d'un autre côté, d'autres sont exclus parce qu'ils sont d'intensité délirante (Schmidt, 1994). La réalité de l'hypocondrie serait différente: elle se situerait sur un continuum de croyances allant de temporaires à permanentes. De plus, si l'on s'attarde aux diagnostics différentiels du TOC, du TAG, de la panique et de l'hypocondrie, on note rapidement un chevauchement d'un diagnostic à l'autre. Ainsi, il semble évident que la place de l'hypocondrie dans les Troubles somatoformes peut être remise en question. Certains auteurs affirment que ce Trouble somatoforme serait mieux classé dans la catégorie des troubles anxieux (Fallon et al., 1993; Schmidt, 1994, Noyes, 1999). Étant donné toutes ces considérations, il semble avantageux d'aborder l'hypocondrie d'une nouvelle façon, c'est-à-dire comme une forme d'anxiété face à la santé et en incluant un plus grand nombre de manifestations différentes.

Outre le fait que le terme anxiété face à la santé soit moins restrictif que le diagnostic primaire d'hypocondrie, celui-ci comporte un autre avantage significatif: l'acceptabilité du diagnostic par la personne qui en souffre et une perspective plus optimiste. Le patient convaincu de la cause organique de son trouble est souvent catégorisé comme adepte de la somatisation et comme une cause perdue ou difficile à traiter. Le diagnostic d'hypocondrie implique malheureusement un pronostic très pessimiste. Il est reconnu que l'hypocondriaque demande à la fois une aide incessante pour ses symptômes, mais rejette à la fois l'aide apportée par le médecin (Barsky, Whyslak, Lathame & Klerman, 1991). Une étude a démontré que le médecin formule un diagnostic d'hypocondrie en fonction de la frustration que provoque le patient hypocondriaque (Barsky et al., 1991). Souvent, cette frustration pousse les médecins à considérer que ces malades sont des cas trop complexes. Le médecin n'en peut plus et réfère le malade au professionnel de la santé mentale. Ces derniers quant à eux ne sont pas plus intéressés à travailler avec ce type de population en raison du pronostic faible.

L'hypocondriaque se voit donc référé d'un spécialiste à l'autre et à chaque fois s'installe un mode de relation thérapeutique complexe. Ces multiples références n'ont pour effet que de renforcer le malade dans sa perception du milieu médical: on ne considère pas ses symptômes et sa maladie, on ne le traite pas comme il le mériterait puisqu'une maladie le ronge à l'intérieur.

Comment mettre de côté cette vision pessimiste? On peut croire que le fait de nommer le syndrome hypocondriaque autrement, c'est-à-dire l'anxiété face à la santé, donne une perspective nouvelle et généralement plus acceptable pour la personne qui en souffre. Il est plus facile pour le malade de considérer qu'il souffre d'anxiété excessive face à la maladie que d'admettre qu'il est hypocondriaque. Le diagnostic d'hypocondrie est très souvent perçu comme la preuve qu'on ne considère pas les symptômes physiologiques. Ici, on considère les symptômes en leur donnant une explication moins lourde de conséquences et plus positive. Il faut souligner que le fait d'aborder le problème à l'aide de l'approche comportementale-cognitive peut aussi donner des pistes de traitement intéressantes et par le fait même, apporter une vision plus optimiste. Cette approche a en effet fait ses preuves pour l'anxiété, la dépression, le Trouble panique, les phobies, l'obsession-compulsion (Beck, 1991) et pour les plaintes somatiques fonctionnelles (Sharpe, 1997; Sharpe, Peveler & Mayou, 1992). De plus, des études de traitement contrôlées démontrent que l'approche comportementale-cognitive est très efficace pour l'hypocondrie (Warwick, Clark, Cobb & Salkovskis, 1996; Clark et al, 1998; Bouman & Visser, 1998). Cette approche considère que la maladie en général doit être abordée dans une perspective comportementale, émotionnelle, cognitive, biologique et sociale et que tous ces éléments s'influencent mutuellement. La théorie cognitive de l'anxiété face à la santé propose que les symptômes physiologiques sont perçus comme étant plus dangereux qu'en réalité et qu'une maladie est considérée comme étant plus probable qu'elle ne le serait en réalité (Salkovskis & Warwick, 1989; Warwick & Salkovskis, 1990). Pour les besoins du présent sujet à l'étude, l'approche comportementale-cognitive présente

un avantage : plusieurs techniques spécifiquement utilisées pour les troubles anxieux pourraient être utilisées dans le traitement de l'anxiété face à la santé étant donné la forte similarité des processus impliqués.

Pour la personne qui souffre d'anxiété, une simple tension dans un muscle ou une rougeur sur la peau est signe d'une maladie potentielle ou d'une anomalie quelconque. Étant donné le nombre élevé de ces manifestations sur le corps humain, les gens qui souffrent d'hypocondrie ont par le fait même des sources de préoccupations nouvelles et constantes. Il ne faut pas non plus oublier que le simple fait de se concentrer sur une partie du corps augmente la sensibilité de la région ciblée (Pennebaker, 1982). L'intervention auprès de cette population devrait amener les patients à générer des explications alternatives aux sensations physiques. Il importe aussi de souligner à cette clientèle que les sensations déplaisantes dont ils souffrent sont bien réelles, mais que le problème se situe au niveau de l'évaluation qu'ils en font. Dans un sens, cette façon d'aborder la problématique avec ces derniers augmente leur participation au traitement psychologique (Salkovskis, 1989; Barsky, 1996; Bass & Benjamin, 1993; House, 1989). Ces individus en ont souvent assez de se faire dire que le problème est dans leur tête. Il ne faut pas oublier que dans bien des cas, l'individu a été référé et ils recherchent toujours une explication biologique à leurs problèmes.

Il est évident que la personne convaincue de la cause organique de son problème sera réticente à consulter un psychologue. Salkovskis (1991) a proposé des principes généraux pour les problèmes somatiques liés à l'anxiété. Voici quelques-unes des consignes à considérer:

- Le but du traitement est d'aider le patient à se rendre compte que c'est leur interprétation des symptômes qui fait défaut, au lieu de leur dire qu'ils ne souffrent de rien.

- Il faut aussi faire la distinction entre l'apport d'informations pertinentes et d'informations rassurantes mais inappropriées et répétitives.
- Les croyances des patients sont invariablement basées sur des preuves qu'ils estiment convaincantes; plutôt que de ne pas tenir compte de ces croyances, il est préférable de s'intéresser aux constatations qui semblent constituer des preuves de maladie aux yeux du patient, puis de collaborer avec lui sur ces bases.
- Il faut établir un contrat à durée limitée qui répond aux exigences thérapeutiques tout en respectant les réserves du patient.

#### Les processus impliqués dans les différentes manifestations de l'anxiété face à la santé.

Nous allons aborder différents processus pouvant être impliqués dans le phénomène de l'anxiété face à la santé. Il importe à ce moment de noter que tous ces processus ne sont pas nécessairement impliqués dans les différents cas d'anxiété face à la santé. De plus, certains processus proposés sont habituellement associés au TAG, au TOC, à la panique et d'autres plus spécifiquement associés à l'hypocondrie.

D'un point de vue général, on peut considérer un élément central à toutes les formes d'anxiété face à la santé: la préoccupation face à sa propre santé ou en d'autres mots, la tendance à s'inquiéter pour sa santé. L'inquiétude serait donc un élément important chez la plupart des individus qui souffrent d'anxiété face à la santé. L'inquiétude est l'élément central du TAG (APA, 1994) et un modèle récent a été élaboré pour toucher spécifiquement les inquiétudes (Dugas, Gagnon, Ladouceur, Freeston, 1998). De plus, deux études récentes de traitement du TAG basé sur ce modèle ont démontré son efficacité (Ladouceur et al., 2000 ; Dugas et Ladouceur, 2000).

Un processus majeur impliqué dans le modèle de Dugas et al., (Dugas, Gagnon, Ladouceur, Freeston, 1998) est l'intolérance à l'incertitude. Plusieurs études ont démontré la relation étroite que l'on retrouve entre les inquiétudes et l'intolérance à l'incertitude. L'intolérance à l'incertitude réfère à la façon dont un individu perçoit l'information dans des situations ambiguës (Ladouceur et al., 1995; Dugas, Freeston & Ladouceur, 1997; Furnham, 1994) et répond à cette information par des réactions émotionnelles, cognitives et comportementales (Freeston, Rhéaume, Letarte, Dugas & Ladouceur, 1994). Les personnes intolérantes à l'incertitude ont tendance à percevoir un plus grand nombre de menaces puisque la vie implique un grand nombre de source d'ambiguïté et d'imprévisibilité. L'intolérance à l'incertitude joue donc un rôle très important dans la formation et le maintien d'inquiétudes excessives et incontrôlables (Dugas et al., 1998). Donc, si l'intolérance à l'incertitude peut avoir un impact sur une multitude de thèmes particuliers, elle pourra influencer un seul thème cible, dans notre cas, la santé. Selon le modèle, il faut donc tolérer que la maladie fasse partie des éventualités de la vie. La tolérance peut aussi être appliquée à la question des symptômes, puisque le symptôme est en soi une source d'ambiguïté qui mérite d'être tolérée. Les patients doivent donc se remettre constamment en question, se remémorer que leur tendance à être intolérants face à l'incertitude les amène à focaliser sur des symptômes physiologiques pour lesquels d'autres personnes n'accordent pas d'importance.

Un deuxième processus impliqué dans le phénomène de l'inquiétude est la surestimation de l'utilité de s'inquiéter (Dugas et al., 1998). Les individus souffrant du TAG, en comparaison avec les individus qui s'inquiètent de façon modérée, croient que les inquiétudes sont utiles en ce sens qu'elles aident à trouver des solutions en plus de prévenir des conséquences négatives (Dugas et al., sous presse). Les sujets TAG tendent donc à surestimer les avantages et à sous-estimer les désavantages des inquiétudes (Roemer & Borkovec, 1993; Freeston et al., 1994b). Ils croient que leurs inquiétudes les aident à mieux composer avec les conséquences négatives anticipées,

généralement très improbables (Roemer & Borkovec, 1993). L'inquiétude excessive serait maintenue par renforcement négatif parce que l'événement anticipé ne se produit pas (Dugas et al., 1998). Dans le même sens, les individus qui s'inquiètent pour leur santé considèrent qu'il est bon de prévoir et de prévenir toute situation pouvant mettre en péril leur santé. Ce besoin de prévenir est aussi promulgué par la société. Cependant, les visites médicales répétitives pour la prévention d'un cancer n'apportent rien et impliquent des coûts considérables. Paradoxalement, le fait de s'inquiéter ne permet pas de prévenir toutes les maladies potentielles et l'inquiétude peut aussi créer des sensations physiologiques qui à leur tour seront interprétées comme le signe d'une autre maladie. La surestimation de l'utilité de s'inquiéter pourrait être un processus impliqué dans l'anxiété face à la santé.

Le modèle de Dugas et al. (1998) inclut aussi le concept d'évitement cognitif. En fait, dans ce modèle, l'évitement cognitif permet d'expliquer comment les inquiétudes sont maintenues par renforcement. L'évitement cognitif des images mentales contribue au maintien des inquiétudes en diminuant l'activation physiologique (Borkovec, Robinson, Pruzinsky & Depree, 1983; Borkovec, Lyonfields, 1993). Concrètement, les individus souffrant d'inquiétudes veulent éviter des images mentales associées à des sensations physiologiques désagréables qui impliquent du matériel traumatisant. Ils évitent ces images en s'engageant dans des dialogues internes verbaux qui deviennent, avec le temps, insupportables mais dont ils ne peuvent plus se passer. Donc, ces individus ne peuvent pas s'habituer aux sensations déplaisantes associées aux images ou à la pensée traumatisante, la réaction émotionnelle ne diminuant pas d'elle-même (Foa & Kozak, 1986; Rachman 1980). Peu importe la forme (pensées verbales ou images) que prend l'évitement cognitif, celui-ci contribue au maintien des inquiétudes en empêchant l'exposition et la réévaluation cognitive des intrusions (Langlois et al., 1996).

Une autre caractéristique que l'on retrouve souvent chez les personnes qui souffrent d'anxiété face à la santé est la recherche de rassurance et la vérification, ce que l'on retrouve aussi dans le TOC et jusqu'à un certain point dans le TAG. Ces individus vont utiliser ces comportements pour diminuer à court terme l'anxiété provoquée par les préoccupations face à la santé. Cependant, la rassurance (auprès de la famille, de la littérature ou du médecin) et la vérification (la palpation du corps) empêchent l'individu de s'exposer à son anxiété et à ses préoccupations (Warwick & Salkovskis, 1990). Donc, il ne s'habitue pas à ses sensations et ne peut découvrir que la maladie crainte ne serait pas arrivée, même s'il n'avait pas tenté de la prévoir ou de la prévenir. Il faut aussi noter que la palpation du corps peut, dans certains cas, être sévère au point de créer des inflammations dues à des irritations. Il ne faut pas oublier que certains cas d'anxiété sont caractérisés par l'évitement de tout élément associé à la question de la santé. On parle ici de la phobie de la maladie. Tout comme la rassurance, l'évitement empêche l'individu de s'exposer à l'anxiété et empêche ainsi l'habituation (Kellner et Warwick, 1992).

L'évaluation erronée des sensations physiologiques fait partie des critères de l'hypocondrie (APA, 1994) et se retrouve dans la plupart des cas d'anxiété face à la santé. Pour l'individu qui souffre d'anxiété face à la santé, une simple tension dans un muscle ou une rougeur sur la peau est signe d'une maladie potentielle ou d'une anomalie quelconque. Étant donné le nombre élevé de manifestations physiologiques du corps humain, ces derniers ont par le fait même des sources de préoccupations nouvelles et constantes. Plusieurs études démontrent que le seuil de tolérance à l'inconfort physique est plus faible chez les hypocondriaques (Barsky, Geringer & Wool, 1988). Des auteurs ont même proposé une approche thérapeutique éducationnelle (Barsky et al., 1988) qui enseigne aux patients à atténuer et moduler l'information sensori-somatique et à corriger les attributions et les interprétations erronées. Dans leur traitement cognitif-éducatif, Barsky et ses collaborateurs expliquent aux patients l'effet de l'interprétation sur l'intensité du symptôme. Ce même



auteur a grandement touché la composante physiologique de l'hypocondrie où l'amplification somatosensorielle serait selon lui, un processus grandement impliqué dans l'étiologie de l'hypocondrie. Ce concept réfère à la tendance à vivre des sensations somatiques et viscérales comme étant très intenses, dangereuses et dérangeantes (Barsky, Wyshak & Klerman, 1990c). Ce concept implique aussi l'hypervigilance face au corps, la prédisposition à diriger l'attention sur des sensations peu fréquentes et la tendance à évaluer ces sensations comme étant le symptôme d'une maladie et d'une pathologie plutôt que de normaliser la sensation. Une étude a démontré que les patients hypocondriaques présentent des moyennes significativement plus élevée sur une mesure d'amplification somatosensorielle comparativement à des sujets contrôles (Barsky et al., 1990c). Dans le même ordre d'idée, une autre étude a démontré que l'amplification était positivement corrélée à une mesure de symptômes hypocondriaques dans un échantillon de patients en intervention de première ligne (Barsky & Wyshak, 1990). Il ne semble pas y avoir d'études démontrant que ce processus est spécifique à l'hypocondrie. On ne peut donc pas savoir jusqu'à quel point il est impliqué dans la question de l'anxiété face à la santé.

Un autre concept semble être très près de celui de l'amplification somatosensorielle. Il s'agit de la sensibilité à l'anxiété, processus habituellement associé au Trouble panique. Cependant, comparativement à l'amplification somatosensorielle, la sensibilité à l'anxiété implique la peur du symptôme et la peur des conséquences qui lui sont associées. Il est stipulé que la peur des sensations somatiques est un processus important impliqué dans le déclenchement de l'attaque de panique et dans la venue éventuelle de comportements d'évitement (Barlow, 1988; Clark, 1986; Goldstein & Chambless, 1978). Le symptôme hypocondriaque pourrait être associé à cette tendance à craindre et à interpréter de façon catastrophique des sensations somatiques comme on le retrouve dans le cas du Trouble panique (Otto, Pollack, Sachs & Rosenbaum, 1992). Une étude de Otto et al. (1992) a démontré que les symptômes hypocondriaques étaient grandement associés à la sensibilité à l'anxiété.

Cependant, cette étude a reçu les critiques d'un spécialiste de la question de la sensibilité à l'anxiété (Taylor, 1994). Ce dernier souligne que l'auteur a omis de faire une distinction importante entre les symptômes impliqués dans le Trouble panique et les symptômes impliqués dans les craintes hypocondriaques: l'exacerbation du symptôme. Or, les deux mesures utilisées dans l'étude de Otto et al. ne permettent pas de faire cette distinction et les conclusions de Otto et al. seraient par le fait même invalidées. La personne qui souffre de Trouble panique affirmera comme l'hypocondriaque qu'il se préoccupe pour sa santé et qu'il a peur de mourir. Toutefois, la peur des symptômes physiques, avec ou sans exacerbation, semble en soi un point commun entre l'hypocondrie et le Trouble panique et il importe de considérer cet aspect dans l'étude de l'anxiété face à la santé. Enfin, d'autres auteurs abordent l'hypocondrie presque exclusivement par l'effet de l'attention dans l'anxiété face à la santé. Pennbaker (1982) a démontré que le fait de diriger l'attention d'un individu sur une sensation augmente le signalement de ces symptômes. Ainsi, l'attention sélective à des sensations internes peut augmenter les craintes hypocondriaques ou l'anxiété face à la santé. Papageorgiou et Weels (1997) utilisent un traitement de l'attention qui a pour objectif l'interruption du processus d'autofocus, l'augmentation de la flexibilité de l'attention, le développement de nouveaux processus automatiques et l'acquisition de nouvelles croyances.

Enfin, la question de la conviction dans l'anxiété face à la santé s'avère très complexe. En effet, même si l'on considère avoir le meilleur traitement psychologique pour l'anxiété face à la santé, encore faut-il que la personne accepte de rencontrer le thérapeute. Si cette personne demeure convaincue qu'elle souffre d'un trouble organique, nos chances de la rencontrer diminuent grandement. À ce sujet, Kellner stipule que la rassurance demeure le meilleur moyen pour les convaincre du contraire. Un article présente un traitement où il utilise la rassurance par l'évaluation médicale (Kellner, 1982). Cela semble donner des résultats intéressants pour des cas d'hypocondrie, mais il nous est impossible de déterminer s'il s'agit de l'ingrédient

actif. En effet, le traitement de Kellner (1982) impliquait aussi de l'information sur le processus psychophysiologique et sur l'effet de l'attention sélective. La rassurance est autrement vue par l'approche cognitive puisqu'elle est considérée comme un facteur de maintien (Warwick, 1989; Warwick et Salkovskis, 1990; Kellner & Warwick, 1992). Cependant, on semble s'entendre sur le fait que la rassurance peut être utile dans certains cas si elle est correctement prodiguée (Kellner & Warwick, 1992). La rassurance efficace doit comporter de l'information nouvelle, elle doit être prodiguée avec soin et elle doit éviter les termes techniques. La rassurance efficace se veut précise afin d'éviter toute ambiguïté pouvant être source de nouvelles préoccupations (Kellner & Warwick, 1992). Mais que devons-nous faire lorsque la conviction demeure malgré la bonne rassurance? Il semble y avoir des propositions cliniques quant à la façon d'aborder ce phénomène, mais peu d'études indiquent comment la conviction influence l'anxiété face à la santé et comment se fait l'évaluation de la conviction. Un grand nombre de variables pourraient influencer le degré de conviction: la persistance des symptômes dans le temps, le nombre de symptômes, les croyances plus générales face à la santé. Finalement, il ne semble pas y avoir de méthodes qui touchent très efficacement et explicitement la conviction de la maladie. Selon Kellner (1986), une thérapie sera sans succès si la conviction n'est pas ébranlée chez le patient. La fausse croyance d'avoir une maladie maintient le cercle vicieux des symptômes somatiques, de l'attention sélective, de l'attribution erronée des symptômes, de l'anxiété et exacerbe ainsi les symptômes somatiques (Kellner, 1986). Mais tout ceci ne dit rien sur le processus de conviction comme tel. Cet aspect de l'anxiété face à la santé mérite l'attention des recherches futures puisque la connaissance en la matière est pratiquement nulle.

### L'analyse en 5 chapitres

Bien que l'hypocondrie ou l'anxiété face à la santé puisse prendre diverses formes, il demeure que ces pensées dérangent et amènent une certaine perte de contrôle

mental. Ceci nous amène à les considérer comme des intrusions cognitives. Un courant d'études a porté une attention spéciale aux mécanismes impliqués dans le maintien des troubles anxieux, particulièrement dans les obsessions et les inquiétudes. À la base, l'étude systématique de l'intrusion cognitive, sous ses diverses formes pathologiques, a ouvert de nouvelles avenues pour le traitement des troubles anxieux parfois très réfractaires à toute forme d'intervention. Puisque le phénomène de l'intrusion se retrouve aussi dans les différentes expressions de l'anxiété face à la santé, il s'avère justifié de comprendre la position de ces pensées anxiogènes dans un modèle global de l'intrusion (Freeston & al., 1994a). Il est pertinent de continuer à observer sur quels points les intrusions liées à la santé se distinguent ou se rapprochent des autres types d'intrusions. En somme, il importe de comprendre la base du problème, l'intrusion, et ses caractéristiques propres pour élaborer des plans d'interventions efficaces.

Le deuxième chapitre veut clarifier la place de la préoccupation face à la santé dans un modèle de l'intrusion cognitive et vise à identifier les caractéristiques des intrusions face à la santé qui sont la base du trouble. Les méthodes de traitement seraient différentes advenant le cas où l'intrusion face à la santé s'avérerait une intrusion complètement différente de l'inquiétude et de l'intrusion obsessionnelle. Le second chapitre vise aussi à faire ressortir les relations entre les stratégies de gestion de l'intrusion et les caractéristiques de l'intrusion face à la santé. Ces analyses sont primordiales pour l'avancement du traitement des préoccupations face à la santé. Rappelons que le maintien des intrusions repose sur l'évaluation faite de ces pensées dérangeantes et sur la gestion de l'intrusion suivant cette évaluation. Par exemple, tenter de chasser la pensée ou tenter de résoudre le problème associé.

Le présent chapitre a abordé quelques processus qui pourraient être impliqués dans la création ou le maintien de l'anxiété face à la santé. L'objectif principal du troisième chapitre est de mesurer la contribution relative de différents processus dans cette problématique. Un traitement efficace doit tenir compte des processus majeurs

impliqués dans le phénomène. Ainsi, il faut tester de façon empirique l'implication des processus dans la psychopathologie. Pour ce faire, le chapitre trois utilise des analyses de régression pour faire ressortir les processus qui prédisent de façon significative la tendance à être anxieux face à la santé. Les processus mesurés seront multiples: l'intolérance à l'incertitude, l'évitement cognitif, les croyances face à l'utilité de s'inquiéter, la conviction de la maladie, la sensibilité à l'anxiété, l'interprétation des symptômes physiques et la tendance à l'amplification physiologique.

L'application clinique des conclusions ressorties des premières études sera abordée au quatrième chapitre. Le traitement qui est proposé est fortement influencé par le deuxième et le troisième chapitre. Il a déjà été démontré dans une étude analogue que des processus habituellement associés à l'inquiétude en général semble aussi impliqué dans le phénomène de l'anxiété face à la santé. Le choix du traitement cognitif-comportemental du quatrième chapitre se base sur cette observation. Un traitement de l'inquiétude excessive y est appliqué à six cas d'anxiété face à la santé. Rappelons que ce traitement est habituellement utilisé pour le TAG. Le quatrième chapitre ne veut pas confirmer l'efficacité du traitement de l'inquiétude excessive mais plutôt l'adapter à une population similaire comportant néanmoins des particularités. Les protocoles à cas uniques à niveaux de bases multiples permettront de tester l'impact de ce traitement dans cette population plus particulière. Soulignons que le traitement est appliqué à six cas d'hypocondrie qui rencontrent les critères du DSM-IV. Ceci va à l'encontre de la vision plus large qui est discutée dans le présent chapitre mais nous avons choisi de limiter l'essai à un type précis d'anxiété face à la santé puisqu'il s'agit d'un premier essai clinique.

Enfin le dernier et cinquième chapitre discutera brièvement les principaux résultats obtenus, leurs implications cliniques, théoriques et méthodologiques. Il soulèvera aussi des pistes de recherche futures.

## **CHAPITRE 2**

### **LES CARACTÉRISTIQUES DE L'INTRUSION CONCERNANT LA MALADIE DANS LA POPULATION NON CLINIQUE.**

## Résumé

Cette étude veut déterminer si l'intrusion concernant la maladie se distingue de l'intrusion obsessionnelle et de l'inquiétude. Elle veut aussi évaluer la relation entre les stratégies de gestion de l'intrusion et les caractéristiques de l'intrusion concernant la maladie. Deux cent trente participants non cliniques ont identifié une intrusion obsessionnelle, une inquiétude et une intrusion concernant la maladie. Ils ont évalué chacune de ces intrusions à l'aide du questionnaire sur les intrusions cognitives. La comparaison des intrusions démontre que l'intrusion concernant la maladie partage des caractéristiques de l'inquiétude et de l'intrusion obsessionnelle, mais possède aussi ses propres caractéristiques. L'intrusion concernant la maladie semble être particulièrement égosyntone. La relation entre les stratégies de gestion de l'intrusion et les caractéristiques de l'intrusion ont été testées. Les résultats supportent l'idée qu'il existe des liens entre certaines caractéristiques d'une intrusion et le type de stratégie qui sera utilisé pour gérer cette intrusion. L'intrusion concernant la maladie pourrait parfois être conceptualisée autant comme une obsession qu'une inquiétude. L'étude supporte l'idée qu'il importerait davantage d'évaluer la gestion de l'intrusion pour déterminer le plan d'intervention clinique plutôt que la catégorie diagnostique. L'intervenant devrait donc accorder une attention particulière à l'évaluation subjective que fait l'individu de son intrusion et à sa façon de la gérer.

Characteristics of Illness Intrusions in a Non-clinical Sample.

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Running head: ILLNESS INTRUSION, OBSESSION AND WORRY

### Illness intrusions in a non-clinical sample

This study examines whether illness intrusions can be distinguished from obsessional intrusions and worries. It also assesses the possible relationship between strategies, thought characteristics and appraisal of illness intrusions. Two hundred and thirty non-clinical participants identified an obsessive intrusive thought, a worry and an illness intrusion. They evaluated each thought using items from the Cognitive Intrusions Questionnaire. The comparisons of intrusions showed that illness intrusions share characteristics of worry and obsessional intrusions, but also have their own characteristics. Illness intrusions seem to be particularly egosyntonic. The relationships between the strategies used to counter illness intrusions and their appraisal was also tested. Results support the idea that there are specific links between the evaluation of cognitive intrusions and the way they are processed. It demonstrated that escape/avoidance strategies are associated with the egodystonic nature of the thought and that problem-focused strategies are associated with the thought's basis in reality. Illness intrusions may sometimes be conceptualized as either obsessions or worries. This study demonstrated that the category of an intrusive thought may not be as important as the way it is processed. It seems more important to consider appraisal of the disturbing thought and the way in which the person subsequently reacts and behaves.

### Illness intrusions in a non-clinical sample

There are two different ways in which thinking in health anxiety can be experienced. Health anxiety can resemble an obsession or a worry. Whether the anxious thoughts are experienced as a worry or as an obsession, the thought is disturbing and may interfere with functioning. Health anxiety can therefore be considered as a problem of intrusive thoughts. Consequently, it seems justified to explore the role of health anxiety related intrusive thought within a general model of intrusion (Freeston et al, 1994). Prior studies considered factors thought to be involved in the maintenance of anxiety disorders, particularly obsessions and worry. The study of cognitive intrusions has provided a number of interesting avenues for investigating anxiety disorders which had previously been refractory to intervention. The phenomenon of health anxiety has been the subject of relatively little empirical research. The numerous therapeutic implications of such research warrants further study.

There are many similarities between health preoccupations, worries and obsessions. Borkovec, Robinson, Pruzinsky, and DePree (1983) describe worry as a "chain of thoughts and images, negatively affect-laden and relatively uncontrollable". According to this definition, health preoccupation could be considered as a form of worry. Obsessions are defined as recurrent and persistent thoughts, impulses, or images that are experienced as intrusive and inappropriate and that cause marked anxiety or distress (APA, 1998). Given these criteria, illness intrusions could also be considered as an obsession, and as seen in typical obsessions, people with health related thoughts, impulses, or images typically attempt to ignore, suppress or neutralize them with some other thought or action. Typical obsessions are normally thought to be appraised as more egodystonic than typical worries (Turner, Beidel & Stanley, 1992; Langlois, Freeston & Ladouceur, 2000a). Although health preoccupations are usually egosyntonic, given that it is socially acceptable to worry about health issues, these preoccupations can sometimes be as exaggerated and unrealistic, as is the case with

typical obsessions. Preoccupation with having contracted HIV where there is no at-risk sexual behavior is a good example of an unrealistic expression of illness intrusion. Finally the similarities between illness intrusions, worries, and obsessions often render the diagnosis of disorders such as Hypochondriasis very complex.

In an effort to better comprehend the delineation between worries and obsessions, Langlois, Freeston, and Ladouceur (2000a) compared worry and obsessional intrusions in a non-clinical population. Findings showed that there are differences between obsessional intrusions and worry and that worries and obsessional intrusions can be categorized with some accuracy using a discriminant function. Results also indicated that the percentage of verbal content is a variable that discriminates worry and obsessional intrusions: worry was more often experienced in verbal form whereas obsessions were more often experienced in visual form. This finding is consistent with those obtained by Borkovec and Lyonfields (1993), and Freeston et al. (1996). The second part of the study demonstrated the existence of a continuum ranging from pure obsessions (egodystonic and not based in reality) to pure worries (egosyntonic and based in reality). It is proposed that differences between obsessional intrusions and worries, reported in the first part of the study (Langlois et al., 2000 a), may be useful for characterizing intrusions at the ends of the continuum (i.e., pure obsessions and pure worries). It is further proposed that intrusions in the gray zone will share characteristics from both ends of the continuum.

Analogue studies have demonstrated that people use a range of coping strategies to deal with intrusive thoughts. These strategies are differentially associated to the appraisal of thoughts (Freeston & Ladouceur, 1993; Freeston, Ladouceur, Thibodeau & Gagnon, 1991). Findings suggest that coping strategies are not selected on a random basis. Their use is partly determined by personal rules associated with discriminant stimuli (Freeston, Ladouceur, Provencher & Blais, 1995). The results of a most recent study support this idea (Langlois et al., 2000 b). Regression analysis identified specific relationships between strategies, thought characteristics and appraisal. These findings

demonstrate that escape/avoidance strategies were associated to thoughts experienced as egodystonic. Moreover, this relationship was found for both obsessional intrusions and worries even though in general, obsessional intrusions were rated as more egodystonic (Langlois et al., 2000 a). In contrast, problem focused strategies were associated intrusions that had a greater basis in reality. Thus, even obsessions perceived to have some basis in reality were associated with the use of problem-focused strategies. This study lends support to models that propose that the maintenance of intrusions depends on the appraisal of the disturbing thought and the way in which the person subsequently reacts and behaves.

In a previous studies investigating worries and obsessions (Langlois, Freeston & Ladouceur 2000), illness intrusions were not investigated because of the potential for greater overlap between worries and obsessions in the domain of health (e.g., Tallis, Eysenck, & Mathews, 1992). The goal of the present study was to compare intrusions falling within the gray zone (i.e., illness intrusions), to obsessional intrusions and worries. The first aim of the present study was to investigate the role of illness intrusions within a general model of intrusion. If illness intrusions were found to share many characteristics with worry and obsessional intrusions, therapeutic techniques developed for Generalized Anxiety Disorder (GAD) and Obsessive-Compulsive Disorder (OCD), may then be used for illness intrusions. If, on the other hand, illness intrusions were found to have little resemblance with obsessions and worries, the treatment of health anxiety and Hypochondriasis should be conceptualized differently. A second aim of the study was to assess the possible relationship between strategies, thought characteristics and appraisal of illness intrusions to determine whether illness intrusions can be framed within a general model of intrusive thoughts.

## Method

### Participants

The sample was composed of 243 students; 190 women and 53 men ( $M = 23.53$  yrs,  $SD = 7.5$ ) from three different departments of a French-Canadian university. They participated in the present study on a voluntary basis.

### Measures

The Cognitive Intrusion Questionnaire (CIQ; Freeston, Ladouceur, Thibodeau, & Gagnon, 1992). The CIQ is a measure designed to assess intrusive thoughts, images or impulses. The short form, employed in the present study, consists of 32 questions grouped into four categories: (a) general descriptors (e.g., frequency, duration, and percentage of verbal content and images); (b) appraisal (e.g., responsibility, controllability, probability of negative consequences, acceptability); (c) emotions in reaction to the intrusion (e.g., sadness, worry, guilt); and (d) strategies used in reaction to the thought and their efficacy. Respondents are required to rate each item on a Likert scale ranging from one to nine. Both good reliability and validity of this scale have been demonstrated (Freeston & al., 1992; Freeston & Ladouceur, 1993).

List of Worries: A list of worries was constructed using items from the Worry Domains Questionnaire (Tallis et al., 1992) and the Questionnaire on Types of Worry (Lachance, Doucet, Freeston, Ladouceur & Blais, 1993). The list contains thirty items covering different domains: interpersonal relations, fears concerning the future, work incompetence, finances, and some miscellaneous items. We excluded items related to health.

List of Obsessive-Intrusive Thoughts: The List of obsessive-intrusive thoughts was derived from the Obsessional Intrusive Inventory (Purdon & Clark, 1992). For the present study, only the 44 items regarding aggression, checking, and sexuality were employed. We excluded items related to health.

List of Illness: The Fear Intrusion Questionnaire, a measure designed to assess fear of various illnesses, was derived from a 25-item questionnaire, drawn mainly from the list of illnesses found in the DSM-IV.

## Procedure

Recruitment took place in a French-Canadian university. Students were approached during classes and invited to participate in the study on a voluntary basis. Participants received the following instructions regarding the aim of the study: "This is a study about intrusive thoughts, that is, thoughts which may come to mind and cause distress. Most people experience one or more of the thoughts listed in this study". The experimenter made no distinction between obsessive intrusive thoughts, health intrusions, and worries. Participants completed a consent form, the worry list, the illness list, and the obsessions list. The completion of each of the three lists was followed by CIQ items. The sequence of questionnaire completion was counter-balanced to avoid methodological flaws such as carryover effects and fatigue. For each list, participants were asked to choose the thought which most frequently comes to mind, or which best represents their personal experience. Participants were subsequently asked to write a personal description of the thought, and to rate it using items from the CIQ that immediately followed each of the administered lists.

## Results

### Preliminary analyses

To assess whether the descriptions of obsessions and worries provided by participants were typical, two experienced psychologists in the treatment of anxiety disorders classified 25% of them as typical or atypical. The classification procedure was employed to ensure a valid comparison of illness intrusions with worry and obsessional intrusions and to identify a subset of thoughts which were not highly typical of the respective thought types (i.e., obsessions or worries). In the present study, "highly typical" referred to intrusions that were clearly and easily identifiable as worries or obsessive intrusive thoughts. The inter-rater reliability for the typical nature of the intrusions was 93.4% for obsessions and 93.4 % for worries.

Despite the fact that some thoughts were not prototypical, the analyses reported below include all surveyed thoughts. There are three reasons justifying why we include all surveyed thoughts. First, thoughts came from established lists of typical obsessions and worries. Second, the majority of intrusions were considered highly typical of obsessions and worries for the global sample. Third, results from a prior study (Langlois et al, 2000 a), which the present one replicated, were not significantly influenced by the inclusion or exclusion of atypical intrusions from the analyses.

### Principal Analyses

The first part of the analyses were employed to assess the possibility of discriminating between three types of thoughts (i.e., obsessions, worries, and health intrusions) in a non-clinical sample. In this context, we used a discriminant analysis to confirm the distinction between the three kinds of intrusion. It has the advantage to present a visual plot of the three groups on two discriminant functions. It also presents the variables that best distinguish between the three types of intrusions. A repeated-measure ANOVA was also conducted to assess if there is a difference between the percentage of verbal content and the percentage of image content in the three types of intrusions.

The second part of the analyses focused on the structure of the illness intrusion. To determine the underlying dimensions of illness intrusions and coping strategies, factor analyses were conducted. Finally, regression analyses were used to determine predictors of coping strategies used in response to illness intrusions.

### Discriminant analysis

The CIQ variables were used to predict membership to a kind of intrusion (obsessional intrusion, illness intrusion, or worry). Because discriminant analysis needs independancy of predictors, all participants were randomly divided into three equal groups and two new samples were created. The first sample was created with the worries of the first third, the obsessional intrusions of the second third and illness

intrusions of the third third. The second sample was created with the worries of the second third, the obsessional intrusion of the third third and illness intrusions of the first third. A sample was used as an index sample to create a discriminant function for predicting the type of intrusion. The second was used as a validation sample to test whether the function could adequately classify obsessions and worries into their respective groups.

A stepwise discriminant analysis was conducted on the index sample to identify variables that best accounted for the total sample variance. The entry criterion was .05 and the criterion for remaining in the function was .025. Some variables had higher rates of missing values than others. For a more powerful and representative test, the discriminant analysis was rerun with only the seven variables identified in the first stepwise analysis on the remaining 203 cases. Two discriminant functions were calculated with a combined chi-squared test ( $\chi^2$  (df=14) = 172.41,  $p < .01$ ). After removal of the first function, there was still strong association between groups and predictors ( $\chi^2$  (df=6) = 48.82,  $p < .01$ ). The two discriminant functions accounted for 75.6 % and 24.3 % respectively of the between-group variability. As shown in Figure 1, the first discriminant function differentiated all three groups. The second discriminant function differentiated illness intrusion from the other two groups. Variables that correlated more strongly with the first discriminant function were frequency of the intrusion, feeling of insecurity, percentage of verbal content, reality of the problem and disapproving thinking about it. Variables that correlated more strongly with the second discriminant function were feeling of responsibility if the thought were to come true and feeling of guilt because having the thought. Correlations and coefficients for the discriminant functions are presented in table 1.

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Insert table 1 and figure 1 about here

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### Classification

The classification analysis was conducted on the second sample. 162 (68,4 %) of the 237 observations were correctly classified (57 worries, 60 obsessions, 45 illness intrusions). The error rate was 24% for worries, 25.9 % for obsessions and 44.4 % for illness intrusions. Illness intrusions were classified incorrectly as either obsessions or worries and when worries and obsessional intrusions were not correctly classified, they were more likely to be classified as illness intrusions. However, this classification was statistically better than chance ( $Q=178.1$ ,  $p < .001$ ). The Kappa coefficient for the agreement between the classification by the discriminant function and the nominal type of intrusion (illness intrusion, obsession or worry) was moderate (Kappa = .48). The classification matrix is presented in Table 2.

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Insert table 2 about here

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### Percentage of verbal and image content:

Because the percentage of verbal content discriminated between the three kinds of intrusions, more precise comparisons were made using a repeated measure analysis of variance. Participants were asked to estimate the percentage of image and verbal content of obsessional intrusions, illness intrusions, and worries. Results demonstrate an interaction between content and type of intrusion ( $F(2,228) = 46.62$ ,  $p < .0001$ ). Findings indicate that obsessions were experienced predominantly as images whereas worry was experienced primarily in verbal form. Illness intrusions were experienced in both image and verbal form. Figure 2 presents means for the verbal and image content of obsessional intrusions, illness intrusions, and worries.

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### Factor structure of appraisal of the illness intrusions

To determine underlying dimensions in appraisal, factor analyses were conducted on data from the illness intrusions. The appraisal items and emotional reaction items of the CIQ were included in the analyses. The scree test and simple structure criteria were employed to determine the number of relevant factors. A clear break in the scree plot and high values on Kaiser's measure of adequacy indicated that factor analysis was appropriate. Common factor analysis with orthogonal rotation was used. Results indicated a five factor solution. Of the 23 items implicated, seven showed complex loadings. Table 1 shows the factor structure. Factor 1 contains items about the typical characteristics of an intrusion. Factor 2 represents interference associated with the intrusion's basis in reality and Factor 3 characterizes egosdystony. Factor 4 reflects feelings of responsibility and guilt if the intrusions were to be true and Factor 5 represents the responsibility for doing something because the situation is modifiable. Results of this factor analysis are presented in table 3.

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Insert table 3 about here

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### Factorial structure of illness intrusion strategies

Factor analysis with orthogonal rotation was conducted on coping strategies for CIQ items of the illness intrusions. The analysis identified two factors. The first consisted of problem-focused strategies that could lead to solutions and the second consisted of escape/avoidance strategies. The first factor also included neutralizing the thought with a thought or action. Results of the factor analysis for strategies used with illness intrusions are presented in table 4.

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Insert table 4 about here

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Relationship between appraisal/reaction and strategies

Regression analyses were used to predict strategy use from the appraisal and reaction factors. Multiple regression analyses demonstrated a significant relationship ( $R^2 = .23$ ,  $F(4,194) = 14.4$ ,  $p < .01$ ) between the problem-focused strategies and the five descriptor factors for illness intrusions. Factor 3 did not account for a significant portion of the problem-focused strategy variance. Results are shown in table 5. Factor 5 (responsibility for doing something because the situation is modifiable) accounted for a greater proportion of the variance of problem-focused strategies (10.1 %). Factor 1 (characteristics of an intrusion), factor 4 (feelings of responsibility and guilt if the intrusions were to be true) and Factor 2 (interference associated with the intrusion's basis in reality) accounted for 7.1 %, 3% and 2.8 % of the variance respectively. It is important to note that the regression coefficient was negative for Factor 4. Problem-focused strategies for illness intrusions were therefore associated with greater feelings of responsibility when the situation was modifiable, with greater interference associated with the intrusion's basis in reality and with lesser feelings of guilt and shame.

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Insert table 5 about here

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Along the same lines, multiple regression analyses demonstrated a significant relationship ( $R^2 = .29$ ,  $F(3,195) = 26.61$ ,  $p < .01$ ) between the escape/avoidance strategy and the five descriptor factors for illness intrusions. Factors 4 and 5 did not account for a significant portion of escape/avoidance strategy variance. Factor 1, referring to characteristics of the intrusion accounted for the greater portion of the variance (18.9 %). Factor 3 (egodystony) and Factor 2 (interference associated with the intrusion's basis in reality) accounted for 7.9 % and 2.3 % of the variance respectively. The regression coefficient for Factor 2 was negative. Results are shown in table 6.

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Insert table 6 about here

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## Discussion

The objective of the present study was to assess whether illness intrusions are different from worries and obsessional intrusion in a non-clinical population. The study also aimed to assess the relationship between coping strategies employed for illness intrusions and their appraisal.

The discriminant analysis demonstrated that illness intrusions, obsessional intrusions, and worries differentiated with two discriminant functions. The error rate was quite high even though the classification was significantly better from chance. The rate of misclassification of worry as obsessional intrusions and vice versa were quite low ( $< 10\%$ ) and similar to the first study (Langlois et al, 2000a, 2000b). In the present classification, illness intrusions seem responsible for several classification errors. However, when worries and obsessional intrusions were not correctly classified, they were more likely to be classified as illness intrusions. Conversely, illness intrusions were erroneously categorized as worry or obsessional intrusions at a similar rate. These results suggest that illness intrusions can sometimes possess characteristics of worry and other times, characteristics of obsessional intrusions. These findings indicate that from a dimensional stand point, illness intrusions fall between obsessions and worries. The findings do, however, indicate that illness intrusions can be differentiated from obsessional intrusions and worries.

Worry is experienced in verbal form to a greater extent, is more frequent and creates more intense feelings of insecurity than do obsessional intrusions (Langlois et al, 2000 a). These variables were included in the discriminant function used for the comparison of obsessional intrusions and worries. It is interesting to note that the first discriminant function of the present study also included these variables. Examining the centroids reveals that illness intrusions are intermediates between worry and

obsessional intrusions on these variables. The first discriminant function differentiates all three types of intrusions while the second discriminates illness intrusions from worry and obsessional intrusions. According to the centroid points, when compared to worry and obsessions, illness intrusions were anticipated to create less feelings of responsibility if they were to come true and less guilty feeling because having the thought. This result would seem to be coherent with the fact that hypochondriacal patients do not attempt to resist their intrusions in the same way obsessive-compulsives do (Barsky, 1992). In hypochondria, intrusions are considered justified and realistic. Individuals with Obsessive Compulsive Disorder (OCD) often perceive intrusions as the expression of abnormality and thereby consider them unacceptable. OCD patients often try to resist intrusions. For hypochondriacal patients, health preoccupation is egosyntonic. Behaviors characteristic of Hypochondriasis such as reassurance seeking and physiological scanning are considered egosyntonic. These individuals generally do not know that these behaviors maintain the problem (Warwick & Salkovskis, 1990). They believe that frequent consultation, tests, and self-examination are necessary for quickly diagnosing physiological abnormalities. Restructuring faulty beliefs should be targeted in the treatment of health anxiety to improve adherence to response prevention interventions. It must, however, be kept in mind that the present findings derive from a non-clinical sample. Individuals seeking treatment may differ on important variables such as the responsibility they attribute to themselves for illnesses they believe to be suffering from. Excessive responsibility is involved in OCD and may also be involved in health anxiety if the overlap between the conditions is considered. Future studies must investigate this further.

Results of the ANOVA demonstrated that illness intrusions are intermediate to worry and obsessional intrusions with regard to verbal and image content. According to Borkovec's theory, the verbal content of worry is related to individuals' attempts to avoid the physiological activation created by unpleasant images. The process involved in illness intrusions may differ on some aspects since the image content is greater in this kind of intrusion. When assessing the level of visual and verbal content, it is clear

that illness intrusions can neither be classified as worry nor as obsessional intrusions. Furthermore, the present findings do not enable us to determine whether it is easier to create an image concerning illness intrusion. Some intrusion themes may require less effort to escape from unpleasant images. Future research should assess whether it is easier to create images for obsessional themes, worry themes or illness themes. There may be a confound between content and form of intrusions. Avoidance of unpleasant images is one form of cognitive avoidance. Regardless of whether it is an unpleasant thought or image that is avoided, the process is similar: it does not allow the reevaluation and the habituation to the anxiety that it provokes. Foa and Kosak (1986) proposed that successful processing of fearful stimuli is dependent upon physiological habituation and cognitive modification of associated danger-laden misconceptions. Henceforth, we know that illness intrusion is expressed in both visual and verbal form. Cognitive exposure treatment must elicit emotion associated to imagery but must also elicit emotion associated to the misconception (verbal content) of that illness intrusion.

Factor analysis revealed a factor concerning the evaluation of the illness intrusions as egodystonic and one factor concerning the degree to which the thought is based in reality. This structure follows the same patterns found in a prior study (Langlois et al, 2000 b). More interestingly, the general structure of illness intrusion is similar to that of worry. When comparing both studies, we find that the first factor concerns general characteristics of the intrusion, the second concerns the thought's basis in reality, and the third is related to egodystonic evaluation. Moreover, in both factor structures, the last factor involved feelings of responsibility and a perception that the problem was modifiable. Feelings of guilt were, however, included in this factor for worry but not for illness intrusions. Based on the results of the discriminant analysis, the non-clinical population may not feel responsible for having the illness but may feel responsible for doing something when there is a trigger and when the problem is perceived as modifiable. In the same way, the structure of the coping strategies employed to deal with illness intrusions is similar to the one found in the first study (Langlois et al, 2000, b). One factor concerns escape/avoidance strategies and the

other is related to problem focused strategies. Neutralizing actions was included in the problem-focused strategies. The same pattern was found for obsessional intrusion in the prior study. In health intrusions, neutralisation may be seen as a means of dealing with unpleasant thoughts or deal with a thought that would seem to have real consequences.

Multivariate regression analyses provide further information on illness intrusions. Results indicate that if illness intrusions are perceived to have some basis in reality, problem-focused strategies are more likely to be used. The best predictor of problem-focused strategies was the factor with loadings of feelings of responsibility in the presence of triggers (e.g., physical symptoms) and a modifiable problem. The factor that referred to basis in reality accounted for nearly three percent of the variance even if it was fourth in the regression model. Inversely, problem-focused strategies were less likely to be used if feelings of guilt and shame were present. Likewise, if the illness intrusion was perceived to have some egodystonic characteristics, it is more likely to be associated with escape/avoidance strategies. The factor concerning egodystonic evaluation, when entered third in the model, accounted for 2% of the variance of escape/avoidance strategies. Moreover, the escape/avoidance strategies were less likely to be used if the intrusions had some basis in reality. The same basic pattern of relationships between coping strategies and appraisal variables was found in the prior study (Langlois et al, 2000, b). The present study once again supports models that propose that the maintenance of intrusions depends on the appraisal of the disturbing thought and the way in which the person subsequently reacts and behaves.

This study presents the same limits as the ones discussed in Langlois et al. (2000 a and b). Analogue studies support the notion that high scoring non-clinical participants possess what might be considered a milder variant of a disorder (Gibb, 1996). On the other hand, analogue studies don't identify different subtypes of a disorder, which may require separate theoretical explanations. Analogue studies also use inconsistent selection criteria that may make generalisation difficult. It is possible that the low mean age of this sample had an impact on result. Young participants may

fell less vulnerable to illness. However, analogue studies may rapidly be used to answers specific questions, defeat mistaken ideas, lead to construction of new conceptions and allow greater flexibility and control in designing experiments. It would be relevant to replicate this study in clinical populations. However, it would probably be difficult to find a sample of patients with a comorbid GAD, OCD and Hypochondriasis. Without this comorbid condition, we loose the power of within subject comparisons. This study did not assess the presence of illnesses in participants. Is is difficult to evaluate the impact of this variable on the present results. However, even if some participants were suffering from an illness at the time of the study, this could be considered as an illness intrusion more reality based.

The current study is an additional support for the idea that strategies are differentially associated to the appraisal of thoughts (Freeston & Ladouceur, 1993; Freeston, Ladouceur, Thibodeau & Gagnon, 1991; Langlois et al, 2000, b). It demonstrated, once again, that escape/avoidance strategies are associated with the egodystonic nature of the thought and that problem-focused strategies are associated with the thought's basis in reality. The present study assessed intrusions hypothesized to reside in the gray zone, discussed in a previous study. Results indicate the same pattern of relationship found between coping strategies and appraisal variables. These findings suggest that the diagnosis of Hypochondriasis, which is often difficult, may not be such a problem as it appears to be. It may be important to take a functional approach and consider appraisal of the disturbing thought and the way in which the person subsequently reacts and behaves. Considering that cognitive exposure has been an effective component of an OCD treatment (Freeston, Ladouceur, Gagnon & Thibodeau, 1997) and a GAD treatment (Dugas & al, 2000) it appears that this treatment could also be effective for illness intrusions in Hypochondriasis and health anxiety. Successful treatment techniques developed for OCD and GAD may then be adapted for the specific characteristics of illness related intrusions and worry.

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### Author Notes

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Table 1

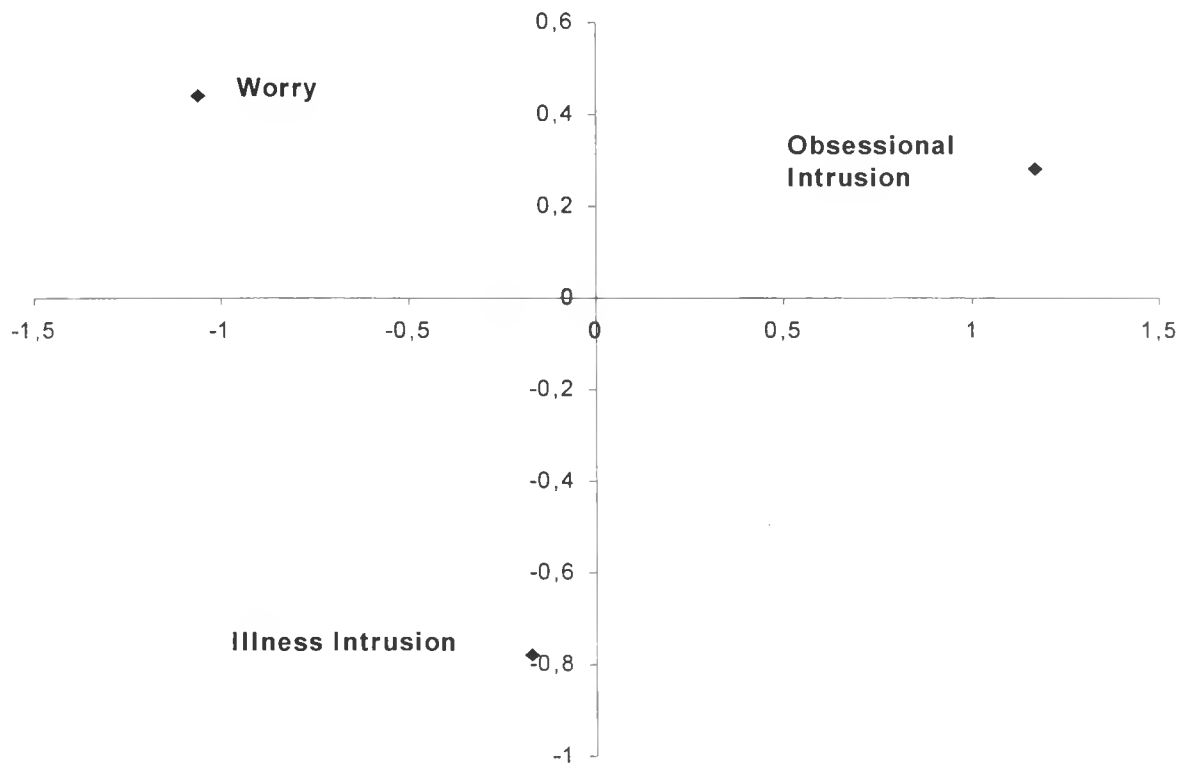
Correlations and coefficients for the discriminant functions.

|                                             | Function 1                       |                           | Function 2                       |                           |
|---------------------------------------------|----------------------------------|---------------------------|----------------------------------|---------------------------|
|                                             | Pooled within sample correlation | Standardized coefficients | Pooled within sample correlation | Standardized coefficients |
| Frequency                                   | *-.60                            | -.45                      | .46                              | .55                       |
| Feeling of insecurity                       | *-.54                            | -.70                      | .11                              | .03                       |
| Percentage of image content                 | *.41                             | .45                       | -.03                             | .01                       |
| Problem is real                             | *-.37                            | -.10                      | -.30                             | -.52                      |
| Disapprove thinking about it                | *.16                             | .39                       | .14                              | -.23                      |
| Responsible if came true                    | .19                              | .11                       | *.72                             | .65                       |
| Feeling of Guilt because having the thought | .17                              | .31                       | *.42                             | .36                       |

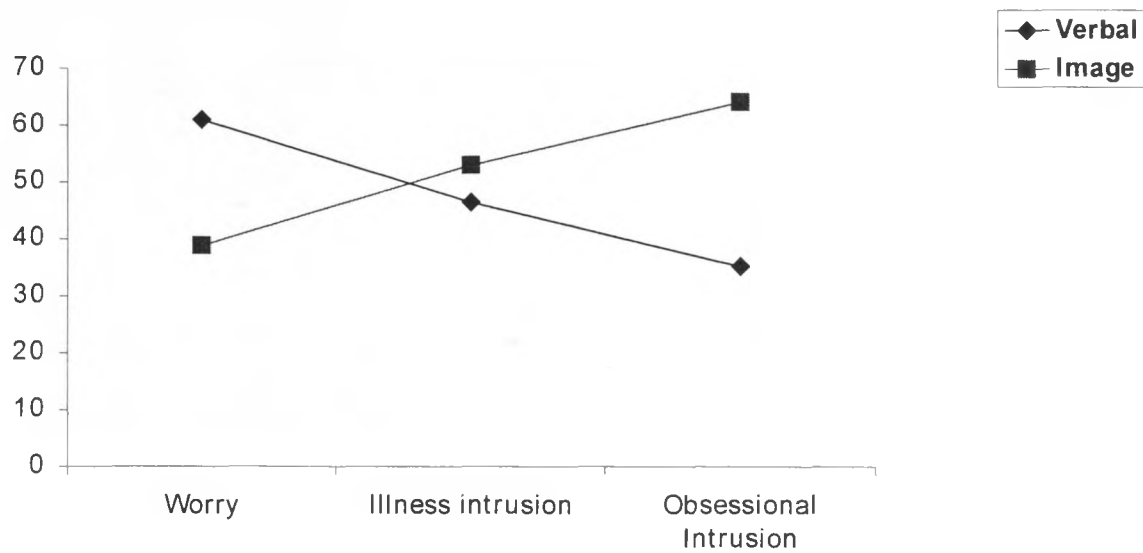
\*Largest absolute correlation between each variable and any discriminant function

Table 2      Classification matrix created with the two discriminant functions

| Original              | Predicted group membership |                       |                   |
|-----------------------|----------------------------|-----------------------|-------------------|
|                       | Worry                      | Obsessional Intrusion | Illness intrusion |
| Worry                 | 57 (76.0%)                 | 2 (2.7%)              | 16 (21.3%)        |
| Obsessional intrusion | 7 (8.6%)                   | 60 (74.1%)            | 14 (17.3%)        |
| Illness intrusion     | 18 (22.2%)                 | 18 (22.2%)            | 45 (55.6%)        |



**Figure 1 :Plots of three groups centroids on the two discriminant functions**



**Figure 2 : Mean Percentage of verbal and image content for worry, illness intrusion and obsessional intrusion.**

Table 3

Factors for illness intrusions created using emotion and appraisal variables.

| Item                                     | Factor |      |      |      |      |
|------------------------------------------|--------|------|------|------|------|
|                                          | 1      | 2    | 3    | 4    | 5    |
| Effort to dismiss                        | .810   |      |      |      |      |
| Content of the thought is unpleasant     | .632   |      |      |      |      |
| Difficulty to dismiss                    | .605   | .483 |      |      |      |
| Feeling of insecurity                    | .534   |      |      | .466 |      |
| Effort to resist                         | .509   |      |      |      |      |
| Intrusiveness                            | .506   | .427 |      |      |      |
| Probability to come true                 |        | .694 |      |      |      |
| Disturbance in functioning               |        | .617 | .401 |      |      |
| Frequency                                |        | .529 |      |      |      |
| Problem has basis in reality             |        | .478 |      |      |      |
| Remains in mind                          |        | .462 |      |      |      |
| Egodystonic nature                       |        |      | .694 |      |      |
| Reveals a negative aspect of personality |        |      | .545 |      |      |
| Disapproval                              | .427   |      | .528 |      |      |
| Guilt                                    |        |      |      | .771 |      |
| Shame                                    |        |      | .470 | .599 |      |
| Responsibility if it were to come true   |        |      |      | .430 | .713 |
| Responsibility of thinking about it      |        |      |      |      | .561 |
| Awareness of trigger                     |        |      |      |      | .433 |
| Problem may be modifiable                |        |      |      |      | .418 |
| Avoidance of triggers                    |        |      |      |      |      |
| Efficacy of strategies to relieve        |        |      |      |      |      |
| Duration of the intrusion                |        |      |      |      |      |
| Percent of variance                      | 28.3   | 10.5 | 7.8  | 5.8  | 4.8  |

N=212

Note. Only coefficients higher than .40 are shown.

Table 4

Strategy Factors for illness intrusion.

|                                            | Factor |      |
|--------------------------------------------|--------|------|
|                                            | 1      | 2    |
| I try to find a solution                   | .998   |      |
| I neutralize by a mental action.           | .436   |      |
| I analyze the thought, I think about it.   | .359   |      |
| I tell myself "stop".                      |        | .562 |
| I tell myself it means nothing.            |        | .456 |
| I do things that need concentration.       |        | .541 |
| I reassure myself by speaking to somebody. |        |      |
| Percent of variance                        | 32.1   | 16.5 |

N= 212

Note. Only coefficients higher than .35 are shown.



Table 6

Illness intrusions: correlation and regression coefficients for the five descriptor factors and strategy factor 2 (escape-avoidance).

| Factor   | Strategy<br>Factor 2 | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Prob>t                         | $\beta$ | SR <sup>2</sup> |
|----------|----------------------|----------|----------|----------|----------|--------------------------------|---------|-----------------|
| Factor 1 | .435                 |          |          |          |          | .000                           | .378    | .189            |
| Factor 2 | -.073                | .160     |          |          |          | .014                           | -.136   | .079            |
| Factor 3 | .314                 | .080     | .034     |          |          | .000                           | .260    | .023            |
| Factor 4 | .072                 | .019     | .006     | .138     |          | Ns                             |         |                 |
| Factor 5 | .047                 | -.025    | .044     | .008     | .161     | Ns                             |         |                 |
| N=198    |                      |          |          |          |          | R <sup>2</sup> = .291          |         |                 |
|          |                      |          |          |          |          | R <sup>2</sup> adjusted = .280 |         |                 |
|          |                      |          |          |          |          | R = .539                       |         |                 |

### **CHAPITRE 3**

## **LES PROCESSUS PRÉDISANT LA TENDANCE À S'INQUIÉTER POUR LA MALADIE.**

## Résumé

La présente étude veut tester l'implication de différents processus habituellement associés au maintien de troubles anxieux à la question de l'anxiété face à la santé. Une grande variété de préoccupations somatiques est évaluée. Les processus ciblés sont l'intolérance à l'incertitude, les fausses croyances concernant l'inquiétude, l'évitement cognitif, l'interprétation physiologique des symptômes, la sensibilité à l'anxiété, l'amplification somato-sensorielle et la conviction. Soixante-dix-huit participants présentant une préoccupation face à la santé clinique sont sélectionnés sur la base d'un dépistage téléphonique, et d'une entrevue structurée, de mesures de symptômes et enfin de mesures de processus. Une analyse de régression a été conduite pour déterminer quels processus prédisaient l'inquiétude pour la maladie. Deux processus déjà reconnus comme étant des facteurs impliqués dans l'hypocondrie se sont avérés des prédicteurs significatifs de la tendance à s'inquiéter pour la maladie : l'amplification somato-sensorielle et l'interprétation pathophysiologique d'un symptôme physique. Deux autres processus habituellement associés à d'autres troubles anxieux, notamment le Trouble d'anxiété généralisée, se sont aussi avérés des prédicteurs de la tendance à s'inquiéter pour la maladie. Nous parlons de l'intolérance à l'incertitude et de l'évitement cognitif. Étant donné les résultats, il est proposé qu'un traitement du Trouble d'anxiété généralisée déjà existant (Ladouceur et al., 2000) soit adapté à l'anxiété face à la santé. Cette adaptation du traitement pourrait aussi ajouter d'autres processus comme l'amplification somato-sensorielle et la réattribution des symptômes physiques à l'aide d'une approche psychoéducationnelle.

Predictors of illness worry in a clinical population.

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Running head: HEALTH ANXIETY, HYPOCHONDRIASIS, ILLNESS WORRY

### Predictors of illness worry in the clinical population.

The present study tests the implication of different processes associated to anxiety disorders in the context of health anxiety. A wide range of somatic preoccupations are assessed. The processes targeted are intolerance to uncertainty, faulty beliefs regarding worry, cognitive avoidance, physiological interpretation of symptoms, anxiety sensitivity, somato-sensory amplification and conviction. Seventy-eight participants presenting clinical illness preoccupation are selected on the basis of telephone screening and structured clinical interview, symptoms and process measures. A regression analysis was conducted on process measures to predict the tendency to worry about illness. Results confirm the implication of two variables recognized as significant components of health anxiety: somatosensory amplification and physiological interpretation of symptoms. It also demonstrates that two processes associated to Generalized Anxiety Disorder, cognitive avoidance and intolerance to uncertainty, are implicated in health anxiety. Given these results, it is proposed to adapt the Generalized Anxiety Disorder treatment proposed by Ladouceur et al. (2000) to health anxiety. The adaptation of this treatment should also target other processes, notably somatosensory amplification with an educational approach and reattribution of symptoms.

### Predictors of illness worry in the clinical population.

Anxiety may be a normal reaction when confronting illness. When health and life are in danger, anxiety is a healthy way of reacting to stay alive. On the other hand, individuals may overreact to the presence of symptoms that could be a sign of a possible illness. They could also misinterpret these symptoms and try different ways to save their health or prevent catastrophic consequences. From this perspective, Hypochondriasis could be classified as an anxiety disorder. The essential feature of Hypochondriasis is the preoccupation or the idea that is suffering from a serious disease, based on misinterpretation of one or more bodily signs or symptoms (APA, 1994). Most of the time, people suffering from this disorder are battling with anxiety and sometime depressive moods. Hypochondriacs share some similarities with a few anxiety disorders. They are characterized by health preoccupations which are common in Generalized Anxiety Disorder (GAD) (Barsky, 1996). Furthermore, as proposed by Salkovskis and Clark (1993), Hypochondriasis also shares with Panic Disorder an enduring tendency to misinterpret bodily sensations. Compulsive behaviors widely found in the Obsessive-Compulsive population (OCD) are also present in Hypochondriasis (Barsky, 1992). Evidence suggests that categorizing hypochondria as a somatoform disorder is questionable. Some authors proposed that Hypochondriasis should be considered as an anxiety disorder (Schmidt, 1994). The present study tests the implication of different processes associated to anxiety disorders with respect to health anxiety.

Health preoccupations are often difficult to classify using DSM-IV diagnostic criteria. Worry about health is found in both GAD and Hypochondriasis. Is it possible to find a difference between illness preoccupation and the fear of getting a disease? The distinction will probably be very subtle. In Generalized anxiety, excessive anxiety and worry encompass a number of events or activities. In Hypochondriasis, however, worry and fear are centered on one theme, i.e. health (Barsky, 1996). Although the

presence of several worry themes (including worry about health) may indicate a diagnosis of GAD, many clinicians assign both diagnoses in these circumstances. Although the presence of health worries in GAD is very obvious from a clinical perspective, empirical research has yielded inconsistent results. Craske, Rapee, Jackel, & Barlow (1989) report that health worries constituted a significantly larger proportion of all worries in a GAD patient group (30.6%) than in a matched control group (2.2%). However, only 3% of GAD patients in the Shadick, Roemer, Hopkins, & Borkovec, (1991) study reported illness, health or injury related worries while 25% of their non-anxious participants reported these worries. Sanderson and Barlow (1990) found that 14% of their GAD patients reported illness related worries. Finally, Freeston et al. (1994) found that 61% of a student population reported health related intrusive thoughts and those intrusive thoughts were the most frequent theme among 19.9% of the students. In another type of study, Starcevic et al. (1994) compared hypochondriacal phenomena in patients with GAD and Panic Disorder to examine the relationship between worries about illness on one hand and disease fears/phobias and hypochondriacal beliefs on the other. The results of this study indicate that worry about illness is a relatively unimportant feature of GAD. However, we must consider the result of a study of comorbidity in hypochondriacal patients where GAD had the highest lifetime prevalence (71.4%) among comorbid conditions (Barsky, 1992). Finally, even though the results do not show a clear relationship between GAD and Hypochondriasis, we cannot forget some similarities. The inconsistency of findings regarding the presence of health preoccupation in GAD points to the need for additional research.

Hypochondriasis share some similarities with other anxiety disorders. Most behavior like self-checking, self-examination and reassurance seeking to medical services or close family members is also present in the OCD population. Like compulsion in OCD, these have a driven and irresistible quality, are excessive and are enacted in an attempt to allay anxiety and relieved dread (Barsky, 1992).

Hypochondriac patients engage in repetitive checking to neutralize and diminish the discomfort stemming from unacceptable intrusive thoughts. Even though the behaviors seem similar, obsessions and illness fears are distinct on certain aspects. The hypochondriac patient does not seem to resist to the intrusive illness related thought. Moreover, he views his fear as realistic and justified and this explains his need for medical treatment. The findings of a recent study by Langlois, Freeston, Ladouceur & Gosselin (2002) supports this thesis. In this analogue study, illness intrusions were, comparatively to worry and obsessionnal intrusions, particularly egosyntonic and provoked less feeling of responsibility if the intrusion would come true. Although checking and reassurance seeking are more characteristics of OCD, these behavioral components are also implicated in other disorders like GAD (Craske et al. 1989) and Hypochondriasis (Barsky, 1992), once again demonstrating the overlap of symptoms among these disorders.

Although there are subtle differences, Hypochondria and Panic Disorder seem to operate according to a common mechanism. The cognitive approach hypothesis asserts that repeated panic attacks could be explained by an enduring tendency to misinterpret bodily sensations. Patients interpret their own internal sensations as signs of imminent physical or mental harm (Clark, 1986). Similarly, hypochondriac patients interpret internal sensations as signs of physical harm but the consequences (illness) will not be as imminent as in panic attacks. The reassurance seeking of those patients could be explained by the fact that the consequences will not be immediate. Hypochondriac patients therefore have the sense that they can do something and have to do something to save their life. Because the preoccupation is with respect to future and often concern eventual events, this type of preoccupation is closer to a worry. Therefore, we find here a first distinction between panic attacks and Hypochondriasis: the time of course of catastrophe (Salkovskis and Clark, 1993). More specifically, misinterpreted sensations are also different in the two cases. In panic attacks, the feared sensations are those subject to immediate increase as a result of autonomic arousal. In

Hypochondriasis, feared sensations are less circumscribed, including both anxiety-increased and many other symptoms (Salkovskis and Clark, 1993). The differences between the two disorders, although present, are subtle and concern the intricate details of the disorders rather than their global conceptualization.

The ambiguity caused by substantial overlap between hypochondria and anxiety disorders must be addressed. It is believed that the identification of disorder-specific symptom clusters and process variables will lead to more reliable diagnosis and more effective treatment (Ladouceur et al. in press). The past decade has produced an impressive amount of evidence for specific cognitive process variables in many anxiety disorders. Considering that Hypochondriasis shares some similarities with other anxiety disorders, it seems justified to test the implication of processes associated to GAD, OCD or panic, within the framework of hypochondria.

Some processes implicated in GAD may be also implicated in health anxiety. According to the model of Dugas, Gagnon, Ladouceur, & Freeston (1998), GAD patients have a lower threshold for uncertainty than other anxiety disorder patients and a non-clinical sample (Ladouceur et al., 1995). An individual with intolerance to uncertainty considers an uncertain situation very unpleasant comparatively to a more tolerant person. Because there are no guarantees when it comes to health, health is uncertain by its very nature. The patient preoccupied with symptoms or illness may be intolerant to health related uncertainty. An additional process of the GAD model proposed by Dugas et al. (1998), the erroneous beliefs regarding worry, may also be involved in health anxiety. Compared to moderate worriers, non-clinical high worriers believe that worry is useful because it helps prevent negative outcomes from occurring and minimizes the negative effects if these outcomes should occur (Freeston, Rhéaume, Letarte, Dugas, & Ladouceur, 1994). These faulty beliefs contribute to maintain the tendency to worry. It is hypothesized that these beliefs may also be present in health anxiety (e.i. If I worry about illness, I will not be surprised if I really become sick). Cognitive avoidance, a further component of Dugas et al.'s GAD model may also be

involved in health anxiety. It is proposed that worry has an avoidance function (Borkovek & Inz, 1990). Research has shown that worry is mostly made up of verbal-linguistic cognitive activity, which may suppress fear-related imagery (Borkovek & Inz, 1990). The avoidance of mental imagery interferes with emotional processing. Illness intrusions possess verbal and image content, (Langlois et al, 2002). Thus, it may be the emotions associated to imagery and the emotion associated to misconception (verbal content) that are avoided. Foa and Kosak (1986) proposed that successful processing of fearful stimuli is dependent upon physiological habituation and cognitive modification of associated danger-laden misconception. It is essential to determine whether cognitive avoidance is implicated in the maintenance of health anxiety.

In Warwick and Salkovskis's model of health anxiety (1990), catastrophic interpretation of symptoms is a component that maintains anxiety and preoccupation with health. Considering the inherent circularity of this model, we must not forget that catastrophic interpretation can be considered as a cause, a consequence or a symptom of health anxiety. The erroneous evaluation of symptoms is a criteria for the diagnostic of Hypochondriasis (APA, 1994). Individuals suffering from hypochondria may interpret medically innocuous symptoms such as muscle tension or a red blotch as signs of severe illness. Because those physiological manifestations are frequent, hypochondriac patients often experience constant preoccupations. This process will be considered in this research.

Inquiries into the physiological component of hypochondria have demonstrated that hypochondriacs not only differ in their cognitive processing of sensations (i.e. misinterpretation of sensations), but also in their experience of sensations. Some studies demonstrated that the tolerance threshold for physical discomfort is low for hypochondriacal patients (in Barsky, Geringer & Wool, 1988). Barsky extensively investigated this component of Hypochondriasis known as somatosensory

amplification. This concept refers to a tendency to experience somatic and visceral sensation as unusually intense, noxious and disturbing. Findings indicate that hypochondriac patients score significantly higher than control participants do on a self-report measure of somatosensory amplification (Barsky, Wyshak, Klerman, 1990). A recent study evaluated hypochondriac patients over a period of 5 years. Results demonstrate that amplification score do not change as a function of time. This is the case even though hypochondriacal symptoms decrease as a function of time (Barsky, Fama, Bailey, Ahern, 1998). These results confirm the trait-like character of amplification and point to the possibility that additional processes must be present for the occurrence and/or maintenance of health anxiety. Barsky's somatosensory amplification concept also involves bodily hypervigilance, the predisposition to focus on certain weak and infrequent bodily sensations, and a tendency to appraise them as pathological and symptomatic of disease rather than normalizing them (Barsky & Wyshak., 1990). Bodily hypervigilance and attention focus were also included in Warwick and Salkovskis's model of Hypochondriasis (1990). In the same way, attention training was the main treatment target in Papageorgiou and Wells study (1997).

The role of anxiety sensitivity, the fear of physical symptoms and consequences associated with them has also been explored. As presented before, Panic Disorder and Hypochondriasis are characterized by an enduring tendency to misinterpret bodily sensations. It is proposed that the fear of somatic sensations is involved in triggering panic attack and in eventual avoidance behaviors (Barlow, 1988; Clark, 1986; Goldstein & Chambless, 1978). Anxiety sensitivity refers to the fear of physical symptoms and the consequences associated to it. Otto, Pollack, Sachs, & Rosenbaum (1992) demonstrated that hypochondriac symptoms were associated to anxiety sensitivity in a sample of 50 Panic Disorder patients. However, this study has been criticized by Taylor (1994). He proposed that to investigate the structure of fears of somatic symptoms, it is necessary to assess the fears of specific symptoms from

multiple domains. Taylor also proposed that heterogeneous sample would be more appropriate. Since Otto and al. (1992) pointed the relation between hypochondriac symptoms and anxiety sensitivity in a Panic Disorder sample, it is difficult to generalise these results to all the manifestations of Hypochondriasis. The present study is an opportunity to test the implication of anxiety sensitivity in the multiple manifestations of health anxiety.

In addition to the weak empirical consensus regarding hypochondria and other anxiety disorders, one main therapeutic issue needs to be resolved in order to allow for empirical advancement. A very complex issue in health anxiety is therapeutic compliance. This complexity is largely attributable to patients being convinced that their symptoms are physical rather than psychological. This often limits the number of hypochondriacal patients that mental health professionals receive in treatment, and the number of treatment outcome studies. There has been substantial controversy among authors regarding the role of medical reassurance in non-medical help seeking behavior. For instance, Kellner (1986) argues that medical reassurance is the only way to convince patients that their problem is not medical and therefore increases the probability of psychological help seeking. Warwick and Salkovskis, on the other hand, argue that medical reassurance is a factor that maintains health anxiety and decreases psychological help seeking (Warwick, 1989; Warwick & Salkovskis, 1990; Salkovskis, 1989; Kellner & Warwick, 1992). It has been argued that medical reassurance can, however, have a positive impact on health anxiety if the reassurance consists of new information (not repetition) and the information is accurate and unambiguous. Disease conviction can be approached as proposed for OCD with poor insight. According to Kellner (1986), therapy will be unsuccessful if the conviction is not targeted. The false belief that one is afflicted with an illness or that doctors fail to diagnose an illness maintains the vicious circle of somatic symptoms, attention focus, catastrophic interpretation and exacerbation of symptoms (Kellner, 1986). Despite the potential importance of conviction in health anxiety, no research has investigated its impact.

Given the important similarities between anxiety disorders and hypochondria, it is crucial to investigate the presence of maintaining process factors in GAD, OCD and Panic Disorder as they apply to illness preoccupation. If the presence of those processes is demonstrated, the clinical implications will be numerous. The present study will employ a transnosographical approach to assess the processes that may be involved in health anxiety. It will focus on the presence of illness worry, independently of the participant diagnoses. The current study will assess a wide range of somatic preoccupations: fear of somatic symptoms, fear of cancer, fear of illness in general, fear of heart attack. The processes targeted are intolerance of uncertainty, faulty beliefs regarding worry, cognitive avoidance, catastrophic interpretation of symptoms, anxiety sensitivity, somato-sensory amplification and conviction. In the present study, the term health anxiety, as proposed by Warwick and Salkovskis (1990), will be employed when referring to hypochondriacal phenomena. This will have the advantage of enabling a more general understanding of hypochondriacal manifestations and symptomatology.

## Method

### Participants and Procedure

Following the publication of articles describing our work in local newspapers, 119 individuals contacted our treatment center between October 1998 and April 1999. Each caller was first screened over the telephone, using of a structured telephone interview developed for this and other related studies (i.e., Dugas et al., in press; Ladouceur et al., 2000). Screening was implemented to eliminate individuals who clearly did not have an illness preoccupation or a manifestation of health anxiety. When participants presented a significant health preoccupation, they were invited to the next step of study. Eighty-four individuals were invited to our clinic for a structured diagnostic interview, the Anxiety Disorders interview Schedule for DSM-IV. The interview was tape-recorded to allow a second clinician to listen to 25% of recorded

interviews. Clinicians evaluated the diagnosis according to the DSM-IV criteria in addition to assigning a general health anxiety severity score ranging from 0 to 8. To arrive at this score, both clinicians considered the interference associated with manifestations of health anxiety, regardless of the DSM-IV diagnostic. Where the two clinicians disagreed as to whether health anxiety was clinically significant, a case conference was held to arrive at a consensus. Case conference was held for less than 5% of the sample. Entry criteria for inclusion in the process study were based on the telephone interview and the structured diagnostic interview. Participants were included in the analyses if they met four criteria: (1) a clinical interference  $\geq 4$  on a severity scale ranging from 0 to 8 (this information came from one of two sources: interference in the Hypochondriasis ADIS-IV section, or interference of illness preoccupation in the telephone interview); (2) a severity score of health anxiety  $\geq 4$  (on a severity scale ranging from 0 to 8); (3) the use of three or more coping behaviors (body checking and palpation, reassurance seeking by family or doctor, dismissal or substitution of the illness intrusion, avoidance of trigger associated to illness, relaxation or sleep to calm the symptoms, concentration or attention focus on symptoms); and (4) difficulty to control the illness preoccupation ( $\geq 4$  on a severity scale ranging from 0 to 8). Individuals were excluded from analyses if they exhibited psychosis, a drug or alcohol dependency, a bipolar disorder, if the illness that caused anxiety had been diagnosed by a doctor and if the preoccupation was related to fibromyalgia or Chronic Fatigue. Based on these criteria, 78 of the 84 interviewed participants were included in the analyses.

### Measures

All participants were asked to complete a questionnaire battery.

Dependant variable

Illness Worry Scale (IWS); Robbins & Kirmayer, 1996). The Illness Worry Scale is a measure designed to quantify the tendency to worry that bodily sensations or feelings indicate serious disease and to feel vulnerable to becoming ill. The original version of the Illness Worry Scale consists of 9 yes/no questions derived from the Illness Behavior Questionnaire (Pilowsky, Spence, Cobb, Katsikitis, 1984). This measure was employed in the present study because it appears to be uncontaminated by related constructs of body or self-focus and symptomatology (Robbins & Kirmayer, 1996). These aspects will be considered as process variables. This measure has moderate internal consistency ( $\alpha=.70$ ), a stability of .64 over a 12 month period and is highly correlated ( $r=.82$ ) with the Withely index of Hypochondriasis (Pilowsky, 1967). To enhance variability in the present study, IWS was adapted. A Likert scale (0-5; not at all corresponding to extremely corresponding) was employed. The internal consistency of the version used in the current study is high ( $\alpha=.83$ ).

#### Process variables

Intolerance to Uncertainty (IU); Freeston et al., 1994). The Intolerance to Uncertainty questionnaire is designed to assess emotional, cognitive and behavioral reactions in uncertain situations. This measure contains 27 items which participants are required to rate on a 5 point Likert scale (not at all corresponding to extremely corresponding). This measure has very high internal consistency ( $\alpha=.91$ ), good criteria and construct validity (Freeston et al., 1994), and adequate test-retest reliability (5 weeks).

Why Worry Questionnaire (WWQ); Freeston et al., 1994). ). The Why Worry Questionnaire is designed to assess faulty beliefs concerning the usefulness of worrying. This measure consists of 20 items which participants are required to rate on a 5 point Likert scale (not at all corresponding to extremely corresponding). In the present study, participants completed the questionnaire dealing with their most salient

illness related worry. This measure has good internal consistency ( $\alpha=.87$ ) and adequate test-retest reliability (5 weeks;  $r=.71$ ).

Cognitive Avoidance Questionnaire (CAQ; Langlois et al. 1996) The Cognitive Avoidance Questionnaire is designed to assess various cognitive avoidance strategies: 1) thought substitution, 2) transformation of images into verbal thoughts, 3) distraction, 4) avoidance of trigger, and 5) suppression of thoughts. The Cognitive Avoidance Questionnaire contains 25 items which participants are required to rate on a 5 point Likert scale (not at all corresponding to extremely corresponding). This measure has very good internal consistency ( $\alpha=.96$ ), construct and convergent validity.

Somatosensory Amplification Scale (SSAS; Barsky et al. 1990). The Somatosensory Amplification Scale contains 10 items regarding unpleasant physical sensations that do not necessarily connote serious disease. Participants are asked to rate the degree to which statements are reflective of them, on an ordinal scale from 1 to 5. The English version of the Somatosensory Amplification Scale has good test-retest reliability (74 days; ( $r=.79$ ) and internal consistency ( $\alpha=.82$ ). The French version, created with a back translation for the present study, has moderate internal consistency ( $\alpha=.72$ ).

Anxiety Sensitivity Index (ASI; Reiss, Peterson, Gursky & McNally, 1986; translation Stephenson, Marchand, Lavallée & Brillon, 1996). The Anxiety Sensitivity Index is designed to assess fear of anxiety sensations and of negative consequences related to anxiety. This measure consists of 16 items which participants are required to rate on a 5 point Likert scale. The French version of the Anxiety Sensitivity Index has good internal consistency ( $\alpha=.87$ ) and test-retest reliability (3 weeks;  $r=.91$ ).

Symptom Interpretation Questionnaire (SIQ; Robbins & Kirmayer, 1991). The Symptom Interpretation Questionnaire is designed to evaluate three kinds of

attributions (psychological, somatic, and neutral) for 13 physical symptoms. Internal consistency (psychological  $\alpha=.87$ , somatic  $\alpha=.71$  and neutral  $\alpha=.81$ ) and convergent validity are good for each scale. Confirmatory analysis demonstrates the three different constructs.

Overvalued Ideas Scale (OVIS; Neniroglu, McKay, Yaryra-Tobia & Steven, 1997). The Overvalued Ideas Scale is a semi-structured interview designed to measure overvalued ideation in OCD. Overvalued ideas are strongly held beliefs that fall along a continuum between normal and delusional thoughts. This measure was chosen to assess the impact of conviction on health anxiety. This measure assesses strength, bizarreness, belief accuracy, reasonableness, efficacy of compulsions, etc. The English version of the Overvalued Ideas Scale has good internal consistency and convergent validity. The French version, created with a back-translation, has poorer internal consistency for this sample ( $\alpha=.55$ ). In this study, the overvalued idea targeted with this semi-structured interview was the principal illness fear of the participant.

#### Other measures

The Beck Depression Inventory (BDI; Beck, Steer, & Garbin, 1988) The Beck Depression Inventory was employed to assess the implication of depressive symptoms in health anxiety. This measure consists of 21 items covering the main depressive symptoms. The French translation has excellent psychometric properties (Bourque & Beaudette, 1982).

The Health Perception, Belief and Behavior Questionnaire (Langlois, Freeston, Vézina & Ladouceur, 1997) This measure is designed to assess health-related perceptions, behaviors, and attitudes. For the present study, only descriptive information was considered: medical consultation, hospitalization, medication, etc.

Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV; Dinardo, Brown, Esler, & Barlow, D. H. (1995). The ADIS-IV is a structured interview designed to assess all anxiety disorders and screen for mood disorders, somatoform disorders, psychoactive substance use disorder, psychotic disorders and medical problems. The interview yields information on the presence of Axis 1 disorders with severity ratings on a 9-point Likert scale (0-8).

## Results

This health anxiety sample is composed of 54 women (69.2%) and 24 men (30.8%). The mean age was 40.25 years old ( $Sd=11.9$ ). Inter-rater agreement for the general score of health anxiety was 75% when clinicians gave exactly the same severity score (from 0 to 8). The Inter-rater agreement was 95% if we accept a severity difference of one. All evaluators gave a clinical score of health anxiety (severity  $\geq 4$ ). The kappa coefficient for the severity agreement between the evaluators was good ( $Kappa = .68$ ). The majority of the participants who met the inclusion criteria were married and had completed high school or a higher level of education. Table 1 and 2 present demographic and medical consultation information. Health anxiety was not found to interfere with working activities given that the majority of the sample was employed at the time of the interview. The number of medical consultations in the last year, the number of health professionals consulted and the number of absences from work due to incapacity were, however, important given that no medical diagnoses were present in the majority of the participants.

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Insert table 1 and 2 about here

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Fear of heart disease and fear of cancer were the most frequently reported fears (38% and 28% of overall reported fear). The presence of differences in illness themes

in function of sex was tested with Chi-square test. It demonstrated that fear of cancer was more present in women and ( $Q=7.33, p < .005$ ) and that fear of heart disease was more present in men ( $Q=8.24, p < .005$ ).

Although a transnosographical approach was proposed for this study, it is pertinent to present the diagnoses of the present health anxiety sample. Inter-rater reliability for presence of diagnoses of the ADIS-IV structured interview was high (95%). Moreover, the kappa coefficient for the severity agreement of diagnoses was good ( $Kappa = .61$ ). As presented in table 3, Hypochondriasis is the most frequent primary diagnostic, followed by GAD and Panic Disorder (with or without agoraphobia). It is interesting to note that although one participant did not meet the criteria for any of the disorders listed in the DSM-IV, this participant was included because he met the criteria of the present study. GAD was the most frequent secondary diagnosis followed by Hypochondriasis and Panic Disorder (with or without agoraphobia). Surprisingly, OCD was not as frequent in this sample. Health anxiety in OCD concern usually AIDS or infectious illnesses and those concerns were not common in the sample.

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Insert table 3 and 4 about here

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To detect basic relationships between all measures in the study, Pearson correlations were calculated. There was a positive correlation between the criterion measure (Illness Worry Scale) and all the predictor measures except conviction in the belief (illness). There was no correlation between the tendency to worry about illness and depressive symptoms. Depressive symptoms were, however, the only variable related to conviction. There was only one positive relation between sex, age and all the measures. Obtained results indicate that emotional interpretation of somatic symptoms is positively associated to age. Table 5 presents the correlation matrix.

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Insert table 5 about here

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Only process variables significantly related to Illness Worry Scale were entered in the regression model. The analysis included the score on physiological interpretation of symptoms (from the Symptom Interpretation Questionnaire), intolerance to uncertainty, cognitive avoidance, faulty beliefs concerning worry (Why Worry Questionnaire), anxiety sensitivity, and somatosensory amplification. These variables were used to predict the tendency to worry that bodily sensations or feelings are indicative of serious disease and to feel vulnerable to becoming ill (Illness Worry Scale). Given that those variables were all related to the predicted variable, a first backward regression was conducted. This method has the advantage of keeping in the model only the variables that explain a significant and unique part of the variance of the predicted variable. For example, a variable that correlated too highly with others variables will be excluded from the regression model because its variance cannot be isolated from the variance engendered by other variables. The criterion for remaining in the function was .05. A multiple regression analysis demonstrated a significant relationship ( $R^2 = .37$ ,  $F(4,77) = 10.86$ ,  $p < .0001$ ) between the IWS score and four of the six process variables. Two variables were excluded from the regression model: the faulty beliefs concerning worry (Why Worry Questionnaire) and the anxiety sensitivity (Anxiety Sensitivity Index). Another stepwise regression was conducted to determine the importance of each of the variables retained in the predictive model. Table 6 presents the standardized coefficient, t values and R square change. The best predictor of IWS, accounting for 15% of the variance, is physiological interpretation of symptoms. The second best predictor, the cognitive avoidance questionnaire, accounts for 13% of IWS variance. Finally SASS and IU account for 6% and 3% of the variance respectively.

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Insert table 6 about here

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### Discussion

The aim of the present study was to assess the possible role of processes, usually associated with GAD, OCD and Panic Disorder, in health anxiety. More precisely, the goal was to determine whether there is a relationship between different processes and the tendency to worry that bodily sensations or feelings indicate serious disease and to feel vulnerable to becoming ill. A transnosographical approach was employed to survey a larger sample of illness preoccupations. It focused on the presence of clinical illness worry no matter the diagnoses the participants may have.

The present sample was very heterogeneous. Hypochondriasis was the most frequent diagnosis however only 7 participants did not present comorbid diagnosis. 47 participants (61%) met the criteria for Hypochondriasis (primary or secondary) in the present study. Most participants had one or more secondary diagnoses (73.9%). There was also an important sub-group of cardiac phobia (diagnosed as Panic Disorder) and several GAD patients with health predominant worry. The sample consisted mainly of hypochondriacal patients who were not convinced that they were afflicted by an illness but were nonetheless afraid of the possibility of contracting one. This sample may be illustrative of the concept of illness phobia proposed by Kellner (1986). The low Overvalued Idea Scale mean score supports this idea ( $M = 32.42$ ,  $S.D. = 9.5$ ). Most of the participants explained to the interviewer that they did not really believe they had an illness but were preoccupied by the idea of contracting one.

The possibility that the present study failed to target all manifestations of health anxiety must be raised since disease convictions were not that frequent. Moreover, results failed to demonstrate a relationship between disease conviction and the predicted variable. OVIS was only related to depressive symptoms. Disease conviction may in fact be completely different from other processes assessed in the present study.

This in turn may be indicative of severity in health anxiety. Consistent with this speculation, disease conviction has been proposed to comprise of illness anxiety, although the reverse is not true (Schmidt, & Lousberg, unpublished manuscript). Because disease conviction is related to depressive symptoms, clinical intervention must target this aspect of health anxiety. This finding supports the idea that special clinical considerations must be made when disease conviction is present (Kellner, 1986, Salkovskis, 1989). The problem associated with disease conviction is the difficulty of keeping patients in psychological treatment or at least having them consider the psychological aspect of their problem. Much more research must target this aspect of health anxiety. The concept of overvalued ideas (Nizeroglu et al., 1997) would be an interesting research avenue because of the knowledge it would provide regarding the differential impact of disease conviction on health anxiety.

Regression demonstrated that the tendency to interpret physical symptoms in a physiological way is the best predictor of worry about illness. This is consistent with Salkovskis' model of health anxiety (1989). The Symptom Interpretation Questionnaire presents a limitation. In this study, participants reported the tendency to interpret physical symptoms as a physiological problem but this measure can't allow us to assess the strength of this interpretation. It is difficult to speculate on what is implicated in this symptom interpretation: the fear or the conviction of disease? As proposed earlier, there may be a continuum between fear and conviction of disease. Future studies must be conducted to assess the presence of that continuum and evaluate whether processes differ as a function of it.

In Dugas et al.'s model (1998), cognitive avoidance is considered to be a maintaining factor for worry. According to Borkovec's theory, the verbal content of worry is related to individuals' attempts to avoid the physiological activation created by unpleasant images. The present study demonstrated that this concept is also implicated in illness preoccupation. This process was the second most important predictor of illness worry. Cognitive avoidance implicated in illness intrusions may,

however, differ on some aspects since image content is more important in this kind of intrusion (Langlois et al., 2002). A recent study demonstrated that when assessing the level of visual and verbal content, it becomes clear that illness intrusions can neither be classified as worry nor as obsessional intrusions (Langlois et al., 2002). Regardless of whether it is an unpleasant thought or image that is avoided, the process is similar; it does not allow the reevaluation and the habituation to the anxiety that it provokes. This possibility has received support from recent studies (see Butler, Wells, & Dewick, 1995; Well & Papageorgiou, 1995). In health anxiety, the intrusiveness of the thought might be more important since the physical symptom is an omnipresent trigger for Hypochondriasis. Cognitive exposure treatment should elicit emotions associated to imagery but should also elicit emotions associated to the misconception (verbal content) of that illness intrusion.

The present study once again confirms the implication of somatosensory amplification in health anxiety. When entered third in the model, this variable explained 6% of the predicted variable's variance. Hypochondriacs are thought to amplify normal physiological sensations, the somatic concomitants of intense affects, and the benign symptoms of trivial and self-limited infirmities (e.g. tinnitus, a twitching eyelid) (Barsky, Wyshak & Klearman, 1990). Somatosensory amplification includes bodily hypervigilance, the predisposition to focus on certain weak and infrequent bodily sensations, and a tendency to appraise them as pathological and symptomatic of disease, rather than normalizing them (Barsky et al., 1990). Since the concept is general rather than specific, direct cognitive intervention will be difficult. However, a good treatment for health anxiety must consider this aspect of the problem.

Results also demonstrated that the tendency to be intolerant to uncertainty was a significant predictor of the illness worry scale (IWS). This variable explained 3% of variance even if it was entered fourth in the model. Furthermore, this measure would probably be more related to the predicted variable if items were presented only as a function of illness. Basically, this measure was created for assessment of intolerance to

uncertainty in several worry domains. It was therefore not idiosyncratic enough for participants of the present study. This measure might be adapted for health related worry themes and would better present the relation between intolerance to uncertainty and health anxiety. But it is also possible that intolerance to uncertainty is no more associated to health anxiety and that other processes not assessed in this study would be the components that best explain variance.

The same explanation may account for the Why Worry Questionnaire. Remember that this questionnaire did not explain a unique part of the variance of the IWS. Items of the Why Worry Questionnaire are also created for all worry themes. Even though the Why Worry Questionnaire was positively correlated to IWS, it seems to share too much variability with the other processes assessed in this study. Moreover, many other faulty beliefs associated to illness were not included in this measure. The Why Worry Questionnaire only targets faulty beliefs related to the usefulness of worry. Hypochondriacs may believe that symptoms are always the sign of a disease, that every symptom must have a medical explanation, that good health equals no symptoms, that we can always prevent illness, that thinking about illness can create it, etc. Hypochondriac patients will continue to worry about illness if a form of cognitive restructuring does not weaken those beliefs. Future research should assess different kinds of faulty beliefs associated with health anxiety.

Anxiety Sensitivity Index did not explain a unique part of the IWS variance. This result was surprising since it was the process variable that had the highest positive correlation with the predicted variable. This measure seemed to share too much variability with other process measures. It was therefore excluded from the regression model because the variance that it explained was best accounted for by the others variables. Anxiety Sensitivity plays an important role in the etiology and maintenance of many forms of psychopathology, including anxiety disorders, depression, chronic pain, and substance abuse (Taylor, 1999). In this study, this measure was positively correlated to the predicted variable. The results of the present study demonstrate that

anxiety sensitivity is associated with a general tendency to interpret physical symptoms as physiological causes. The Symptoms Interpretation Questionnaire assesses physical symptoms from multiple domains and the Anxiety Sensitivity Index was the only process variable related to the physiological scale of the Symptoms Interpretation Questionnaire. Physiological interpretation of symptoms is, in other words, a catastrophic interpretation of symptoms and it is present in both Panic Disorder and health anxiety. Anxiety sensitivity may be a form of catastrophic interpretation specific to feared sensations that is subject to immediate increase in autonomic arousal.

The clinical implication of all the significant predictors of health anxiety should also be considered. As presented earlier, physiological interpretation of symptoms is the best predictor of illness worry. The inherent difficulty in direct cognitive intervention is a clinical limitation of the concept of catastrophic or physiological interpretation of symptoms. Very often, hypochondriac patients are already aware of their tendency to interpret symptoms in a catastrophic way but maintain the response pattern. A parallel can be made with GAD patients who, despite being fully aware of the uselessness of worry, nonetheless, continue to worry. In this case, cognitive intervention must more precisely target other faulty beliefs that maintain the tendency to worry. For instance, the belief that worry helps to find good solutions, that it enhance motivation, etc... (Dugas et al., 1998). This may be similar in health anxiety. Cognitive intervention must target faulty beliefs about good health or symptoms in general if it aims to weaken the catastrophic interpretation tendency. Unfortunately, there does not seem to have a lot of research specifically targeting faulty beliefs about good health or symptoms.

Moreover, two processes included in the GAD model conceptualized by Dugas et al. (1998) were significant predictors of health anxiety. Given these results, it would be interesting to adapt the GAD treatment proposed by Ladouceur et al. (2000) to health anxiety. Considering that this treatment has been found successful with GAD patients and that Hypochondriasis shares several characteristics of GAD, it would be an

opportunity to approach this disorder from a new perspective. Moreover, it appears that this treatment was particularly effective for health related worry (Langlois, Dugas, Léger & Ladouceur, 1998). As suggested earlier, the adaptation of this treatment should target faulty beliefs about worry in a way that would be more idiosyncratic for health anxiety. Hypochondriac patients must believe that worry is useful in a certain way: if they would not, they would stop worrying about illness.

The present study once again confirmed the implication of somatosensory amplification with respect to health anxiety. But, as we proposed for catastrophic interpretation, it is difficult to target this process directly and specifically. However, the cognitive-educational approach of Barsky (1988) could be an intervention that would weaken this process. He proposes a treatment that involves component-like information about the role of attention on symptoms, the reattribution of benign symptoms, and information about the impact of affects on symptoms. Attention training was also the main treatment target in Papageorgiou and Wells study (1998). However, caution must be taken when using this approach. This intervention could become a form of cognitive avoidance if it is the images and misconceptions created by the symptoms that are avoided. In other words, it will be a challenge for clinicians to educate patients to find a balance between the distraction from physical symptoms and cognitive avoidance.

As discussed before, the principal limit of this study is the possibility that the sample may not be representative of all manifestations of health anxiety. In fact, participants were volunteers and they may be different from those who don't admit that they excessively worry about illness. However, it will always be difficult to thwart this limit. Normally, hypochondriac patients don't participate in psychological studies because they think they are really diseased. This study is a first step in the good direction but the transversal design did not allow any conclusion regarding causal relationships. Future studies should use more experimental design and test causal relation between the different processes and health anxiety symptoms. Also, even if

we consider that the major processes related to health anxiety were considered in this study, it is probable that some aspect passed unnoticed. It could be interesting to consider the relation of health anxiety with the perception of internal control and external control. Also, in the future, it could be interesting to study, on the processes level, differences between subtypes of health anxiety. Another limit of the study is that some measures used were not completely validated in their French version.

Finally, the present study once again confirmed the relation of two variables with of health anxiety (or Hypochondriasis); somatosensory amplification and physiological interpretation of symptoms. It also demonstrated that two processes of GAD are related to health anxiety. Given these results, it would be interesting to adapt the GAD treatment proposed by Ladouceur et al. (2000) to health anxiety. The adaptation of this treatment must also target other processes, notably somatosensory amplification with an educational approach and reattribution of symptoms.

Hypochondriasis is the somatoform disorder which has received more research attention in recent years (Kellner & Warwick, 1992) but there remains much to discover. Future research should address a particular attention to the process implicated in health anxiety. Moreover, those processes must be clinically relevant hence they should be directly and specifically targeted in treatment.

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Table 1

General information about consultation, work incapacity and hospitalization

| Variables                                                         | <u>M</u> | <u>Mdn</u> | <u>SD</u> | Range  |
|-------------------------------------------------------------------|----------|------------|-----------|--------|
| Nb of consultation in the last year                               | 9,4925   | 9,0000     | 6,8763    | 31,00  |
| Nb of different health professional<br>Consulted in the last year | 4,4627   | 4,0000     | 2,0841    | 8,00   |
| Nb of day with work incapacity                                    | 27,5522  | 5,0000     | 69,2381   | 365,00 |
| Nb of day with hospitalization                                    | 1,3731   | 0          | 6,2252    | 43,00  |
| Nb emergency consultation                                         | 1,8507   | 1,0000     | 3,0662    | 20,00  |

Table 2  
Social-demographic characteristics

|                              | Frequency | Percentage |
|------------------------------|-----------|------------|
| Educational level            |           |            |
| Elementary school            | 1         | 1,3        |
| High School                  | 25        | 32,1       |
| College                      | 25        | 32,1       |
| University                   | 25        | 32,1       |
| Occupation                   |           |            |
| Employed                     | 51        | 65,4       |
| House keeping                | 9         | 11,5       |
| Student                      | 6         | 7,7        |
| Unemployed                   | 6         | 7,7        |
| Retired                      | 3         | 3,8        |
| Stop working due to Sickness | 1         | 1,3        |
| Civil Status                 |           |            |
| Married                      | 39        | 50,0       |
| Single                       | 25        | 23,0       |
| Divorced                     | 2         | 2,6        |
| Separated                    | 2         | 2,6        |
| Widowed                      | 1         | 1,3        |
| Commun in law                | 7         | 9,0        |

Table 3  
Primary diagnoses

|                                      | Frequency | Percentage |
|--------------------------------------|-----------|------------|
| Hypochondriasis                      | 31        | 39,7       |
| GAD                                  | 22        | 28,2       |
| Panic Disorder                       | 18        | 23,1       |
| Major Depressive Episode             | 2         | 2,6        |
| OCD                                  | 2         | 2,6        |
| Specific Phobia                      | 1         | 1,3        |
| Undifferentiated Somatoform Disorder | 1         | 1,3        |
| Insomnia                             | 1         | 1,3        |
| No diagnosis                         | 1         | 1,3        |

Table 4  
Secondary diagnoses

|                                                  | Frequency | Percent |
|--------------------------------------------------|-----------|---------|
| GAD                                              | 25        | 24,5    |
| Panic Disorder                                   | 22        | 21,6    |
| Hypochondriasis                                  | 17        | 16,7    |
| Specific phobia                                  | 12        | 11,7    |
| Major Depressive Episode                         | 10        | 9,8     |
| Social Phobia                                    | 8         | 7,8     |
| OCD                                              | 3         | 2,9     |
| Dysthymic Disorder                               | 3         | 2,9     |
| Agoraphobia                                      | 1         | 0,9     |
| Mood disorder due to a general medical condition | 1         | 0,9     |
| Nil                                              | 21        | 26,9    |

Table 5 Pearson Correlation for process measures, demographic variables and symptom measures.

|                   | Sex   | Age   | OVIS   | Physio. SIQ | Emo. SIQ | Neut. SIQ | PSWQ   | CAQ    | WWQ    | IWS    | ASI    | IU     | SSAS  |
|-------------------|-------|-------|--------|-------------|----------|-----------|--------|--------|--------|--------|--------|--------|-------|
| Age               | ,057  | 1,000 |        |             |          |           |        |        |        |        |        |        |       |
| OVIS              | ,122  | ,061  | 1,000  |             |          |           |        |        |        |        |        |        |       |
| Physiological SIQ | -,119 | -,158 | -,008  | 1,000       |          |           |        |        |        |        |        |        |       |
| Emotional SIQ     | ,089  | ,244* | -,039  | -,685**     | 1,000    |           |        |        |        |        |        |        |       |
| Neutral SIQ       | -,051 | -,073 | -,029  | -,401**     | -,216    | 1,000     |        |        |        |        |        |        |       |
| PSWQ              | -,193 | -,091 | -,019  | ,177        | -,008    | -,177     | 1,000  |        |        |        |        |        |       |
| CAQ               | -,071 | -,124 | ,067   | ,022        | ,066     | -,031     | ,384** | 1,000  |        |        |        |        |       |
| WWQ               | -,089 | -,091 | ,087   | ,113        | ,054     | -,145     | ,340** | ,411** | 1,000  |        |        |        |       |
| IWS               | -,118 | -,207 | ,002   | ,405**      | -,234*   | -,199     | ,435** | ,361** | ,278*  | 1,000  |        |        |       |
| ASI               | -,080 | -,061 | -,011  | ,292**      | -,040    | -,256*    | ,391** | ,296** | ,393** | ,406** | 1,000  |        |       |
| IU                | ,074  | ,085  | ,107   | ,046        | ,126     | -,125     | ,402** | ,475** | ,495** | ,369** | ,301** | 1,000  |       |
| SSAS              | -,186 | -,070 | ,008   | ,168        | -,162    | ,069      | ,122   | ,240*  | ,289*  | ,379** | ,356** | ,275*  | 1,000 |
| BDI               | ,006  | ,122  | ,281** | -,005       | ,121     | -,085     | ,421** | ,298** | ,348** | ,186   | ,402** | ,438** | ,148  |

Symptoms Interpretation Questionnaire (SIQ), Penn Stat Worry Questionnaire (PSWQ), Cognitive Avoidance Questionnaire (CAQ), Why Worry Questionnaire (WWQ), Illness Worry Questionnaire (IWS), Anxiety Sensitivity Index (ASI), Intolerance to Uncertainty (IU), Somatosensory Amplification Scale (SSAS), Beck Depression Inventory (BDI).

\* significant at 0.05 (bilateral)

\*\* significant at 0.01 (bilateral)

Table 6

Correlation and regression coefficients for the four retained process and the predicted variable (IWS).

|               | IWS  | SIQ | CAQ  | SASS | IU | Prob>t                       | $\beta$ | sR <sup>2</sup> |
|---------------|------|-----|------|------|----|------------------------------|---------|-----------------|
| SIQ           |      |     |      |      |    |                              |         |                 |
| Physiological | .41* |     |      |      |    | .0001                        | 0.35    | 0.15            |
| CAQ           | .36* | .02 |      |      |    | .027                         | 0.21    | 0.13            |
| SASS          | .38* | .17 | .24* |      |    | .016                         | 0.22    | 0.06            |
| IU            | .37* | .05 | .48* | .28* |    | .037                         | 0.19    | 0.03            |
|               |      |     |      |      |    | R <sup>2</sup> = .37         |         |                 |
|               |      |     |      |      |    | R <sup>2</sup> adjusted= .34 |         |                 |
|               |      |     |      |      |    | R= .61                       |         |                 |

Note. N = 78

\* p < .05

Illness Worry Questionnaire (IWS ), Symptom Interpretation Questionnaire (SIQ), Cognitive Avoidance Questionnaire (CAQ), Somatosensory Amplification Scale (SSAS), Intolerance to Uncertainty (IU).

## **CHAPITRE 4**

### **ADAPTATION D'UN TRAITEMENT DE L'INQUIÉTUDE EXCESSIVE À L'HYPONDRIE.**

## Résumé

Les préoccupations concernant la santé sont présentes autant dans le Trouble d'anxiété généralisée que dans l'hypocondrie. Contrairement au Trouble d'anxiété généralisée, où l'inquiétude touche plusieurs thèmes, la santé est le thème central de l'hypocondrie. Selon Barsky (1992) le Trouble d'anxiété généralisée serait la condition à vie le plus souvent comorbide avec l'hypocondrie. Une étude récente a démontré que des processus associés au Trouble d'anxiété généralisée étaient aussi impliqués dans l'inquiétude concernant la maladie. Ainsi, l'adaptation d'un traitement du Trouble d'anxiété généralisée à la question de l'hypocondrie serait envisageable. Six individus souffrant d'un trouble d'hypocondrie ont participé à un protocole à niveaux de bases multiples. Les cibles de traitements étaient les suivantes : (1) la prise de conscience de l'inquiétude; (2) l'intolérance à l'incertitude; (3) les fausses croyances concernant l'inquiétude et la santé; (4) l'évitement cognitif et comportemental ainsi que la prévention de la réponse; (5) l'orientation inefficace aux symptômes physiques et aux problèmes divers et (6) la prévention de la rechute. Le traitement adapté s'est avéré efficace puisque les six participants présentaient un haut niveau de fonctionnement un an après la fin de l'intervention. Le traitement de l'inquiétude excessive de la maladie a eu un impact sur la mesure principale de symptômes. Cet impact s'est maintenu 6 mois et un an après la fin de l'intervention. On observe aussi un changement sur plusieurs mesures de processus à la fin de l'intervention comme aux suivis.

Adaptation of a GAD treatment for Hypochondriasis

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Running head: HEALTH ANXIETY, HYPOCHONDRIASIS, TREATMENT

### Adaptation of a GAD treatment for Hypochondriasis

Health preoccupations are present in both Generalized Anxiety Disorder (GAD) and Hypochondriasis. Contrary to GAD, in which excessive anxiety and worry encompass a number of events or activities, health is the central theme of worry in Hypochondriasis. According to Barsky (1992), GAD has the highest lifetime comorbidity in hypochondriacal patients. A recent study demonstrated that two processes implicated in GAD are also implicated in health anxiety. In light of these findings, adapting the treatment for GAD, as advanced by Ladouceur et al. (2000) to Hypochondriasis was warranted. In the present study, six hypochondriacal patients participated in a multiple baseline single case design. Patients were assessed by means of a structured interview both before and after treatment. Treatment targeted the following components: 1) awareness of worry, 2) intolerance of uncertainty toward health, 3) faulty beliefs regarding worry and anxiety, 4) cognitive avoidance and relapse prevention of reassurance or avoidance behaviors, 5) poor orientation to physical symptoms and problems, and 6) relapse prevention. Following treatment, none of the six patients met criteria for Hypochondriasis. Results confirmed that a treatment targeting excessive worry is effective for Hypochondriasis. All participants reached a high endstate functioning at the 1 year follow up. The clinical implications of these results are discussed.

### Adaptation of a GAD treatment for Hypochondriasis

Some years ago, Hypochondriasis was considered as a disorder particularly resistant to intervention (Nemia; 1985) and the prognosis was considered as low (Fallon, Klein, & Liebowitz, 1993). Prevalence is difficult to assess because nosological borders are woolly and also because the limit between the clinical and the non clinical level is not clearly defined (Barsky, Wyshak, Klerman & Latham, 1990). However, prevalence at six months is considered to be close to 4.2 to 6.3 % in a clinical setting (Barsky et al., 1990). A multi-site international study estimates that Hypochondriasis is found in 0.8 to 1.5% of the general population (Gureje, Ustün, & Simon, 1997). Prevalence is most likely higher in the context of health services than in the general population since these persons are already seeking medical treatment (Noyes, Happels, & Yagla, 1999).

Individuals suffering from Hypochondriasis desperately seek to identify the physical causes of their symptoms and will often consult several medical professionals. The cost for society is significant. According to DSM-IV, Hypochondriasis is defined as the preoccupation with or the belief that one has a serious disease (APA, 1994). The fear of the illness or health anxiety is an important aspect and may be a basic aspect of Hypochondriasis, and in this sense, it is interesting to highlight the overlap between this somatoform disorder and the anxiety disorder. Hypochondriasis shares some similarities with a few anxiety disorders. They are characterized by health preoccupations, which are common in Generalized Anxiety Disorder (GAD) (Barsky, 1996). Furthermore, as proposed by Salkovskis and Clark (1993), Hypochondriasis and Panic Disorder patients have an enduring tendency to misinterpret bodily sensations. Compulsive behaviors widely found in the Obsessive-Compulsive population (OCD) are also present in Hypochondriasis (Barsky, 1992). Evidence suggests that categorizing Hypochondriasis as a somatoform disorder is questionable. Some authors proposed that Hypochondriasis should be considered as an anxiety disorder (Fallon, et al., 1993; Schimdt, 1994; Noyes, 1999).

Recently, some authors considered that strategies used successfully in the treatment of other forms of anxiety may be also used for Hypochondriasis or health anxiety (Bolduc, Freeston, Mainguy, Marchand, & Todorov, 1999). For example, the clinical conceptualization of Hypochondriasis proposed by Warwick and Salkovskis (1990) implies components usually used in the treatment of Obsessive-Compulsive Disorder. This conceptualization has been demonstrated effective in the treatment of this disorder (Warwick, Clark, Cobb & Salkovskis, 1996; Clark et al, 1998). Hence, it can be proposed that these clinical aspects were useful in the treatment of Hypochondriasis because the disorders share some of the same processes. Some studies demonstrated that cognitive-behavioral treatment is a promising approach for the treatment of this disorder in an individual or in a group design (e.g. Warwick, Clark, Cobb & Salkovskis, 1996; Clark et Al, 1998; Bouman & Visser, 1998; Avia et Al., 1996; Stern & Fernandez, 1991; Furer, Walker, Vincent, 1999). Those cognitive-behavioral treatments target processes that are implicated in health anxiety, but the processes are also implicated in other anxiety disorders: reassurance seeking, behavioral avoidance, cognitive avoidance, and faulty belief.

A recent study assessed different processes implicated in health anxiety (Langlois & Ladouceur, 2002). The processes assessed in that study were related to GAD, Panic Disorder, OCD and Hypochondriasis. All processes were used as predictors of illness worry. Results of backward regressions demonstrated that four processes explained a significant and unique part of the variance of illness worry. In order of importance, those processes were 1) tendency to interpret symptoms as organic abnormality; 2) the cognitive avoidance; 3) the somatosensory amplification of symptoms and finally; 4) intolerance to uncertainty. This study raises some of the processes that must be taken into account in the treatment of Hypochondriasis or health anxiety.

A good treatment of Hypochondriasis must take into account the particular characteristics of health anxiety. A recent analogue study compared three kinds of

cognitive intrusions: illness intrusion, obsessionnal intrusion and worry. The comparison of the intrusions showed that illness intrusions share characteristics of worry and obsessionnal intrusions, but also have their own characteristics (Langlois, Freeston, Ladouceur & Gosselin, 2002). This kind of intrusion seems to be particularly egosyntonic. In other words, the hypochondriac patients may consider that it is normal to worry about illness and that it is justified to seek reassurance in a medical setting as soon as physical symptoms appear. This egosyntonic evaluation results probably from faulty beliefs concerning health and illness. The impact of specific faulty beliefs on health anxiety has been recently tested in an analogue population (Pelletier, Langlois & Ladouceur, 2000a, and b). In this study, two new measures were validated: (1) the first targets faulty belief about illness worry (usefulness of worry illness and magical thinking in illness worry) and (2) the second targets general faulty beliefs concerning health (vulnerability, characteristics of good health, responsibility in illness, consequences of illness, magical thinking in illness). Results demonstrated that a group with a high tendency to worry about illness present more general faulty beliefs concerning health compared to a group with a low tendency to worry about illness. A cognitive-behavioral treatment must take into account this new information. The cognitive restructuring of the faulty beliefs specific to health anxiety may improve the efficacy of cognitive-behavioral treatment.

It has been demonstrated that if we consider the percentage of verbal and image content, illness intrusion cannot be labeled as pure obsessionnal intrusion or pure worry (Langlois et al. 2002). The content of obsessionnal intrusion seems more experienced as images and worry seems more experienced in a verbal form. Illness intrusion seems to take a middle ground and is experienced as much as verbal content as it is an image content (Langlois et al. 2002). Treatment of illness intrusion should account for both visual and verbal intrusions. As proposed by Foa and Kosak (1986), successful processing of fearful stimuli is dependent upon physiological habituation and cognitive modification of associated danger-laden misconceptions. Considering that cognitive exposure was included in cognitive-behavioral treatment for OCD (Freeston et al.

1997) and GAD (Ladouceur et al., 2000) it appears that this treatment target may also be effective for illness intrusion in Hypochondriasis.

Current findings seem to indicate that the general structure of illness intrusions closely resembles that of worry (Langlois et al., 2002). Considering these similarities, it would be interesting to adapt a treatment of GAD to Hypochondriasis. A treatment was recently proposed by Ladouceur et al (2000) and appears to be particularly effective for health related worry (Langlois, Dugas, Léger, & Ladouceur, 1998). This treatment program presents the advantage of targeting worry based in reality or situations amenable to problem solving and targeting worry about situations that do not yet exist (e.g., developing cancer).

The aim of the present study is to test with a multiple single case design the adaptation of a cognitive behavioral treatment for Generalized Anxiety Disorder, which has already demonstrated its efficacy in the treatment of excessive worry. This adaptation takes into account the recent findings in health anxiety but also includes the component used in previous effective treatment studies of Hypochondriasis. The processes considered in the treatment are numerous. Intolerance to the uncertainty about health is targeted specifically and is presented at the start of the treatment. The cognitive restructuring of faulty beliefs about worry is similar to the method used in Ladouceur et al. (2000) but this adaptation also targets the specific faulty beliefs associated to health anxiety (Pelletier, Langlois & Ladouceur, 2000, a, b). Cognitive exposure is used to enhance the physiological habituation and the cognitive modification of associated illness intrusions. This adaptation also includes, as in the original treatment, the psycho-education of problem solving. This aspect was considered in this adaptation since it was demonstrated by Clark et al. (1998) that behavioral stress management was effective for Hypochondriasis. The rationale can be formulated as followed: if daily problems are discarded more rapidly with problem solving, there is fewer chance that symptoms of anxiety would be interpreted as signs of illness. Meanwhile, hypochondriacal patients may observe that the symptoms that they

usually interpret as signs of illness are in fact anxiety symptoms or reactions to stressful events.

This treatment adaptation is an attempt in approaching Hypochondriasis in a new way, as a worry illness. The treatment wants to treat it by targeting excessive worry. At the same time, it will consider strategies that have already been demonstrated as effective in the treatment of this disorder.

## Method

### Participants

The participants of the present study were selected among participants of a previous study that targeted processes in health anxiety (Langlois & Ladouceur, 2002). From all participants meeting the entry criteria, six were randomly selected. The entry criteria were: 1) a primary diagnosis of Hypochondriasis; 2) no change in medication type or dose during the 12 weeks prior to treatment; 3) willingness to keep medication status stable during the treatment; 4) no evidence of suicidal intent; 5) if there was another anxiety or mood disorder, this disorder must be of lower severity; 6) no evidence of current substance abuse; and 7) no evidence of current or past schizophrenia, bipolar disorder or organic mental disorder. A clinician assessed participants with the Anxiety Disorder Interview Schedule for DSM-IV. Interviews were tape-recorded and a second clinician independently confirmed the diagnosis by listening to the recordings. The participants' physicians were contacted to confirm that symptoms were not part of a diagnosed disease and that the reaction to the symptom disease was excessive.

Participant 1 was a 53-year-old married women that had throat cancer 5 years ago. At the time of the study, specialists considered her in remission and without risk of relapse in short term. However, she had annual follow-ups. She met clinical criteria for Hypochondriasis with a severity rating of 7/8. This woman tended to repetitively palpate her throat daily and often asked her husband to check her throat. She tried to

avoid situations that reminded her of cancer treatment despite the fact she worked in a medical university. This participant perceived every abnormal symptom as a sign of immune weakness and a danger of cancer relapse.

Participant 2 was a 56-year-old married woman who interpreted every physical symptom as the sign of a severe illness. At intake, she met the Hypochondriasis criteria with a severity rating of 7 and also met criteria for Panic Disorder with Agoraphobia (severity rating of 5) and GAD (severity rating of 4). Every symptom was interpreted as a sign of different types of cancers depending on the body source. This woman also had a diagnosis of irritable bowel syndrome. Symptoms associated with the bowels were interpreted as a sign of cancer even though she had been correctly investigated. She took alprazolam if needed however the last consumption was stable 12 weeks before treatment.

Participant 3 was a 40-year-old single man who manifested health anxiety since he had a cerebral-vascular accident 2 years ago. He had catastrophically interpreted symptoms that could have been associated to CVA : headaches, cardiac palpitations, feelings of dizziness, hot flashes, numbness. At intake, he met Hypochondriasis criteria with a moderate severity (4/8). His medication (Warfarine sodique) was regularly reevaluated at the time of the study. Specialists consider this CVA as very exceptional considering that he did not present any risk factors and he was younger than usual at the time of his accident. However, for insurance classification purposes, he is now considered among the population at risk. Moreover, his physician is of the opinion that he could easily live a long life without any further CVA's.

Participant 4 was a 42-year-old single man who had been on medical leave for several years. For the last five years, his mood had been stabilized with sertraline and he also used a stable dose of clonazepam. His diagnosis at intake was Hypochondriasis with a severity rating of 6 and GAD (severity rating of 4). He was particularly preoccupied with heart palpitations and tiredness symptoms. He was convinced that

physicians may not have found the real cause of his symptoms and that he was in fact suffering from a severe illness.

Participant 5 was a 54-year-old widowed woman with a diagnosis of Hypochondriasis with, at intake, a severity rating of 4. This participant was primarily preoccupied with pain and a burning sensation in her mouth. Despite several medical consultations, which did not identify an organic cause to the symptoms, she continued to believe that there was a real organic cause and that she was suffering from a severe disease. She also tended to catastrophically interpret any other bodily symptoms. This participant did not meet GAD criteria at intake but was easily worried with several subjects. She recognized after treatment that she probably minimized her GAD symptoms at intake. This participant also had a benzodiazepine medication taken rarely and exceptionally.

Participant 6 was a 25-year-old single woman who, at intake, met Hypochondriasis criteria with a severity rating of 5. She had a diagnosed bladder disease controlled with medication. However, the secondary effects of the medication and the symptoms of the disease itself were often interpreted as signs of bowel cancer. She also interpreted other body symptoms as signs of different types of cancers.

### Treatment Outcome Measures

Treatment outcome was assessed with daily self-monitoring, self-reporting questionnaires and standardized clinician ratings.

### Daily Self-Monitoring

A self-monitoring booklet was used to evaluate 2 questions on a daily basis during baseline and treatment, as well as at the 6 month and the 1 year follow-up consultations. The questions targeted the following topics: 1) the time spent worrying about illness and 2) the intensity of the need for reassurance seeking behaviors. Participants rated each question on a 100-point scale. For the first question (time spent

worrying), 0 indicated a complete absence of worry and 100 represented their most worrisome days. The maximum (100) was predetermined before baseline.

### Self-report questionnaires

Illness Worry Scale ((IWS); Robbins & Kirmayer, 1996). This measure was designed to quantify the tendency to worry that bodily sensations or feelings indicated serious diseases and feeling vulnerable about becoming ill. The original version of the IWS consists of 9 yes/no questions derived from the Illness Behavior Questionnaire (Pilowsky, Spence, Cobb, Katsikitis, 1984). This measure was employed in the present study because it appears to be uncontaminated by related constructs of body or self-focus and symptomatology (Robbins & Kirmayer, 1996). These aspects will be considered with other measures. This questionnaire has moderate internal consistency ( $\alpha = .70$ ), a stability of .64 over a 12-month period and is highly correlated ( $r = .82$ ) with the Withely index of Hypochondriasis (Pilowsky, 1967). The internal consistency of the version used in the current study is high ( $\alpha = .83$ ). To enhance variability in the present study, a Likert scale (0-5; not at all corresponding to extremely corresponding) was employed.

Symptom Interpretation Questionnaire (SIQ; Robbins & Kirmayer, 1991). The Symptom Interpretation Questionnaire was designed to evaluate three kinds of attributions (psychological, somatic, and neutral) for 13 physical symptoms. Internal consistency (psychological  $\alpha = .87$ , somatic  $\alpha = .71$  and neutral  $\alpha = .81$ ) and convergent validity are good for each scale. Confirmatory analysis demonstrates the three different constructs. We only used the somatic score in the present study.

Overvalued-Ideas Scale (OVIS; Neziroglu, McKay, Yaryra-Tobia & Steven, 1997). The Overvalued Ideas Scale is a semi-structured interview designed to measure overvalued ideation in OCD. Overvalued ideas are strongly held beliefs that fall along a continuum between normal and delusional thoughts. This measure was chosen to

assess the impact of conviction on health anxiety. This measure assesses strength, bizarreness, belief accuracy, reasonableness, efficacy of compulsions and other related variables. The English version of the Overvalued Ideas Scale has good internal consistency and convergent validity. However, the French version, created with a back-translation, has poorer internal consistency ( $\alpha = .55$ ).

Somatosensory Amplification Scale (SSAS; Barsky, Wyshak, & Klerman, 1990). The Somatosensory Amplification Scale contains 10 items regarding unpleasant physical sensations that do not necessarily connote serious diseases. Participants are asked to rate the degree to which statements reflect them on an ordinal scale from 1 to 5. The English version of the Somatosensory Amplification Scale has good test-retest reliability (74 days;  $r = .79$ ) and internal consistency ( $\alpha = .82$ ). The French version, created with a back translation for the present study, has moderate internal consistency ( $\alpha = .72$ ).

Intolerance to Uncertainty (IU; Freeston et al., 1994). The Intolerance to Uncertainty is designed to assess emotional, cognitive and behavioral reactions in uncertain situations. This measure contains 27 items that participants are required to rate on a 5 point Likert scale (not at all corresponding to extremely corresponding). This measure has a very high internal consistency ( $\alpha = .91$ ), good criteria and construct validity, and adequate test-retest reliability (5 weeks).

Cognitive Avoidance Questionnaire (CAQ; Gosselin et al, 2001) The Cognitive Avoidance Questionnaire is designed to assess various cognitive avoidance strategies: 1) thought substitution, 2) transformation of images into verbal thoughts, 3) distraction, 4) avoidance of trigger, and 5) suppression of thoughts. The Cognitive Avoidance Questionnaire contains 25 items which participants are required to rate on a 5 point Likert scale (not at all corresponding to extremely corresponding). This measure has very good internal consistency ( $\alpha = .96$ ), construct and convergent validity.

The Beck Depression Inventory (BDI; Beck, Steer, & Garbin 1988) The Beck Depression Inventory was employed to assess the implication of depressive symptoms in health anxiety. This measure consists of 21 items covering the main depressive symptoms. The French translation has excellent psychometric properties (Bourque & Beaudette, 1982).

The Health Perception, Belief and Behavior Questionnaire (Langlois, Freeston, Vézina & Ladouceur, 1997) This measure was designed to assess health-related perceptions, behaviors, and attitudes. For the present study, only descriptive information was considered: medical consultation, hospitalization, medication, etc.

#### Standardized clinician rating

Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV; Dinardo, Brown, Esler, & Barlow, D. H. (1995). The ADIS-IV is a structured interview designed to assess all anxiety disorders and screen for mood disorders, somatoform disorders, psychoactive substance use disorder, psychotic disorders and medical problems. The interview yields information on the presence of Axis 1 disorders with severity ratings on a 9-point Likert scale (0-8). The ADIS-IV was used to diagnose patients and to evaluate treatment outcome.

#### Experimental design

A multiple baseline design across individuals was used. This design provides control over maturational effects and life events by showing that participants improve when treatment is introduced (Hersen & Barlow, 1976; Ladouceur & Bégin, 1980).

#### Therapist

The therapist (the first author) was experienced in cognitive-behavioral treatment of anxiety disorders and was supervised by a senior clinical psychologist (the second author). The therapist had the opportunity to do an internship in a health center

specialized in somatoform disorders. He had done a pilot study that consisted in the application of the worry treatment with health anxiety patients. He applied this integral treatment for a GAD treatment group study. He also had significant experience in the assessment of health anxiety.

### Treatment

One-hour therapy sessions were conducted weekly and participants were told the treatment would last 12 to 14 sessions, depending on the evolution and the needs of the participants. Participants 3, 5 and 6 had 12 sessions. Participants 1,2 and 4 had 14 sessions. The treatment consisted of the following goals:

#### Awareness Training

The chain of events created by the worry phenomenon was presented to the participant. Different daily triggers can provoke the “What if” questions. For the participants in this study, triggers were often a physical sensation but also a health report or a discussion. These questions act as a trigger of worry, which provokes the anxiety symptoms and a number of different somatic reactions. With time, demoralization and exhaustion appear. The patient was also informed that anxiety symptoms or demoralization symptoms could be triggers for new illness worry or confirmation of disease. The patient was educated in the distinction of two kinds of worry: 1) worry about actual problems and 2) worry about eventual problems (see Ladouceur et al. 2000). Gradually, patients became aware that worry was triggered by symptoms real in themselves but the content of that fear is rather an eventual catastrophic consequence (disease, cancer...).

#### Intolerance to Uncertainty in Health

Participants must understand that uncertainty is an integral part of life and particularly with respect to health. They were informed that compared to others, they have low tolerance of uncertainty. We tried however to make them understand that it's more realistic to learn to tolerate uncertainty rather than trying to control and to attain

certainty in health. This was presented to the participant by explaining that medical research is always in development, that certain illnesses have not yet been discovered, that certain tests do not yet exist or are not infallible. Perfect control of health is therefore impossible. Patients were asked to use a model of tolerance and try to imagine their reaction and interpretation when faced with similar physical symptoms. Response prevention was the best way to demonstrate that an unpleasant sensation can sometimes be tolerated and that it does not warrant a medical consultation or other kind of reassurance. Participants tolerated the sensation without reassurance and finally accepted that it disappeared without complications.

### Faulty Beliefs Concerning Worry and Health

Participants were informed of the impact of two kinds of faulty beliefs. First, it was demonstrated to participants that faulty beliefs about worry may maintain the tendency to worry about illness. It was suggested that participants must confront their faulty beliefs: worry can prevent illness; worry will make me react more rapidly to symptoms; if I worry about illness I won't be surprised if it comes true. Secondly, participants were invited to reevaluate their general view of illness or health. Using cognitive restructuring, participants confront different faulty beliefs: perception of vulnerability, the consequence associated to illness, personal control of illness, definition of good health and magical thinking about illness.

### Problem Orientation and Orientation to Physical Symptoms

The participants targeted the actual problems. They were informed that they could have reactions to problems or symptoms, which are not effective and are in fact harmful to problem solving. The physical symptom is considered here as a real and actual problem but the emphasis is put on the ineffective and premature reaction to that symptom. The participant learns to transform his/her threat perception into challenge perception and learns to accept that his or her body can't always be in a perfect shape. However, we must not forget that the objective of the intervention is to have the

participant realize that the symptom is not a problem in itself. The symptom may only be a symptom and not necessarily a sign of illness. Participants are also trained to rapidly recognize and solve daily problems. This has two principal advantages: 1) effective problem solving may decrease the severity of anxiety symptoms; and 2) participant can realize that daily problems may influence the apparition of several physical symptoms and that symptoms may be a reaction to stress or problems.

### Cognitive avoidance, neutralization and behavioral avoidance

Avoidance and neutralization of intrusions is a process that maintains the tendency to worry. The more an illness intrusion is avoided or escaped, the more and the stronger this intrusion will reappear. The exposure to threatening images was presented as the new skill to be used when worry concerns an eventual problem (illness worry). With repetitive exposure to the illness intrusion, participants understood the phenomenon of habituation to anxiety. Participants were asked to describe in more concrete terms the images and the story of their illness intrusion. They recorded their description and listened to it repetitively with proscription of all voluntary activity used to neutralize the images. Participants were also informed that they must expose themselves to different triggers associated to illness (hospital, illness reports, and discussions about illness...). Behavioral exposure to these triggers combined with cognitive exposure may enhance the successful processing of this fearful schema.

### Relapse Prevention

The last two treatment sessions were devoted to relapse prevention. The patients viewed a summary of the strategies used for illness worry. The distinction between lapse and relapse was presented. The fear of relapse was considered as a typical worry and they must apply the same strategies for that preoccupation. They were informed that some periods could be more difficult but that at those moments they must apply their new skills in a more structured way.

### Follow-up assessment

Follow-up assessments were held 6 months and 1 year after treatment. Before each follow-up session, participants were asked to complete their daily self-monitoring booklet (the same 2 questions) for one week and to complete all questionnaires. They were assessed by a clinician using the ADIS-IV at 6-month and 1 year follow-up.

### Treatment Integrity

All sessions were recorded and an independent evaluator (a graduate student) checked 25% of sessions by using a treatment intervention checklist made by our team.

Treatment sessions were divided into 4 quartiles and 1 session was randomly chosen in each quartile to ensure that treatment integrity considered all phases of treatment. The evaluator calculated the proportion of interventions that were indicated in the protocol on the overall session time. Integrity for the 6 combined participants reached 96.9%. Most of the time, the interventions that were not indicated in the protocol concerned clinical discussion on another diagnosis (e.g. insomnia, panic, lost of interest).

## Results

### Treatment outcome

Treatment outcome and maintenance were assessed with data obtained from daily self-monitoring, self-report questionnaires and standardized clinician ratings.

### Daily self-monitoring

Figure 1 presents the daily self-monitoring of illness worry. If we consider a decrease of 50% in the time spent worrying, only participant 4 did not improved at any time during the study. For the five other participants, gains were maintained at the 6 and 12 months follow-up. These observations are in function with the mean percentage for the baseline, pretest, post-test, and the 6 and 12 months follow-ups.

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Figure 2 presents the daily self-monitoring of the need for reassurance. The need for reassurance decreased for all participants during the treatment and gains were maintained at the 6 months and 1-year follow-ups. If we consider a decrease of 50% of the need for reassurance, only participant 3 did not improved at posttest. However, he presented improvement at the 6 month and 1-year follow-ups.

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#### Standardized Clinician Ratings

Independent clinicians experienced with the ADIS-R conducted the posttest, and the 6 month and 1-year follow-up evaluations. The presence of Axis I disorders with a severity rating was noted. Table 2 shows the standardized clinician ratings. At posttest, participant 1, 3, 4, 5, and 6 did not meet criteria for any disorders. Participant 2 still met criteria for Panic Disorder with Agoraphobia and Blood Phobia but not for Hypochondriasis. We must remember that participant 2 presented GAD disorder at pretest but not at posttest but the residual symptom for GAD were quite severe.

At the six month follow up, there was no change for participants 2, 3, 5, and 6. Participant 1 presented a major depressive episode probably created by his health anxiety. She did not fear illness for 6 months, therefore she did not meet criteria for Hypochondriasis. However, the independent rater considered that her residual hypochondriac symptoms were severe. The symptoms severity was not detectable in the self-report questionnaires because they were filled out one week before the relapse episode and before the standardized clinician rating. This episode appeared at the same date of the chemotherapy treatment some years before. In light of this, results for

participant 1 must be interpreted with caution at the six month follow-up. Changes for participant 4 were related on the GAD diagnosis. This participant met the criteria for GAD at pretest and not at posttest. However, this difference was not important since there were severe residual symptoms for GAD at posttest.

At the one-year follow-up, when compared to the 6-month follow-up, there was no change for participants except for participant 1. Participant 1's condition had improved even though she presented an adaptation disorder at this time. Family and professional conflicts were the causes of the disorder.

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### Self report questionnaires

For the treatment outcome self-report data, two indications of clinically significant changes were calculated. First, cutoff points were used to determine if scores were in the clinical range at pretest, posttest and follow-up. As proposed by Truax (1991), clinical change should occur when the level of functioning subsequent to therapy places the client closer to the mean of the functional population than it does to the mean of the dysfunctional population (p. 634 for a description of the mathematical formulas). Normative data for the clinical distribution comes from a preceeding study in our laboratory. In this study, 78 participants were assessed and met the criteria for clinical health anxiety (Langlois & Ladouceur, 2002). Normative data for the non-clinical distribution came from results of our other recent analog studies using the same measures.

The second method used to assess the clinically significant changes was to question how much change had occurred during the treatment. Thus a severe patient

score may reflect significant change but may still be in the clinical range. Jacobson and colleagues (1991) have proposed a Reliable Change index (RC). When RC is larger than 1.96, it may be concluded that the change is real and cannot be explained by the error relative to the measure.

### Symptoms measures

Table 1 presents the results on all self report questionnaires for the six participants. All scores are in the clinical range for the symptom measure (IWS) at pretest. At posttest, all participants reached the RC index and only Participant 2 was still in the clinical range. At the six month and 1-year follow-ups, all participants presented scores in the non-clinical range and met the RC index. We decided not to present results on BDI and PSWQ for two reasons. First, only participants 1 and 4 were in the clinical range and their scores were very close to the non-clinical range. Second, no participants presented change in score at posttest and follow-up that met the minimum RC.

### Process Measures

We consider that a participant considerably improved at the process level if he presented a reliable change and a non-clinical score for two processes measures. Participants 2, 4, and 5 met this criterion at any time during treatment. Participant 1 did not meet this criterion at any time during treatment. Participant 3 did not meet this criterion at posttest or at the 1 year follow-up. Participant 6 met the criterion at posttest and the 6 month follow-up but did not maintain this gain at the 1-year follow-up. When reliable change was observed for different process measures at any time during treatment, we observed that CAQ is the process that is the most influenced by treatment (5 participants out of 6). The SIQ and conviction follow (4 participants out of 6). SSAS and IU are not very influenced by treatment (2 participants out of 6).

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### Endstate functioning

To determine endstate functioning at posttest, and the 6 and 12-month follow-up, a composite score was derived from the principal measures. Criteria for the different assessment modality were the following: (1) a decrease of at least 50% in daily monitoring scores of time spent worrying about illness; (2) a decrease of at least 50% in the intensity of the need for reassurance; (3) an absence of Hypochondriasis as measured by the ADIS-IV; (4) a reliable change for the symptom measure (IWS); (5) a score in the non clinical range for the symptom measure (IWS); (6) at least two process measures that met reliable change index and a non-clinical score. The number of modalities on which the specific criteria was met determined the level of endstate functioning: low (0-2modality), moderate (3-4) and high (5-6).

When the criteria were considered, results showed that only participant 3 did not present a high endstate functioning at the end of treatment. At the six-month follow-up, only participant 1 did not maintain gains and participant 3 presented an improvement. At the 1-year follow-up, all participants presented a high endstate functioning. Endstate functioning for all time is presented in table 3.

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## Discussion

The primary aim of this study was to test the effectiveness of a cognitive-behavioral treatment of excessive worry with respect to Hypochondriasis. The treatment was an adaptation of a GAD treatment program that has already been demonstrated as effective (Ladouceur et al., 2000). The overall results suggest that a treatment of excessive health worry is a promising approach: the results show that all participants reached a high endstate functioning at the 1-year follow-up. Considering that the treatment outcome was assessed using different modalities (self-monitoring, standardized self-report questionnaires and structured interview) it can be concluded that all participants benefited from this treatment.

Because of the preliminary nature of this study, we voluntarily offered treatment to participants who presented no other diagnosis or when comorbidity was present, Hypochondriasis was clearly the main interfering diagnosis. Since the diagnosis of Hypochondriasis is often comorbid with other diagnoses (Barsky, Whysak, & Klerman 1992; Noyes, Kathol, Fisher, Phillips, Suelzer & Woodman, 1994; Kenyon, 1964), it is difficult to generalize results to all manifestations of health anxiety. It would be interesting to empirically test this aspect in larger clinical trial that better represents the different manifestation of Hypochondriasis or Health Anxiety. In the present study, only participants 2 and 4 were in this condition and the impact of the treatment seemed to be specific considering that they presented the same comorbid diagnosis at post-test and at the 1-year follow-up. It would be interesting to evaluate if, in a larger clinical trial, this observation will remain or if the treatment of illness worry have an impact on other diagnoses as it was seen in another study (Ladouceur et al., 2000). In this treatment study, targeting excessive worry in GAD also decreased the number of other diagnosis.

It is interesting to observe the clinical change on the different processes measure. First, cognitive avoidance seems to be the process that is the most influenced

by the treatment. Five participants presented a reliable change on this measure at post-test and at the 1 year follow-up. Six participants presented a reliable change at the 6-month follow-up. Another recent study demonstrated that cognitive avoidance was a good predictor of illness worry (Langlois & Ladouceur, 2002). In the present study, treatment targeted this process by using cognitive exposure. We proposed in the introduction that a treatment of illness intrusion should account for both visual and verbal content of the intrusions. Considering the clinical reliable changes for the Cognitive Avoidance Questionnaire, it may suggest that cognitive exposure effectively enhances the emotional processing of the illness worry content. Interestingly, cognitive exposure may have an impact that was not expected on participants 1 and 3. In fact, these participants may have a traumatic aspect in their illness worry (participant 1 had a past throat cancer and participant 3 had a past ACV). Cognitive exposure may have an impact on the past trauma aspect of their illness intrusions. So, at the same time it may have targeted the emotional processing of the past trauma and the emotional processing of the fear of a relapse or the fear of new illness. This suggests that a worry treatment may be effective for individuals who suffered from a disease and reacted to it by excessive worry. These two participants openly proposed that this treatment should be offered as a post-treatment medical follow-up intervention.

The results also show that 4 participants presented a reliable change on the physical scale of the interpretation questionnaire at post-test and the 1 year follow-up. Physical misinterpretation is included in the definition of Hypochondriasis (APA, 1994). In this study, as in other studies, it is difficult to clearly determine if it is a process or a symptom. Results showed that all participants presented a reliable change on the principal symptom measure of this study (Illness Worry Scale; IWS). In this sense, physical interpretation scale of the Symptom Interpretation Questionnaire may be a less sensitive symptom measure compared to IWS but it may also indicate that physical interpretation of symptoms is rather a process measure that is more stable than a symptom measure. Warwick and Salkovskis (1990) proposed a circular model of health anxiety where catastrophic interpretation of physical symptoms may be targeted

by cognitive restructuring. In the present treatment, catastrophic interpretation of the symptom was not directly targeted with cognitive restructuring. It was indirectly targeted in two ways: (1) tolerance to uncertainty and (2) problem orientation. For example, participants were invited to interpret the symptom, as a tolerant person would do. Results showed that only 2 participants presented a reliable change for intolerance to uncertainty at posttest and the 1 year follow-up. This result must be interpreted by taking into account that this measure would probably be more sensitive if items were presented only as a function of illness. Basically, this measure was created for the assessment of intolerance to uncertainty in several worry domains. So logically, since the treatment only targeted illness worry theme, the general tendency to be intolerant to uncertainty can't change very much. Symptom interpretation was also indirectly targeted by the critic of the ineffective and premature reaction to that symptom, the orientation to symptoms. The participants learned to transform their threat perception into challenge perception. At the same time they learned to accept that their body can't always be in a perfect shape. They also learned that sometimes it is normal to have unexplained bodily symptoms. Unfortunately, the present study did not assess the effect of the treatment on the first reactions to symptoms and the first reactions to other daily problems. A next controlled clinical trial should attempt to assess this aspect.

The results show that the Somatosensory Amplification Scale (SSAS) presented a reliable change for only 2 participants. The Somatosensory amplification includes bodily hypervigilance, the predisposition to focus on certain weak and infrequent bodily sensations, and a tendency to appraise them as pathological and symptomatic of disease, rather than normalizing them (Barsky et al., 1990). Since the concept is general rather than specific, direct cognitive intervention was difficult in this context. This observation seems coherent with another study where it has been demonstrated that amplification score does not change in time. This is the case even though hypochondriacal symptoms decrease as a function of time (Barsky, Fama, Bailey, Ahern, 1998). These results may support the idea of the trait-like character of amplification and raise the possibility that additional processes must be present for the

occurrence and/or maintenance of health anxiety. However, it is still difficult to demonstrate that the hypochondriacal threshold for physical discomfort is explained at either a neuro-biological level or a cognitive perceptual level. Future innovative protocol should continue targeting this interesting but complex aspect.

Until recently, effective treatment for Hypochondriasis has been lacking and the prognosis considered poor (Fallon et al., 1996). These patients also find their care as ineffective and unsatisfactory as it is extensive (Barsky, 1996). This can partially be explained by the fact that they won't spontaneously consider the psychological component of their physical symptoms. The conviction is probably a factor that lowers our chances of keeping these patients in a psychological treatment. The present study demonstrated that a treatment targeting excessive worry about illness seems to have an impact on the conviction of 4 participants. However, it is possible that the patients of this study were probably not very convinced of the organic explanation of their symptoms. The doubt was certainly present but the persuasion, if present, was not strong as can be observed with other cases in a medical setting. Hence, a principal criticism of this study is that if participants voluntarily engage in a psychological treatment of their illness worries, we can assume that they are different from other hypochondriac patients who look only for the organic cause of their symptoms. The clinical cut score considered in this study comes from a sample of health anxiety patients who also participated on a voluntary basis. The clinical mean on the Overvalued Ideas Scale may be higher in a sample of patients who still hope to find the organic cause of their physical symptoms and who have never considered consulting in mental health. Here, clinicians are confronted with the fact that treatment studies always have difficulty in reaching the real representation of the diverse cases of Hypochondriasis. Conviction has been indirectly targeted by the restructuring of faulty beliefs about worry and the restructuring of general faulty beliefs about health. The usual cognitive restructuring technique was presented to participants and they were invited to confront all their personal faulty beliefs. It would have been interesting to have a measure that assessed this direct impact on beliefs but no validated measure

existed at that time. The next clinical controlled trial should address this limit. Results concerning conviction must be interpreted with caution because of the lower internal consistency of the French version of OVIS. Otherwise, the present study demonstrated that a treatment targeting excessive worry about illness seems to have an impact on the conviction of 4 participants. Finally, another limit concerning the follow-up assessments must be considered. Although the evaluator was not related to the present study, keeping him completely blinded was not fully achieved. The evaluator knew about this treatment study since he was a member of the department of psychology.

This treatment adaptation wanted to approach Hypochondriasis as illness worries. Results confirmed that a treatment targeting excessive worry is a promising approach for Hypochondriasis. All participants reached a high endstate functioning at the 1 year follow up. It seems that our comprehension of Hypochondriasis is evolving and that we have more effective clinical strategies. It will be very important to confirm those preliminary results in a controlled clinical trial. We discussed the different strategies that were used to target specific processes. Actually, we cannot clearly assure that the strategies used were responsible for the clinical change on the related process. In the next years, it would be interesting to test the unique effectiveness of each component. The result of this study paired with some other treatment (Warwick, Clark, Cobb & Salkovskis, 1996; Clark et Al, 1998; Bouman & Visser, 1998; Avia et Al., 1996; Stern & Fernandez, 1991; Furer, Walker, Vincent, 1999) invalidate the idea that Hypochondriasis is still refractory to treatment. There is still a lot to discover and understand but a new challenge in Hypochondriasis may be more at the level of screening in medical setting and psycho-education of both health professionals and hypochondriacal patients. Clinical track has already been proposed for the medical management of Hypochondriasis (Salkovslis, 1989; Fallon, et al, 1993; Barsky, 1996), a part of the problem may be a question of information diffusion.

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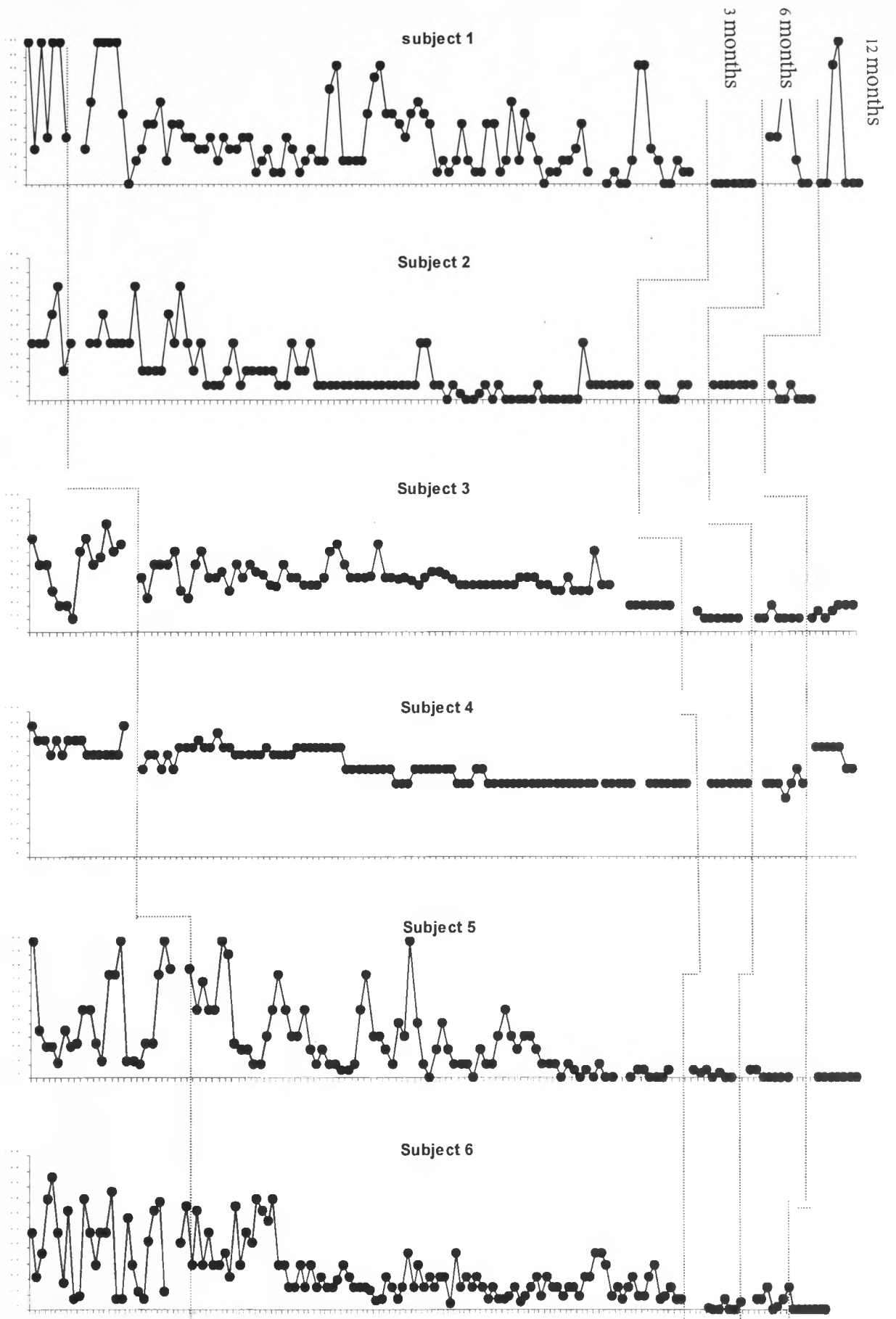


Figure 1: Daily self-monitoring of illness worry.

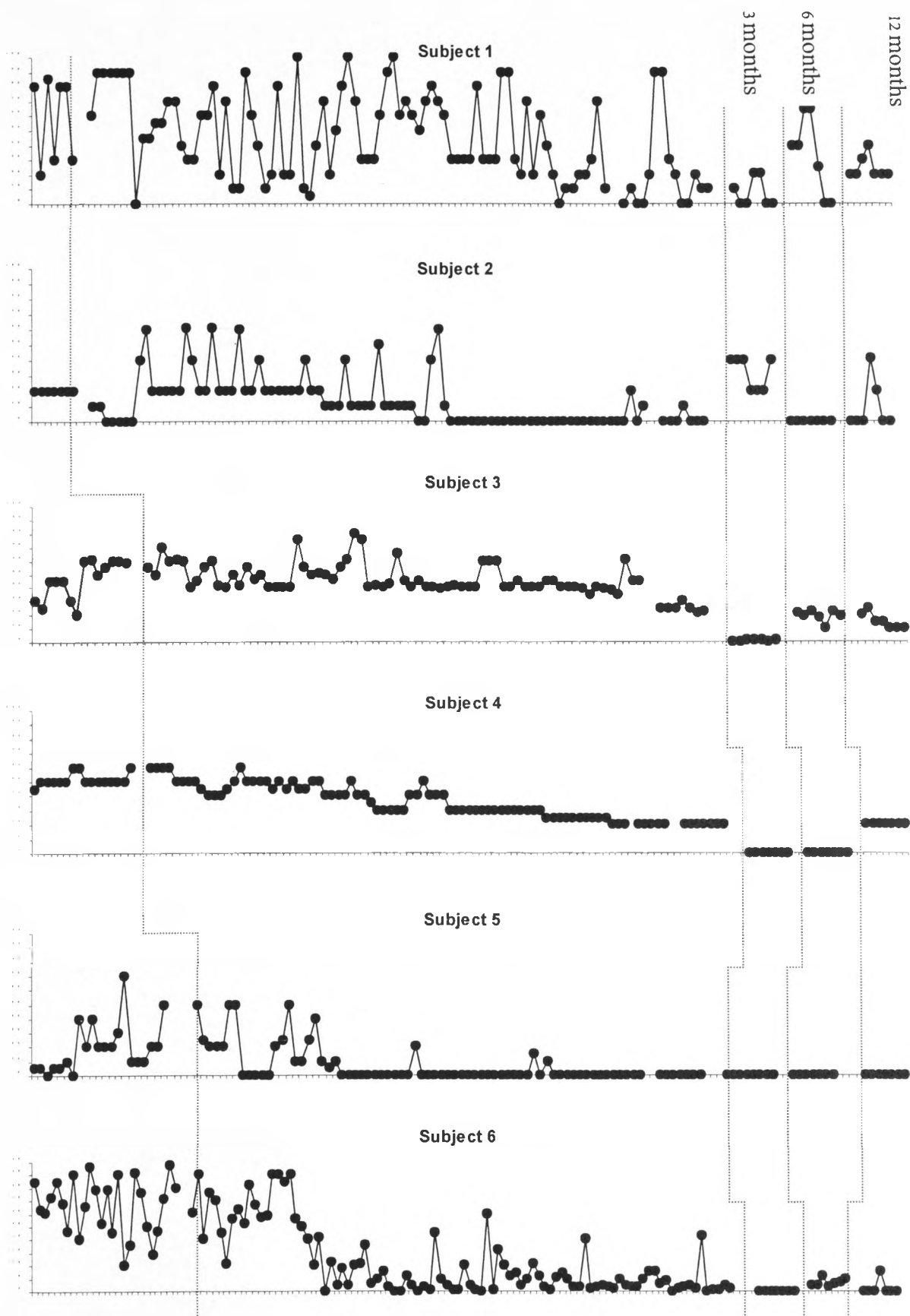


Figure 2: Daily self-monitoring of the need for reassurance.

Table 1

Diagnostic severity and clinical global impression scale for the 6 participants at pretest, post-test, 6 month follow-up and 1 year follow-up.

|               | Pretest                                      | Posttest                                              | 6 months follow-up                                      | 1 year follow-up                                        |
|---------------|----------------------------------------------|-------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|
| Participant 1 | Hypochondriasis 7                            | Not any Dx<br>Hypochondriasis Residual = 2            | Major Depression 6<br>Hypochondriasis Residual = 7      | Adaptation Disorder 4<br>Hypochondriasis Residual = 1   |
| Participant 2 | Hypochondriasis 7<br>TPA 5<br>Blood Phobia 6 | TPA 5<br>Blood Phobia 6<br>Hypochondriasis Residual 3 | TPA 5<br>Blood Phobia 6<br>Hypochondriasis Residual = 2 | TPA 4<br>Blood Phobia 6<br>Hypochondriasis Residual = 2 |
| Participant 3 | Hypochondriasis 4                            | Not any Dx<br>Hypochondriasis Residual =2             | Not any Dx<br>Hypochondriasis Residual = 4              | Not any Dx<br>Hypochondriasis Residual = 3              |
| Participant 4 | Hypochondriasis 6<br>TAG 4                   | Not any Dx<br>Hypochondriasis Residual = 2            | TAG 5<br>Hypochondriasis Residual = 2                   | TAG 5<br>Hypochondriasis Residual = 2                   |
| Participant 5 | Hypochondriasis 4                            | Not any Dx<br>Hypochondriasis Residual = 1            | Not any Dx<br>Hypochondriasis Residual = 2              | Not any Dx<br>Hypochondriasis Residual = 2              |
| Participant 6 | Hypochondriasis 5                            | Not any Dx<br>Hypochondriasis Residual = 1            | Not any Dx<br>Hypochondriasis Residual = 1              | Not any Dx<br>Hypochondriasis Residual = 1              |

Table 2

Treatment Outcome : Questionnaire Cut score and Scores obtained by participants at Pretest, Posttest and Follow-up

|                  | Measure           | Cut score | Minimum<br>reliable change<br>index | Pretest | Posttest | 6-month Follow-<br>up | 1 year Follow-up |
|------------------|-------------------|-----------|-------------------------------------|---------|----------|-----------------------|------------------|
| Participant<br>1 | IWS               | 21,5      | 8,6                                 | 26      | 16*•     | 17*•                  | 14*•             |
|                  | SIQ physical      | 2,8       | 5,2                                 | 9       | 1*•      | 5                     | 4                |
|                  | OVIS (Conviction) | 26,1      | 7,7                                 | 54      | 45•      | 67                    | 42•              |
|                  | SSAS              | 27,5      | 8,1                                 | 30      | 30       | 31                    | 24*              |
|                  | IU                | 63,2      | 23,9                                | 85      | 69       | 82                    | 66               |
|                  | CAQ               | 63,2      | 28,8                                | 125     | 92•      | 75•                   | 66•              |
| Participant<br>2 | IWS               | 21,5      | 8,6                                 | 45      | 29•      | 16*•                  | 17*•             |
|                  | SIQ physical      | 2,8       | 5,2                                 | 10      | 2*•      | 2*•                   | 1*•              |
|                  | OVIS (Conviction) | 24,4      | 8,4                                 | 48      | 33•      | 28•                   | 26•              |
|                  | SSAS              | 27,5      | 8,1                                 | 44      | 41       | 35•                   | 33•              |
|                  | IU                | 63,2      | 23,9                                | 95      | 81       | 76                    | 69               |
|                  | CAQ               | 63,2      | 28,8                                | 114     | 43*•     | 45*•                  | 37*•             |
| Participant<br>3 | IWS               | 21,5      | 8,6                                 | 31      | 19*•     | 18*•                  | 20*•             |
|                  | SIQ physical      | 2,8       | 5,2                                 | 4       | 3        | 5                     | 5                |
|                  | OVIS (Conviction) | 24,4      | 8,4                                 | 60      | 55       | 52                    | 58               |
|                  | SSAS              | 27,5      | 8,1                                 | 23*     | 16*      | 20*                   | 24*              |
|                  | IU                | 63,2      | 23,9                                | 70      | 48*      | 46*•                  | 50*              |
|                  | CAQ               | 63,2      | 28,8                                | 83      | 51*•     | 45*•                  | 47*•             |

\*Score is in non-clinical range

•Difference in score between this time and pretest reach minimum reliable change index for the mesure  
 IWS (Illness Worry Scale), SIQ (Symptom Interpretation Questionnaire), OVIS (Overvalued Ideas Scale),  
 SSAS (Somatosensory Amplification Scale), IU (Intolerance to Uncertainty), CAQ (Cognitive Avoidance Questionnaire).

Table 2 (continued)

Treatment Outcome : Questionnaire Cut score and Scores obtained by participants at Pretest, Posttest and Follow-up

|                  | Measure           | Cut score | Minimum<br>reliable change<br>index | Pretest | Posttest | 6-month Follow-<br>up | 1 year Follow-up |
|------------------|-------------------|-----------|-------------------------------------|---------|----------|-----------------------|------------------|
| Participant<br>4 | IWS               | 21,5      | 8,6                                 | 32      | 19*•     | 19*•                  | 20*•             |
|                  | SIQ physical      | 2,8       | 5,2                                 | 11      | 1*•      | 0*•                   | 4•               |
|                  | OVIS (Conviction) | 24,4      | 8,4                                 | 40      | 39       | 48                    | 48               |
|                  | SSAS              | 27,5      | 8,1                                 | 30      | 26*      | 26*                   | 23*              |
|                  | IU                | 63,2      | 23,9                                | 76      | 50*•     | 49*•                  | 49*•             |
|                  | CAQ               | 63,2      | 28,8                                | 69      | 36*•     | 38*•                  | 39*•             |
| Participant<br>5 | IWS               | 21,5      | 8,6                                 | 29      | 17*•     | 13*•                  | 11*•             |
|                  | SIQ physical      | 2,8       | 5,2                                 | 10      | 8        | 3•                    | 1*•              |
|                  | OVIS (Conviction) | 24,4      | 8,4                                 | 44      | 17*•     | 20*•                  | 22*•             |
|                  | SSAS              | 27,5      | 8,1                                 | 26*     | 16*•     | 21*                   | 14*•             |
|                  | IU                | 63,2      | 23,9                                | 76      | 57*      | 57*                   | 40*•             |
|                  | CAQ               | 63,2      | 28,8                                | 58*     | 34*      | 25*•                  | 26*•             |
| Participant<br>6 | IWS               | 21,5      | 8,6                                 | 39      | 13*•     | 12*•                  | 11*•             |
|                  | SIQ physical      | 2,8       | 5,2                                 | 8       | 1*•      | 2*•                   | 2*•              |
|                  | OVIS (Conviction) | 24,4      | 8,4                                 | 43      | 18*•     | 22*•                  | 26•              |
|                  | SSAS              | 27,5      | 8,1                                 | 32      | 21*•     | 28                    | 29               |
|                  | IU                | 63,2      | 23,9                                | 50*     | 30*      | 31*                   | 31*              |
|                  | CAQ               | 63,2      | 28,8                                | 81      | 35*•     | 35*•                  | 63*              |

\*Score is in non-clinical range

•Difference in score between this time and pretest reach minimum reliable change index for the mesure  
 IWS (Illness Worry Scale), SIQ (Symptom Interpretation Questionnaire), OVIS (Overvalued Ideas Scale),  
 SSAS (Somatosensory Amplification Scale), IU (Intolerance to Uncertainty), CAQ (Cognitive Avoidance Questionnaire).

Table 3

Endstate functioning at posttest, 6 months and 1 year follow-up.

|               | posttest     | 6 month      | 1 year   |
|---------------|--------------|--------------|----------|
| Participant 1 | High (5)     | Moderate (4) | High (5) |
| Participant 2 | High (5)     | High (6)     | High (5) |
| Participant 3 | Moderate (4) | High (6)     | High (5) |
| Participant 4 | High (5)     | High (5)     | High (5) |
| Participant 5 | High (6)     | High (6)     | High (6) |
| Participant 6 | High (6)     | High (6)     | High (5) |

## **CHAPITRE 5**

### **CONCLUSION GÉNÉRALE**

Les trois études présentées avaient pour but l'approfondissement de notre compréhension de l'anxiété face à la santé et l'amélioration des interventions psychothérapeutiques auprès de cette population. Cette condition, plus communément connue sous le terme d'hypocondrie, était considérée encore récemment comme un trouble réfractaire aux traitements (Fallon, Klein et Liebowitz, 1996). Par contre, la conceptualisation cognitive-comportementale semble commencer à saisir les subtilités cliniques associées à ce trouble puisque de plus en plus d'essais cliniques présentent des résultats intéressants (Warwick, Clark, Cobb & Salkovskis, 1996; Clark et Al, 1998; Bouman & Visser, 1998; Avia et Al., 1996; Stern & Fernandez, 1991). Cependant, beaucoup d'éléments sont encore imprécis et méritent l'attention des chercheurs. Cette thèse de doctorat visait spécifiquement cet objectif. Pour ce faire, trois études étaient proposées. La première visait la compréhension de l'intrusion cognitive concernant la maladie ou la santé. Il était essentiel de bien comprendre l'intrusion qui est à la base de l'anxiété face à la santé pour bien cerner la psychopathologie sous-jacente. La deuxième étude voulait déterminer les processus qui constituent les meilleures prédicteurs de l'inquiétude pour la maladie. Ces processus étaient par la suite intégrés dans un traitement de l'hypocondrie. La troisième étude avait pour but d'adapter un traitement de l'inquiétude excessive et de l'appliquer à l'hypocondrie.

Il importe de commenter les implications cliniques de chacune des études. La première étude analogue démontre que l'intrusion face à la santé possède des caractéristiques qui lui sont propres mais démontre aussi qu'elle partage des caractéristiques de l'inquiétude et de l'intrusion obsessionnelle. Lorsque comparée à l'inquiétude et à l'intrusion obsessionnelle, l'intrusion concernant la maladie serait davantage égosyntone. Ceci signifie que l'intrusion concernant la santé serait considérée comme étant davantage acceptable et normale. Ce résultat supporte l'impression clinique qui stipulait que les individus résistent davantage à l'obsession qu'au besoin de réassurance médicale (Barsky, 1992). Les résultats démontrent aussi que l'intrusion pour la santé serait considérée comme étant davantage acceptable,

normale comparativement à d'autres thèmes d'inquiétude (finance, famille, avenir...). Les fausses croyances concernant la maladie et les fausses croyances concernant l'utilité de s'inquiéter pourraient être en partie responsables de ce résultat. En effet, si la population analogue considère que l'intrusion face à la santé est davantage acceptable, c'est que celle-ci entretient des fausses croyances concernant la santé. Si l'individu croit que l'inquiétude permet de réagir plus rapidement ou efficacement aux symptômes physiques inhabituels, celui-ci continuera de s'en inquiéter. Les résultats de la première étude, de même que ceux d'études récentes (Pelletier, Ladouceur, Langlois, 2001; Gosselin et al, 1999), démontrent l'importance de cibler les fausses croyances chez l'individu qui s'inquiète excessivement pour la maladie. Maintenant, à un niveau plus global, il importe d'amener les individus à distinguer la gestion de la santé et l'inquiétude pour la santé. Cette distinction pourrait avoir un impact sur les consultations excessives de certains usagés du système de santé. Prendre soin de sa santé signifie la prévention sous toutes ses formes et moins la consultation médicale en présence de symptômes anormaux. La société doit être toujours plus conscientisée en ce sens. Les services d'information téléphonique sur la santé et plusieurs sites de l'autoroute de l'information sont des médiums intéressants pour conscientiser et responsabiliser les individus face à leur santé. De plus, il importe de conscientiser davantage la société de l'impact du stress sur le corps humain qui s'exprime souvent par des symptômes physiques inhabituels. L'individu doit apprendre à considérer autant les explications émotionnelles et psychosomatiques que les explications organiques de ses symptômes physiques.

Il a été soulevé dans le premier chapitre que le diagnostic d'hypocondrie est souvent complexe étant donné le chevauchement de ce trouble avec d'autres troubles anxieux. Certains résultats de la première étude suggèrent que les problèmes entourant le diagnostic seraient en partie triviaux. En effet, il importerait davantage d'analyser le style de gestion de l'intrusion pour déterminer le plan d'action clinique. La première étude a démontré que l'interprétation de l'intrusion face à la santé est associée à des stratégies de gestion des intrusions. Notre façon d'interpréter l'intrusion pour la

maladie déterminerait la stratégie que nous utilisons pour gérer cette intrusion, par exemple, chasser la pensée ou tenter de trouver des solutions. Mais un élément encore plus intéressant ressort : le même patron de relation a été observé pour d'autres types d'intrusions cognitives (Langlois, Freeston & Ladouceur, 2000). Ainsi, peu importe le type d'intrusion (inquiétude, obsessions ou rumination hypochondriaque), si celle-ci possède davantage des caractéristiques égodystone, si celle-ci provoque un sentiment de honte, de culpabilité, l'individu aurait tendance à vouloir la neutraliser ou la chasser. Par contre, si l'intrusion implique davantage des bases réelles et une certaine probabilité d'occurrence, l'individu aura davantage tendance à rechercher des solutions pour gérer cette intrusion. Ceci laisse croire qu'une conceptualisation plus générale de l'intrusion cognitive pourrait diminuer l'emphase qui semble si souvent accordée au diagnostic différentiel. L'intervenant doit accorder encore plus d'importance aux mécanismes de maintien de l'intrusion. Ici, on parle de neutralisation et d'évitement cognitif ou d'habiletés de résolutions de problèmes inefficaces ou mal utilisées. Le plus tôt les facteurs de maintien seraient identifiés, le plus tôt le clinicien pourrait intervenir auprès de l'individu qui souffre d'intrusions cognitives récurrentes.

Si l'identification des facteurs de maintien est essentiel pour l'intervention clinique, il importait de démontrer empiriquement quels processus prédisaient le mieux la tendance à s'inquiéter pour la maladie ou la santé. La deuxième étude a permis de mettre en évidence les processus qui expliquent une part significative et unique de la variance associée à l'inquiétude pour la maladie. Parmi les différents processus mesurés, deux processus déjà reconnus comme étant des facteurs impliqués dans l'hypocondrie se sont avérés des prédicteurs significatifs de la tendance à s'inquiéter pour la maladie. Ces processus sont l'amplification somato-sensorielle et l'interprétation pathophysiologique d'un symptôme physique. Par ailleurs, deux autres processus habituellement associés à d'autres troubles anxieux, notamment le TAG et le TOC, se sont aussi avérés des prédicteurs de la tendance à s'inquiéter pour la maladie. Nous parlons de l'intolérance à l'incertitude et de l'évitement cognitif. Le résultat le plus novateur est sans doute celui qui touche l'évitement cognitif. Ce processus

explique une part significative de la variance associée à l'inquiétude pour la maladie et s'avère le second prédicteur en importance après l'interprétation physiologique des symptômes physiques. L'évitement cognitif empêche l'habitation aux sensations désagréables que provoquent les images déplaisantes. L'évitement de ces sensations agit à titre de renforcement négatif. À ses débuts, les travaux sur l'évitement cognitif ont été proposés par Borkovek et Inz (1990). D'autres études plus récentes ont supporté ce principe (Butler, Wells, & Dewick, 1995; Wells & Papagiorgiou, 1995). L'évitement ou la neutralisation des pensées déplaisantes est un facteur de maintien de l'inquiétude. Tenter de chasser ou de ne pas penser à une pensée particulière crée souvent cette même pensée (Wegner & Zanakos, 1994). Si un individu tente de supprimer une pensée qui est associée à un état émotionnel, cet état émotionnel ultérieur pourra provoquer la pensée (Wenzlaff, Wegner, & Klein, 1991). Ainsi, l'évitement d'une pensée ou d'une image s'avère un processus sans fin. La deuxième étude démontre que le phénomène de l'évitement cognitif est aussi associé à l'inquiétude pour la maladie. Plus un individu a tendance à chasser des images ou des pensées reliées à la maladie, plus il a tendance à s'inquiéter de la maladie. Il importe donc d'évaluer et de cibler cette composante chez les individus qui souffrent d'anxiété face à la santé. L'exposition est sans aucun doute l'intervention de choix en présence d'évitement. La rédaction d'un scénario catastrophique est le premier exercice à considérer. L'intervenant doit permettre à la personne de visualiser et d'exprimer toutes les composantes de la peur s'il veut amener cette personne à réagir et interpréter différemment sa peur. Comme il a été souligné au deuxième chapitre, l'exposition doit cibler autant le contenu en images que le contenu verbal. L'exposition comportementale à des objets ou lieux associés à la peur, par exemple un hôpital, des livres portant sur des maladies, peut sûrement stimuler le schéma sous-jacent à la peur.

Il semble que la deuxième étude soit la première à démontrer une relation significative entre l'intolérance à l'incertitude et l'inquiétude pour la maladie dans la population clinique. Une telle relation avait déjà été observée dans une étude analogue (Gosselin, Langlois, Ladouceur, Drouin, Brunelle, 1999). Cependant, ce processus

s'avère le quatrième en importance dans la prédiction statistique de cette tendance. La relation entre ce processus et l'inquiétude concernant la maladie est beaucoup moins importante que celle retrouvée avec l'inquiétude en général (Freeston et al, 1998). Cette situation peut être en partie expliquée par le fait que la mesure de l'intolérance à l'incertitude est moins idiosyncratique pour la population souffrant d'anxiété face à la santé. Néanmoins, il demeure que cette relation est significative et qu'il s'agit d'une piste d'intervention intéressante. D'autres études devraient tenter de mesurer plus adéquatement la relation entre ce processus et l'anxiété face à la santé.

La troisième étude a démontré qu'un traitement de l'inquiétude excessive pour la maladie est efficace et améliore la condition de six participants présentant un trouble d'hypocondrie. Ces six participants présentaient un haut niveau de fonctionnement un an après la fin du traitement. Dans l'ensemble, les résultats de la troisième étude démontrent que le fait d'aborder l'anxiété face à la santé en tant qu'inquiétude excessive est une intervention efficace. L'étude ne nous permet pas de déterminer quels sont les ingrédients les plus actifs dans le traitement. Des études ultérieures pourraient nous informer sur ce sujet. Malgré la courte durée du présent protocole (12-14 rencontres), il pourrait arriver que certains éléments n'ajoutent que peu à l'intervention. Il est intéressant d'observer que le traitement de l'inquiétude excessive de la maladie a eu un impact sur la mesure principale de symptôme (Illness Worry Scale; IWS) et que cet impact s'est maintenu 6 mois et un an après la fin de l'intervention. Mais il est encore plus intéressant de savoir qu'on observe un changement sur plusieurs mesures de processus à la fin de l'intervention comme aux suivis. Il est dommage qu'aucune mesure validée des fausses croyances concernant la santé n'existait au moment de l'intervention. Il importerait de mesurer l'impact d'un tel traitement sur les fausses croyances des individus qui souffrent d'anxiété face à la santé.

Maintenant que ce premier essai clinique a présenté des résultats encourageants, il s'avère nécessaire de tester le protocole dans une étude contrôlée avec groupe

contrôle. Il serait aussi intéressant de tester la possibilité d'utiliser un tel traitement chez des individus souffrant d'anxiété face à la santé suite à la communication d'un diagnostic, pendant le suivi d'une maladie réelle chronique ou suite à une intervention médicale. La gestion de l'anxiété pendant et après une intervention médicale pourrait augmenter la qualité de vie de ces individus. Voilà l'avantage que présente le traitement de l'inquiétude excessive : il permet de gérer l'inquiétude que provoque à la fois la peur provoquée par des problèmes réels et la peur de conséquences éventuelles. À la base, le traitement a été créé pour cibler l'inquiétude dans le Trouble d'anxiété généralisée. Par contre, il semble que la troisième étude supporte l'idée que son application pourrait être favorable à d'autres domaines plus circonscrits où l'inquiétude diminue les capacités des individus à gérer efficacement les événements et du même coup diminuent leur qualité de vie.

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