The Interpersonal Model of Health Anxiety: Testing predicted paths and model specificity

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ABSTRACT

Health anxiety involves persistent worry about one's health and is characterized by dysfunctional interpersonal processes such as excessive health-related reassurance-seeking and feelings of alienation from others. Cognitive-behavioral models largely ignore cyclical, interpersonally averse behaviors and social cognitions observed amongst health anxious individuals. The Interpersonal Model of Health Anxiety (IMHA) proposes health anxiety is maintained through activated anxious attachment insecurities, which drive frequent, but ineffective, health-related reassurance-seeking from others. Such excessive health-related reassurance-seeking leads to health-related alienation and beliefs others are unconcerned about one's perceived health problems. Feeling alienated from others fuels further health-related worry, resulting in continued self-defeating attempts at health-related reassurance-seeking. The present study offers the first comprehensive articulation and test of the IMHA. Using a cross-sectional design and 107 undergraduates, path analysis supported five of six hypothesized paths in the model; all paths except that from anxious attachment to health-related reassurance-seeking were significant and in the expected direction. Specificity tests suggested anxious attachment was more central than avoidant attachment to the IMHA. The present test of the IMHA as a single, coherent model provides a conceptual foundation for future research on interpersonal processes in health anxiety. Clinical implications are discussed.

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1. Introduction

Health anxiety involves persistent worry about one's health along with beliefs that one has an illness or may contract a serious disease (Taylor & Asmundson, 2004). It may be viewed as a dimensional construct, present among clinical and nonclinical samples (Longley et al., 2010). Health anxiety is debilitating to the individual and costly to the healthcare system (Longley, Watson, & Noyes, 2005). In undergraduates, health anxiety is linked to increased doctor visits, decreased academic performance, and co-occurring psychological distress (Abramowitz, Deacon, & Valentiner, 2007). Given such negative consequences, there is a need to better understand factors that maintain health anxiety.

1.1. Advancing existing research

While dysfunctional cognitive and behavioral processes in health anxiety are well-studied (Taylor & Asmundson, 2004), research has largely ignored dysfunctional interpersonal processes such as feelings of alienation from others (Longley et al., 2005). Health anxious individuals are largely studied in-isolation-from-others, rather than in-relation-to-others, despite theory and research suggesting health anxiety is associated with serious interpersonal problems (MacSwain et al., 2009; Noyes et al., 2003).

In what little research is conducted on interpersonal processes in health anxiety, usually only unidirectional relationships are tested (MacSwain et al., 2009), thereby failing to account for cyclical interpersonal processes proposed in interpersonal models of health anxiety (Stuart & Noyes, 2005). To date, most research on interpersonal processes in health anxiety also involves little conceptual integration (see Noyes et al., 2003 for an exception). A single, coherent, conceptual model is needed to unify disparate findings and allow research to advance cumulatively. This research also suffers from a lack of statistical integration. Using multivariate statistics (e.g., path analysis) to test integrative conceptual models,

researchers can simultaneously test a system of variables and help to identify unique or redundant predictors of health anxiety.

Although researchers and clinicians have long highlighted the need to develop and test models explicating interpersonal processes maintaining health anxiety (Noyes et al., 2003), research in the area is only beginning to emerge. Our study addresses the aforementioned limitations by proposing the Interpersonal Model of Health Anxiety (IMHA; MacSwain et al., 2009; Noyes et al., 2003) and testing this integrative conceptual model using path analysis in undergraduates.

1.2. Outlining the IMHA

According to the IMHA, health anxiety is exacerbated among insecurely attached individuals through a maladaptive interpersonal cycle of health-related reassurance-seeking (seeking care from others regarding one's perceived health problems), alienation (believing that others are unconcerned with one's perceived health problems), and worry (anxiety about one's perceived health problems; MacSwain et al., 2009). Drawing on adult retrospective reports of childhood (Noyes et al., 2002), the IMHA hypothesizes health anxiety represents a maladaptive expression of insecure attachment developed from adverse early caregiving and childhood physical illness experiences (Stuart & Noyes, 1999). These early adverse experiences are believed to influence expressions of health anxiety and interpersonal interactions in adulthood. The IMHA described here has received preliminary empirical support in adults (MacSwain et al., 2009; Noyes et al., 2003).

The IMHA proposes attachment styles are activated in situations of threat (e.g., perceived ill health), initiating the need to seek support from others to maintain interpersonal closeness and manage responses to stress (Sadava, Busseri, Molnar, Perrier, & DeCourville, 2009). Health anxious individuals communicate their preoccupation with attachment needs and health fears to others via reassurance-seeking about somatic complaints, increasing the likelihood their attachment insecurities and health-related worry will be managed interpersonally (Stuart & Noyes, 2005). While insecurely attached individuals learn that reassurance-seeking is effective for regulating health worries short term, it becomes increasingly maladaptive when repeated over time (Puri & Dimsdale, 2011).

The excessive reassurance-seeking of health anxious individuals and repeated failure to respond to interpersonal reassurance leads others to perceive them as fragile, needy, and difficult to reassure. Thus, this health-related reassurance-seeking is met with reactions of negativity, distancing, and alienation within interpersonal relationships (Waldinger, Schulz, Barsky, & Ahern, 2006). Such rejection further solidifies attachment insecurities and leads health anxious individuals to believe others do not take their health concerns seriously (MacSwain et al., 2009). In turn, perceptions of rejection by anxiously attached individuals may exacerbate health-related worry by triggering distress and unpleasantness associated with somatic sensations (Macdonald & Kingsbury, 2006). Significant others' withdrawal of support is interpreted by the anxiously attached individual as evidence of abandonment or punishment, and is linked with later exacerbation of health-related worries (Hilbert, Martin, Zech, Rauh, & Rief, 2010) that trigger a perceived need for further support from others. In acting out this characteristic interpersonal pattern, health anxious individuals increase the likelihood that others will react to them in undesired, rejecting ways (Williams, Smith, & Jordan, 2010).

In sum, the IMHA is an integrative model that provides an understanding of the characterological and interpersonal context within which health anxiety occurs. The cyclical, maladaptive patterns of behavior (health-related reassurance-seeking), cognition (health-related alienation), and affect (health-related worry)

characteristic of health anxious individuals are said to arise from a hyperactivated insecure attachment system (MacSwain et al., 2009; Stuart & Noyes, 1999). These magnified attachment insecurities lead health anxious individuals to engage in health-related reassurance-seeking in an attempt to elicit support from others and manage their distress. This reassurance-seeking ultimately leads to rejection from others and the conviction that others are unconcerned about their health problems and unpredictable in their support. These beliefs of alienation further exacerbate health anxious individuals' worries about their health, resulting in continued health-related reassurance-seeking (MacSwain et al., 2009; Stuart & Noyes, 1999).

1.3. Objectives and hypotheses

1.3.1. Primary

This study's first objective was to test the IMHA. Testing this model brings greater clarity to our understanding of attachment styles and interpersonal processes in health anxiety. Though general insecure attachment has been tied to health anxiety (Noyes et al., 2003), the IMHA purports high levels of anxious attachment, in particular, are central to maladaptive interpersonal processes in health anxious individuals. Compared with secure and avoidant attachment styles, anxious attachment has been linked to greater worry about one's health (Schmidt, Strauss, & Braehler, 2002), outward displays of health concerns (e.g., healthcare use; Ciechanowski, Walker, Katon, & Russo, 2002), emotional expressivity (Armitage & Harris, 2006), and health-related reassurance-seeking intended to secure support from others (Stuart & Noyes, 1999). Unable to manage their distress alone, anxiously attached individuals express their concerns and seek reassurance despite fears of rejection, becoming dependent on others to help manage their health-related worries (Maunder & Hunter, 2009).

Consistent with the IMHA (see Fig. 1), significant paths were hypothesized from anxious attachment to variables believed to maintain health anxiety (i.e., health-related reassurance-seeking, alienation, and worry). In the interpersonal cycle, significant paths were also hypothesized from health-related reassurance-seeking to health-related alienation, from health-related alienation to health-related worry, and from health-related worry back to health-related reassurance-seeking.

1.3.2. Secondary

The second objective was to test the specificity of insecure attachment style in the IMHA. In particular, we examined if the model would differ when avoidant attachment replaced anxious attachment as the insecure attachment style central to the IMHA. Testing specificity is important for understanding the unique contribution of particular insecure attachment styles and interpersonal processes in this explanatory model of health anxiety.

As with an anxious attachment style, individuals high in avoidant attachment mistrust and expect rejection from others (Maunder & Hunter, 2009). However, in contrast to anxiously attached individuals, those with an avoidant attachment style are likely to deny or conceal their distress and avoid seeking reassurance for fear of distancing or alienating themselves from others (Feeney, 2000). Thus, we expected avoidant attachment to be *negatively* related to health-related reassurance-seeking and *positively* related to health-related alienation. A positive link was expected between avoidant attachment and health-related worry because insecurely attached individuals are likely to experience negative affect and report physical symptoms (Armitage & Harris, 2006; Ciechanowski et al., 2002).
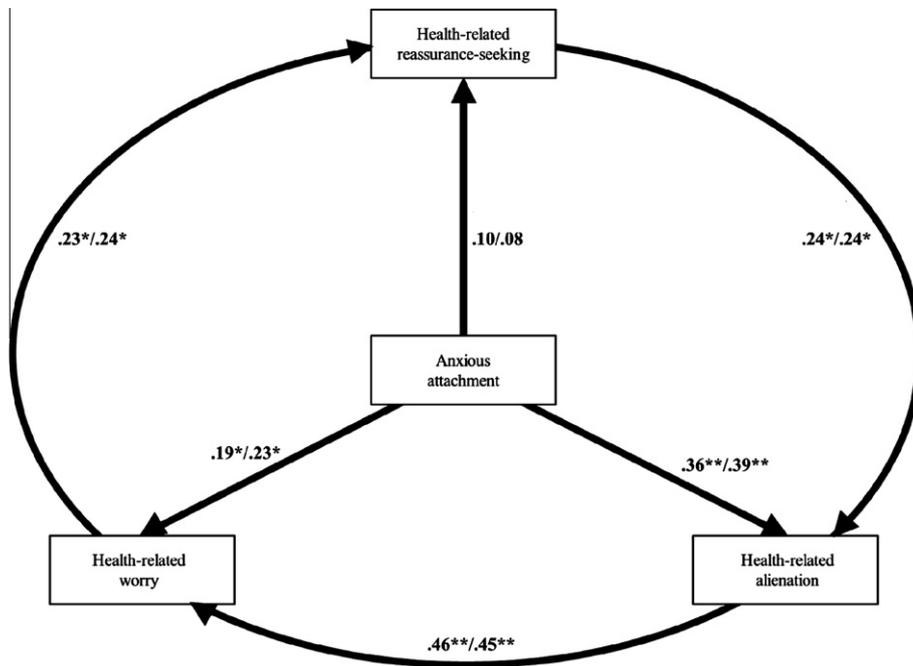
Fig. 1. The path model for the Interpersonal Model of Health Anxiety (IMHA). Rectangles represent observed variables. Single-headed black arrows represent hypothesized paths. Path coefficients are standardized. Statistics to the left are path coefficients without covariates; statistics to the right are path coefficients after age and relationship status are controlled. $^*p < .05$, $^{**}p < .01$.

2. Method

2.1. Participants

A sample of 107 undergraduates (92 women) from Dalhousie University completed measures. Participants averaged 19.75 years of age ($SD = 3.20$) and 1.63 years of university education ($SD = 0.95$); 79.4% identified as Caucasian, 6.5% as Asian, 2.8% as Black, and 10.3% as 'Other' (e.g., Arab), with 0.9% not identifying their ethnicity or year of study. Approximately half (55.1%) of participants were currently involved in a romantic relationship.

2.2. Measures

Experiences in Close Relationships Questionnaire-Revised (ECR-R; Fraley, Waller, & Brennan, 2000) is a 36-item self-report measure of general attachment experiences in emotionally intimate relationships. The ECR-R is composed of two 18-item subscales measuring anxious and avoidant attachment. In responding, participants were asked to consider the past several years. Items are rated from 1 ("*strongly disagree*") to 7 ("*strongly agree*"). Alpha reliabilities for the ECR-R subscales are usually ⩾.90 (Fairchild & Finney, 2006). Test–retest correlations for the anxious ($r = .92$) and avoidant ($r = .91$) attachment subscales are high over 3 weeks (Sibley, Fischer, & Liu, 2005). Regarding validity evidence, the anxious attachment subscale was significantly correlated with loneliness ($r = .53$) and the avoidant attachment subscale was significantly correlated with lower perceived social support ($r = -.45$; Fairchild & Finney, 2006).

Multidimensional Inventory of Hypochondriacal Traits (MIHT; Longley et al., 2005) is a 31-item self-report measure of four dimensions of health anxiety: health-related reassurance-seeking (8 items), health-related alienation (7 items), health-related worry (7 items), and health-related absorption (9 items). Absorption is not viewed as central to IMHA (Noyes et al., 2003) and is not included here. In responding, participants were asked to keep a 3-month timeframe in mind. MIHT items are rated from 1

("*strongly disagree/definitely false*") to 5 ("*strongly agree/definitely true*"). Alpha reliabilities for the MIHT subscales are typically ⩾.75 (MacSwain et al., 2009). The 8-week test–retest reliabilities for the health-related reassurance-seeking ($r = .78$), alienation ($r = .75$), and worry subscales ($r = .76$), are high (Longley et al., 2005). Regarding validity evidence, the health-related reassurance-seeking ($r = .34$), alienation ($r = .31$), and worry ($r = .45$) subscales were significantly correlated with anxiety sensitivity (Stewart, Sherry, Watt, Grant, & Hadjistavropoulos, 2008).

2.3. Procedure

This study was approved by the Dalhousie University Social Sciences Research Ethics Board. Participants were recruited through the Department of Psychology participant pool. Participants provided informed consent and completed study measures in a laboratory. Participants were debriefed and received a 1.0% bonus to their grade in a psychology course.

2.4. Data analysis plan

Path analysis tested the IMHA and model specificity. Path coefficients in the path model for the IMHA were evaluated. Missing data were minimal (<1%); a nonsignificant Little (1988) missing data test, $\chi^2(5, N = 107) = 5.00$, $p = .42$, suggested missing data were missing completely at random. Missing data were estimated using a full information maximum likelihood approach.

3. Results

3.1. Descriptive statistics

Means for all measures (see Table 1) were within one standard deviation of means from studies using comparable samples (Fairchild & Finney, 2006; Stewart et al., 2008). Alpha reliabilities (see Table 1) were also acceptable (⩾.75) and congruent with previous research reported above.

Table 1
Means, standard deviations, ranges, alpha reliabilities, and bivariate correlations.

Variable	1	2	3	4	5
1. Anxious attachment	–	.54**	.19	.41**	.37**
2. Avoidant attachment		–	−.23*	.11	.05
3. Health-related reassurance-seeking			–	.38**	.36**
4. Health-related alienation				–	.57**
5. Health-related worry					–
M	53.35	50.59	27.12	15.14	18.68
SD	21.02	17.26	5.22	5.07	5.91
α	.94	.92	.75	.86	.82

* $p < .05$.
** $p < .01$.

3.2. Bivariate correlations

Anxious attachment was significantly positively correlated with avoidant attachment, health-related alienation, and health-related worry (see Table 1). Surprisingly, no significant correlation was found between anxious attachment and health-related reassurance-seeking. Health-related reassurance-seeking, health-related alienation, and health-related worry were significantly positively inter-correlated. Avoidant attachment was significantly negatively correlated with health-related reassurance-seeking, but not significantly correlated with health-related alienation or health-related worry. Correlations show the variables of the IMHA are more clearly related to anxious (vs. avoidant) attachment, suggesting merit in testing the path model for the IMHA.

3.3. Path analysis

The hypothesized path model for the IMHA (see Fig. 1) was tested using AMOS 7.0. Model fit was not evaluated using fit indices as the hypothesized path model is just-identified. Therefore, no degrees of freedom are available to estimate fit indices.

Five out of six paths in Fig. 1 were significant and consistent with the hypothesized IMHA and are outlined in Table 2. Anxious attachment was tied to health-related alienation and health-related worry; however, contrary to our hypotheses, anxious attachment was not significantly tied to health-related reassurance-seeking. Furthermore, (a) health-related reassurance-seeking was tied to health-related alienation; (b) health-related alienation was tied to health-related worry; and (c) health-related worry was tied to health-related reassurance-seeking. Overall, results suggested the path model for the IMHA was largely consistent with our hypotheses.

We focused the path analysis apart from demographics, as models including many parameters (e.g., multiple demographics) are hard to replicate. Among demographics, only age ($r = −.20$, $p < .05$) and relationship status (i.e., "not in a relationship" versus "in a relationship"; $r = −.45$, $p < .01$) were associated with anxious attachment. No other significant correlations were noted between demographics and variables of the IMHA. When age and

relationship status were added, paths in the IMHA remained virtually the same (see Fig. 1).

3.3.1. Specificity

Specificity of the IMHA was tested by substituting avoidant attachment for anxious attachment in Fig. 1. Consistent with the IMHA, (a) health-related reassurance-seeking was tied to health-related alienation ($\beta = .32$, $p < .01$); (b) health-related alienation was tied to health-related worry ($\beta = .52$, $p < .01$); and (c) health-related worry was tied to health-related reassurance-seeking ($\beta = .23$, $p < .05$). As expected, avoidant attachment was *negatively* related to health-related reassurance-seeking ($\beta = −.24$, $p < .01$) and *positively* related to health-related alienation ($\beta = .19$, $p < .05$). However, contrary to hypothesis, avoidant attachment was not related to health-related worry ($\beta = −.01$, $p > .05$). Given these findings, anxious attachment appears more relevant to the IMHA than avoidant attachment.

4. Discussion

This study articulated and tested the IMHA, an integrative conceptual model of interpersonal processes in health anxiety. Largely consistent with hypotheses and previous work (MacSwain et al., 2009), path analysis showed significant paths for all but one path proposed in the IMHA. Contrary to our hypotheses, anxious attachment did not significantly predict health-related reassurance-seeking. Overall, however, support for the IMHA was strong. This model provides a novel conceptualization of health anxiety as involving anxiously attached individuals caught in a vicious cycle of health-related reassurance-seeking which results in alienation, leading to worry, and further health-related reassurance-seeking (Noyes et al., 2003). The IMHA seemed best represented as involving anxious rather than avoidant attachment, supporting the specificity of this emerging model.

4.1. Testing the IMHA

Our results largely supported the IMHA. Results suggested a vicious characterological interpersonal cycle wherein reassurance-seeking about health concerns contributed to fears of rejection and inadequate support from others and resulted in continued anxiety about potential health problems that, ultimately, fueled further health-related reassurance-seeking. Anxious attachment appeared to drive two key interpersonal processes in this vicious cycle, including health anxious individuals' perception that others are disregarding their health concerns (health-related alienation) and the degree of anxious concern they have about their health (health-related worry). Trying to parse out individual cognitive factors (e.g., catastrophic misinterpretations of bodily symptoms) while ignoring an individual's wider interpersonal context may overlook important factors that maintain health anxiety (e.g., health-related alienation).

Unexpectedly, anxious attachment and health-related reassurance-seeking were unrelated in our study. Problems with our measure of health-related reassurance-seeking may explain this

Table 2
Unstandardized betas, standardized betas, and significance levels for paths in Fig. 1 (standard errors in parentheses).

Parameter estimate	B	β	p
Anxious attachment → health-related reassurance-seeking	.03 (.03)	.10	.32
Anxious attachment → health-related alienation	.09 (.02)	.36	<.01
Anxious attachment → health-related worry	.05 (.02)	.19	.03
Health-related reassurance-seeking → health-related alienation	.23 (.09)	.24	.01
Health-related alienation → health-related worry	.54 (.10)	.46	<.01
Health-related worry → health-related reassurance-seeking	.20 (.10)	.23	.04

unexpected result. Examination of items comprising the reassurance-seeking subscale of the MIHT suggests they reflect a more passive desire for health-related reassurance (e.g., "It is important that others care about my health concerns"). This contrasts with the active, incessant, and aversive reassurance-seeking discussed in theories of health anxiety (Puri & Dimsdale, 2011), including the IMHA (MacSwain et al., 2009; Stuart & Noyes, 2005). Furthermore, the health-related reassurance-seeking subscale of the MIHT was positively and significantly correlated with measures of social support in a recent study of women diagnosed with breast cancer (Jones, Hadjistavropoulos, & Sherry, 2012). This suggests the health-related reassurance-seeking of the MIHT may not operationalize a form of health-related reassurance-seeking that is noxious to others and disruptive in relationships. The reassurance-seeking subscale of the MIHT has also shown weak correlations with other measures of health-related reassurance-seeking (Longley et al., 2005). More data on the psychometrics of this subscale are needed (e.g., convergent validity data).

An alternate explanation may be that the relationship between anxious attachment and health-related reassurance-seeking is moderated by another unmeasured variable, such as early childhood experiences with illness. The specificity of early childhood learning experiences to physical illness or health anxious beliefs and behaviors may be important for anxious attachment to lead to health-related reassurance-seeking in particular (Watt, O'Connor, Stewart, Moon, & Terry, 2008). This is consistent with interpersonal accounts of health anxiety, which purport the maladaptive beliefs and behaviors of health anxious individuals in adulthood are expressions of insecure attachment arising from early caregiving and childhood experiences with physical illness (Stuart & Noyes, 1999). This hypothesis cannot be tested in the present study, as we did not measure childhood illness-related learning.

4.2. Specificity

A test of specificity supported the importance of a particular type of insecure attachment in the IMHA, as replacing the central variable of anxious attachment with avoidant attachment led to the breakdown of key relationships in the model.

As expected, path analysis indicated avoidant attachment was linked to health-related alienation, a finding consistent with the standoffishness and distrust seen as central to the experience of avoidantly attached individuals (Fraley & Shaver, 1998). Although the correlation between avoidant attachment and health-related alienation was not significant, this relationship was significant when examined in the context of path analysis. This is consistent with a suppressor effect (Conger, 1974), indicating a different effect for avoidant attachment on health-related alienation when health-related reassurance-seeking is considered. Overall, results suggest anxiously and avoidantly attached individuals are prone to health-related alienation.

When avoidant attachment was included in the path model for the IMHA, the influence of this attachment style on health-related worry and health-related reassurance-seeking either fell apart or reversed direction (relative to anxious attachment). Our results supported hypotheses and research indicating individuals with avoidant attachment styles are less likely to seek reassurance for their health worries (Feeney, 2000) and anticipate rejection and a lack of concern from others (Maunder & Hunter, 2009). Contrary to expectations, avoidant attachment was not associated with health-related worry. This may be because individuals high in avoidant attachment are less likely to be bothered by and catastrophically interpret physical symptoms relative to anxiously attached individuals (Watt, McWilliams, & Campbell, 2005).

4.3. Limitations and future directions

Strengths of path analysis (e.g., simultaneously test a system of variables) must be balanced with limitations arising from our use of a just-identified model. As such, only hypotheses about specific paths can be tested, as no degrees of freedom are available to estimate overall model fit. This leaves open the possibility that other variations of our model provide a better fit to the data. However, the proposed model offers a parsimonious, yet comprehensive, first test of the IMHA rooted in theory and past research.

The IMHA represents an unfolding temporal process; however, we tested this model with a cross-sectional design and, though directionality and temporal precedence are theoretically assumed, these assumptions were not tested. Future studies of the IMHA should adopt longitudinal or daily diary methods.

Our study also used only self-report questionnaires. Although self-report is critical for constructs based on subjective perception of others (e.g., health-related alienation), future studies might use multisource (e.g., reports from romantic partners) and multimethod (e.g., direct observations) approaches to more rigorously assess overt behaviors in the IMHA (e.g., health-related reassurance-seeking). Data obtained from multiple sources and methods can be used to establish latent variables, facilitating a more rigorous test of the IMHA using structural equation modeling.

A related concern is our testing of an *inter*personal model using only an *intra*personal approach. It will be important to test the IMHA in various interpersonal contexts, including romantic relationships and relationships with health professionals (e.g., physicians). Moreover, generalizations from our nonclinical sample of mostly Caucasian, undergraduate women should be made cautiously. Past work on the IMHA reported higher rates of health-related reassurance-seeking and worry in women (MacSwain et al., 2009). However, participant gender did not impact IMHA paths in our study, perhaps due to the preponderance of women and relatively small sample size. Testing the IMHA in more diverse samples is needed.

Lastly, the IMHA emphasizes the role of health-related reassurance-seeking as it is a widely-recognized maladaptive interpersonal behavior displayed by health anxious individuals (Puri & Dimsdale, 2011); however, it is likely health anxious individuals also engage in other interpersonally aversive behaviors (e.g., complaining to others). There is a need to further test the specificity of the model as it pertains to other interpersonally aversive behaviors that are the result of excessive health-related reassurance-seeking and anxious attachment (e.g., conflict; Williams et al., 2010).

4.4. Clinical implications

Cognitive-behavioral approaches to health anxiety predominantly address maladaptive intrapersonal cognitions (e.g., catastrophizing) and behaviors (e.g., bodily checking; Taylor & Asmundson, 2004). Although reassurance-seeking is acknowledged in the cognitive-behavioral model (Taylor & Asmundson, 2004), the IMHA offers a viable alternate account of the excessive reassurance-seeking in health anxiety while additionally drawing the clinician's attention to the interpersonal basis and consequences of such aversive behavior. Clinicians should consider potential involvement of attachment dysfunction, particularly anxious attachment, when assessing and treating health anxiety. Interpersonal therapies for health anxiety focus on identifying and addressing the maladaptive care-seeking communication style seen in health anxious individuals (Stuart & Noyes, 2005). Cognitive-behavioral and interpersonal models of health anxiety need not be mutually exclusive in theory or practice (Williams et al., 2010), as recent studies posit interactions between cognitive (e.g., attentional biases toward health-related threat; Abramowitz

et al., 2007) and attachment dimensions in the development of anxiety disorders (Nolte, Guiney, Fonagy, Mayes, & Luyten, 2011).

5. Conclusions

Maladaptive interpersonal processes are understudied in health anxiety research. The IMHA brings greater clarity and coherence to our understanding of attachment styles and interpersonal processes in health anxiety. As hypothesized, results supported the central role of anxious attachment in both health-related alienation and worry. The hypothesized processes by which seeking reassurance about one's health concerns leads to perceived rejection from close others, increasing health-related worries, and leading to more reassurance-seeking also received support. Though not supported in our study, potentially due to limitations in measurement, anxious attachment is believed to result in health-related reassurance-seeking as suggested by previous research (Maunder & Hunter, 2009). Research focused solely on intrapersonal cognitions may inadvertently miss maladaptive interpersonal processes central to maintaining health anxiety. The present test of the IMHA as a single, coherent, conceptual model provides a foundation for further research and clinical practice developments in this area.

Acknowledgements

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