Factors predicting disclosure of chronic illness status in the workplace and general well-being for individuals with Inflammatory Bowel Disease

The purpose of this above study was to examine the predictive effect of 3 types of predictors on 2 types of criteria, and the association between the 2 types of criteria in individuals with Inflammatory Bowel Disease (IBD). The predictors were illness severity, coping behavior x 5 (Positive reinterpretation and growth; Active coping; Seeking emotional support; Acceptance; and Planning) and social support x2 (emotional and practical support), and the criterion were disclosure of illness at workplace and general well-being x 2 ('worn-out' and 'up-tight' factors). See Appendix 1 for detailed descriptive statistics. All the data (i.e., self-ratings) were obtained from a questionnaire booklet that consisted of several questionnaires such as personal detail questionnaire, coping questionnaire, social support questionnaire and general well-being questionnaire. Personal details questionnaire consisted of demographic and disclosure questions.

Of the 110 participants studied, 45.9% were male and 54.1% were female (with one participant's gender information missing). Forty-two (38.5%) of the patients had a diagnosis of Crohn's disease, whereas 68 (61.5%) had ulcerative Colitis. The study aimed for individuals of a working age, as reflected in the sample 9.3% of participants were 25-year-old and below (minimum aged 19), 51.9% aged 26 to 45, and 38.9% aged 46 and above (maximum aged 64). Seventy-nine patients (71.8%) had worked full time and 31 had worked part time. The mean number of years since diagnosis of IBD was 9.4.

Linear regression analyses were performed to assess the association between the 3 predictors and 2 criteria. Pearson correlation coefficients were then computed to evaluate the associations between the 2 criteria. These analyses will be described below. Statistical significance was set at $p < .05$.

1. <u>Joint predictive effects of coping strategies on Illness Disclosure and General Well-being (Appendix 2)</u>

In the regression analyses of joint predictive effects of the five coping styles, the five coping styles only explain 5% of the variance in illness disclosure, and in combination they failed to predict patients' disclosure of illness at workplace [$r = .23$, $F (5, 99) = 1.05$,

p = .39]. In terms of the correlation between each one coping style and illness disclosure while controlling for the other four coping styles, no significant correlations were found.

It's been found that effective coping strategies help patients adjust to adverse stressors and can thus improve both clinical outcomes (e.g., Drossman, 1996) and satisfaction with lifestyles (e.g., Kinash et al., 1993). One would therefore expect that coping strategies will contribute to general well-being of IBD patients. However, the five coping styles in combination also failed to predict IBD patients' general well-being [r_1 = .26, F_1 (5, 95) = 1.34, p = .26 for 'worn-out' factor and r_2 = .24, F_2 (5, 94) = 1.16, p = .33 for 'up-tight' factor]. However, one of the coping styles, namely 'seeking emotional social support' correlated highly to general well-being ratings [β_1 = .26, $p < .05$ for 'worn-out' factor and β_2 = .27, $p < .05$ for 'up-tight' factor]. As general well-being questionnaire includes items such as 'how often have you become easily tired' (i.e., 'worn-out' factor) and 'how often have you been tense or jittery' (i.e., 'up-tight' factor), the higher the score, the worse the perception of general well-being. The results therefore indicates that IBD patients who reported worse general well-being (i.e., feeling more worn out and up tight) tended to seek more emotional social support.

2. <u>Predictive effect of illness severity on Illness Disclosure and General Well-being (Appendix 3)</u>

Higher illness severity of IBD patients lead to increased illness disclosure at work [r = .31, F (1, 105) = 11.08, $p \leq .001$]. This is in parallel to what Beatty (2004) found. She also suggested that people may disclose preemptively to retain control over potentially stigmatizing personal information and to justify illness behavior.

Measure of health related quality of life has been extensively used as a tool to evaluate patients with IBD. Saibeni et al. (2005) found that active disease is related to poor perception of quality of life. With regards to other types of disease, Jones et al. (2006) also reported a highly significant correlation between severity of illness (dysphonia) and patients' quality of life. Measure of general well-being is a new tool to evaluate the effect of illness severity. As the general well-being index has been extensively used for the assessment of quality of life and general well-being (e.g.,

Bertella et al., 2007), it is reasonable to expect that higher illness severity will lead to poorer perception of general well-being. It is indeed the case. Illness severity had a strong effect on IBD patients' general well-being. The more severe the illness, the higher the worn-out and up-tight scores which lead to poorer self perception of general well-being [$r_1 = .22$, F_1 (1, 100) = 4.99, $p < .05$; $r_2 = .21$, $F_2 = 4.43$, $p < .05$].

3. Joint predictive effects of Social Support Satisfaction on Illness Disclosure and General Well-being (Appendix 4).

In this study, the social support questionnaire measured the perceived amount of social support received by an individual from various significant others since the start of current employment. Patients were asked to first rate the support available and then the ideal level of support. The discrepancy between support received and ideal support for each participant was then calculated and entered for analyses. A higher average discrepancy score indicated a larger discrepancy between the level of support received compared to the participant's ideal level of support. This means that the higher the average discrepancy, the lower the social support satisfaction.

Higher average discrepancies of social supports (emotional and practical) in combination resulted in increased illness disclosure [$r = .25$, F (2, 103) = 3.46, $p < .05$]. This indicated that patients who are less satisfied with their received social support tended to be more likely to disclose their illness at work. These individuals who lack of social support might choose to disclose their illness in order to receive potential understanding and extra support from their organizations. When looking into two kinds of social supports individually, only a highly significant negative correlation between discrepancy in practical support and illness disclosure was found [$\beta = -.37$, $p < 05$], but not between emotional social support discrepancy and illness disclosure [$\beta = .24$, $p = .10$]. This means that the higher the discrepancy (i.e., lower satisfaction) in practical social support, the lower levels of illness disclosure. This contradicts to the joint effects of social supports in combination on illness disclosure.

Higher average discrepancies of social supports (emotional and practical) in combination resulted in more feelings of worn-out but did not contribute to the feelings of up-tight in IBD patients [$r_1 = .33$, F (2, 98) = 5.84, $p < .05$; $r_2 = .23$, F (2, 97) = 2.68, p

= .07]. Individual correlations revealed that only higher average emotional support discrepancy (i.e., lower emotional support satisfaction) was highly significantly correlated to higher ratings of feeling 'worn-out' as well as feeling 'up-tight'[$\beta_1 = .35$, $p < .05$; $\beta_2 = .30$, $p < .05$].

4. Predictive effects of coping strategies and illness severity on illness disclosure and general well-being (Appendix 5)

Unexpectedly, coping strategies did not contribute to either illness disclosure ore general well-being in IBD patients. However, illness severity itself contributes significantly to both illness disclosure and general well-being. Hierarchical regression analyses are therefore conducted to examine whether illness severity predicts illness disclosure and general well-being beyond the set of coping styles. As a result, r-value increased to .41, which represented a significant increase of .114 (11.4%) in the explained variance ($p < .001$). The second regression model which incorporated illness severity with coping styles was significant [$F (6, 96) = 3.15$, $p < .05$]. This suggested that illness severity predicted illness disclosure incrementally above the coping styles. In the second regression model, the correlation between each predictor (5 coping styles and illness severity) and the criterion (illness disclosure) indicated that only illness severity highly significantly contributed to illness disclosure ($\beta = .35$, $p < .001$).

A hierarchical regression was also performed to assess coping strategies and illness severity, in connection to IBD patients' general well-being. The addition of illness severity to the regression model resulted in a significant increase in explained variances for both two respects of general well-being (4.5% and 4.7% increases for 'worn-out' and 'up-tight' factors respective, both $p < .05$). However, no significant regression models were found. It therefore appeared that illness severity did not have any additional predictive effect on general well-being to the set of coping styles. In terms of the correlation between each predictor and general well-being, while all the other predictors were controlled, both 'seeking emotional social support' ($\beta_1 = .26$, $p < .05$; $\beta_2 = .27$, $p < .05$) and illness severity ($\beta_1 = .22$, $p < .05$; $\beta_2 = .22$, $p < .05$) contributed significantly to IBD patients' perception of general well-being. This indicated that IBD patients who

were more likely to seek for emotional support and obtained higher illness severity tended to feel more worn-out as well as up-tight (i.e., poorer general well-being).

5. Predictive effects of coping strategies and social support satisfaction on illness disclosure and general well-being (Appendix 6)

Both illness severity and social support satisfaction contributed independently to IBD patients' disclosure of their illness and their perception of general well-being. Illness severity also predicted incrementally to illness disclosure but not to general well-being above the set of coping styles, so does social support satisfaction predict the two criteria beyond the set of coping styles? Hierarchical regression analyses revealed that the addition of social support to the regression model did no lead to a significant increase in explained variance in illness disclosure ($p = .08$) and it did not have any additional contribution to illness disclosure [$F (7, 93) = 1.73$, $p = .11$]. Moreover, higher average practical support discrepancy (i.e., lower practical support satisfaction) resulted in higher illness disclosure ($\beta = -.24$, $p < .05$).

The addition of social support satisfaction to the set of coping styles when predicting IBD patients' perception of general well-being resulted in a significant increase in the explained variance of feelings of worn-out (12.1%, $p < .005$) and a nearly significant increase in explained variance of feelings of up-tight (6%, $p = .054$). However, social support in combination only significantly contributed to feelings of worn-out incrementally above the set of coping styles [$F (7, 89) = 2.86$, $p < .01$]. The correlation between each predictor and the criterion indicated that the more IBD patients choose 'seeking emotional social support' as their coping strategy, the more they feel worn-out ($\beta = .28$, $p < .05$) as well as up-tight ($\beta = .25$, $p < .05$). Moreover, the higher average emotional social support discrepancy (i.e., the lower satisfaction), the more IBD patients feel worn-out ($\beta = .33$, $p < .05$) and up-tight ($\beta = .31$, $p < .05$). Taken collectively, both 'seeking emotional social support' and emotional social support satisfaction contributed significantly to IBD patients' perception of general well-being.

To conclude, chronic illness presents unique challenges for IBD patients at work, as the illness severity, coping strategies, and received social support all influence the possibility of illness disclosure at workplace and perceived general well-being. The way

people choose to manage information about their illness is critical to maintaining reputation as a competent actor in the workplace environment. Higher illness severity increase illness disclosure, and illness disclosure is associated with social support satisfaction. Higher illness severity leads to poor perception of general well-being, general well-being is also associated with social support received from significant others.

6. The relationship between illness disclosure and general well-being (Appendix 7)

Illness disclosure did not correlate to IBD patients' feelings of worn-out ($r = .14$, $p = .16$), neither did it correlate to their feelings of up-tight ($r = .08$, $p = .43$). Taken together, illness disclosure was not associated with general well-being. This patterns of results contradict to previous research in the way that failure to disclose illness concerns was found to be associated with low emotional well-being (Figueiredo, et al., 2003). Moreover, when examining disclosure of HIV status and mental health consequences of such disclosure, Zea et al. (2005) found that disclosure resulted in greater social support, which in turn had positive effects on (psychological) well-being. However, IBD patients who felt worn-out were significantly more likely to feel up-tight ($r = .78$, $p < .001$). This is not surprising as feelings of worn-out and uptight together determines people's level of stress (Cox & Griffiths, 1995).

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