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<td><strong>Author(s)</strong></td>
<td>Wen, Kien Gi Gigi (温建芝)</td>
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CITY UNIVERSITY OF HONG KONG

The Relationship between
Hopefulness, Coping Flexibility and
Psychological Adjustment among
Patients suffering from Inflammatory Bowel Disease

A Report Submitted to
Department of Applied Social Studies
in Partial Fulfillment of the Requirements for
the Master of Social Sciences in Applied Psychology

by

WEN Kien Gi, Gigi

May, 2013
Abstract

(1) Objectives: Anxiety and depression are prevalent among patients with Inflammatory Bowel Disease (IBD), which is a chronic relapsing gastrointestinal disease. The aim of this study was to investigate the possible roles of hope and coping flexibility on buffering anxiety and depression levels in these patients. Another aim of this study was to compare the effects of hope and coping flexibility, and to explore whether the overall hope construct, or its components of agency or pathways, would have a more significant effect on psychological adjustment.

(2) Method: The study used a cross-sectional design comprising 81 subjects with Crohn’s disease (a type of IBD) recruited from Queen Mary Hospital. Informed consents were obtained from the subjects during their follow-up in the outpatient clinic of the hospital. A questionnaire package was administered to the participants which comprises the Hospital Anxiety and Depression Scale (HADS), Adult Hope Scale (AHS), Perceived Ability to Cope with Trauma Scale (PACTS) and questions collecting demographic information.

(3) Results: Hope negatively correlated with anxiety \( (r = -.54, p < .001) \) and depression \( (r = -.54, p < .001) \). Coping flexibility was also found to be negatively
associated with anxiety ($r = -.47, p < .001$) and depression ($r = -.49, p < .001$).

Regression analyses controlling for marital status and religion showed that hope was a significant predictor for anxiety and depression in the final model (anxiety: $\beta = -.41, p < .01$; depression: $\beta = -.36, p < .01$), but not coping flexibility. Hope was found to be a mediator of the relationship between coping flexibility and anxiety ($\beta = -.30, 95\% \text{ CI} [-1.46, -.26]$) and depression ($\beta = -.26, 95\% \text{ CI} [-1.26, -.32]$). When hope was separated into agency and pathways components, only agency was predictive of depression ($\beta = -.32, p < .05$).

(4) Conclusions: Hope was found to be a significant factor in buffering the anxiety and depression levels in patients with Crohn’s disease. The effect of coping flexibility was secondary to hope. Hopeful thinking also necessitates both components of agentic and pathways thinking, although agentic thinking could be a more important factor in buffering psychopathology than pathways thinking. Implications from the study as well as future directions were discussed.
Thesis Submission Declaration Form
City University of Hong Kong
Department of Applied Social Studies

Student Name: Wen Kien Gi, Gigi

Student No.: 52130572

Title of Thesis/Dissertation: The relationship between hopefulness, coping flexibility and psychological adjustment among patients suffering from inflammatory bowel disease

Course Code: SS5790

Programme: MSSAPSY

Supervisor’s Name: Prof. Samuel Ho Mun Yin

I have read and understood the following

- Rules on Academic Honesty (http://www.cityu.edu.hk/qac/academic_honesty/rules.htm)
- Department’s Statement on Plagiarism.

Thesis/Dissertation Checklist:

(✓) This paper is my own individual work.

(✓) This paper has not been submitted to any other courses.

(✓) All sources consulted have been acknowledged in the text and are listed in the reference list, with sufficient documentation to allow their accurate identification.

(✓) All quotations are enclosed in quotation marks and that the source for each quotation has an accurate citation.

Signature: __________________ Date: __1 May 2013__
Acknowledgments

I would like to express my most sincere gratitude to my thesis supervisor, Prof. Samuel Ho, who has been immensely insightful and generous in offering me many inspirational advices and guidance. I would also like to extend my appreciation to Dr. Judy Ho, without whose professional expertise and kind support this thesis would have been impossible. Special thanks also go to Norris and Samson for their valuable assistance on data collection.
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Chapter 1 Introduction and Literature Review

1.1 Introduction and Background

Inflammatory Bowel Disease (IBD) is a group of chronic, relapsing gastrointestinal diseases comprising of Crohn’s disease (CD) and Ulcerative Colitis (UC). Its precise etiology is unknown and cure is not yet available (Stange et al., 2006). Patients face long-term disabling conditions such as symptoms of abdominal pain, diarrhea, and weight loss. Three-quarters of patients require an operation in their lifetime. The course of the disease is usually unpredictable and often requires recurrent treatment of active disease, complications and reoperation (Ng & Kamm, 2008). Patients often report worry about the need of having an ostomy bag, the uncertain nature of the disease, and their low energy level (Blondel-Kucharski et al., 2001).

Given the disability and functional impairment generated by IBD, there is higher comorbidity of emotional disorders such as anxiety and depression in the patients. A recent review summarizing past studies pointed to a conservative estimate of at least twice the rate for IBD patients than those in the general community (Graff, Walker, & Bernstein, 2009). Moreover, the direction of the relationship between IBD and
emotional disorders is potentially reciprocal (Graff et al., 2009). On the one hand, there has been shown a clear temporal relationship where changes in disease activity (either increase or decrease in severity) are followed by changes in levels of anxiety and depression (Porcelli, Leoci, & Guerra, 1996). On the other hand, emotional disturbances are risk factors for disease exacerbation. For instances, higher baseline depression is significantly correlated with increased chance of relapse in the next 18 months (Mittermaier, 2004). Both anxiety and depression are associated with treatment non-adherence (Nahon et al., 2011) and lower remission rate when treated with medication (Persoons et al., 2005), both having negative impact to the course of the disease.

The medical community widely agrees that psychosocial factors are important and should be considered during clinical management of IBD (Caprilli et al., 2006). In health psychology context, identifying factors promoting psychological adjustment in chronic illness patients can contribute to formulation of effective interventions that can improve quality of care (Leventhal, Weinman, Leventhal, & Phillips, 2008). The present study attempted to identify psychological factors that contribute to the adjustments of patients with IBD, in terms of levels of anxiety and depression. Although the incidence
The cognitive model of hope (Snyder et al., 1991; Snyder, 2002) was used to

guide the investigation. A review of the model would be provided in the Literature

Review section. From past studies, Snyder’s two-component hope theory of goal

attainment has been useful in predicting positive adjustment across a wide range of

health conditions (Snyder et al., 1991; Snyder, 2002). In a local pilot study, hope-based

intervention has been found to promote positive psychological adjustments in

individuals susceptible to colorectal cancer (Ho et al., 2012). Despite the potential

applicability, the role of hope in adjustment of IBD patients had not yet received any

research attention, whether local or overseas. In the present study, attempt was also

made to study the relationship between hope and other psychological factor on their

simultaneous effect in influencing psychological adjustment. Coping, with its long

tradition of research attention received in health psychology (Lazarus & Folkman,
1984), was selected and the present study turned to a more recent concept of coping flexibility (Bonanno, Pat-Horenczyk, & Noll, 2011).

In summary, the purpose of the present study was three-fold:

(1) To assess the emotional well-being of Hong Kong Chinese IBD patients in terms of levels of anxiety and depression.

(2) To examine the role of hope in the psychological adjustment of IBD patients.

(3) To compare the effects of hope and coping flexibility on psychological outcomes of IBD patients.
1.2 Literature Review

1.2.1 Hope

1.2.1.1 Snyder’s Cognitive Model of Hope

Traditionally, hope has been generally viewed as unidimensional construct of positive expectation for goal attainment (Stotland, 1969; Synder et al., 1991).

Expanding this earlier view, Synder and his colleagues proposed a two-component theory of hope emphasizing the necessity of both “will” and “ways” for successful goal pursuits (Snyder et al., 1991). A hopeful individual would have the ability to produce plausible planning of ways to meet goals (pathways component, or “ways”), and perceive himself/herself as having the capability to use these pathways to reach goals (agency component, or “will”). The model of hope posits that during the pursuit of a valued goal, the iterative thought processes of pathways and agency would elicit positive emotions and facilitate the appraisals of obstacles as challenges (Snyder, 2002). Hopeful individual is postulated to be more flexible thinkers in producing alternative routes to attain a goal, utilize a wider repertoire of coping responses, and can sustain motivation in the face of barriers. Attainment of the goal, in turn, would generates positive feedback on one’s dispositional and situational hopeful thinking.
1.2.1.2 Benefit of Hope

Hopeful individuals consistently fare better over numerous arenas, including academics, athletics, and psychotherapy (Snyder, 2002). In terms of psychological adjustment, hope was found to predict less anxiety and depression in college students, but not in the opposite direction (Arnau, Rosen, Finch, Rhudy, & Fortunato, 2007).

Some studies attempted to understand the mechanism by which hope brings about positive adjustment. In a path analysis to explore the effect of hope on depression, in addition to a direct effect, hope was also found to indirectly influence secondary appraisal and coping strategies (Chang & DeSimone, 2001). Thus, hopeful individuals have more positive appraisal on their coping resources and engage in more conscious efforts to obtain goals. In addition, higher level of hope may reflect an underlying coherent sense of meaning in life that contributes to resiliency against the face of adverse life circumstances. Hopefulness was found to be predicted by one’s sense of explicit and implicit meaning in life which also predicted less depression, when the effect of personality traits was controlled for (Mascaro & Rosen, 2005). Hope may also influence knowledge-seeking behavior so that one is better equipped to face adverse circumstances. In a study of college women facing hypothetical situations of coping
with cancer, hopeful individuals were more knowledgeable about cancer and had superior coping responses in the risk, detection, course, and impact stages of cancer (Irving, Snyder, & Crowson, 1998).

1.2.1.3 Hope and Health

In stressful encounters such as facing illness, hopeful individuals are expected to cope better with pains and other disabilities (Snyder, 2002). Empirical researches have supported the beneficial effect of trait hopefulness over a wide range of health conditions. For example, hope was found to significantly predict less depression across time after traumatic experience of spinal cord injury (Elliott, Witty, Herrick, & Hoffman, 1991) and buffer disability-related stress in mothers caring for children with chronic illness (Horton & Wallander, 2001). Research on Hong Kong Chinese patients also confirmed the universal beneficial effect of hope. Hope was found to predict resilience over 1 year after stressful situation of colorectal cancer genetic testing (Ho, Ho, Bonanno, Chu, & Chan, 2010), and predict less depression in oral cavity cancer survivors where its effect is independent from other positive psychological construct like optimism (Ho et al., 2011). While no research has studied the effect of hope on IBD patients, it is expected that hopeful individuals may as well persevere better in the face
of such chronic disability and exhibit less anxiety and depression symptoms.

1.2.1.4 Agency and Pathways Components of Hope

In Snyder’s theory, both agency and pathways components of hope are necessary to bring about hopeful thinking. The two are reciprocal, additive, and positively related, yet not synonymous (Snyder et al., 1991). Accordingly, both agency and pathways should make unique contributions to the prediction of relevant psychological outcomes. For example, in a study attempted to elucidate the differential effect of the two components in people coping with health problems, agency and pathways thinking were found to be differentially related to different outcomes. Relations between hope and constructive thinking was mainly a function of agency, whereas the relations between hope and resource allocation was primarily a function of pathways (Drach-Zahavy & Somech, 2002), supporting Snyder’s concept of bi-dimensional structure of hope. Further support of the theoretical position came from factor analytic studies, where the hope scale was generally found to have a two-factor structure of agency and pathways, and both were relatively distinct (Babyak, Snyder, & Yoshinobu, 1993; Roesch & Vaughn, 2006).
Nevertheless, some studies did not support the view that the hope construct consists of two factors. In one study exploring the association between participants’ direct perception of hope and traits of agency and pathways (Tong, Fredrickson, Chang, & Lim, 2010), only trait agency was associated with and predicted participants’ self-report of hope. There was a lack of relationship between pathways thinking and hope across different kinds of goals and across cultures. Thus, it was suggested that only agentic thinking was relevant to hope but not pathways thinking. Other researches comparing the effects of the two components generally found that agency rather than pathways was associated with relevant adjustment outcomes. For example, agency was better than pathways in predicting students’ suicide ideation (Range & Penton, 1994) and explaining the negative relation between hope and maladjustment scores of students (Cramer & Dyrkacz, 1998). Agency, but not pathways, had prospective effect on depression and anxiety in a longitudinal study of college students across 1 month (Arnau et al., 2007).

Notwithstanding the potential differential effects of agentic and pathways thinking, most studies of hope generally employed it as a unitary construct instead of discerning the unique contributions of agentic and pathways thinking (Chang, 2003).
Therefore, it would be of interest to elucidate the unique contributions of agentic and pathways thinking to psychological adjustments in patients with chronic illness. From previous researches, there may be a higher possibility that agency rather than pathways is a more powerful predictor of psychological adjustments.

1.2.2 Coping Flexibility

1.2.2.1 Traditional Theory and Research of Coping

Coping is a key concept for theory and research on adaptation and health (Lazarus, 1993), which is defined as “cognitive and behavioral efforts to manage specific external or internal demands that are appraised as taxing or exceeding the resources of the person”. Lazarus and Folkman’s transactional theory of stress and coping posited that one’s appraisal of the event influences the degree of stress one experiences from it. Moreover, the process is dynamic such that coping behaviors change consistently to meet the evolving demands of the situation (Lazarus & Folkman, 1984). For example, one may direct coping effort at the demands themselves (problem-focused strategies) or at the emotional reactions triggered (emotion-focused strategies), depending on the situation.
While research attempted to delineate the effectiveness of each coping strategies, there has been no consensus on any universal effectiveness of one over another (Thoits, 1995). A recent literature review on coping of IBD patients pointed to mostly negative associations between emotion-focused coping and adjustment, but weak positive associations had also been found (McCombie, Mulder, & Gearry, 2013). Similar inconsistent findings were also found for problem-focused coping, that four studies showed its positive associations with psychological outcome, two negative, and five showed no relationship. In line with theoretical view, coping processes are not by themselves good or bad, but should be evaluated in terms of the specific context in which they are employed, such as the controllability and the dynamics of the situation as it progresses (Folkman & Moskowitz, 2004). For IBD patients, coping strategies can vary in effectiveness when they are employed in adjustment to concerns of different natures, such as loss of control of the bowel, fatigue, body image impairment, fear of sexual inadequacy, social isolation, concern of unworthiness and stigmatization (Sajadinejad, Asgari, Molavi, Kalantari, & Adibi, 2012).

1.2.2.2 Theory and Research of Coping Flexibility

Given the emphasis of contextual fitness of coping, evaluation on one’s coping
flexibility may be more important than simply studying the effectiveness of individual strategies. To cope adaptively, one should have the ability to flexibly modify his coping strategies according to the situational demand instead of rigidly apply the same strategies over different situations (Kashdan & Rottenberg, 2010; Rozanski & Kubzansky, 2005). Research showed that coping flexibility consistently correlated with better psychological functioning, such as less psychopathology in bereaved individuals in both America and Hong Kong (Burton et al., 2012), better quality of life in Chinese patients with gastrointestinal cancer (Cheng et al., 2012), as well as less anxiety and depression in patients facing progressive and unpredictable course of chronic rheumatic diseases (Vriezekolk et al., 2012).

The experience with IBD can be potentially traumatic, since one needs to adjust to a chronic and unpredictable disease course and to a wide range of concerns. Past literature on adjustment to traumatic experiences consisted of two diverging points of view (Bonanno et al., 2011). One view posits that recovery requires a deliberate and effortful “working through” of the trauma, where normal goals are suspended and time is devoted to processing the event (trauma-focus coping). The other view posits that positive future-oriented expectancies help people maintain a focus on on-going
activities and plan, thereby minimizing the negative impact (forward-focus coping).

Integrating both perspectives, Bonanno and colleagues proposed that coping flexibility, defined as the ability to employ both types of strategies in the face of potentially traumatic events, would most likely predict optimal adjustment. Consistent with this hypothesis, in a cross-country study of bereaved individuals of China and America, the ability to flexibly employ both forward-focus and trauma-focus strategies was more salient in predicting adjustment than simply evaluating the ability to exercise a particular strategy (Burton et al., 2012). Notwithstanding its explanatory potential, the integration of forward-focus and trauma-focus coping into a single coping flexibility construct has not yet been employed in studying psychological adjustment of patients with chronic illness such as IBD.

1.2.3 Relationship between Hope and Coping

From the past literature, both hope and coping are important in promoting well-being of people facing serious and prolonged stress. A few research had attempted to study the simultaneous effects of the two constructs. Individuals high in hope-pathways was found to use more overall coping strategies during daily coping (Roesch, Duangado, Vaughn, Aldridge, & Villodas, 2010). The finding was consistent
with the view that flexible individuals could better differentiate among different stressful situations, and are more effective in generating alternative ways to handle problems (Cheng & Cheung, 2005). Therefore, hope may be positively associated with coping flexibility. In addition, hope and coping have been shown to exert independent significant effects on dysphoria (Chang & DeSimone, 2001). As such, hope and coping flexibility may each contribute unique variance on predicting psychological adjustment.

Hope may also interact with coping to bring about favorable adjustment in stressful situations, and their relationship can be viewed as dynamic and reciprocal where each supports and is in turn supported by the other (Folkman, 2010). A study on breast cancer patients showed that level of hope moderated the effectiveness of coping strategies. Emotionally expressive coping was useful for hopeful individuals but not for less hopeful ones (Stanton et al., 2000). In another study of children with sickle cell disease, hope contributed to less anxiety only when active, support, and distraction coping strategies were used (Lewis & Kliwer, 1996).

The possible mediating relationship between hope and coping in explaining adjustment was less well delineated, although theoretically it has been suggested that
hope and coping may engender each other in bringing about favorable outcomes (Folkman, 2010). Along the view that hope is a more stable trait across situations and coping is generally dynamic and contextually dependent, hopeful disposition may facilitate a more favorable cognitive appraisal of stressful situation or coping resources (Chang & DeSimone, 2001). In the study of breast cancer patients, the effect of hope was partially mediated by emotional expressive coping, which led to better perceived health and sense of vigor (Stanton et al., 2000). Yet in the study of children with sickle cell disease, no mediation effect was found for active coping mediating the relationship between hope and anxious symptoms (Lewis & Kliewer, 1996).

Alternatively, hopeful thinking may be generated through a dynamic process and fostered by effective coping. In Snyder’s hope model, the generation of hopeful thinking can be viewed as a feedback process where pathways and agency thoughts are activated during a goal pursuit sequence (Snyder, 2002). Stressor elicits one’s emotional reactions which are shaped by one’s emotional processing, and in turn affect the cognitions of the person during the goal pursuit process. When a person has overcame the stressor at the end, the perception about the success or failure would generate emotions which are cycled back and reinforce one’s goal-directed thinking. On the other hand, from the
perspective of coping literature, an effective coping and appraisal process during a stressful situation may eventually instill hope by a more favorable interpretation of one’s personal odds (Folkman, 2010). As such, theories of hope and coping imply a complex interaction between hope and coping. One’s coping appraisal may contribute to the success or failure of goal pursuit through mechanism such as affecting one’s interpretation of personal odds. The outcome of the goal pursuit may then generate positive or negative emotions that cycle back and shape one’s hope-related cognitions.

Despite the theoretical possibility, there has been limited research which attempts to directly investigate the role of hope as a mediator between coping and psychological outcomes. In a study of patients with different illness where their levels of hope were measured over 6 months, patients with serious chronic illness such as cancer had relatively low hope in the initial phase but became more hopeful after 6 months (Heszen-Niejodek, Gottschalk, & Januszek, 1999). It was suggested that the changing level of hope may reflect the result of underlying coping process during the course of illness, but the possibility was not explicitly tested. In another study of blinded military veterans, a mediating role was found for hope in the relationship between proactive sociable style and perceived level of functional ability (Jackson, Taylor, Palmatier, Elliott, & Elliott, 1998). Nevertheless, in view that evidences had been found for both
directions of the meditational relationship, no definite hypothesis can be generated on
whether hope or coping flexibility act as a mediator in their relationship with
psychological adjustment.
1.3 Conceptual Framework and Hypotheses

In summary, both psychological constructs of hope and coping flexibility have been shown in previous research to be related to positive psychological adjustment in the face of adverse health conditions. However, past studies have rarely simultaneously looked into the effects of both factors on the psychological adjustment of chronic disease patients, in particular IBD patients or the Hong Kong Chinese community. It would be of interest to explore the contribution of each factor as well as to study their relationships in bringing about psychological adjustment in the present sample of Hong Kong Chinese Crohn’s disease patients.

Specifically, the following hypotheses were tested:

(1) Hope and coping flexibility would each be negatively correlated with anxiety and depression, based on the past findings of positive psychological effects of hope (e.g. Snyder, 2002), and coping flexibility (e.g. Burton et al., 2012; Vriezekolk et al., 2012).

(2) Hope would be positively and significantly correlated with coping flexibility, as suggested in the finding of Roesch et al. (2010) that hope-pathways was associated with more flexible coping strategies.
(3) Hope agency would be a better predictor than pathways of anxiety and depression, based on the findings of Tong et al. (2010) that only agency but not pathways predicted hope.

(4) Hope and coping flexibility would each contribute to significant and unique variance on predicting less anxiety and depression, as shown in Chang & DeSimone (2001)’s study that hope was independent predictor of dysphoria independent of coping.

While no specific hypotheses could be generated based on past literature, the following research question was also explored:

(5) Whether there exists a mediating relationship, and the direction of the relationship, if any, between hope, coping flexibility and psychological adjustment outcomes.
Chapter 2  Methodology

2.1  Participants

A total of 81 patients with Crohn’s disease were recruited from Queen Mary Hospital during their follow-up or treatment at the hospital. All participants were Cantonese-speaking. The sample consisted of 53 male (65.4%) and 28 female (34.6%). Age ranged from 20 to 78 years, with a mean age of 40.65 years ($SD = 13.05$). Of the total sample, 59.3% were currently married and 40.7% had religious faith. Duration of diagnosis ranged from 0.17 years to 40 years ($M = 10.24$ years; $SD = 8.47$). Table 1 presents the demographic data of the sample.
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<td>$25,000 or above</td>
<td>39</td>
<td>48.1</td>
</tr>
<tr>
<td>Missing information</td>
<td>3</td>
<td>3.7</td>
</tr>
</tbody>
</table>
2.2 Materials and Measures

2.2.1 Anxiety and Depression

The Hospital Anxiety and Depression Scale was originally developed by Zigmond and Snaith (1983) as a self-assessment scale for detection of depression and anxiety states in the setting of hospital medical out-patient clinic. The scale consists of 14 items with 7 for the anxiety subscale and 7 for the depression subscale. Each item is rated on a 4-point scale from 0 (not at all) to 3 (very much indeed) with higher score corresponding to more severe symptoms. The Chinese-Cantonese version of the scale showed good psychometric properties in previous validation studies (Leung, Ho, Kan, Hung, & Chen, 1993; Leung, Wing, Kwong, Lo, & Shum, 1999). The Cronbach’s alphas for the anxiety and depression subscales in the current study were .91 and .88 respectively, indicating good internal consistencies.

2.2.2 Dispositional Hope

The 12-item Adult Trait Hope Scale (AHS) developed according to Synder (1991)’s model of hope was used as a measurement of dispositional hope. The scale consists of 12 items, with 4 measuring the agency component and 4 measuring the pathways component, and the remaining 4 being fillers. The items on agency tap one’s
sense of successful goal-related determination (e.g. “I energetically pursue my goals”).

The items on pathways assess the individual’s cognitive appraisal of ability to generate means for reaching goals or overcoming obstacles (e.g. “I can think of many ways to get out of a jam”). Each item is rated on a 4-point scale from 1 (definitely false) to 4 (definitely true) with higher score indicating higher hopefulness. The original scale showed good convergent, discriminant and construct validity. The Chinese version developed by Ho and colleagues (2010) was used in the present study. The Cronbach’s alphas for hope total, agency and pathways in the present study were .91, .83, and .87 respectively, demonstrating good internal consistencies.

2.2.3 Coping Flexibility

The Perceived Ability to Cope with Trauma (PACT) Scale is a 20-item measurement on the perceived ability to endorse different coping strategies in the face of potentially traumatic events such as illness (Bonanno et al., 2011). The trauma-focus subscale contains 8 items measuring the perceived ability to focus on processing the trauma (e.g. “Let myself fully experience some of the painful emotions linked with the event”). The forward-focus subscale consists of 12 items tapping the perceived ability to move beyond the trauma (e.g. “Keep my schedule and activities as constant as
possible”). Each item is rated on a 7-point scale (1 = not true, 7 = extremely true). A coping flexibility score is generated by the total coping flexibility (sum of subscales) minus coping polarity (discrepancies between subscales). The perceived ability to use both forward- and trauma-focus copings would be reflected in a high total score of both subscales and relatively little discrepancies between the two. The original scale showed good convergent, discriminant and incremental validity. The utility of the Chinese version had been demonstrated in a previous cross-cultural study (Burton et al., 2012). The Cronbach’s alphas for the forward-focus and trauma-focus subscales in this study were .92 and .84 respectively, showing good internal consistencies comparable to the original scale.
2.3 Procedures

The study was approved by the College Research Ethics Sub-Committee of the City University of Hong Kong and the Institutional Review Board of the Hospital Authority Hong Kong West Cluster. Convenient sampling was adopted in the current study. A research assistant approached potential participants in the Outpatient Department of Queen Mary Hospital. Participants gave informed consent before voluntary participation. A self-completed questionnaire package was administered to the participants to collect psychosocial measurements, demographic and medical information. The participants were given debriefing information after the study.
3.1 Descriptive Statistics

Table 2 shows the descriptive statistics of psychosocial variables. Mean anxiety score of the sample was 6.33 ($SD = 4.48$) and mean depression score was 5.37 ($SD = 4.30$). A 5/6 cutoff point was adopted according to previous study in Hong Kong (Leung et al., 1993; Leung et al., 1999) to identify potential anxiety and depression caseness. It was revealed that 42 participants (51.9%) and 32 participants (39.5%) could be classified as anxiety and depression cases respectively.

Table 2
Descriptive Statistics of Psychosocial Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>$SD$</th>
<th>Alpha ($\alpha$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HADS Anxiety</td>
<td>0</td>
<td>20</td>
<td>6.33</td>
<td>4.48</td>
<td>.91</td>
</tr>
<tr>
<td>HADS Depression</td>
<td>0</td>
<td>18</td>
<td>5.37</td>
<td>4.30</td>
<td>.88</td>
</tr>
<tr>
<td>Hope Total</td>
<td>21</td>
<td>64</td>
<td>45.35</td>
<td>9.93</td>
<td>.91</td>
</tr>
<tr>
<td>Hope Agency</td>
<td>9</td>
<td>32</td>
<td>22.02</td>
<td>5.30</td>
<td>.83</td>
</tr>
<tr>
<td>Hope Pathway</td>
<td>9</td>
<td>32</td>
<td>23.32</td>
<td>5.22</td>
<td>.87</td>
</tr>
<tr>
<td>PACT Flexibility</td>
<td>4.17</td>
<td>12</td>
<td>9.29</td>
<td>1.60</td>
<td>−</td>
</tr>
<tr>
<td>PACT Forward-focus</td>
<td>2.25</td>
<td>6.17</td>
<td>4.92</td>
<td>0.82</td>
<td>.92</td>
</tr>
<tr>
<td>PACT Trauma-focus</td>
<td>2</td>
<td>6.63</td>
<td>4.77</td>
<td>0.86</td>
<td>.84</td>
</tr>
</tbody>
</table>

Note. HADS = Hospital Anxiety and Depression Scale; Hope = Adult Hope Scale; PACT = Perceived Ability to Cope with Trauma Scale
3.2 Relationships between Study Variables

Independent-samples \( t \)-tests and one-way analyses of variance (ANOVA) were carried out to examine the potential effects of demographic and medical variables on anxiety and depression symptoms. The \( t \)-test by religion was found to be statistically significant for anxiety (\( t(79) = -2.31, p < .05 \)), and depression (\( t(79) = -2.46, p < .05 \)) with medium effect sizes for both anxiety (\( \eta^2 = .063 \)) and depression (\( \eta^2 = .071 \)). Participants with religious beliefs reported higher levels of anxiety (\( M = 7.82, SD = 5.71 \)) and depression (\( M = 6.88, SD = 5.42 \)) than those without (\( M = 5.31, SD = 3.05 \) for anxiety; \( M = 4.33, SD = 2.96 \) for depression). In addition, the \( t \)-test for marital status was found to be statistically significant for depression (\( t(79) = 2.19, p < .05 \)) with a medium effect size (\( \eta^2 = .057 \)). Married participants reported less depression (\( M = 4.52, SD = 3.97 \)) than those who were never married, divorced or separated (\( M = 6.61, SD = 4.52 \)). No other demographic or medical variables were found to have significant effect on anxiety and depression symptoms. Results of the \( t \)-tests and one-way ANOVAs are shown in Table 3 and 4 respectively. Simple correlation showed no significant correlation between disease duration and anxiety (\( r = -.09, p = .45 \)) or depression (\( r = .03, p = .79 \)).
Since religion and marital status had significant effect on depression and anxiety, these two variables were controlled in subsequent analyses.
Table 3
*Independent Sample t-tests by Demographic and Medical Variables on Anxiety and Depression*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Anxiety</th>
<th></th>
<th></th>
<th>Depression</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>t-value</td>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male (n = 53)</td>
<td>6.21</td>
<td>4.26</td>
<td>.35</td>
<td></td>
<td>5.21</td>
<td>3.89</td>
</tr>
<tr>
<td>Female (n = 28)</td>
<td>6.57</td>
<td>4.94</td>
<td></td>
<td></td>
<td>5.68</td>
<td>5.06</td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (n = 33)</td>
<td>7.82</td>
<td>5.71</td>
<td>-2.31*</td>
<td>.063</td>
<td>6.88</td>
<td>5.42</td>
</tr>
<tr>
<td>No (n = 48)</td>
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<td>3.05</td>
<td></td>
<td></td>
<td>4.33</td>
<td>2.96</td>
</tr>
<tr>
<td>Marital status</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Currently married (n = 48)</td>
<td>5.69</td>
<td>4.51</td>
<td>1.58</td>
<td></td>
<td>4.52</td>
<td>3.97</td>
</tr>
<tr>
<td>Currently not married (n = 33)</td>
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<td>4.33</td>
<td></td>
<td></td>
<td>6.61</td>
<td>4.52</td>
</tr>
<tr>
<td>Current smoker</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (n = 9)</td>
<td>7.67</td>
<td>4.87</td>
<td>-.95</td>
<td></td>
<td>6.78</td>
<td>3.27</td>
</tr>
<tr>
<td>No (n = 72)</td>
<td>6.17</td>
<td>4.43</td>
<td></td>
<td></td>
<td>5.19</td>
<td>4.40</td>
</tr>
<tr>
<td>Ever undergone surgery for CD</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Yes (n = 45)</td>
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<td>-.10</td>
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<td>5.56</td>
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<tr>
<td>No (n = 36)</td>
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<td></td>
<td>5.14</td>
<td>4.28</td>
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<tr>
<td>Currently has a stoma</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (n = 3)</td>
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<td>1.73</td>
<td>-.52</td>
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<td>3.67</td>
<td>.58</td>
</tr>
<tr>
<td>No (n = 78)</td>
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<td></td>
<td>5.44</td>
<td>4.37</td>
</tr>
<tr>
<td>Ever received education on CD</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Yes (n = 29)</td>
<td>6.17</td>
<td>4.60</td>
<td>-.24</td>
<td></td>
<td>4.86</td>
<td>4.68</td>
</tr>
<tr>
<td>No (n = 52)</td>
<td>6.42</td>
<td>4.45</td>
<td></td>
<td></td>
<td>5.65</td>
<td>4.10</td>
</tr>
</tbody>
</table>

*Note. *p < .05.*
Table 4
One-way ANOVAs by Demographic Variables on Anxiety and Depression

<table>
<thead>
<tr>
<th>Variable</th>
<th>Anxiety</th>
<th></th>
<th>Depression</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>F-value</td>
<td>M</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-29 (n = 15)</td>
<td>7.67</td>
<td>4.05</td>
<td>.93</td>
<td>5.40</td>
</tr>
<tr>
<td>30-39 (n = 27)</td>
<td>6.37</td>
<td>4.89</td>
<td></td>
<td>5.81</td>
</tr>
<tr>
<td>40-49 (n = 18)</td>
<td>6.44</td>
<td>4.19</td>
<td></td>
<td>5.50</td>
</tr>
<tr>
<td>50-59 (n = 14)</td>
<td>4.50</td>
<td>3.41</td>
<td></td>
<td>4.29</td>
</tr>
<tr>
<td>60 or above (n = 7)</td>
<td>6.71</td>
<td>6.16</td>
<td></td>
<td>5.43</td>
</tr>
<tr>
<td>Education level</td>
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<td></td>
</tr>
<tr>
<td>No formal education (n = 2)</td>
<td>4.50</td>
<td>6.36</td>
<td>1.20</td>
<td>2.50</td>
</tr>
<tr>
<td>Primary (n = 4)</td>
<td>2.75</td>
<td>3.78</td>
<td></td>
<td>3.50</td>
</tr>
<tr>
<td>Secondary (n = 46)</td>
<td>6.85</td>
<td>4.33</td>
<td></td>
<td>5.89</td>
</tr>
<tr>
<td>Tertiary or above (n = 29)</td>
<td>6.14</td>
<td>4.66</td>
<td></td>
<td>5.00</td>
</tr>
<tr>
<td>Job</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Studying (n = 5)</td>
<td>3.40</td>
<td>2.88</td>
<td>1.38</td>
<td>2.60</td>
</tr>
<tr>
<td>Full-time employment (n = 51)</td>
<td>6.51</td>
<td>4.56</td>
<td></td>
<td>5.35</td>
</tr>
<tr>
<td>Part-time employment (n = 9)</td>
<td>7.78</td>
<td>5.22</td>
<td></td>
<td>7.89</td>
</tr>
<tr>
<td>Retired (n = 4)</td>
<td>8.75</td>
<td>5.32</td>
<td></td>
<td>7.00</td>
</tr>
<tr>
<td>Homemaker (n = 6)</td>
<td>6.33</td>
<td>3.27</td>
<td></td>
<td>4.17</td>
</tr>
<tr>
<td>Unemployed (n = 6)</td>
<td>3.50</td>
<td>2.88</td>
<td></td>
<td>4.17</td>
</tr>
<tr>
<td>Monthly Household Income</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below $5,000 (n = 6)</td>
<td>6.00</td>
<td>3.74</td>
<td>1.06</td>
<td>5.00</td>
</tr>
<tr>
<td>$5,000 – $25,000 (n = 33)</td>
<td>6.97</td>
<td>4.96</td>
<td></td>
<td>5.94</td>
</tr>
<tr>
<td>$25,000 or above (n = 39)</td>
<td>5.46</td>
<td>3.92</td>
<td></td>
<td>4.46</td>
</tr>
</tbody>
</table>
3.3 Correlation Analysis

To explore the relationship between anxiety and depression symptoms and psychosocial variables, partial correlation was carried out controlling for religion and marital status as covariates. Table 5 shows the result of partial correlation among all variables.

Anxiety and depression were significantly and positively correlated with each other ($r = .76, p < .001$). Hope was significantly and negatively correlated with anxiety ($r = -.54, p < .001$) and depression ($r = -.54, p < .001$). Participants with a higher hope level tended to report less severe anxiety and depression symptoms. Similar associations were found for coping flexibility as being negatively correlated with anxiety ($r = -.47, p < .001$) and depression ($r = -.49, p < .001$). In addition, hope was significantly and positively correlated with coping flexibility ($r = .72, p < .001$).

Visual presentation of the mean anxiety and depression scores for groups with higher versus lower levels of hope (grouped by above versus below mean scores) across groups with higher versus lower coping flexibility (grouped by above versus below mean scores) are shown in Figures 1 and 2. Participants with both high hope and high
coping flexibility tended to report lower mean anxiety and depression scores.
Table 5
Partial Correlation of Psychosocial Variables Controlling for Religion and Marital Status as Covariates

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. HADS Anxiety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. HADS Depression</td>
<td>.76***</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Hope Total</td>
<td>-.54***</td>
<td>-.54***</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Hope Agency</td>
<td>-.52***</td>
<td>-.55***</td>
<td>.95***</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Hope Pathways</td>
<td>-.50***</td>
<td>-.48***</td>
<td>.94***</td>
<td>.78***</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. PACT Flexibility</td>
<td>-.47***</td>
<td>-.49***</td>
<td>.72***</td>
<td>.70***</td>
<td>.65***</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. PACT Forward-focus</td>
<td>-.51***</td>
<td>-.51***</td>
<td>.71***</td>
<td>.69***</td>
<td>.65***</td>
<td>.95***</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>8. PACT Trauma-focus</td>
<td>-.42***</td>
<td>-.47***</td>
<td>.72***</td>
<td>.69***</td>
<td>.66***</td>
<td>.93***</td>
<td>.83***</td>
<td>-</td>
</tr>
</tbody>
</table>

*Note.* HADS = Hospital Anxiety and Depression Scale; Hope = Adult Hope Scale; PACT = Perceived Ability to Cope with Trauma Scale.

***p < .001.
Figure 1. Mean anxiety scores for higher versus lower hope groups across higher versus lower coping flexibility groups.

Figure 2. Mean depression scores for higher versus lower hope groups across higher versus lower coping flexibility groups.
3.4 Multivariate Statistics

To examine the extent to which hope and coping flexibility predicted anxiety and depression, hierarchical multiple regression analyses were carried out in two separate regression equations with anxiety and depression as dependent variables respectively. In both analyses, religion and marital status were coded as dichotomous variables and were controlled for in Step 1 (Ho, Chan, Ma, & Field, 2013). Coping flexibility and hope were entered as predictors in successive steps.

Anxiety. Table 6 shows the regression model predicting anxiety. The control variables of religion and marital status explained 13% of the variance in anxiety ($F(2,78) = 5.74, p < .01$) in Step 1. Adding coping flexibility in Step 2 improved the predictive power of the regression equation significantly and explained an additional 19% of the variance ($\Delta R^2 = .19, F(1,77) = 21.35, p < .001$). Finally, adding hope in Step 3 explained an additional 8% of the variance significantly ($\Delta R^2 = .08, F(1, 76) = 9.68, p < .01$). Upon entry of hope in Step 3, coping flexibility was no longer a significant predictor of anxiety. The total variance explained by the final model was 39.5% ($F(4,76) = 12.39, p < .001$) in which religion ($\beta = .24, p < .05$) and hope ($\beta = -.41, p < .01$) were significant predictors of anxiety.
**Depression.** Table 6 shows the regression model predicting depression. Similar to the analysis on anxiety, the control variables of religion and marital status explained 17% of the variance in depression ($F(2,78) = 8.16, p < .01$) in Step 1. Adding coping flexibility in Step 2 improved the predictive power of the regression equation significantly and explained an additional 20% of the variance ($\Delta R^2 = .20, F(1,77) = 24.39, p < .001$). Finally, adding hope in Step 3 explained an additional 6% of the variance significantly ($\Delta R^2 = .06, F(1, 76) = 8.36, p < .01$). Upon entry of hope in Step 3, coping flexibility was no longer a significant predictor of depression. The total variance explained by the final model was 43.4% ($F(4,76) = 14.58, p < .001$) in which religion ($\beta = .26, p < .01$), marital status ($\beta = -.22, p < .05$) and hope ($\beta = -.36, p < .01$) were significant predictors of depression.
Table 6
Hierarchical Multiple Regression Analyses Predicting Anxiety and Depression from Coping Flexibility and Hope, Controlling for Religion and Marital Status

<table>
<thead>
<tr>
<th>Variable</th>
<th>Anxiety</th>
<th></th>
<th>Depression</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>ΔR²</td>
</tr>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious/ Non-religious</td>
<td>2.87</td>
<td>.97</td>
<td>.32**</td>
<td></td>
</tr>
<tr>
<td>Currently married/ not married</td>
<td>-2.09</td>
<td>.97</td>
<td>-.23*</td>
<td></td>
</tr>
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<td><strong>Step 2</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious/ Non-religious</td>
<td>2.18</td>
<td>.88</td>
<td>.24*</td>
<td></td>
</tr>
<tr>
<td>Currently married/ not married</td>
<td>-1.39</td>
<td>.88</td>
<td>-.15</td>
<td></td>
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<tr>
<td>Coping flexibility</td>
<td>-1.25</td>
<td>.27</td>
<td>-.45***</td>
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<tr>
<td><strong>Step 3</strong></td>
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</tr>
<tr>
<td>Religious/ Non-religious</td>
<td>2.14</td>
<td>.83</td>
<td>.24*</td>
<td></td>
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<tr>
<td>Currently married/ not married</td>
<td>-1.39</td>
<td>.83</td>
<td>-.15</td>
<td></td>
</tr>
<tr>
<td>Coping flexibility</td>
<td>-.42</td>
<td>.37</td>
<td>-.15</td>
<td></td>
</tr>
<tr>
<td>Hope</td>
<td>-.18</td>
<td>.06</td>
<td>-.41**</td>
<td></td>
</tr>
<tr>
<td>Total R²</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. *p < .05. **p < .01. ***p < .001.
To compare the extent to which agency and pathways components of hope could predict anxiety and depression, the above regression analyses were repeated with hope in Step 3 being separated into agency and pathways components. Table 7 shows the regression model. For anxiety, when agency and pathways were entered in Step 3, an additional 8% of the variance was predicted by the model significantly \( F(2, 75) = 4.79, p < .05 \), but both agency and pathways were not significant predictors of anxiety in the final model. Nevertheless, standardized \( \beta \) showed that agency tended to be a more important predictor than pathways on anxiety symptoms. For depression, when agency and pathways were entered in Step 3, an additional 7% of the variance was predicted by the model significantly \( F(2, 75) = 4.58, p < .05 \). Agency was a significant individual predictor of depression in the final model \( (\beta = -.32, p < .05) \) but not pathways. Furthermore, religion (Yes/No) was a significant predictor of both depression and anxiety in the two regression equations.
### Table 7
Hierarchical Multiple Regression Analyses Predicting Anxiety and Depression from Coping Flexibility and Hope Agency/Pathway, Controlling for Religion and Marital Status

<table>
<thead>
<tr>
<th>Variable</th>
<th>Anxiety</th>
<th></th>
<th></th>
<th>Anxiety</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B$</td>
<td>$SE_B$</td>
<td>$\beta$</td>
<td>$\Delta R^2$</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious/ Non-religious</td>
<td>2.87</td>
<td>.97</td>
<td>.32**</td>
<td>3.01</td>
<td>.91</td>
<td>.35**</td>
</tr>
<tr>
<td>Currently married/ not married</td>
<td>-2.09</td>
<td>.97</td>
<td>-.23*</td>
<td>-2.62</td>
<td>.91</td>
<td>-.30**</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious/ Non-religious</td>
<td>2.18</td>
<td>.88</td>
<td>.24*</td>
<td>2.32</td>
<td>.81</td>
<td>.27**</td>
</tr>
<tr>
<td>Currently married/ not married</td>
<td>-1.39</td>
<td>.88</td>
<td>-.15</td>
<td>-1.92</td>
<td>.81</td>
<td>-.21*</td>
</tr>
<tr>
<td>Coping flexibility</td>
<td>-1.25</td>
<td>.27</td>
<td>-.45***</td>
<td>-1.23</td>
<td>.25</td>
<td>-.46***</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious/ Non-religious</td>
<td>2.14</td>
<td>.84</td>
<td>.24*</td>
<td>2.29</td>
<td>.78</td>
<td>.26**</td>
</tr>
<tr>
<td>Currently married/ not married</td>
<td>-1.37</td>
<td>.85</td>
<td>-.15</td>
<td>-1.81</td>
<td>.79</td>
<td>-.21*</td>
</tr>
<tr>
<td>Coping flexibility</td>
<td>-.42</td>
<td>.37</td>
<td>-.15</td>
<td>-.48</td>
<td>.34</td>
<td>-.18</td>
</tr>
<tr>
<td>Hope agency</td>
<td>-.20</td>
<td>.14</td>
<td>-.24</td>
<td>-.26</td>
<td>.13</td>
<td>-.32*</td>
</tr>
<tr>
<td>Hope pathways</td>
<td>-.17</td>
<td>.13</td>
<td>-.19</td>
<td>-.06</td>
<td>.12</td>
<td>-.08</td>
</tr>
<tr>
<td>Total $R^2$</td>
<td></td>
<td></td>
<td></td>
<td>.40**</td>
<td></td>
<td>.44***</td>
</tr>
</tbody>
</table>

Note. *$p < .05$. **$p < .01$. ***$p < .001$. 
3.5 Mediation Analyses

From the hierarchical multiple regression analyses for both anxiety and depression, the significant effect of coping flexibility in Step 2 became non-significant after entering hope in Step 3. To further test whether hope acted as mediator for the effect of coping flexibility on psychological adjustments, Baron and Kenny (1986)’s casual step approach of mediation analysis was followed. Regression analysis showed that coping flexibility was a significant predictor for hope when religion and marital status were controlled for ($R^2 = .53, \beta = .73, p < .001, F(3,77) = 29.06$). Therefore, mediation effect was established for hope acting as a mediator for the effect of coping flexibility on anxiety and depression.

Separating hope into agency and pathways component, coping flexibility was also shown to be significant predictors for each of them when the other was controlled for. For agency, $R^2 = .69, \beta = .34, p < .001, F(4,76) = 42.49$. For pathways, $R^2 = .64, \beta = .21, p < .05, F(4,76) = 33.87$. Since earlier regression showed that the effect of coping flexibility on depression in Step 2 became non-significant after entering agency in Step 3, mediation effect was also established for agency acting as a mediator for the effect of coping flexibility on depression.
More recent recommendations on mediation analyses suggested carrying out a significance test of the indirect effect of the independent variable on the dependent variable through the mediator, particularly for small samples (MacKinnon, Fairchild, & Fritz, 2007; Preacher & Hayes, 2004). As such, significance tests of indirect effect based on a nonparametric bootstrapping method using 1000 resamples with bias-corrected and accelerated 95% confidence intervals were carried out, using the SPSS script *Indirect* provided by Preacher and Hayes (2008). The indirect effect would be significant if zero does not lie in the 95% confidence intervals. The indirect effect of coping flexibility through hope for anxiety was significant ($\beta = -0.30, 95\% \text{ CI} [-1.46, -0.26]$), and that for depression was also significant ($\beta = -0.26, 95\% \text{ CI} [-1.26, -0.32]$). The mediation models for anxiety and depression are shown in Figure 1 and 2 respectively.

Further analyses were also carried out to examine the mediation effect of agency and pathways components for coping flexibility on anxiety and depression. Similar to earlier analyses, significant effect was found only for agency acting as a mediator for coping flexibility on depression ($\beta = -0.23, 95\% \text{ CI} [-1.21, -0.11]$). The mediation models for anxiety and depression are shown in Figure 3 and 4 respectively.
Alternative to hope acting as mediator in the models, other models with coping flexibility acting as mediator were tested which showed that coping flexibility was a weaker mediator for the relationship between hope and depression ($\beta = -.19$, 95% CI [-1.18, -.007]), and did not mediate the relationship between hope and anxiety ($\beta = -.15$, 95% CI [-.17, .02]).
Figure 3. Mediation model of hope acting as mediator for the effect of coping flexibility on anxiety, controlling for religion and marital status. Indirect effect of coping flexibility through hope on anxiety: $\beta = -0.30$, 95% CI [-1.46, -0.26]. Standardized coefficients are shown. Value in parenthesis indicates the coefficients for the unmediated path.

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

Figure 4. Mediation model of hope acting as mediator for the effect of coping flexibility on depression, controlling for religion and marital status. Indirect effect of coping flexibility through hope on depression: $\beta = -0.26$, 95% CI [-1.26, -0.32]. Standardized coefficients are shown. Value in parenthesis indicates the coefficients for the unmediated path.

** $p < .01$. *** $p < .001$. 
Figure 5. Mediation model of agency and pathways acting as mediators for the effect of coping flexibility on anxiety, controlling for religion and marital status. Indirect effect of coping flexibility through agency on anxiety (non-significant): $\beta = -.17$, 95% CI [-1.17, -.11]. Indirect effect of coping flexibility through pathways on anxiety (non-significant): $\beta = -.13$, 95% CI [-.85, .24]. Standardized coefficients are shown. Value in parenthesis indicates the coefficients for the unmediated path.

* $p < .05$. *** $p < .001$.

Figure 6. Mediation model of agency and pathways acting as mediators for the effect of coping flexibility on depression, controlling for religion and marital status. Indirect effect of coping flexibility through agency on depression: $\beta = -.23$, 95% CI [-1.21, -.11]. Indirect effect of coping flexibility through pathways on depression (non-significant): $\beta = -.05$, 95% CI [-.61, .37]. Standardized coefficients are shown. Value in parenthesis indicates the coefficients for the unmediated path.

* $p < .05$. *** $p < .001$. 
Chapter 4  Discussion and Conclusions

4.1 Discussion

The primary objective of this study was to examine the effects of hope and coping flexibility on psychological adjustments in terms of anxiety and depression symptoms in Chinese Hong Kong Crohn’s disease patients. Supporting the hypothesis, both hope and coping flexibility positively correlated with each other, and both negatively correlated with anxiety and depression symptoms. Therefore, patients who were more hopeful were also more likely to cope flexibly, and would fare better in terms of less psychopathology in the face of chronic stressful condition of having Crohn’s disease.

Hope was found to be the best predictor for both anxiety and depression in the final regression model, after controlling for religion and marital status. This confirmed previous results that hope plays a significant role in buffering psychological distress (Snyder et al., 1991; Snyder, 2002), and that such positive effect was also present in patients facing chronic illness of IBD. Therefore, interventions that aims particularly to augment hopeful thinking may be helpful to IBD patients in alleviating their anxiety and depression symptoms.
Coping flexibility was a significant predictor of anxiety and depression in earlier regression step, but its effect became non-significant after the effect of hope was taken into account. Thus, coping flexibility did not contribute unique variance to, but rather exerted indirect effect through hope in predicting psychological adjustments.

Furthermore, the indirect effect of coping flexibility through hope on psychological adjustments was found to be more salient than the opposite direction of hope through coping flexibility, although the latter one may have been more likely since a trait-like variable (hope) generally exerts indirect effect through a more state-like variable (coping) to explain psychological adjustments. A possible explanation was that the construct of coping flexibility may be conceptualized as an inherent tendency of coping flexibly across numerous scenarios. As pointed out by Bonanno and colleagues (2011), the measurement of coping flexibility may reflects an individual’s belief in their ability, instead of their actual ability, of endorsing both types of coping behaviors. The concept of coping flexibility may therefore reflect a more stable individual cognitive differences of their belief in coping ability than the earlier concepts of coping strategies which are more dynamic and context-dependent (Cheng, 2003). Moreover, it has been pointed out that hope and coping can be viewed as reciprocal and both supports the other (Folkman, 2010), and there exists a feedback mechanism in the process of generation of hopeful
Individuals who cope more flexibly are able to better differentiate across different stressful situations, and adopt different coping with good strategy-situation fit (Chang & Cheung, 2005). For patients diagnosed with inflammatory bowel disease, a series of psychological adaptive steps is required (Sajadinejad et al., 2012). Patients need to adjust to a wide range of behavioral responses (e.g. taking new medications, seeking social support, modifying diet) and psychological adaptations (e.g. acceptance, handling self-unworthiness and stigmatization), and good differentiation of strategy-situation fit may be particularly important. Poor use of coping strategies could lead to maladaptation and psychological distress in these patients (Crane & Martin, 2004). On the other hand, coping flexibility were associated with heightened sense of personal control and psychological well-being in cancer patients (Cheng et al., 2012), and are likely to promote successful coping over a wide range of area for patients. According to Snyder’s model of hope, the positive emotion generated by successful adjustment to stressors will further elicit hopeful cognition in subsequent goal pursuit activities (Snyder, 2002). Therefore, the present finding supported the view that one’s belief of coping flexibility may promote hopeful thinking via mechanisms during the goal pursuit process. Nevertheless, the present result should be viewed with caution and further studies with longitudinal design should
be carried out to validate the findings by elucidating the casual relationship between the variables.

Both agency and pathways of hope were found to associate negatively with anxiety and depression in the correlational study. However, only agency turned out as a significant predictor of depression in the regression models and no other significant effects were found. Considering that the overall hope construct significantly predicted both anxiety and depression, such result may support Snyder’s view that both agency pathways are necessary ingredients of hope in bringing about positive outcomes (Snyder, 2002).

Comparing the effects of agency and pathways thinking, agency but not pathways was found to predict less depression, although both did not predict anxiety significantly. The result of agency as a better predictor of psychological adjustment was generally in line with most previous studies showing that agency but not pathways associated better with psychological outcomes (e.g. Arnau et al., 2007; Cramer & Dyrkacz, 1998). It has been argued that people may remain hopeful even when they perceive lacking means to reach goal, especially in uncontrollable situations (Tong et al., 2010). For patients
facing chronic illness such as IBD where the disease course is unpredictable and uncontrollable, it may be perceived that little can be done to change the actual circumstances brought about by the disease. Maintaining a sense of positive determination and expectation maybe more relevant to facilitate wellbeing. Therefore, endorsement of agentic thinking may be more helpful for the patients than pathways thinking in bringing about favorable psychological adjustments.

In the mediation models where hope was separated into agency and pathways, coping flexibility was found to predict agency more significantly and strongly than pathways. Such result may be counterintuitive since the construct of coping flexibility seems to resemble pathways in the sense that both are related to employing different strategies in the face of stressful conditions. Examining the individual items of the two scales more closely, however, seems to reveal less relevance between coping flexibility and pathways items. Pathways items are related to the generation of concrete ways of reaching a goal (e.g. “I can think of many ways to get out of a jam”), while coping flexibility items seems more relevant to behavioral styles of reacting to a traumatic event instead of generating problem-solving tactics (e.g. “keep my schedule and activities as constant as possible”). On the other hand, some items of coping flexibility,
in particular trauma-focus coping (e.g. “remind myself that things will get better”) may bear more resemblance to goal-related positive determination like agentic thinking (e.g. “I energetically pursue my goal”). Further studies such as factor analysis may better illuminate the issue.

Another unexpected finding was that people with religion reported more anxiety and depression symptoms, which was in contrary to most previous findings that religious involvement was usually associated with better physical and mental health in various populations of patients (George, Ellison, & Larson, 2013; Koenig, Larson, & Larson, 2001). It may be that the dichotomous variable of religious affinity cannot capture the multidimensional nature of religion, including different aspects such as religious affiliation, public participation, private practices, beliefs and values (Koenig et al., 2001). Also, among people with religious beliefs, those who endorse positive religious coping (e.g. faith in God, belief that God loves, cares for, and strengthens one) have better illness outcome and less distress that those who endorse negative religious coping (e.g. feeling punished or abandoned by God or believing that illness is a result of sin) (Pargament, Smith, Koenig, & Perez, 1999). Alternatively, it has been reported that other psychological variables, such as hope, can explain the role between religiosity and
coping among patients with breast cancer (Hasson-Ohayon, Braun, Galinsky, & Baider, 2009). Along this line of view, a post-hoc analysis was attempted in the present study (result not shown) which indicated that hope tended to interact with religion affiliation, such that the negative association between religiosity and symptoms was only present in low-hope individuals but not in hopeful individuals. In other words, hopeful individuals maintained better psychological outcomes no matter they were religious or not. Perhaps individuals who were less hopeful may question their religious belief in the face of adversity, and the suffering brought about by chronic illness may be in conflict with their own religious beliefs, leading to psychological distress. Further studies may be carried out to better illuminate how religion and its interaction with other variables affect psychological outcomes.
4.2 Limitations and Future Studies

The present study had several limitations. First, the correlational study could not establish any causational link between the study variables. Further study of longitudinal nature can investigate the question of whether hope and coping flexibility influenced the level of anxiety and depression in chronic disease patients prospectively. Longitudinal study can also confirm whether coping flexibility measured in a earlier time-point has effect on later hope levels, as suggested by the current mediation results. Second, the sample size limited the generalizability of results. It also did not permit more in-depth analysis, such as to look into the effect of how forward-focus and trauma-focus components interact with hope components in more complex models, or to incorporate other variables such as self-efficacy or social support for a more comprehensive analysis. Third, some measurements used in the study may not permit full analysis of the variable of interest. For example, religion can be further studied by its positive and negative coping dimensions (Pargament et al., 1999). Also, while the self-report measurement of coping flexibility has its advantage of being easy to administer, further study using experimental design such as in Cheng (2003) may yield a more accurate measurement. Fourth, the present study used convenient sampling method and did not assess patients in their acute phase of disease which may also limit the generalizability
of results. Lastly, the mediation model should be examined again in future independent study since there exists the possibility that coping flexibility may mediate the relationship between hope and psychopathology as mentioned earlier.
4.3 Conclusions

The present study extended previous research on hope and provided evidence on the importance of hope in psychological adjustment of patients with chronic illness such as Crohn’s disease. This was the first psychosocial study on Crohn’s disease patients in Hong Kong involving a clear theoretical framework of hope and coping flexibility, to the author’s best understanding. It contributed to a better understanding of the psychological profile of Crohn’s disease patients in Hong Kong. The relatively high levels of anxiety and depression symptoms in the present patient sample indicated the importance of holistic patient care for alleviating the psychological distress of these patients. With the findings that hopeful patients experienced less anxiety and depression symptoms, hope-based intervention may be useful in reducing psychopathology in these patients. The present study also contributed to the theoretical understanding of the hope construct, showing that hopeful thinking necessitates both agency and pathways components to bring about the most beneficial effect. Comparing the effects of agency and pathways components, the study confirmed previous findings that agentic thinking was a more important factor in psychological adjustment than pathways thinking. Moreover, coping flexibility was found to be associated with better psychological adjustment, and its effect was secondary to hope. The present study also hinted a
possible mediating effect of hope between coping flexibility and psychological adjustment, which can be a direction of further research. Result on religion showed a possible negative effect of religion on psychological adjustment which was contrary to most previous studies, suggesting that a broader concept of religion should be utilized in further research.
References


Zigmond, A. S., & Snaith, R.P. (1983). The hospital anxiety and depression scale,

問卷調查

1. 研究號碼 ____________________________________________

2. 醫院名稱
   A. 瑪麗
   B. 威爾斯
   C. 其他，請註明 ______________________________________

3. 填寫問卷日期 _______________ 年 __________ 月 _________日
請提供以下有關你的個人資料:

1. 姓名 __________________________________________

2. 性別
   A. 男
   B. 女

3. 出生日期 __________年 __________月 __________日

4. 香港身份証號碼 ________________________（ ）

5. 最高學歷程度
   A. 無正規教育
   B. 小學
   C. 中學
   D. 大學或以上

6. 婚姻狀況
   A. 未婚
   B. 已婚
   C. 同居
   D. 分居 / 離婚
   E. 鰥寡

7. 職業
   A. 就學
   B. 全職受雇
   C. 半職受雇
   D. 全職自雇
   E. 半職自雇
   F. 退休
   G. 無業
   H. 家庭主婦

你的居住狀況

8. 居所種類
   A. 私人住宅/房屋
   B. 公共屋苑
   C. 寮屋/木屋
   D. 房間/牀位
   E. 其他，請註明 ________________________

9. 你的居所是
   A. 自置物業
   B. 租用物業
10. 誰與你同住？
(可選擇多過一項)
A. 父親  
B. 母親  
C. 兄弟姊妹，數目: ______  
D. 兒女，數目: ______  
E. 配偶  
F. 祖父母，數目: _____  
G. 岳父母/家翁或家婆，數目: _____  
H. 新抱/女婿，數目: _____

有關你的其他資料

11. 家庭每月平均收入為(港幣):
A. $2,000 或以下  
B. $2,000 至 $5,000  
C. $5,000 至 $10,000  
D. $10,000 至 $25,000  
E. $25,000 至 $50,000  
F. $50,000 或以上

12. 你現在有否領取綜援
A. 有  
B. 沒有

13. 你現在有否領取傷殘津貼?
A. 有  
B. 沒有

14. 你的宗教信仰
A. 無宗教信仰 (下一條問題不用答)  
B. 基督教  
C. 天主教  
D. 回教  
E. 佛教  
F. 其他，請註明 ___________________

15. 你有多常參加教堂/寺廟的崇拜?
A. 幾乎每週  
B. 每月 1-2 次  
C. 一年數次  
D. 少過每年一次
16. Your smoking habits are:
   A. Never smoke
   B. Current occasional smoker (i.e., daily less than 1 stick or weekly less than 7 sticks)
   C. Current habitual smoker (i.e., daily more than 1 stick or weekly more than 7 sticks)
   D. Previous occasional smoker (i.e., daily less than 1 stick or weekly less than 7 sticks and currently not smoking)
   E. Previous habitual smoker (i.e., daily more than 1 stick or weekly more than 7 sticks and currently not smoking)

17. If you are a current habitual smoker, 
   A. How many sticks do you smoke per day? __________ sticks
   B. How old were you when you started smoking? ________ years

18. How long have you been diagnosed with Crohn's disease? ________ years

19. What are you currently taking for your inflammatory bowel disease? (Choose more than one)
   A. 5-ASA (e.g., pentasa, salofalk, asacol)
   B. Steroids (e.g., prednisolone, entocort)
   C. Immune suppression agent (e.g., aza / azathioprine, methotrexate, 6-MP)
   D. Biologic (e.g., infliximab/Remicade, adalimumab/Humira)

20. Have you had surgery for your inflammatory bowel disease?
   A. Yes
   B. No

21. How many surgeries have you had for your inflammatory bowel disease?
   A. None
   B. 1
   C. 2
   D. 3
   E. 4
   F. 5 or more

22. How long has it been since your last surgery for your inflammatory bowel disease?
   Time: ________ months

23. Have you had an ileostomy (a hole made in your abdomen to allow waste to be defecated)?
   A. Yes
   B. No

24. Do you currently have an ileostomy?
   A. Yes
   B. No
25. 除正常飲食外，你現在有否因克隆氏腸炎而要服用任何形式的營養補充劑？
   A. 有
   B. 沒有

26. 你現在服用的營養補充劑為：(可選擇多於一項)
   A. 沒有服用
   B. 口服營養補充劑
   C. 不定期的靜脈營養注射
   D. 定期靜脈營養注射 (包括家居定期注射)

27. 你的親人中有否患上腸炎(包括克隆氏腸炎及潰瘍性腸炎)?
   A. 有
   B. 沒有 (可免答下一條問題)

28. 你那一些親人患上腸炎? (可選擇多於一項)
   A. 父親
   B. 母親
   C. 兄弟，數目：____
   D. 姊妹，數目：____
   E. 子女，數目：____
   F. 祖父母，數目：____
   G. 伯叔父/姨丈，姑姨媽，數目：____
   H. 堂或表兄弟姊妹，數目：____
   I. 其他，請註明人數及與你的關係：____________________

你對克隆氏腸炎的認識

29. 你曾否接受過有關克隆氏腸炎的教育？
   A. 有
   B. 沒有 (可免答下一題)

30. 如果有，是誰提供的教育？(可選擇多於一項)
   A. 家庭醫生
   B. 醫院或專科門診的醫生
   C. 醫院或專科門診的其他醫護人員
   D. 病人組織
   E. 其他，請註明：_____________________

31. 你對這些教育質素的意見:
   A. 良好
   B. 差劣
   C. 沒接受過相關的教育

32. 你自己有否搜尋有關克隆氏腸炎的資訊？
   A. 有
   B. 沒有 (可免答下兩題)
33. 如果有，這些資訊的來源為: (可選擇多於一項)
   A. 互聯網
   B. 病人組織小冊子
   C. 其他(如親友、報紙)

34. 你對這些資料的滿意程度為:
   A. 全不滿意
   B. 不置可否
   C. 滿意
   D. 相當滿意
   E. 絕對滿意

35. 請評定你對克隆氏腸炎的認識程度:
   A. 非常少
   B. 一點點
   C. 足夠
   D. 好
   E. 非常好
CHADS

這部份的問卷是為了幫助我們了解你的感受，請閱讀下列每題，並選出最接近你
過去一星期的情緒狀況。請不要花太多時間考慮你的答案，你對問題的立刻反應
往往會比反覆思量來得更準確。

1. 我感到神經緊張:
   □ 大部份時候感到
   □ 很多時候感到
   □ 有時候、間中感到
   □ 完全不感到

2. 我依然享受我以前享受的事物:
   □ 肯定和以前一樣
   □ 有點不及以前
   □ 只及以前小許
   □ 和以前差得極遠

3. 我有一種驚恐，好像有可怕的事情會發生:
   □ 很肯定有，而且相當厲害
   □ 有，但不太厲害
   □ 有少許，但不令我擔心
   □ 完全沒有

4. 我能看到事物有趣的一面並且會心微笑:
   □ 和以前一樣
   □ 有點不如以前
   □ 肯定不如以前
   □ 完全不能

5. 煩惱的念頭在我腦海中浮現:
   □ 絕大部份時候
   □ 很多時候
   □ 有時候，但不太常
   □ 只是間中

6. 我感到高興:
   □ 完全不感到
   □ 不時常感到
   □ 有時候感到
   □ 大部份時候感到

7. 我能安坐並感到鬆弛:
   □ 肯定能夠
   □ 通常能夠
   □ 不時常能夠
   □ 完全不能
8. 我感到缺乏衝勁，整個人都慢下來：
   □ 差不多全部時候
   □ 非常多時候
   □ 有時候
   □ 完全沒有

9. 我有一種忐忑不安的驚恐 (十五十六的感覺)：
   □ 完全沒有
   □ 間中有
   □ 相當多時候有
   □ 很常有

10. 我對自己的儀容已失去興趣：
    □ 肯定失去
    □ 比我應該關心的少
    □ 可能比我以前關心的少
    □ 我像以前一樣關心

11. 我感到不能安靜，像要不停地走動：
    □ 很強烈
    □ 相當強烈
    □ 不太強烈
    □ 完全沒有

12. 我對未來的事抱有熱切期望：
    □ 和以前一樣
    □ 較為不如以前
    □ 肯定不如以前
    □ 絕無僅有

13. 我突然感到驚惶失措：
    □ 非常多時候
    □ 相當多時候
    □ 不太多時候
    □ 完全沒有

14. 我能享受喜歡的書、電台或電視節目：
    □ 經常能夠
    □ 有時候能夠
    □ 不常能夠
    □ 絕少能夠
前境量表 Hope Scale (Chinese)

請在細閱下列各題後，在各題右邊圈出適當的數字（1 至 8），以表示最能形容自己的情況。

<table>
<thead>
<tr>
<th>項目</th>
<th>完全不正確</th>
<th>大致上不正確</th>
<th>部分不正確</th>
<th>些微不正確</th>
<th>些微正確</th>
<th>部分正確</th>
<th>大致上正確</th>
<th>完全正確</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 我能想到很多方法走出困境。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>2. 我熱切追求自己的目標。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<td>8</td>
</tr>
<tr>
<td>3. 我經常覺得疲倦。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>4. 任何問題都有很多解決方法。</td>
<td>1</td>
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</tr>
<tr>
<td>5. 在爭論中我很容易會輸。</td>
<td>1</td>
<td>2</td>
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<td>8</td>
</tr>
<tr>
<td>6. 我能想到很多方法去獲得生命中對我重要的東西。</td>
<td>1</td>
<td>2</td>
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<td>4</td>
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</tr>
<tr>
<td>7. 我擔心自己的健康。</td>
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</tr>
<tr>
<td>8. 即使別人都已失望，我仍相信自己會找到解決問題的方法。</td>
<td>1</td>
<td>2</td>
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<td>7</td>
<td>8</td>
</tr>
<tr>
<td>9. 我過去的經歷有助我面對將來。</td>
<td>1</td>
<td>2</td>
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<td>4</td>
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</tr>
<tr>
<td>10. 我的人生是頗成功的。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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</tr>
<tr>
<td>11. 我常發現自己憂慮著某事。</td>
<td>1</td>
<td>2</td>
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<td>4</td>
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</tr>
<tr>
<td>12. 我能達到自己定下的目標。</td>
<td>1</td>
<td>2</td>
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<td>6</td>
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</tr>
</tbody>
</table>
有時我們必須面對人生不如意的事。有時我們甚至還要面對對人生產生創傷性和破壞性的事件。比如說親近的人過世或受傷，嚴重事故或疾病。以下是一份人們在潛在創傷事件後有時候會使用的行為和策略的清單。這份問卷問您，您覺得您有能力使用哪些行為和策略。假如您在某件潛在創傷性事件發生後需要使用這些行為和策略，請您評定您使用每項行為和策略的能力的程度。請用“1”（絕對沒有能力）到“7”（極其有能力）來評定每條的程度（極其有能力）。

<table>
<thead>
<tr>
<th></th>
<th>極其沒有能力</th>
<th>非常沒有能力</th>
<th>稍沒有能力</th>
<th>不確定</th>
<th>稍有能力</th>
<th>很有能力</th>
<th>極其有能力</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 讓自己保持嚴肅和冷靜</td>
<td>1</td>
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<td>7</td>
</tr>
<tr>
<td>2. 專注於目前的目標和計劃</td>
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<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>3. 關注由這件事導致的悲痛的感受</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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<tr>
<td>4. 提醒自己事情會變好</td>
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<tr>
<td>5. 沉思這件事的意義</td>
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<tr>
<td>6. 尋找一線光明</td>
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<tr>
<td>7. 努力減輕痛苦情緒的感受</td>
<td>1</td>
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<tr>
<td>8. 讓自己徹底地去體驗與這件事相關的痛苦的情緒</td>
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<tr>
<td>9. 儘量保持穩定的日程和活動</td>
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<td>10. 花時間獨處</td>
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<tr>
<td>序號</td>
<td>事項</td>
<td>極其沒有能力</td>
<td>非常沒有能力</td>
<td>稍沒有能力</td>
<td>不確定</td>
<td>稍有能力和</td>
<td>很有能力</td>
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<td>11.</td>
<td>轉移自己的注意力不去想這件事</td>
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<td>12.</td>
<td>找活動讓自己忘記這件事</td>
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<td>13.</td>
<td>記住這件事的細節</td>
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<tr>
<td>14.</td>
<td>享受平時我覺得好玩或有趣的事</td>
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<tr>
<td>15.</td>
<td>直面面對無情的事實</td>
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<td>16.</td>
<td>安慰其他人</td>
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<td>17.</td>
<td>我能夠開懷大笑</td>
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<td>6</td>
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<tr>
<td>18.</td>
<td>減少我平常的社會責任</td>
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<td>6</td>
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<tr>
<td>19.</td>
<td>留心或關注其他人的需要</td>
<td>1</td>
<td>2</td>
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<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>20.</td>
<td>改變我的生活常規</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
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