

# **Group Debriefing for People with Chronic Diseases During the SARS Pandemic: Strength-Focused and Meaning-Oriented Approach for Resilience and Transformation (SMART)**

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**ABSTRACT:** This study presented preliminary results on the efficacy of a novel group debriefing model called Strength-Focused and Meaning-Oriented Approach for Resilience and Transformation (SMART). The SMART debriefing (1) aimed at boosting resilience and catalyzing transformation among persons undergoing

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stressful events, (2) adopted a growth-oriented and holistic approach of health promotion, and (3) employed methods drawn from various indigenous sources (e.g. Asian philosophies and Traditional Chinese Medicine). Participants ( $N=51$ ) were people with chronic diseases recruited about 1 month (August 2003) after the Severe Acute Respiratory Syndrome (SARS) outbreak was eventually under control, after causing widespread panic in Hong Kong. After the one-day group debriefing, participants showed significant decrease in depression level, as measured by Brief Symptom Inventory (Derogatis & Melisaratos, 1983, *Psychological Medicine*, 13(3), 595–605) and changes in cognitive appraisal towards SARS. Such changes were sustained in a 1-month follow-up. Clinical implications and directions for further study were discussed.

**KEY WORDS:** debriefing; SARS; resilience.

## INTRODUCTION

The outbreak of Severe Acute Respiratory Syndrome (SARS) in March 2003, and its subsequent spread, caused worldwide panic. The disease, caused by a hitherto unknown strain of coronavirus, affected a number of countries across several continents. Apart from the resulting high mortality rate (currently estimated at about 15%), this new disease was especially threatening in several respects. The World Health Organization (2003) noted that (a) there is no vaccine and no treatment; (b) initial symptoms are non-specific and common to other illnesses as well; and (c) the incubation period is long enough for local and international transmission.

### *SARS and People with Chronic Diseases*

Being the epicenter of the disease, Hong Kong is one of the hardest hit regions in the world. A total of 1755 cases of SARS infection has been confirmed (HKSAR Department of Health, 2003). At the height of the epidemic, mask-donning Hong Kong people lived under widespread fear. People with chronic diseases had more reasons to worry: not only were they more susceptible to infection because of their already compromised health conditions (Drazen, 2003; Peiris, Yuen, Osterhaus, & Stohr, 2003), once infected they had a higher mortality rate (Karlberg, Chong, & Lai, 2004). Among the 683 chronically ill persons surveyed, over three quarters said they were afraid of being infected and had developed anxiety-related symptoms such as sleeping difficulties (Society for Rehabilitation, 2003).

In addition to their own health worries, people with chronic diseases had to deal with the social stigma of being labeled as potential virus carriers. According to a survey conducted in a SARS-infected housing estate which was widely publicized by the media, nearly 90% of the estate residents experienced avoidance and discrimination by relatives and colleagues (Hong Kong Mood Disorders Center, 2003). The nervousness that loomed over the community forced many chronically ill people into social isolation; some of them did not even dare to leave their homes.

In dealing with adverse psychological impact of SARS on chronic patients, preventive group debriefing could be a favorable option. A widely adopted approach is Critical Incident Stress Debriefing (CISD), used principally with individuals who have undergone traumatic events (Mitchell & Everly, 1995). The debriefing process mainly involves recapitulation of the traumatic experience, sharing of symptomatic reactions, education on cognitive coping, and finally a summarization that invites positive learning from the experience. The intervention is time-critical, recommended within a relatively short timeframe (typically 1 week) after the traumatic event. Despite its popularity, efficacy researches on CISD produced mixed results so far (see e.g. Everly & Boyle, 1999; van Emmerik, Kamphuis, Hulsbosch, & Emmelkamp, 2002).

Nevertheless, in case of the SARS epidemic, or of a disease outbreak in general, the CISD may not be the most adequate approach. Unlike a natural disaster, an epidemic does not have a definite starting and ending point. Furthermore as events are unfolding, people face not only a traumatic past but also an uncertain future. Group intervention in this type of event should deal more with preparing for the future than with confronting the past.

#### *Strength-Focused and Meaning-Oriented Approach for Resilience and Transformation (SMART)*

Instead of symptom-focused, past-oriented psychological debriefing, an alternative debriefing model called Strength-Focused and Meaning-Oriented Approach for Resilience and Transformation (SMART) was proposed. The model aimed to develop resilience in the face of adversity and to achieve positive growth after stressful events in three areas: body, mind and spirit (see Table 1).

The SMART debriefing can be considered a loose adaptation of the standard CISD protocol. The thought, reaction and symptom phases

TABLE 1

**Framework of the SMART Debriefing**

|        | <i>Foster Awareness</i>                            | <i>Develop Strength</i>  | <i>Discover Meaning</i>   |
|--------|--|--|---|
| Body   | Physical symptoms, lack of energy                  | Physical exercise (e.g. breathing techniques, tai-chi, acupressure), dietary advice (e.g. Chinese nutritional drink) | Acknowledge mind-body interconnectedness (e.g. somatization, how optimism and hope boost immune system) |
| Mind   | Fear, anxiety, anger, loss                         | Cognitive reappraisal, meditation, guided imagery, coping skills   | Recognize positive and negative emotions; know that adversities can be illuminating                     |
| Spirit | Lack of purpose, vulnerabilities of life and death | Life planning, goal setting, spiritual growth and transformation   | Appreciate and accept unpredictability of life; enjoy the present moment                                |

are shortened. More time is allocated to the teaching and to the re-entry phase. During the teaching phase, concepts of Traditional Chinese Medicine are employed to help participants cope with fear and other emotions. Through short lectures and physical exercises, participants recognize the interconnectedness of emotions and body functions (Chan, Ho, & Chow, 2001; Ots, 1990). We assumed that by incorporating cultural wisdom, participants would be more receptive to the program.

Another feature of the SMART debriefing is its adoption of a holistic view of health. In pointing to mind-body connectedness, participants learn practical and concrete measures to improve their mental well-being (e.g. herbal soup, simple tai-chi and acupressure exercises). These practical measures can also be empowering: a sense of control has been shown to be beneficial to the mental well-being of chronically ill people (Walhagen & Brod, 1997) and those who have experienced life threatening experiences (Havenaar, de Wilde, van den Bout, Drottz Sjoberg, & van den Brink, 2003). These factors were even more

pertinent at the time when the health conditions of these people were under constant threat during the SARS outbreak.

Spiritual teachings are a significant component in the SMART debriefing. Concepts from Daoism and Buddhism are borrowed to guide our Chinese participants to reflect on their negative experiences. Themes include the expansion of self (Dien, 1983), the importance of emotional and social harmony, and the acceptance of a natural order (Bowman & Singer, 2001). The objective is to acknowledge fear and anxiety as part of the human nature, to accept the unpredictability of life, and to encourage participants to appreciate small things in their everyday life.

In summary, the SMART debriefing has the following characteristics:

- (1) Growth oriented: Instead of eliminating symptoms, the SMART debriefing aims to discover meaning and promote growth from negative experiences.
- (2) Holistic view of health: The SMART debriefing teaches easy-to-do physical exercises and provides dietary advices. Emotional coping skills are coupled with meditation, guided imagery, and breathing techniques. Spiritual reflection facilitates search for meaning in life.
- (3) Culturally relevant: Many of the debriefing materials are borrowed from indigenous Chinese culture. However, practitioners should find little difficulty in adapting the message for clients in different cultures (e.g. for a Christian perspective on spiritual coping, see Baldacchino & Draper, 2001). The use of culturally relevant materials not only enhances communication, but also shows respect to the participants.

Although little research is available on the efficacy and appropriateness of promoting growth in a one-day debriefing, it is believed changes could be induced in a relatively short time. As Linley and Joseph (2004) observed in a meta-analysis of adversarial growth studies, '[it] is unlikely that the passage of time per se influences adversarial growth, but rather intervening events and processes' (p. 17). We hypothesize the SMART debriefing can promote positive growth among people with chronic diseases and reduce their distress levels at the same time.

## METHOD

*Participants*

There were 51 participants in the study, conveniently recruited through the Community Rehabilitation Network, a non-profit organization in Hong Kong that provides support to people living with chronic diseases. The most common diseases reported by participants are: diabetes mellitus ( $n=9$ ), heart disease (8), hypertension (7), cerebrovascular accident (6), systemic lupus erythematosus (4), and rheumatoid arthritis (4). History of illness spanned on average 9.90 years ( $SD=9.20$ ). They were randomly assigned to an intervention group ( $n = 25$ ) and a control group ( $n=26$ ). Demographic characteristics of the two groups, as tabulated in Table 2, were not significantly different.

**TABLE 2**  
**Demographics of Participants**

|               | <i>Control<br/>Group (n = 26)</i> | <i>Intervention<br/>Group (n = 25)</i> | <i>t/χ<sup>2</sup></i> | <i>p</i> |
|---------------|-----------------------------------|--|------------------------|----------|
| Age (SD)      | 56.6 (13.0)                       | 53.9 (13.0)                            | -.713                  | .480     |
| Sex           |                                   |  | .163                   | .687     |
| Male          | 6                                 | 7                                      |                        |          |
| Female        | 20                                | 18                                     |                        |          |
| Occupation    |                                   |  | 1.367                  | .713     |
| Full-time     | 5                                 | 4                                      |                        |          |
| Part-time     | 2                                 | 1                                      |                        |          |
| Unemployed    | 7                                 | 10                                     |                        |          |
| Retired       | 11                                | 8                                      |                        |          |
| Religion      |                                   |  | .650                   | .885     |
| Catholic      | 3                                 | 2                                      |                        |          |
| Christian     | 5                                 | 3                                      |                        |          |
| Buddhist      | 5                                 | 6                                      |                        |          |
| No religion   | 13                                | 12                                     |                        |          |
| Education     |                                   |  | 3.222                  | .521     |
| Primary       | 13                                | 9                                      |                        |          |
| Secondary     | 8                                 | 8                                      |                        |          |
| Matriculation | 3                                 | 1                                      |                        |          |
| Tertiary      | 2                                 | 4                                      |                        |          |

## *Apparatus*

Two measures were employed in the study: cognitive appraisal and psychological symptoms. We constructed a 17-item scale to measure how participants appraise the SARS outbreak. Participants rated each item on a 5-point Likert-type scale, ranging from 'strongly disagree' (1) to 'strongly agree' (5). Items fall into four areas: Personal-Positive ('I become stronger', 5 items), Personal-Negative ('I feel helpless', 4 items), Social-Positive ('I appreciate what people have done', 4 items), Social-Negative ('I experience social isolation', 4 items). Internal reliabilities are satisfactory, ranging from .64 to .84. Items were presented in a randomized order.

Psychological symptoms were measured by four subscales of the 53-item Brief Symptom Inventory (BSI, Derogatis & Melisaratos, 1983): Anxiety (6 items,  $\alpha = .88$ ), Depression (6 items,  $\alpha = .90$ ), Somatization (7 items,  $\alpha = .94$ ), and Hostility (3 items,  $\alpha = .77$ , two items dropped due to low internal reliability). The choice of subscales reflects the prevalent negative moods in the society at that time. Participants rated each item on a 5-point Likert-type scale to indicate the degree of distress, ranging from 0 (not at all) to 4 (extremely).

## *Procedure*

Prior to data collection, informed consents were obtained from all participants. Baseline measures were taken in both groups upon recruitment ( $T_0$ ). The intervention group received a whole-day psycho-educational program from 9:30 am to 5:00 pm, August 2, 2003. The structure of the program can be found in Table 3. The control group received no intervention, but were told to expect a follow-up questionnaire in 1 month. A second batch of same measures was given to the intervention group at the end of session ( $T_1$ ) while no control group data were collected. A third set of measures was administered to both control and intervention group on August 30, 2003 ( $T_2$ ).

## *RESULTS*

The BSI scores of the participants in both groups were comparable to the psychiatric outpatient norms established by Derogatis and Melisaratos (1983), indicating a high level of distress (Anxiety:  $1.18 \pm 0.91$ ; Depression:  $0.99 \pm 0.94$ ; Somatization:  $1.11 \pm 1.04$ ; Hostility:  $1.50 \pm 1.41$ ).

A paired *t*-test was conducted to determine if there are any significant changes immediately after the intervention (i.e. between  $T_0$  and  $T_1$ ). The Depression score dropped significantly ( $t = -2.92$ ,  $p < .01$ ), although Anxiety, Somatization and Hostility scores did not. Both Personal-Negative and Social-Negative scores decreased ( $t = -2.47$  and  $-2.37$  respectively, both  $ps < .01$ ), while the increase in Personal-Positive score had marginal significance ( $t = 1.99$ ,  $p = .062$ ).

One month after the intervention, valid responses were obtained from 21 participants in the intervention group and 13 in the control group. Repeated-measure ANOVA was conducted (see Table 4). Significant

TABLE 3

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**Structure of the SMART Debriefing**


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|           |  |
|-----------|--|
| Morning   | <p><i>Factual Recapture</i><br/>           Brief recapture of the SARS pandemic<br/>           Cognitive reappraisal:<br/>             1. Statistics of infected persons<br/>             2. Positive and negative impacts of SARS</p> <p><i>Symptoms Revisiting</i><br/>           Discussion of symptoms<br/>           Meditation and guided imagery</p> <p><i>Coping of Fear</i><br/>           Body-mind linkage: discussion of somatization<br/>           Physical exercise: simple <i>tai-chi</i>, acupressure, message<br/>           Dietary advice: Tradition Chinese Medicine-derived health drinks<br/>           Appreciation of life and acceptance of vulnerabilities:<br/>             Zen and Taoist teachings</p> |
| Afternoon | <p><i>Emotional well-being</i><br/>           Chinese teachings: balance of emotional state<br/>           Coping skills for extreme emotions such as fear, anxiety and worry</p> <p><i>Meaning Making</i><br/>           Appreciation<br/>           Meaning of life<br/>           Goal setting</p>  |

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group effects were found in Personal-Positive [ $F(1,31) = 8.906, p < .01$ ] and Social-Negative scores [ $F(1,32) = 5.687, p < .05$ ]. Depression was the only subscale in BSI which has significant group effect,  $F(1,28) = 5.215, p < .05$ . Group effects on other measures were not significant.

### DISCUSSION

In terms of psychological symptoms, the SMART debriefing reduced the level of depression significantly among chronically ill people. Treatment effect was maintained after one month. It is hypothesized that such improvement was due to an increase of positive self-appraisals



TABLE 4

**Measures of Both Groups at Baseline ( $T_0$ ) and After One Month ( $T_2$ ) ( $N=34$ )**

|                                    | <i>Intervention</i><br>( $n = 21$ ) |       |          | <i>Control</i><br>( $n = 13$ ) |       |          | <i>F</i> |
|------------------------------------|-------------------------------------|-------|----------|--------------------------------|-------|----------|----------|
|                                    | $T_0$                               | $T_2$ | $\Delta$ | $T_0$                          | $T_2$ | $\Delta$ |          |
| <i>Brief symptom inventory</i>     |                                     |       |          |                                |       |          |          |
| Anxiety                            | 1.29                                | 0.89  | -0.40    | 1.02                           | 0.99  | -0.03    | 1.958    |
| Depression                         | 1.23                                | 0.82  | -0.41    | 0.65                           | 0.90  | 0.25     | 5.215**  |
| Somatization                       | 1.18                                | 1.01  | -0.17    | 1.07                           | 0.87  | -0.20    | 0.017    |
| Hostility                          | 1.41                                | 1.19  | -0.22    | 1.79                           | 1.44  | -0.35    | 0.071    |
| <i>Cognitive appraisal of SARS</i> |                                     |       |          |                                |       |          |          |
| Personal-Positive                  | 19.80                               | 22.10 | 2.30     | 18.00                          | 16.08 | -1.92    | 8.906**  |
| Personal-Negative                  | 11.62                               | 11.10 | -0.52    | 11.92                          | 11.46 | -0.46    | 0.001    |
| Social-Positive                    | 17.80                               | 18.35 | 0.55     | 15.08                          | 14.38 | -0.69    | 2.008    |
| Social-Negative                    | 13.55                               | 11.60 | -1.95    | 13.31                          | 15.00 | 1.69     | 5.687*   |

\* $p < .05$ ; \*\* $p < .01$ .

after debriefing, although further research is needed in order to confirm such linkage.

Although negative self-appraisals decreased immediately after debriefing, the effect was not sustained. Instead, participants who had debriefing increased their positive self-appraisals in the one-month follow-up. This finding supported our hypothesis that the SMART debriefing can promote growth after stressful events. On the other hand, although their positive appraisal of social impact of SARS did not improve, they did not make negative appraisals as much as the control group did. This was notable comparing to the prevalent public hostility towards the government in the latter half of 2003 for their mishandling of the SARS outbreak.

This study has several limitations. First, recruitment of participants was done by convenient sampling. Sampling bias might occur and the sample may not be representative of the population of chronically ill people. The sample size was also small and could not justify more stringent statistical analysis. Missing data in the follow-up measurement warrant caution in interpreting the results.

## CONCLUSION

The SMART debriefing adopts a holistic view of health and aims at promoting resilience and growth after stressful events. Instead of symptom elimination, an alternative pathway based on strength-building is proposed. Results suggest the SMART debriefing can improve mental health and foster positive cognitive appraisals of the event. Further study is needed, however, for the standardization of the protocol and the understanding of the underlying mechanism of change.

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