THE STUDY OF RESILIENCE AND ITS FOUR CAPABILITIES

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Introduction

The recent development on counseling, psychology, and education, in addition to the identification of risk factors, has been focused on studying factors which enhance buffering of adversities. For example, in the field of psychiatric research, the concept of 'protective factors' has been developed. According to Rutter (1985), protective process concerns about 'factors that counter risk, when the process involves a change of life trajectory from risk to adaptation, and when the mechanisms of protection seem to differ from those of vulnerability'. Further, enhancing resilience, instead of dealing with risk factors, is a new paradigm in the field of preventing substance abuse among adolescents (Werner, 1989). Clearly, more attention is being paid to explore the strength of children and youth in managing life changes. In short, the strategy of risk prevention has been shifted from a 'problem-oriented' approach to a 'strength-oriented' approach.

Despite resilience has been a focus of intervention on youth problems, there is still no standard instrument for screening resilient from non-resilient adolescents. Moreover, few studies have examined the relationships among some crucial protective factors. The present study aims at filling these gaps by constructing a questionnaire to differentiate resilient and non-resilient adolescents as well as to explore the relationships among the crucial moderating factors. Findings of the study might help effectively identify at-risk adolescents and provide data for designing appropriate preventive programs.

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Resilience and Four Capacities

Resilience has various definitions. It has been defined as a person's static trait or capacity (Rutter, 1985) as well as a process through which a person may develop coping skills to counteract risks and respond to challenges that 'cancel' the negative impact of risk, or even advance the individual to new levels of adaptation (Werner. 1985). The present study defines resilient individuals as those who possess certain essential capabilities which help them to cope with stressful events successfully. Being successful means that the individuals do not display psychological ill health and are without a deviant behavioral tendency after experiencing adversities. In short, resilient individuals are those who have experienced adversities but are able to maintain psychological well-being and refrain from serious deviant behaviors.

Factors which provide individuals' persistence to risks and foster outcomes marked by patterns of adaptation and competence are 'protective factors' (Rutter, 1979). Protective factors include both individual and environmental characteristics (Masten & Garmezy, 1990). Hence, resilience seems to be multidimensional constructs or capabilities, a resilient person can apply them across a range of situations and problems. Among various types of capabilities, four capacities, namely, social support, self-esteem, problem-solving ability, and life purpose, have been found to be effective in buffering depression and deviant behaviors.

Social Support

According to the attachment theory, there is a life-long psychological need for proximity to attachment figures at times of stress, illness, and exhaustion (Homles, 1996). Social support is crucial to some stressful circumstances like juvenile delinquency and pregnancy. Chen S.C.E. and Chen H. (1995), with a sample of 244 unmarried, pregnant, African-American high school students, found that students' mothers and babies' fathers were two key supporters. Apart from the family network, peers also play an important role in influencing young people's behaviors. Based on a sample of eighty-two high school students, Meehan, Durlak and Bryant (1993) revealed that there was a significant relationship between social support and positive dimensions of mental health like happiness, gratification, and self-confidence. By studying 102 preadolescents and 70 adolescents,

Buhrmester (1990) reported that intimacy of friendship was closely related to adolescents' adjustment and competence.

Self-Esteem

Self-esteem includes two components: a sense of personal worth and a sense of self-efficacy (Gecas & Schwalbe, 1986: 38). Some research studies reported that self-esteem was a crucial variable in determining one's degree of resilience. Kobasa, Maddi, and Courington (1981), studying executives who successfully coped with stresses, found that respondents with 'psychological hardiness' had a sense of control over the things that happened in their lives and regarded change to be a positive challenge. According to Jaffe and Scott (1989), people who had successfully handled life stresses felt in control of their world. On the other hand, people who felt a loss of control (also called helpless/hopeless syndrome) were associated with health and stress-related difficulties. As they concluded, a person who had a sense of power knew that he/she had the capabilities to make the next move and chose a meaningful response.

Problem-Solving Ability

Problem-solving ability is considered to be another key moderator of life stresses. Orbach, Bar-Joseph, and Dror (1990), by exploring the differences between suicidal individuals (attempters and ideators) and those of non-suicidal individuals in terms of problem-solving ability, revealed that attempters and ideators tended to escape and avoid direct confrontation as well as depend on others in their solutions. Similarity, Sadowski and Kelley (1993), by investigating the relationship between social problem solving and suicide, showed that young suicide attempters exhibited poorer problem orientation, a motivational component of social problem-solving, than the psychiatric subjects and normal controls. Further, attempters and psychiatric controls were found having difficulties in generating alternatives, decision making, solution implementation and verification. Priester and Clum (1993), by exploring the relationships between perceived problem-solving ability, depression, hopelessness, and suicidal ideation among college students, revealed that respondents' problem-solving appraisal, especially in the domain of problem solving confidence, was a moderator of stress-depression and stress-hopelessness relationships.

Purpose in Life

In the field of personality psychology, studying the relationship between personal meaning and human well-being has flourished in recent years (Little, 1998). According to Frankl (1964: 99), the primary motivational force in human beings is the seeking for meaning. Perkins-Reed, who investigated hriving for many years, observed that all thrivers share a sense of purpose. He explained,

> Thrivers draw on their sense of purpose to fuel their vision, to inspire their actions and to enable them to create consistently excellent results in their lives.
>
> Their life purpose statement thus becomes an organizing principle for he rest of their lives' (Perkins-Reed, 1996: 165).

Some studies found that the hope of achieving personal goals lead to heightened states of well-being (Little, 1989; Omodei & Wearing, 1990; Brunstein, 1993). For example, Little (1989) reported that individuals' well-being could be enhanced by engaging in personal projects which were meaningful, well-structured, supported by others and engender a sense of efficacy. Further, Emmons and Kaiser (1996) noted that avoidant strivings are linked to anxiety and depression, individuals who link more between their goals and future selves may reclaim a sense of successful striving. As they (1996: 95) concluded, well-being involves the search for meaning, it is 'meaning or purpose that gives life unity and coherence'.

According to Johnson and Bradlyn (1988: 91), it is the major task for researchers to analyze variables that 'make some children and adolescents more or less vulnerable in the face of stress'. Moreover, 'it is only through a determination of relevant moderator variables and considering these in designing research studies that we can begin to determine the degree to which, and under what conditions, life events are actually related to relevant aspects of child health and adjustment' (Johnson & Bradlyn, 1988: 86). Although social support, self-esteem, problem-solving ability and life purpose are found to be positively associated with resilience, there are few studies exploring the inter-relationships among these four variables. Our knowledge on the relationships among these four variables might help identify.

Methodology

Subjects

Subjects of the study were 490 form one students from three secondary schools in Hong Kong. The selection of lower form students is based on the assumption that they are experiencing more adaptation problems because of promoting from primary schools to secondary schools. Moreover, it is hoped that early preventive work can be done after identifying students who have psychological and behavioral problems.

Measurements

This study used seven sets of inventories, of which the first three aimed at identifying individuals who had experienced adversities but were able to maintain psychological well-being and refrain from delinquent acts. These measurements helped classify resilient and non-resilient individuals from the sample. These three scales were briefly introduced as follows:

Life Experiences Survey (LES; Choy, Lam, & Ngai, 1990; Ho, 1995)
The 22-item LES measures the incidence of various important life events happened to the respondents in the past six months. The items were mainly selected from the studies of Cho, Lam, and Ngai (1990) and from Ho (1995), both assessed stressful life events among secondary school students of Hong Kong. A period of six month was chosen as the interval of measurement since the recall of life events over that period was highly inaccurate and might be 'a risky venture' (Johnson & Bradlyn, 1988: 75) Respondents to the LES were first asked whether they had experienced the life events listed, then they had to rate, on a five-point Likert scale ranging from 1 (none) to 5 (extremely), the degree of stress they felt on each event.

Self-Reported Deviant Behaviors (SRNB, Fei & Ma, 1991; 1992; Wong, 1992; Wong, S.W., Lee, W.L., & Lo, T.W., 1995)
This is an instrument measuring respondents' tendency in engaging in negative behaviors. Fourteen items of SRNB were selected from three studies, Fei and Ma (1991), Wong, Lee and Lo (1995), and Wong (1992), exploring the deviant behaviors of youth in three districts of Hong Kong. In the SRNB respondents were asked to indicate the frequency of having a particular deviant behavior on a 4-point scale, ranging from

'none', 'ever', 'occasionally', to 'always'. Examples of items include fighting, gambling, stealing, and drug abuse.

The Centre for Epidemiological Studies Depression Scale (CES-D Scale; Radloff, L. S., 1977; Cheung & Bagley, 1998)
The CES-D Scale is a 20-item self-report scale measuring depressive symptoms. Respondents were asked to rate on the frequency of a list of emotional and somatic symptoms of depression they had on a 4-point Likert-type scale, ranging from 'rarely or none', 'sometimes', 'occasionally' to 'most or all of the time'. The CES-D has been extensively used in various cultural groups like European and Mexican Americans (Golding & Aneshensel, 1989), older Americans (Hertzog, Van Alstine, Usala, Hultsch, & Dixon, 1990), American children and adolescents (Faulstich, Carey, Ruggiero, Enyart, & Gresham, 1986; Radloff, 1991), and Chinese in the People's Republic of China (Lai, 1995; Lin, 1989). In Hong Kong, Cheung and Bagley (1996) used the scale to assess the psychological health of 138 married Chinese couples and found good reliability with coefficient alpha ranging from .82 to .83.

Concerning the second part of the questionnaire, four scales were used to measure the four capabilities. Details of the four scales are as follows:

Self-Esteem Scale (SES; Rosenberg, 1965; Shek, D.T.L. 1992)
As a Likert format, the SES is a 10-item self-report measurement in which maximally low self-esteem responses were scored as 1 and maximally high self-esteem responses were scored as 4. Thus, scores on the measure varied from 10 to 40. Whisman and Paul's (1993) study showed that the SES has a high internal consistency ($£\=.89$). The Chinese version of SES was translated by Shek (1992) and used by the Breakthrough Ltd. assessing the degree of self-esteem of adolescents who had participated a developmental program.

Social Support Scale (SSA; Vau, A. et., 1988; Tse, Bagley, & Yau (in press))
The present SSA, including 30 items assessing a student's perceptions on social support from the family, peer, and teacher, is derived from two social support studies. Twenty-three of the items were adopted from the Social Support Appraisal Scale developed by Vau et al. (1986). The English version of SSA was first translated by researchers of the current study into Chinese. Then, a staff member of the Breakthrough Ltd, who was fluent in both Chinese and English, back translated the

Chinese version back into English. As the back-translated version had similar meanings to the original SSA, we deemed the Chinese version to be linguistically equivalent to the original English version. Since school is an important arena for students in Hong Kong but the SSA does not include any items concerning relationship with school teachers, 7 items which had been used in a local study by Tse, Bagley, and Yau (in press) were added to the questionnaire to measure perceived support from teachers. Respondents to the final SSA were asked to rate the degree they agree with each statement on a 4-point Likert scale, ranging from 'strongly disagree' to 'strongly agree'.

Problem-Solving Inventory (PSI; Heppner, & Peterson, 1982; Cheng & Lam, 1997).
The PSI, a 32-item self-report scale measuring one's perception of his/her general problem-solving ability, consists of three factors: (1) problem-solving confidence, (2) approach/avoidance, and (3) personal control. Subjects were asked whether they agreed or disagreed with, on a 6-point Likert-type scale, statements which described his/her problem-solving ability. Heppner (1988) reported good reliability of the PSI: coefficient alpha ranged from .72 to .90, and test-retest reliability ranged from .83 to .89 over a 2-week period. Cheng and Lam's (1997) study showed that there is a high internal consistency for the Chinese PSI (alpha = .73; split-half reliability = .68).

Purpose in Life Questionnaire (PLQ; Crumbaugh, 1968; Ho, 1982; Shek, Hong, & Cheung, 1989)
The PLQ is a 20-item bipolar instrument assessing a respondent's attitudes on life purpose based on the ratings from 1 to 7. The higher scores, the more meaningfulness, purposefulness, enthusiasm, and satisfaction of life. Crumbaught reported that the reliability coefficient of the PLA was .85, and the Spearman-Brown corrected r was .92. The PLQ was also used by Ho (1982) to study the life purpose of 241 students of the Hong Kong Baptist College. On the other hand, Shek, Hong, and Cheung's (1989) study, with a sample of 480 post-secondary school students aged 10 to 25, found that the Chinese version of PLQ was consistent (Cronbach's alpha = .88; Guttman's split-half reliability coefficient = .86).

Findings

Respondents' Characteristics

In May 1999, 490 form one students were administrated the questionnaires at schools under the supervision of the staff of the Breakthrough Ltd., a voluntary organization working for the well-being of young people. Regarding the age of respondents, the overwhelming majority was between 12 and 13 (85.7%), only a small number (12.5%) was aged 14 to 16. As for sex of respondents, the difference in the number of male (51.5%) and female (48.5%) was very small.

Three criteria were used to classify resilient subjects, including:

(a) Having experienced stressful life-events in the past six months
Respondents who reported having at least one major life event which they perceived as stressful or extremely stressful (rating of 4 or above) will be regarded as 'stressful respondents'.

(b) Having a deviant tendency
Respondents who reported they had committed one or more of the deviant behaviors occasionally or frequently (rating of 3 or 4) will be classified as having a deviant tendency.

(c) Having depression
Respondents who scored above the sample mean (mean=2.08, SD=0. 99) on CES-D were considered as having depression.

Based on the above criteria, respondents were classified into eight groups (see Table 1). Among 484 valid cases, over 40 percent (43%) experienced life stresses over the past six months. The proportion of resilient subjects was smaller than 20 percent (16.7%), while the

proportion of individuals with behavioral or psychological problems was over 36 percent (36.3%). In this sample, 194 (40.1%) out of 484 respondents did not experience any stressful events and were without any psychological or behavioral problems. This group was called 'non-stress-healthy'. Interestingly, 17% of respondents who did not encounter any stressful life events were found to have behavioral and psychological problems. Their problems might have been caused solely by internal, endogenous factors, such as neurological or hormonal imbalance, which were out of the scope of the survey.

The Classification of Resilient and Non-resilient Individuals
Table 1: The classification of eight groups

Group	Great life pressure	Depression	Deviant behavioral tendency	N	%
1. Resilience	+	-	-	81	16.7
2. Stress - depression	+	+	-	56	11.6
3. Stress- deviance	+	-	+	42	8.7
4. Stress- depression & deviance	+	+	+	29	6.0
5. Non-stress -health (good psychological & behavioral conditions)	-	-	-	194	40.1
6. Non-stress- depression	-	+	-	29	6.0
7. Non-stress- deviance	-	-	+	43	8.9
8. Non-stress- depression & deviance	-	+	+	10	2.1
			Total	484	100.0

Relationships among the Four Capacities
A series of Analysis of Variance (ANOVAs) were conducted to compare the mean scores on the four scales between respondents of the four stressful

groups (i.e. Groups 1-4 in Table 2). In general, the mean scores of the resilient group were higher than those of the non-resilient groups in all measures, except in 'lack of confidence'. Specifically, resilient students showed higher scores on purpose in life, self-esteem, social support (including family, peers, and teacher support), and problem solving ability (problem-solving competence) than those of the depressed students (Groups 2 & 4). In other words, consistent with our expectation, students who were classified as "resilient" possessed a more positive pattern in terms of the four capabilities. However, contrary to what we might expect, the 'stress-deviance' group (Group 3) did not differ significantly from the resilient group in the four measurements.

Table 2: Comparisons on mean scores of the four scales among four stressful groups

Four Stressful Groups					
	1 (n=81)	2 (n=56)	3 (n=42)	4 (n=29)	F (3, 204)
Purpose in life (PLQ)	4.88 a (0.76)	3.65 b (0.83)	5.00 a (0.70)	3.46 b (0.77)	51.50 ***
Self-esteem (SES)	2.91 a (.45)	2.48 b (0.53)	2.99 a (0.42)	2.50 b (0.55)	15.22 ***
Social support appraisal (SSA)					
Family (SSA-F)	2.78 a (0.42)	2.45 bc (0.58)	2.67 ab (0.46)	2.36 c (0.45)	8.52 ***
Peers (SSA-P)	2.82 a (0.44)	2.31 b (0.54)	2.82 a (0.36)	2.41 b (0.47)	17.65 ***
Teacher (SSA-T)	2.86 a (0.52)	2.43 bc (0.71)	2.67 ab (0.75)	2.23 c (0.66)	8.91 ***
Problem-solving inventory (PSI)					
Problem-solving competence (PSI-C)	4.10 a (0.65)	3.49 b (0.70)	4.02 a (0.69)	3.37 b (0.54)	15.32 ***
Impulsive problem-solving (PSI-I)	3.84 a (0.82)	3.57 ab (0.67)	3.59 ab (0.78)	3.27 b (0.90)	4.18 **
Lack of confidence (PSI-LC)	3.29 (0.73)	3.02 (0.74)	3.45 (0.73)	3.21 (0.83)	2.76 *

Note: Means with different subscripts are significantly different at $p<.05$ under Scheffe post hoc tests.
 * $p<.05$ ** $p<.01$ *** $p<.001$

The relationships between the four capabilities were shown in the correlation matrix in Table 3. Clearly, purpose in life was highly related to self-esteem (r=.574), the three sub-scales of social support (SSA-F, r=.447; SSA-P, r=.549; SSA-T, r=.462), and problem solving competence (PSI-C, r=.524). This might suggest that there is a certain extent of overlap between the constructs measured by PLQ, SES and SSA. On the other hand, SES was highly associated with peer support (r=.514) and problem-solving competence (r=.523). The findings revealed that self-esteem was likely to be enhanced by these two variables. In fact, the other two sub-scales of SSA were moderately related to SES. It was evident that social support played a crucial role in affecting the degree of self-esteem. Similarity, all three sub-scales of SSA (SSA-F, r=.410; SSA-P, r=.383; SSA-T, r=.389) were moderately related to problem-solving competence. The findings might suggest that one's problem-solving competence be enhanced by social support, or vice versa.

Table 3: Correlation matrix of variables of the stressful respondents

	1	2	3	4	5	6	7
1. Purpose-in-life	-						
2. Self-esteem	.574***	-					
3. Family	.447***	.316***	-				
4. Peers	.549***	.514***	.382***	-			
5. Teacher	.462***	.375***	.362***	.385***	-		
6. Problem-solving competence	.524***	.523***	.410***	.383***	.389***	-	
7. Impulsive problem-solving	.290***	.095	.055	.142*	.165*	.090	-
8. Lack of confidence	.122	.193**	.006	.143*	.056	-.074	.398***

N = 208 *p<.05   **p<.01   ***p<.001

The Relative Predictability of the Four Scales

In order to examine the relative predictability of the four capabilities, a series of logistic regression were conducted with resilience versus non-resilience as the dependent variable. In the first set of logistic regression, the resilient group was coded as 1, and the other three groups as 0. The forward stepwise method was used as the means to select significant predictors among the eight variables. Variables with Wald statistics of $p > .10$, the SPSS default significance level, would be removed from the model. The results indicated that PLQ was the only significant factor in predicting resilience (Wald=28.98; $p < 0.001$, odd ratio=2.69) when the effects of all the eight scales were tested simultaneously. The rate of correct prediction of the final regression model is 68.75 percent (see Table 4).

As shown in Table 2 (results of ANOVA), the scores of resilient individuals on the four capabilities were similar to those of 'stress-deviance' individuals (Group 3). Against this characteristic, another logistic regression was further done to explore whether the exclusion of Group 3 was able to increase the predictability of the four scales. In this second set of logistic regression, resilience was coded as 1 and depressed groups (Group 2 and 4) coded as 0 in the dependent variable. It was found that the percentage of correct prediction increased by nearly 10 percent, from 68.75 percent to 78.92 percent. Moreover, apart from PLQ (Wald = 31.02; $p < 0.001$, odd ratio=8.25), the two sub-scales of PSI, PSI-C (Wald=8.31, $p < 0.01$; odd ratio=3.34) and PSI-LC (Wald = 6.11, $p < 0.5$; odds ratio=2.41) were also important as predictors of resilience versus having depression.

In order to test how well the four capabilities could predict resilient individuals versus those with deviant behavioral tendency, a third set logistic regression was conducted, with resilience group coded as 1 and the deviance group (Group 3 and 4) coded as 0 in the dependent variable. The results Wald statistic (Wald=10.53, $p > 0.5$) was insignificant, showing that the model could predict resilience versus deviance not better than by chance. These findings suggested that the four capabilities do not account for the difference between the resilience group and groups with deviant behavioral tendency.

Table 4: Results of logistic regression of four scales in predicting resilience and non-resilience

Variables entered	B	Wald	Odd ratios
	Resilience (Group 1) vs. non-resilience (Group 2, 3, & 4) (correct prediction = 68.75%) a		
Purpose-in-life	0.99	28.98 ***	2.69
	Resilience (Group 1) vs. depression (Group 2 & 4) (correct prediction = 78.92%) b		
Purpose-in-life	2.11	31.02 ***	8.25
Problem-solving competence	1.21	8.31 **	3.34
Lack of confidence	0.88	6.11 *	2.41
	Resilience (Group 1) vs. deviant (Group 3 & 4) (correct prediction = 62.50%) c		
Purpose-in-life	0.63	10.53	1.88

a n=81 for resilience group and n=127 for non-resilience group
b n=81 for resilience group and n=85 for depressed group
c n=81 for resilience group and n=71 for deviant group
*p<.05   **p<.01   ***p<.001

Discussion

The Identification of Non-resilient Respondents and Preventive Programs

Based on the results of the three instruments, LES, SRNB and CES-D, eight types of respondents were identified. Respondents experienced life stresses deserve special attention since numerous studies evident that psychological and behavioral problems were highly associated with life stressors. As a consequence, various types of preventive programs can be provided for respondents with particular types of problems.

Resilience and Four Capabilities

Findings of the present study further showed that resilient individuals obtained higher scores on the four capabilities. Social support, consistent with the findings of other studies, was highly associated with resilience. Particularly, among the supporting networks, resilient subjects reported more support from the family (mean=2.86) and school teachers (mean=2.78). Obviously, these two sources of support were positively associated with resilience.

However, the impact of peer group on respondents might be either positive or negative. This characteristic was revealed from the fact that both resilient individuals and stress-deviant respondents obtained higher scores (mean=2.82) on the SSA-P, a sub-scale of SSA. Peers were found to be the most important source of social support among young people in Hong Kong. Wong, Lee and Lo (1995), studying young people's behavioral problems in Tuen Mun, found that nearly 70 percent of respondents claimed that they would seek help from friends/classmates. Another study (Fei & Ma, 1991) further revealed that young people would talk with friends (41.8 %) and schoolmates (31.1%) while facing difficulties. Clearly, peer support is a crucial variable in mediating life stresses. On the other hand, the main reason for adolescents joining juvenile gangs was a need of companions and of being accepted by peers (The Hong Kong Federation of Youth Groups, 1993; Tang, S.K, & Davis, C., 1997). Thus peer pressures and teenagers' desire of obtaining conformity and recognition are probably underlying causes of juvenile delinquency.

The above findings have three implications to social support and risk prevention. Firstly, peer support is significantly related to resilience. Secondly, training programs can be provided for young people by teaching them how to give positive support to friends and classmates. Thirdly, both parents and teachers, the two important social networks, should understand the behavioral and psychological characteristics of young people as well as be equipped with essential skills in helping young people in stresses.

Resilience and the Purpose in Life

Results of ANOVAs (Table 2) showed that both resilient and stress-deviant subjects obtained high scores on PLQ. Findings from logistic

regression also confirmed that PLQ was the most important predictor of resilience versus non-resilience. Moreover, the similarity of resilient and stress-deviant subjects on the scores of PLQ suggested that the PLQ be an effective tool in identifying depressed versus non-depressed individuals but fails to differentiate between resilient and stress-deviant individuals with no clinical symptoms of depression. However, this does not necessarily imply that both resilient and stress-deviant respondents have same attitudes on life purposes because the PLQ only tapes the respondents' willingness of survival, a sense of control and general life goals. As the nature of PLQ is merely about the general meaning of existence, it probably is unable to assess a person's life purpose in adequate specificity so as to tap the differential types of life purpose among social deviant adolescents. In particular, resilient and non-resilient individuals might differ not in the general "meaningfulness" of life purpose but in specific nature not measured by the PLQ. For instance, it is possible that adolescents with deviant behaviors are less likely to possess socially acceptable life purposes (e. g. helping other people, fulfilling filial piety, and studying hard), and are less likely to possess socially unacceptable life purposes (e.g. pursuing personal interest by using illegal means and enjoying life at the expense of the interests of others). In the light of the weakness of the present PLQ, it is suggested that positive (socially acceptable goals) and negative items (socially unacceptable goals) be added in the PLQ that we might be able to differentiate resilient and stress-deviant subjects. Moreover, for the purpose of risk prevention, some programs teaching adolescents to search for positive meanings of life are crucial to their healthy development.

The Similarity of Resilience and Stress-deviance

One of the most interesting findings of this study was that resilience, Group 1, and stress-deviance, Group 3, had similar characteristics as shown in the results of ANOVAs (see Table 2). The blurred differentiation between these two groups was further revealed from the findings of logistic regression in which the correct prediction of resilience versus depression was as high as 78.92% compared to only 62.5% by predicting resilience versus deviance. These findings suggested that the four capabilities be effective in distinguishing depression and non-depression, but not in distinguishing deviance and non-deviance. Since the concept of resilience in the present study includes both behavioral and psychological problems of stressful subjects, it seems that more

appropriate instruments should be developed to differentiate resilience and stress-deviance. Nevertheless, the use of behavioral checklist is an additional instrument to solve the problem of classification after knowing the respondents' scores on the four scales.

Conclusion

Adolescents have to face various life changes, some of them will be highly stressful. Unfortunately, not every adolescent has the required capabilities to cope with such stress. Individuals who are less successful to cope with life stresses might show psychological dysfunction and behavioral problems. Thus preventive programs aiming at enhancing adolescents' capabilities in managing stresses are crucial. Based on the three instruments of the study, we are able to classify stress-at-risk and resilient individuals. In this way, various types of preventive programs targeting appropriate respondents can be launched. Further, resilience was found highly related to the four capabilities that programs aiming at enhancing adolescents' capabilities on these four aspects can be conducted.

However, further studies are required to enrich our knowledge in resilience. The most important area is the use of instruments which effectively differentiate resilience and stress-deviance. This is because screening devices for identifying high-risk children and adolescents are valuable, and are essential to risk prevention (Pfeffer, 1991). Also, it is essential to explore factors leading stressful individuals to have various ways of responses, including behavioral and psychological problems. More importantly, as the respondents of this study were form one students, more studies can be conducted to try to replicate the findings among students of other forms.

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摘要

　　這項研究旨在探討具逆境彈力人士的特質及其社會心理能力。這研究測量了四百九十名香港中一學生的七個社會心理變項。基於壓力事件量表（Life Experiences Survey; LES）、偏差行為量表（Self-reported Deviant Behaviors; SRNB）、及流行病研究中心抑鬱量表（CES-D）這三個量表的分數，受試學生可被分為八類；當中，百分之 16.7 被評為具逆境彈力，百分之 36.3 被評為有行為或心理問題。變量分析（ANOVA）的結果顯示，具逆境彈力的組別在社交支持量表（Social Support Appraisal; SSA）的兩個分量表中有較高分數（SSA-F: 平均分 = 2.78, F = 17.65, p<0.001; SSA-T: 平均分 = 2.86; F = 8.91; p<0.001），在問題解決量表（Problem Solving Inventory; PSI）的兩個分量表中有較高分數（PSI-C: 平均分 = 4.10, F = 15.32, p<0.001; PSI-I: 平均分 = 3.84, F = 4.18, p<0.01）。另外，後勤回歸分析（logistic regression）的結果顯示，在眾多相關變項中，人生目標問卷（Purpose in Life Questionnaire; PLQ）的分數最能預測逆境彈力（預測正確率 =62.5%, Wald=10.53, p>0.5）

Resumo

Este artigo tem como objectivo estudar e analisar as características das personalidades, com flexibilidade nas circunstâncias desfavoráveis e a sua qualidade psicológica social. O estudo envolve 490 alunos de Hong Kong, nomeadamente, do primeiro ano do ensino secundário para fazer uma medição de 7 variáveis psicológicas sociais. Com base nos resultados dos 3 quadros, isto é, de Life Experiences Survey, LES; Self-reported Deviant Behaviors, SRNB e CES-D, os objectos de estudo são divididos em 8 grupos; dos quais, 16,7% têm flexibilidade nas circunstâncias desfavoráveis; enquanto 36,3% têm problemas comportamentais ou psicológicos. O resultado da ANOVA revela que os que têm flexibilidade nas circunstâncias desfavoráveis obtêm notas altas nos dois quadros de Social Support Appraisal, SSA (SSA-F: médio=2,78; F=17, 65; p<0,001; SSA-T: Médio=2,86; F=8,91; p<0,001) bem como nos outros dois quadros de Problem Solving Inventory, PSI (PSI-C: médio=4,10; F=15,32; p<0,001; PSI-I: Médio=3,84; F=4,18; p<0, 001). Além disso, segundo o resultado do Logistic Regression, entre várias variáveis relativas, os dados do Purpose in Life Questionnaires, PLQ podem melhor prenunciar a flexibilidade nas circunstâncias desfavoráveis (Taxa de Precisão=62,5%; Wald=10,53, p<0,5).