



严重急性呼吸道综合征患者心理症状追踪研究

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【摘要】目的 追踪研究严重急性呼吸道综合征(SARS)患者入院、出院及出院后3个月三个阶段心理状况及影响因素,对有心理问题的SARS患者进行心理干预并做干预效果评价。方法 采用自拟一般状况调查表、症状自评量表(SCL-90)、领悟社会支持量表(PSSS)、简易应对方式问卷(SCSQ)、自尊量表(SES)、艾森克个性问卷(EPIQ)作为工具,对114名SARS患者进行追踪调查。结果 1.总分、强迫、恐怖因子分出院较入院时有上升,之后开始下降;躯体化、抑郁、焦虑因子分随时间变化,在3个阶段逐渐下降。2.强迫、人际敏感、恐怖问题发生率,出院时较入院时上升,之后开始下降($P>0.05$)。3.自尊在3个研究阶段均是SARS患者心理症状的影响因素;自觉病情严重程度是从入院到出院时的影响因素;消极应对是出院和出院后3月时的影响因素;文化程度是出院后3月时的影响因素。4.电话心理干预后SARS患者SCL-90总分及大部分因子分下降($P>0.05$),部分因子分尤其躯体化($P<0.01$)反而上升。结论 1.SARS患者在各期均存在明显的情绪障碍且影响因素不完全相同,临床应该持续评估其心理状态,并进行及时干预。2.心理干预后SARS患者心理症状减轻不明显,部分症状反而加重。

【关键词】严重急性呼吸道综合征; 患者; 心理症状; 相关因素

Follow-up study on mental symptoms of SARS patients

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【Abstract】 Objective To investigate mental symptoms of SARS patients and its related factors for three period-admission, discharge and three months after SARS crisis and to carry out mental intervention and effect evaluation. **Methods** The mental problems of SARS patients in three periods of admission, discharge and three months after discharge were continuously investigated. 114 SARS patients came from seven designated hospitals in Taiyuan of Shanxi. The participants were assessed by self-compiled stressor Questionnaire, PSSS, SCSQ, SES, SCL-90 and EPIQ. **Results** 1. Change tendency of factor score: The SCL-90 total and factors scores including obsessive-compulsion, phobic anxiety went up during discharge compared with admission. After that, these factors scores went down. The factors scores of somatization and depression descended continuously for three period. 2. Change tendency of the incidence: The incidence on factors of obsessive-compulsive, interpersonal sensitivity, phobic anxiety ascended during discharge compared with admission. Then, these factors scores descended. The other factors went down continually for three periods. 3. The self-esteem was influencing factor on mental symptoms of SARS patients for three periods. Conscientious condition severity was influencing factor in admission and discharge. Negative coping was influencing factor in discharge and three months after SARS crisis. Education was influencing factor in three months after SARS crisis. 4. After intervention, the most mental symptoms of 35 SARS patients had mental problems were improved. Dissimilarly, a part of mental symptoms got severity. **Conclusions** 1. SARS patients exist severe mood disorders and have different influencing factors for three periods. They should be evaluated continuously and be intervened in time. 2. The effect of mental intervention by telephone is not uncertainty.

【Key words】 Severe Acute Respiratory Syndrome(SARS); Patients; Mental symptoms; Related factors

Some researchers had reported that the SARS patients have already suffered serious mental problem and appeared mood disorder during from admission to discharged^[1-2]. Besides SARS patients would confront some inconceivable problems of physical, psychological and social for a long time even after recovered^[3-5]. Many researches of cross sectional investigations have reported, but the continuous follow-up study are not found yet. This aim of study was to understand

the variation tendency of mental states of SARS patients during the course of treating and recovering and to explore the effective psychological intervention measures, which will provide psychological advice for dealing with crisis in the future

SUBJECTS AND METHODS

Participants

The SARS patients ($n = 114$) came from seven designated hospitals in Taiyuan of Shanxi. The mental status of the sample were assessed for three periods follow-up investigation altogether 52 males and 62 females. The mean age of the participants was 36.9 ± 13.9 years, ranged from 8 to 81.

基金项目:国家自然科学基金(20041110);山西省科技厅基金项目(032004-8)

Supported by Nature Science Fund (No. 20041110) and Science & technology Fund of Shanxi Province(032004-8)

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Demographic data include gender, age, occupation, education, marital status and so on. The mental symptom was assessed by Symptom Checklist 90, (SCL-90)^[6]. In addition, the mesmerism factor of stress including social support, coping, personality and self-esteem were assessed by standard scale: Perceived social support scale (PSSS)^[7], simplified coping style questionnaire (SCSQ)^[7], and Eysenck personality questionnaire (EPQ)^[8].

Investigation time and measure

The investigation of first period on October 2003 SARS patients were taken centralized test when they had further consultation with doctors and filled the retrospective questionnaires for the three periods: admission, discharge and three months after discharge. SARS patients with the psychological problem were given the corresponding psychological support and intervention for different symptoms. Guidance to change bad cognition, abreast mood and alleviate the pressure by 1~4 times telephone crisis intervention.

On January 2004, We carried out effective evaluation of intervention. The evaluation tools used SCL-90.

Statistical analysis

We adopted Visual Foxpro 6.0 software to set up the all data. Statistical Package for Social Science (SPSS Inc, Chicago, USA) was used for data analysis. Demographic data and continuous variables were summarized by mean value and standard deviation.

Results

1. The change tendency of SCL-90 total and factors scores in SARS patients in different period

Table 1 showed that high correlation in all factor score for three periods. The results showed that the SCL-90 factors scores of panic anxiety score ascended during discharge compared with admission, which had significant statistics difference ($P < 0.05$). The factor scores of somatization, depression, anxiety, panic anxiety, psychotic went down during three months after discharge compared with discharge ($P < 0.05$ or $P < 0.01$). Compared to the mental state of SARS patients in admission, that of SARS patients were relatively steady in discharge. But the panic anxiety degree was obviously aggravated. Three month after discharge compared to discharge, the mental symptoms of somatization, anxiety, depression, panic anxiety and psychotic on SARS patients improve obviously. The correlation association on SCL-90 total scores were observed between discharge and admission and between three months after discharge and discharge. The results showed that the SCL-90 total score ascended during discharge compared with admission ($P > 0.05$). After discharge, the SCL-90 score descended rapidly ($P < 0.05$).

Table 1 The Change Result of SCL-90 Total and Factors Scores in Different Periods ($\bar{x} \pm s$)

Variable	Admission	Discharge	Three Months after Discharge	Compare Discharge with Admission (t)	Compare three Months after Discharge with Discharge (t)	Compare Discharge with Admission (r)	Compare three Months after Discharge with Discharge (r)
Somatization	1.85 ± 0.90	1.77 ± 0.84	1.60 ± 0.75	1.03	3.43**	0.61**	0.84**
Obsessive-Compulsive	1.71 ± 0.71	1.80 ± 0.80	1.76 ± 0.78	-1.71	1.20	0.76**	0.91**
Interpersonal Sensitivity	1.62 ± 0.68	1.73 ± 0.80	1.63 ± 0.70	-1.96	1.95	0.78**	0.78**
Depression	1.81 ± 0.87	1.78 ± 0.85	1.59 ± 0.75	0.46	2.91**	0.70**	0.77**
Anxiety	1.79 ± 0.78	1.76 ± 0.84	1.50 ± 0.66	0.39	5.22**	0.68**	0.81**
Hostility	1.59 ± 0.75	1.53 ± 0.65	1.44 ± 0.55	0.99	1.57	0.67**	0.71**
Panic Anxiety	1.38 ± 0.63	1.48 ± 0.74	1.36 ± 0.61	-2.26*	2.38*	0.79**	0.72**
Paranoid	1.41 ± 0.57	1.43 ± 0.56	1.36 ± 0.51	-0.72	1.63	0.87**	0.81**
Psychotic	1.45 ± 0.52	1.47 ± 0.53	1.40 ± 0.46	-0.49	2.30*	0.70**	0.85**
Total Scores	150.50 ± 56.66	153.34 ± 62.72	138.47 ± 50.91	-0.54	3.75**	0.70**	0.84**

Note: * $P < 0.05$, ** $P < 0.01$

2. The variation tendency of incidence of psychological symptoms

SCL-90 factor score greater than one were considered to have corresponding psychological problems^[6]. Compared to admission, the variation tendency of incidence of obsessive-compulsive, interpersonal sensitivity, panic anxiety problem on SARS patients went up in discharge. After discharge, that of the sampling went down ($P > 0.05$). The variation tendency of incidence of somatization, depression, anxiety, hostility, paranoid and psychotic descended gradually as time went on, but there were no statistics difference except for anxiety ($P < 0.05$). See Table 2.

3. Multivariate stepwise regression of SCL-90 general symptomatic index on SARS patients in three periods

Fifteen variables including sex, age, social support, self-esteem, coping style and personality character and so on were regarded as independent, dependent were SCL-90 general symptomatic index,

$= 0.05$, carried on multivariate linear regression analysis (Table 3).

Table 2 The Incidence of SCL-90 Factors Scores in Different Period (n, %)

Variable	Admission	Discharge	Three Months after Discharge
Somatization	33 (28.9)	31 (27.2)	26 (22.8)
Obsessive-Compulsive	30 (26.3)	34 (29.8)	33 (28.9)
Interpersonal Sensitivity	30 (26.3)	36 (31.6)	27 (23.7)
Depression	37 (32.5)	32 (28.1)	25 (21.9)
Anxiety*	34 (29.8)	33 (28.9)	16 (14.0)
Hostility	27 (23.7)	23 (20.2)	19 (16.7)
Panic Anxiety	18 (15.8)	21 (18.4)	11 (9.6)
Paranoid	19 (16.7)	18 (15.8)	14 (12.3)
Psychotic	20 (17.5)	18 (15.8)	12 (10.5)

Note: * $P < 0.05$



Table3 Multivariate Stepwise Regression of SCL-90 General Symptomatic Index on SARS Patient in Three Periods

Period	Influencing factor	B	SE	Wald χ^2	P	OR
Admission	Conscientious Condition Severity	0.554	0.300	3.406	0.065	1.740
	Self-Esteem	-0.318	0.090	12.581	0.000	0.727
Discharger	Conscientious Condition Severity	0.586	0.306	3.677	0.055	1.797
	Self-Esteem	-0.301	0.091	10.991	0.001	0.740
	Negative Coping	0.201	0.078	6.755	0.009	1.223
Three Months after Discharge	Education	0.632	0.338	3.500	0.061	0.531
	Self-Esteem	-0.333	0.095	12.339	0.000	0.717
	Negative Coping	0.148	0.066	5.116	0.024	1.160

4. The psychological intervention and effective evaluation

After intervention, SCL-90 total score and most factor scores went down ($P > 0.05$) and the factors score of somatization, hostility and paranoid went up. There were no statistics difference except for somatization ($P < 0.01$)

Table4 The Changes of SCL-90 Total and Factor Score of the 35 SARS Patients with Psychological Problems before and after Intervention

Factor score	Before Intervention	After Intervention	t
Somatization	1.58 ± 0.78	2.08 ± 0.82	-3.156**
Obsessive-Compulsive	1.93 ± 0.99	1.92 ± 0.79	0.055
Interpersonal Sensitivity	1.76 ± 0.80	1.40 ± 0.33	1.763
Depression	1.73 ± 0.94	1.65 ± 0.69	0.812
Anxiety	1.75 ± 0.93	1.56 ± 0.53	0.338
Hostility	1.57 ± 0.83	1.61 ± 0.49	-1.270
Panic Anxiety	1.46 ± 0.76	1.26 ± 0.43	1.693
Paranoid	1.40 ± 0.55	1.40 ± 0.56	-0.465
Psychotic	1.57 ± 0.75	1.35 ± 0.35	0.573
SCL-90 scores	155.79 ± 75.25	138.00 ± 32.38	0.533

Note: ** $P < 0.01$

DISCUSSION

This study show that the mental state of SARS patients are instability from discharger to admission. There are two possible reasons. The first important reasons is that SARS is a kind of new infectious disease with higher infection and has not effective treatment measure at pathogen yet at present. So SARS patients suffer severe psychological shock. Experts believe that the great challenge faced in crisis is not medical technological problem, but is the complicate psychological problem^[5,10]. The second reason might be that the relatively late and unskilled intervention technology. Result in the indistinctive effective. It is a deserves the further discussion problem that the phobic score increased in discharged. Because SARS patients still have doubts on whether they would fully recovery? Whether have sequelae or recur in the future? In addition, it could not avoid appearing post-traumatic stress disorder symptoms in related people after the crisis^[3]. Some researches have reported that the psychological problem of SARS patient recovering are outstanding^[3,4]. For coping the puzzles, conflicts and setbacks and releasing unhealthy emotions such as anxiety, depression and rage, SARS patients unconsciously form compulsive thinking or behavior^[11]. Result in mental problems such as obsessive-compulsive, interpersonal sensitive and so on in discharge. So it is easy to understand these mental symptoms still se-

vere in three months after discharge. The conscientious illness condition severity is the risk factor of the psychological problems among SARS patients from admission to discharge. For SARS disease, we still are known a little. So the individuals with incorrect cognition would easily appeared the psychological problem^[12]. The negative coping is a risk factor of the psychological problem on SARS patient in discharge and three months after discharge. An associated is observed between the high positive coping score and the low mental symptoms scores. So it was a good verification that the coping style was significantly correlation with the psychological health level^[13]. Similarly to the other reasearch, our study find that education and psychological stress level were direct proportion after crisis. Our reasearch suggest that high self-esteem is a protect factor of the mental problem in three periods. Helping the patient to rebuild self-esteem would be the effective measure to prevent a patient from the psychological symptom at any time.

We carry out mental intervention by telephone and effective evaluation. The improve of the patient's psychological state is not obvious. This proved that the intervention effect by telephone is very limited. It is an abnormal phenomenon that the somatization factor scores increases after intervention. A large number of documents have reported that 1/3 ~ 1/2 of SARS patients appear serious somatizative syndrome such as head of femur and ankle joint, knee joint, shoulder joint necrosis and so on. It is possible reason that the somatizative score obviously increases after intervention in this research.

REFERENCES

- 1 Maunder R, Hunter J, Vincent L, et al. The immediate psychological and occupational impact of the 2003 SARS outbreak in a teaching hospital. *Can Med Assoc J*, 2003, 10: 1245-1251.
- 2 Cheng SK, Tsang JS, Ku KH, et al. Psychiatric complications in patients with severe acute respiratory syndrome (SARS) during the acute treatment phase: a series of 10 cases. *Br J Psychiatry*, 2004, 184: 359-360.
- 3 Yan F, Dun Z, Li SR, et al. Survey on Mental Status of Subjects Recovered from SARS. *Journal of Chinese Mental Health*, 2004, 18: 675-677.
- 4 Lin Z, Zuo X, Zhong S. Mental Status of Recovered SARS Patients. *Chinese Mental Health Journal*, 2004, 18: 129-131.
- 5 Chan KS, Zheng JP, Mok YW, et al. SARS: prognosis, outcome and sequelae. *Respirology* 2003, 8 Suppl: S36-40.
- 6 Zhang M. Handbook of rating scales in psychiatry. Hu Nan: Hunan Science & technology Press 1993, 17-27.
- 7 Wang X, Wang X, Ma H. Rating scales for mental health. *Chinese Mental Health Journal*, 1999 (suppl): 131-133, 120-122, 318-320.
- 8 Gong Y. Handbook of revising eysenck personality questionnaire. Chang Sha: Medical college of Hunan 1993, 2-31.
- 9 Tsang HW, Scudds RJ, Chan EY. Psychosocial impact of SARS. *Emerg Infect Dis*, 2004, 10: 1326-1327.
- 10 Wei YH. Three theoretical models of stress. *Psychological Science*, 1998, 21: 441-444.
- 11 So WK, Chan SS, Lee AC, et al. The knowledge level and precautionary measures taken by older adults during the SARS outbreak in Hong Kong. *Int J Nurs Stud*, 2004, 41: 901-909.
- 12 Peterson AL, Nicolas MG, McGraw K, et al. Psychological intervention with mortuary workers after the September 11 attack: the Dover Behavioral Health consultant model. *MilMed*, 2002, 167 (9 suppl): 83-88.
- 13 Nick Kates, MBBS, FRCPC, Anne-marie Crustob, BScN. Counsellors in primary care: benefits and lessons learned. *Can J Psychiatry*, 2002, 47: 857-862.

(Received 2005 - 06 - 26)
(Edited by FENG Xue-quan, L in Li)