Coping strategies related to total stress score among post graduate medical students and residents

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Abstrak

Latar belakang: *Beberapa strategi penanganan yang dapat mengurangi tingkat stres. Tujuan penelitian ini untuk mengidentifikasi beberapa strategi yang dominan terhadap tingkat skor stres total.*

Metode: *Pada penelitian potong lintang dengan sampel purposif mahasiswa kedokteran pasca sarjana Fakultas Kedokteran Universitas Indonesia pada bulan April-Juli 2011. Kuesioner yang digunakan ialah kuesioner strategi mengurangi stres dan self reporting questionnaire WHO (SRQ-20). Regresi liniar digunakan Untuk mengidentifikasi faktor dominan terhadap tingkat stres dipergunakan regresi linear.*

Hasil: *Subjek terdiri dari 272 orang, usia 23-44 tahun. Empat hal menurunkan skor stres total (menerima realitas, berbicara dengan seseorang yang dapat melakukan sesuatu, meminta bantuan Allah, dan menertawakan situasi yang bermasalah). Sebaiknya tiga faktor meningkatkan skor stres total (menyelesaikan langkah demi langkah pada suatu waktu, berbicara dengan seseorang untuk mengetahui lebih lanjut tentang situasi, dan mengakui tidak bisa menangani pemecahan situasi). Satu poin menerima realitas situasi mengurangi 0,493 poin skor total stress [koefisien regresi (β) = -0,493, P = 0,002]. Sementara satu poin mencari pertolongan Allah akan mengurangi 0,307 poin skor stres total (β) = -0,307, P = 0,056). Namun, satu poin melakukan satu langkah pada suatu waktu akan meningkatkan 0,54 poin skor stres total (β) = 0,540, P = 0,005).*

Kesimpulan: *Menerima realitas, berbicara dengan seseorang yang dapat melakukan sesuatu, meminta bantuan Allah, dan menertawakan situasi akan menurunkan tingkat stres. Sebaiknya, menyelesaikan langkah demi langkah pada suatu waktu, berbicara dengan seseorang untuk mengetahui lebih lanjut tentang situasi, dan mengakui tidak bisa menangani memecahkan situasi, meningkatkan skor stres total.*

Kata kunci: *strategi pengendalan stres, meminta pertolongan Alllah*

Abstract

Background: Several coping strategies may minimize stress levels. This study aimed to identify several dominant coping strategies related to total stress score levels.

Methods: A cross-sectional purposive sampling method study among postgraduate medical students of the Faculty of Medicine, Universitas Indonesia was done April-July 2011. We used a coping strategies questionnaire and the WHO SRQ-20. Linear regression was used to identify dominant coping strategies related to stress levels.

Results: This study had 272 subjects, aged 23-47 years. Four items decreased the total stress score (accepting the reality of the fact, talking to someone who could do something, seeking God's help, and laughing about the situation). However, three factors increased the total stress score (taking one step at a time has to be done, talking to someone to find out more about the situation, and admitting can't deal solving the situation). One point of accepting the reality of the situation reduced 0.493 points the total stress score [regression coefficient (β)= -0.493; P=0.002]. While one point seeking God's help reduced 0.307 points the total stress score (β)= -0.307; P=0.056). However, one point of doing one step at a time increased 0.54 point the total stress score (β)=0.540; P=0.005).

Conclusions: Accepting the reality of the situation, talking to someone who could do something, seeking God's help, and laughing about the situation decreased the stress level. However, taking one step at a time, talking to someone to find out more about the situation and admitting can't deal solving the situation, increased the total stress score.

Key words: stress level, coping strategies, age, seeking God's help

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For the last years in Indonesia higher education, including the number of post graduate medical students and residents has increased. The post graduate medical students and residents, in general, have to earn money for their families, work with other disciplines in hospitals, and work in multi ethnic and cultural conditions, while trying to also save time for their families. It seems that they may experience stress. A critical issue concerning stress among students is its effect on learning.[1]

Since the post graduate medical students and residents were well educated people, most likely they had specific coping strategies including turning to religion, to control stress.[2,3] At the present time, the relationship between religion and mental and physical health has received substantial scientific interest.[4]

However, in Indonesia such studies on coping strategies to control stress in post graduate medical students and residents are limited or rare. This study aimed to identify several coping strategies to control stress among medical post graduate students and residents.

METHODS

The purposive selected subjects of this cross sectional study consisted of voluntary first year post graduate medical students and residents from two teaching hospitals in the Jakarta Faculty of Medicine, Universitas Indonesia in April-May 2011.

Data collection was performed after the subjects were finishing an examination or classes. An anonymous self reporting questionnaire in English regarding coping strategies,[5] and WHO self reporting questionnaire-20 (SRQ-20) were used.[6]

The collected demographics data were: gender (male/ female); age; marital status (unmarried/married/ widow/ widower); Previous/current work place (government/private company/private practice/others); stress management training (never/ ever).

Coping strategies data consisted of four factors: factor 1 (active coping and planning); factor 2 (denial and behavioral disengagement); factor 3 (seeking social support for instrumental and emotional reasons); and factor 4 (turning to religion).

Factor 1 (active coping and planning) consisted of: (1) taking additional action to get rid of the problems; (2) seeing the situation in a different sight, to make the situation more positive: (3) talking to someone who had a concrete solution; (4) to try to come up with steps to be taken; (5) focus on the problem, and make it simple; (6) thinking about the best way to handle the problem; (7) accepting the reality of the what has happened; (8) doing what has to be done, taking one step at a time' (9) learning from experience.

Factor 2 (denial and behavioral disengagement) consisted of: (1) laughing about the situation; (2) admitting that I can't deal it and stop trying; (3) getting upset and becoming very aware of it; (4) not wanting to believe that it has happened; (5) pretending that it hasn't really happened; (6) reducing the effort and solving the problem.

Factor 3 (seeking social support for instrumental and emotional reasons) consisted of (1) trying to get advice from someone; (2) discussing my feeling with someone; (3) talking to others to seek more information on the situation; (4) accepting what has happened as it is; (5) trying to get support from friends via information technology; (6) seeking emotional support from friends/relatives.

Factor 4 (turning to religion) consisted of: (1) seeking God's help; (2) trying to find comfort in my religion; and (3) praying more than usual.

For each coping strategy scores ranged from 0 to 10 (0=lowest; 10=highest), and for each question on SRQ-20, a positive answer was scored 1 or otherwise was 0. Total distress scores ranged from 0 to 20.

We performed linear regression to identify several dominant coping strategies related to total stress scores using Stata released 9.

RESULTS

Our 272 subjects aged 23 to 44 years old. Table 1 shows that majority of the subjects were more female than male, not married, their previous/current work places were government officials. However, only a small number (4.0%) ever had stress management training.

Table 2 shows that among the coping strategies, turning to religion strategies had a high mean average (from 7.3 to 8.3), and the highest was on seeking God's help. This followed the mean average on active coping and planning (5.97 to 7.42), and seeking social support for instrumental and emotional reasons (5.64 to 6.55). The least average were on denial and behavioral disengagement (mean average from 3.06 to 5.08).

Table 1. Several demographic characteristics of subjects

	n	%
Gender		
Male	102	37.5
Female	170	62.5
Marital status		
Married	120	44.1
Not married	149	54.8
Widow/widower	3	1.1
Previous/current work place		
Government	171	62.9
Private company	25	9.2
Private practice	16	5.9
Others	60	22.1
Stress management training		
Never	261	96.0
Ever	11	4.0

Table 3 shows that most of the subjects had low perceptions of having stress. In term of each stress question (the maximum value was 1), the average ranged from 0.12 (feeling like a worthless person) to 0.33 (easily tired). Furthermore, the total stress score was also a lower score of 3.83 among our subjects (maximum value of 20).

Our final model (Table 4) notes seven coping strategies related to the total stress score. Four items decreased the total stress level, while three factors increased the total stress score. The factor that reduced the total stress score the most was accepting the reality of the fact that it happened, and the lowest reduction was laughing about the situation. One point of accepting the reality of the situation that it happened will reduce 0.522 points of the total stress level. On the other hand, one point of doing what has to be done, taking one step at a time increased by 0.558 points of the total stress level.

Table 2. Descriptive data on coping strategy

	n	Minimum	Maximum	Mean	Std. Dev.
Factor 1. Active coping and planning					
1. Take additional action to get rid of the problems	272	0	10	5.97	2.367
2. To see in different sight, to make more positive	272	0	10	6.76	2.129
3. Talk to someone who had concrete solution	272	0	10	6.42	2.177
4. Try to come up with steps to be taken	272	0	10	6.64	1.849
5. Focus on the problem, and make it simple	272	0	10	6.52	1.866
6 Think about how the best to handle the problem	272	0	10	6.91	1.876
7. Accept the reality of the fact that it happened	272	0	10	6.99	1.969
8. To do what has to be done, one step at a time	272	2	10	6.93	1.892
9. Learn from experience	272	1	10	7.42	1.911
Factor 2. Denial and behavioral disengagement					
1. Laughing about the situation	272	0	10	5.08	2.554
2. Admitting that I can't deal it and quit trying	272	0	10	3.96	2.527
3. Getting upset and I am really aware of it	272	0	10	4.31	2.470
4. Don't want to believe that it has happened	272	0	10	3.19	2.381
5. Pretending that it hasn't really happened	272	0	8	3.06	2.379
6. Reduce the effort and solving the problem	272	0	10	3.67	2.421
Factor 3. Seeking social support for instrumental and emotional reasons					
1. Trying to get advice from someone	272	0	10	6.33	2.180
2. Discuss my feeling with someone	272	0	10	6.53	2.168
3. Talking to other to seek more on the situation	272	0	10	6.55	2.145
4. Accepting what happened as it is	272	0	10	6.39	2.121
5. Try to get support from friends via it technology	272	0	10	5.64	2.505
6. Seek for emotional support from friends/relatives	272	0	10	6.34	2.309
Factor 4. Turning to religion					
1. Seeking God's help	272	2	10	8.32	1.958
2. Trying to find comfort in my religion	272	0	10	8.09	1.967
3. Pray more than usual	272	0	10	7.31	2.202

Table 3. Descriptive data on stress self reporting questionnaire

	n	Minimum	Maximum	Mean	Std. Deviation
Do you often have headaches?	272	0	1	0.26	0.442
Is your appetite poor?	272	0	1	0.18	0.388
Do you sleep badly?	272	0	1	0.24	0.427
Are you easily frightened?	272	0	1	0.17	0.372
Do your hands shake?	272	0	1	0.19	0.397
Do you fell nervous, tense or worried?	272	0	1	0.21	0.408
Is your digestion poor?	272	0	1	0.15	0.355
Do you have trouble thinking clearly?	272	0	1	0.20	0.402
Do you fell unhappy?	272	0	1	0.23	0.423
Do you cry more than usual?	272	0	1	0.15	0.355
Do you find it difficult to enjoy your daily activities?	272	0	1	0.22	0.418
Do you find it difficult to make decisions?	272	0	1	0.23	0.420
Is your daily work suffering?	272	0	1	0.18	0.388
Are you unable to play a useful part in life?	272	0	1	0.18	0.388
Have you lost interest in things?	272	0	1	0.13	0.335
Do you feel that you are a worthless person?	272	0	1	0.12	0.327
Has the thought of ending your life been on your mind?	272	0	1	0.14	0.347
Do you feel tired all the time?	272	0	1	0.12	0.327
Do you have uncomfortable feelings in your stomach?	272	0	9	0.17	0.636
Are you easily tired?	272	0	9	0.33	0.698
Total score	272	0	20	3.81	4.610

Table 4. Dominant coping strategies related to total stress score

	Adjusted regression coefficient	P
I talk to someone who could do something concrete about the problem	-0.387	0.006
I accept the reality of the fact that it happened	-0.522	0.002
I laugh about the situation	-0.278	0.019
I seek God's help	-0.310	0.066
I do what has to be done, one step at a time	0.558	0.006
I admit to myself that I can't deal with it and quit trying	0.307	0.009
I talk to someone to find out more about the situation	0.362	0.011
Constant	6.479	0.000

DISCUSSION

There are several limitations which must be considered in the interpretation of our results. Firstly, in this study we did not have physical health data which may relate to one's stress level. However, the post graduate medical students and residents just had medical clearance (physically) fit for enrolling in the study.

Secondly, the subjects were purposive selected among first year post graduate students and residents only. They did not represent all graduate students and residents in Indonesia. However, our subjects were MDs who may understand the benefit of the study, and we used an anonymous self reply questionnaire.

Thirdly, the constant of our final model was a high value which indicated there are still several risk factors related to stress levels. Lastly, we utilized four factors for coping strategies for assessing our subjects responded to stress instead of a multi dimensional coping inventory to assess the different ways in which people respond to stress.[7]

Our subjects had a low mean total stress score of 3.83 (maximum value of 20) which may be considered as a moderate stress level. If we look at the Yerkes-Dodson law postulates, an empirical relationship between arousal and performance, that individuals under low and high stress learn the least and those

under moderate stress learn the most.[1] Therefore our subjects were likely to be learning the most.

Table 2 shows that among the coping strategies, turning to religion strategies had a higher mean average (from 7.3 to 8.3), and the highest was on seeking God's help. Most likely our subjects had a strong belief in God who will give help any time. It seems most likely that religion strategies may resolve the problems related to stress. In contrast, the results of a prior study provided evidence that among a Christian undergraduate sample religiosity was not associated with psychological distress.[8]

In terms of active coping and planning, our study among highly educated subjects revealed that the mean total stress score was low. Our finding was in accordance with a prior study with seventy-one project managers from a global sample.[9]

In terms of denial and behavioral disengagement, we had only one item (laugh about the situation) that decreased the total stress score, while admitting to oneself that someone can't deal with it and quit trying will increase the total stress score. This lack of trust can solve problems related to stress.

In conclusion, accepting the reality of the fact, talking to someone who could do something, seeking God's help, and laughing about the situation will decreasing total stress score. However, three factors increased the total stress score (taking one step at a time, talking to someone to find out more about the situation, and admitting one can't deal with solving the problem).

Acknowledgments

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