The Effectiveness Of Counseling With Cognitive Restructuringtechnique To Improve The Coping Stress Of Cancer Patients

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Article Info	Abstract
	Cancer patients are susceptible to physical and psychological problems that result in immune reduction, and depression showed by the feelings of sad, hopeless, failure, dissatisfaction, worse, having low opinion on their body, and feeling close to death. Therefore, this study intended to examine the effectiveness of counseling with Cognitive Restructuring (CR) technique to improve the coping stress of cancer patients. It used Single Subject Design (SSD) with multiple baseline individual pattern. There were eleven observational sessions in this study, namely three sessions of baseline A1, five sessions of intervention, and three sessions of baseline A2. The overall data of coping stress were collected using guidelines from GAS (Goal Attainment Scaling). Further, graph visual analysis was made to obtain mean, data level, rapidity behavior changes, trend of data changes, level stability, and data overlap. After that, the data went through the calculation of t score and z score. The results showed that the counseling with Cognitive Restructuring (CR) technique was able to improve coping stress.

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INTRODUCTION

Cancer is a chronic disease that becomes one of leading causes of death in the world. In 2012, cancer caused about 8.2 million people dead. Based on Globocan, International Agency for Research on Cancer (IARC) data, in 2012 there were 14.067.894 cancer cases and 8.201.575 deaths caused by cancer. A person that is diagnosed with cancer usually experiences a strong emotional distress such as shock, anxiety, stress, and depression, yet this distress condition can persist for some patients. Hawari (2009) expresses three stage of distress reaction. In first stage, patients will feel a mental shock when they are told about their illness. They will get panic, feel scared, and be unable to accept the disease they suffer from. In second stage, patients are overwhelmed by fear of death and depression. However, this stage usually quickly passes. In third stage, patients will express denial and moodiness reaction. They are unsure that they are suffering from cancer. Concerning to patients' needs of this service, so this study used cognitive restructuring counseling to improve coping stress.

The interview result with clerics in Sultan Agung Islamic Hospital (RSI) convinced the researcher that there were 2 cancer patients (lung and breast cancer) who were suffering from low coping stress. When they met new people, they tend to be silent and indifferent while lying on their beds. Likewise, when the clerics asked them, they tended to be embarrassed and lack of response.

Based on several impacts of low coping stress, the treatment for cancer patients was found quite slow because of their physical condition that was affected by the pressure on psychological condition. Matin, Looyeh, et al., (2012) says that the health changes of a cancer patient create a transition process. People who are in this process become very vulnerable. Gibson et al (2012) confirms that transition process can be the source of stress. Additionally for the minority of patients, the condition of stress or psychological distress probably increases when the treatment begins until the end.

Related to the effort for improving coping stress of cancer patients, this study used cognitive restructuring technique which has several advantages that can be seen on previous studies. First, Ekennia et al. (2013) used cognitive restructuring to manage nocturnal enuresis of adolescents who experienced social problem related to coping stress. Second, Steigerwald and David Stone (1999) used cognitive restructuring to manage coping stress in case of treating alcoholics. Third, Fitri. (2017) explain that cognitive restructuring technique has significant effects on the increase of mental health level of disable children's parents. Nikmaturohmah et al. (2015) reveal that cognitive restructuring technique is able to improve students' internal coping stress. It can be seen from the mean of post-test of experimental class that was higher than control class'. This technique can be applied on someone who is stressed by painful emotion and has harmful behavior for him and others, who uses absolute languages (always, must, and never), and who has a belief system that impedes the progress of himself (Corcoran, 2006).

The basic concept of cognitive restructuring counseling is based on emotive rational counseling in which human is born with potential both to think rationally and honestly and to think irrationally and badly and tends to take care of himself, happily to think, loves, socializes with others, grows and develops his potential (Corey G., 2012). The strategies of cognitive restructuring counseling can be understood from two things: (1) irrational thought and detective cognition that result in self-defeating behaviors (intentional behavior that has negative effect on oneself) and, (2) thought and statements about himself can be changed through change in views and personal cognition (Sharf, 2012). Then, Ellis (1986) concludes that human is able to talk to himself, evaluate to himself, and have self-defense.

Furthermore, cognitive restructuring counseling approach is used to overcome or eliminate various emotional disorders that can

harm oneself such as hate, fear, and anxiety as the result of irrational thinking and train to face the reality rationally (Willis, 2004). Based on preliminary description, this study intended to: a) describe and analyze the level of coping stress of cancer patients, b) describe and analyze cognitive restructuring counseling on cancer patients when the intervention has been given, c) analyze the level of coping stress, and d) find out the effectiveness level of cognitive restructuring counseling implementation.

METHODS

The subjects of this study were two individuals (patients) who had low coping stress. These female patients were 62 years old (NG), and 53 years old (MU). Both of them suffered from lung and breast cancers, and occupied ma'wa ward in RSI Sultan Agung Semarang.

Data of changes in coping stress level between time measurements were collected using GAS (Goal Attainment Scaling). There are five main scales of GAS, namely distancing, avoidance, self-control, accepting responsibility, and positive reappraisal. Other than this instrument, the researchers also collected data through direct observation over three periods in the chemotherapy process using GAS procedures.

GAS reliability was measured using interrater reliability test based on Azwar's formulae (2013), and obtained the mean intercorrelationcoefficientof 0.829. Moreover, the researchers employed and carried out single subject design with multiple baseline across individuals in several stages. First, baseline A1 was done to measure the trend of behaviors that lead to low coping stress prior to receiving three-session interventions. Second, the researchers gave 5 sessions of intervention, namely recognizing low coping stress, and body reaction (feeling frightened), identifying counselees' experiences in problem situations (expecting bad things to happen), introducing and practicing to overcome thoughts (attitude & action), self-diversion to deal with stress situations (behavior exposure), and homework, follow-up, and self-encouragement (result & reward). All intervention sessions were done in 40 minutes. Third, baseline A2 covered the same actions as the first stage for three sessions.

RESULTS AND DISCUSSION

GAS data presented the mean of the five scales. First, the three sessions of baseline A1 gained the mean of the five GAS scales was -1.37 with the highest and the lowest value of -1.67, and -1.33 respectively, and SD value of 0.65. Second, the five sessions of intervention (B) gained the mean of 1.22 with the highest, and the lowest value of 1.4, and 1.2 respectively, and SD value of 0.81. Third, the baseline A2 session showed that the total mean of five GAS scales was 1.60 with the highest and the lowest values of 1.67, and 1.33 respectively, and SD value of 0.58. In details, the GAS data are presented in the following table 1:

Table 1. The Description of GAS (Goal Attainment Scaling) Result Data

GAS (Copping Stress)	Subjects	Baseline A1		Intervensi (B)		Baseline A2	
		Mean	SD	Mean	SD	Mean	SD
Skala1	NG	-1.33	0.58	1.2	0.84	1.67	0.58
Distancing	MU	-1.33	0.84	1.2	0.84	1.33	0.58
Skala 2	NG	-1.67	0.58	1.2	0.84	1.67	0.58
Escape& Advoidance	MU	-1.00	1.00	1.4	0.55	1.67	0.58
Skala3	NG	-1.33	0.58	1.2	0.84	1.67	0.58
Self Control	MU	-1.33	0.58	1.2	0.84	1.67	0.58
Skala 4	NG	-1.33	0.58	1.2	0.84	1.67	0.58
Accepting Responsibility	MU	-1.33	0.58	1.2	0.84	1.67	0.58
Skala 5	NG	-1.67	0.58	1.2	0.84	1.67	0.58
Positive Reaprasial	MU	-1.33	0.58	1.2	0.84	1.33	0.58
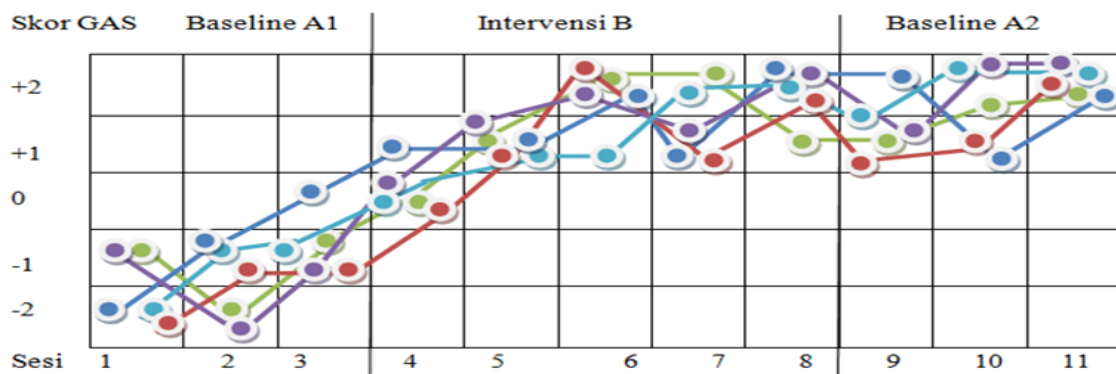
Figure 2. The Analysis of Visual Baseline A1, Intervention B, Baseline A2 Related to Coping Stress in MU
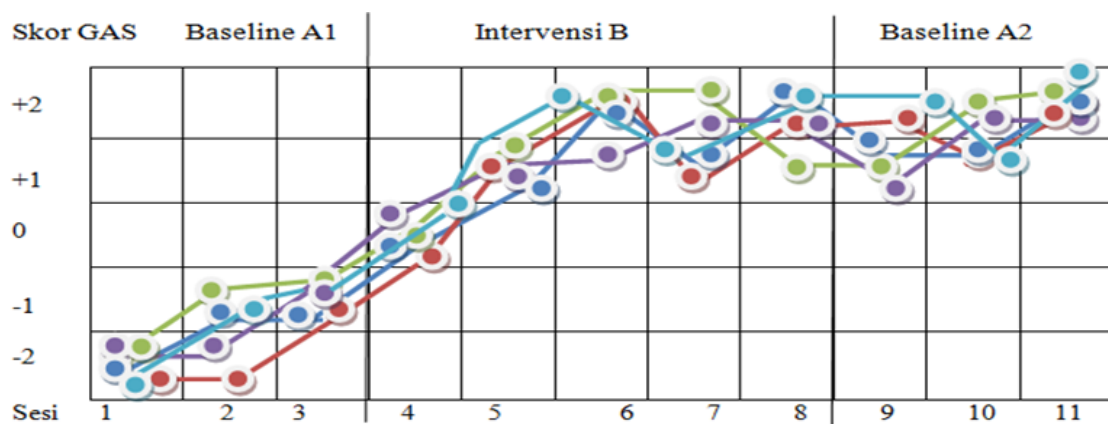
Figure 1. The Analysis of Visual Baseline A1, Intervention B, Baseline A2 Related to Coping Stress in NG

Information :

— ● : Distancing
— ● : Escape & Advoidance
— ● : Self Control
— ● : Acepting & Responsibility
— ● : Positive Reaprasial

Analysis of changes in five GAS scales can be seen in table 1. Distancing scale showed that during baseline A1, NG gained descending trend in the seventh and tenth sessions of intervention (B) during baseline A2. Meanwhile, in the rest sessions the subject experienced a significant improvement. In addition, the subject MU gained rapidity behavior change during baseline A1, no trend in intervention (B) in session 3 during baseline A1, descending trend in session 6 in

intervention (B), and session 9 during baseline A2. These proved that the level of performance always improved in each treatment except in the sixth session. Furthermore, the subjects NG, and MU during baseline A2 gained the level of stability of 40%, and 33.33% in the sixth session. The range of stability of NG and MU in the intervention phase was 40%. Similarly, during baseline A2 phase, the results of visual analysis on NG and MU showed an ascending trend.

Scale 2 (escape & avoidance) showed that NG experienced rapidity behavior change except in the session 1 and session 2 that she gained no trend during baseline A1. Then, in session 7 of intervention (B) and session 10 during baseline A2, this subject gained descending trend. It proved that her level of performance always improved except in session 7. Meanwhile, MU experienced rapidity behavior change during baseline A1, no trend in session 5 of intervention (B), and descending trend in session 7. Further, during baseline A2 of session 10 the subject gained descending trend. It indicated that the level of performance always improved in every treatment except in session 5 and 7. In addition, during baseline A1, and intervention phase, NG and MU obtained the level of stability of 66.67%, and 40% respectively. Further, both of them gained increase of 66.67% for NG, and 33.33% for MU.

Scale 3 (self-control) revealed that subject NG gained ascending trend in all sessions expect in session 3 during Baseline A1, namely no trend, session 7 of intervention (B), and session 10 during baseline A2 with descending trend. It meant that the level of performance always

improved in every treatment except in session 7. Then, subject MU gained rapidity behavior change during baseline A1, no trend in intervention (B) in session 3 during baseline A1, and descending trend in session 6 of intervention (B), and session 9 during baseline A2. It proved that the level of performance always improved in every treatment except in session 6. Alternatively, the baseline A1 stability level of NG was 66.67%, and in the intervention (B), NG and MU gained ascending trend in session 5. Thus, the rapidity behavior change of data trend got improvement except in session 7. Further, both subjects gained a stability level of 66.67% for NG and 40% for MU.

Scale 4 (accepting responsibility) revealed that subject NG gained a lot of no trend in session 3 during Baseline A1, session 7 of intervention, session 9 and 11 during baseline A2. She also experienced descending trend in session 8 of intervention (B). On the other hand, subject MU gained rapidity behavior change after the treatment.In session 2 during baseline A1, and session 8 of intervention (B) she gained descending trend) For more, there was also no trend in session 7 of intervention (B), session 9, and session 11 during baseline A2. Meanwhile, the rest of the sessions were full of trend of performance improvement. NG and MU condition in the intervention obtained the stability level data of 40%, and 60% respectively. Furthermore, their stability level range was 33.33%.

Scale 5 (positive reappraisal)showed that subject NG gained a lot of no trend in session 2 during Baseline A1, session 6 and 8 of intervention (B), and session 11during baseline A2. She also experienced descending trend in session 9 during baseline A2, while the rest of the sessions gained ascending trend indicated by rapidity behavior change. On the other hand, subject MU gained descending trend in session 2 during baseline A1, session 7 of intervention (B), and session 9 during baseline A2. This subject was also found to obtain no trend in session 11 during baseline A2, while the other sessions gained significant improvement. Next, subject NG during baseline A1 phase obtained the

stability level of 100%, and 66.67%. The last, NG and MU during the intervention phase gota stability level of around 40%, while during baseline phase A2, they showed an improvement in the whole nine sessions.

The overlap percentages of all GAS five scale can be seen in figure 1. The overall percentage from baseline A1 to intervention was 0%. It was because there found no data points on the overlapping intervention conditions at the baseline condition A1. Meanwhile, the overlap percentage from intervention to baseline A2 on the five GAS scales was 60%. Next, the t score, and z score of Five GAS scales were calculated. The results can be seen in the following table 2 and table 3.

Table 2. The Description of the Data of Goal Attainment Score (t) Results on NG Subjects

Measurements	Sesssions	Scale/ Objectives					GAS	
		1 (w:20)	2 (w:30)	3 (w:10)	4 (w:30)	5 (w:10)	T Score	Z Score
Baseline (A1)	1	-2	-2	-2	-2	-2	15.05	-3.49
	2	-1	-2	-1	-1	-2	25.54	-2.45
	3	-1	-1	-1	-1	-1	32.53	-1.75
	Mean	-1.33	-1.67	-1.67	-1.33	-1.67	24.37	-2.56
Intervensi (B)	4	0	0	0	0	0	50.00	0.00
	5	1	1	1	1	1	67.47	1.75
	6	1	2	2	2	1	79.70	2.97
	7	2	1	1	2	2	77.96	2.80
	8	2	2	2	1	2	79.70	2.97
	Mean	1.2	1.2	1.2	1.2	1.2	71.0	2.1
Baseline (A2)	9	1	2	2	1	1	74.46	2.45
	10	2	1	1	2	2	77.96	2.80
	11	2	2	2	2	2	84.95	3.49
	Mean	1.67	1.67	1.67	1.67	1.67	79.12	2.91

Table 3. The Description of the Data of Goal Attainment Score (t) Results on MU Subjects

Measurements	Sesssions	Scale/ Objectives					GAS	
		1 (w:20)	2 (w:30)	3 (w:10)	4 (w:30)	5 (w:10)	T Score	Z Score
Baseline (A1)	1	-2	-2	-2	-1	-1	22.04	-2.80
	2	-1	-1	-1	-2	-2	25.54	-2.45
	3	-1	0	-1	-1	-1	37.79	-1.22
	Mean	-1.33	-1.00	-1.33	-1.33	-1.33	28.46	-2.16
Intervensi (B)	4	0	1	0	0	0	55.24	0.52
	5	1	1	1	1	1	67.47	1.75
	6	2	2	1	2	2	83.20	3.32
	7	1	1	2	2	1	74.46	2.45
	8	2	2	2	1	2	79.70	2.97
	Mean	1.20	1.40	1.20	1.20	1.20	72.01	2.20
Baseline (A2)	9	1	2	1	1	1	72.72	2.27
	10	1	1	2	2	1	74.46	2.45
	11	2	2	2	2	2	84.95	2.49
	Mean	1.33	1.67	1.67	1.67	1.33	77.38	2.74

T score gained standard value of 10-90, while z score had more than 1.96 value for baseline A1, and less than 1.96 for baseline A2. In details, Subject NG showed significant changes in every measurement seen from the mean score of t that was initially 24.37 increased to 71.0, and 79.12. In addition, the mean score of z increased from -2.56 to 2.1, and 2.91. It was concluded that the significant change was experienced by baseline A1 because its value was more than 1.96. Conversely, baseline A2 got no significant changes because its value was lower than 1.96. Alternatively, subject MU showed significant changes in every measurement seen from the mean score of t that was initially 28.46 increased to 72.01, and 77.38. In addition, the mean score of z increased from -2.16 to 2.20, and 2.74. It was concluded that the significant change was experienced by baseline A1 because its value was more than 1.96. Conversely, baseline A2 got no significant changes because its value was lower than 1.96.

This study intended to examine the improvement of cancer patients' coping stress at RSI Sultan Agung Semarang on Five GAS scales using counseling with cognitive restructuring technique. GAS scale consists of distancing, escape & avoidance, self-control, accepting responsibility, and positive reappraisal. The findings of this study revealed that the counseling with cognitive restructuring technique was able to improve coping stress. The cognitive restructuring technique equipped individuals to have more confidence about their acts. (Erfantinni, et al. 2016). Schematically, this counseling was carried to determine way of thinking and behavior. However, it cannot be said as replacing thoughts, involving fundamental and integral cognition covering "hot"factors such as emotion, motivation, goals, values reflecting the integration of findings and arenas such as physiology, neuroanatomy, linguistics, computer science, or cultural anthropology.

The implementation of cognitive restructuring approach expected individuals to think positively, and manage their positive thoughts with hope they could reduce the stress caused by the low coping stress that affected their psychology. For more, cognitive restructuring focused on efforts to identify and change one's negative thoughts, and self-statements as well as irrational confidence. This approach prioritized adaptive behavioral and emotional responses influenced by the counselee's confidence, attitudes, and perceptions (cognitions). It was expected that the individuals can identify their own cognition and monitor their self-talk.This study successfully confirmed that the counseling with cognitive restructuring technique was effective to improve the cancer patients' coping stress. It is in line with a study by Matin, et al (2012) that cognitive restructuring technique contributes significant effect to the improvement of coping stress of parents of children with special needs.

Patients who suffered from stress in facing cancer were indicated by the feelings of fear of death and depression, showing denials, feeling unsure of cancer they suffered. With a weak body condition, cancer patients tended to avoid socialization because of the absence of self-confidence, and stated that "I am sick, I have no equal ability to healthy people and my life will not be long." This cognitive distortion was formed by their own thoughts. They automatically stated that "I am sick, and I am weak." This progressive feeling made their condition getting worse and lost the spirit of recover.

When the patients experienced low coping stress, the thing to do is helping them to restructure their negative thoughts to be more adaptive through confidence. By applying cognitive restructuring, cancer patients were facilitated to explore their non-adaptive confidence, and evaluation. After that, they were encouraged to explore adaptive confidence. In this way, they could deal with unpleasant situation, followed by reconciliation with their illnesses, and optimize their abilities although they were exposed to cancer which has the potential to cause stress. This stress arouse because they could not work like healthy people in general. This encouragement needs to be done so that it falls into the category of stressful

situations that cause low stress coping. To complete changes in confidence, the counseling taught the patients to have specific self-management arrangements in dealing with stress, and encourage them to apply coping stress in daily life. Accordingly, it is important for counselors to consider the sufficient time allotment of service to modify counselees' cognition.

CONCLUSION

Based on the results of visual analysis graph using data levels, rapidity behavior change, data trend changes, level stability, and data overlap of each subject, it can be seen that the counselees gained improvement in coping stress seen from the results of optimal GAS scales. Therefore, the individual counseling with cognitive restructuring technique is effective to help cancer patients to improve coping stress.

Hospital clerics may implement a counseling with cognitive restructuring technique to improve the coping stress of its patients, especially the cancer patients whose physical and psychological conditions are weak. Besides, the future studies are suggested to use reversal design in counseling with cognitive restructuring technique to determine the comparison of two basic conditions before and after intervention with hope that the consistency effect of behavior can be explored further.

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