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”Makro” Program: A Way to Minimize Depressive Symptoms in Teenagers

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Depression is one among many other psychological problems found among teenagers. The objective of this research is to measure the effect of the “Makro” (*Membangun Adaptasi dan Kompetensi Remaja Berisiko)* – Building Reckless Youths’ Adaptation and Competencies Program in reducing depression symptoms. Subjects were high school students (*N* = 28), aged 15-16 years, divided into 14 students as experiment group and the other 14 students as control group. Intervention in the form of MAKRO program consists of three components: reasoning management, stress management, and social skills. The measurement of the depression level during pre-test, post-test, and follow-up was conducted using the Beck Depression Inventory (BDI). Results were analyzed using Anova mixed models. It show a significant difference between control and experiment groups ($p < .05$). Based on the analysis of the results, MAKRO program is able to reduce the depression symptoms with 30.2% effective contribution after a 5-week follow-up measurement after treatment.

Keywords: teenagers, MAKRO program, depression

Depresi merupakan gangguan psikologis yang banyak terjadi pada remaja. Penelitian ini bertujuan untuk mengetahui pengaruh program Membangun Adaptasi dan Kompetensi Remaja Berisiko (MAKRO) dalam menurunkan gejala depresi. Subjek adalah siswa SMA (*N*=28) berusia 15-16 tahun, yang terbagi dalam 14 siswa kelompok eksperimen dan 14 siswa kelompok kontrol. Intervensi berupa pelatihan MAKRO terdiri atas 3 komponen materi yaitu manajemen pikiran, manajemen stres dan keterampilan sosial. Pengukuran tingkat depresi pada *pre-test, post-test* dan *follow-up* dilakukan dengan *Beck Depression Inventory (*BDI). Hasil penelitian dianalisis dengan *anova mixed models* (anava campuran). Hasil penelitian menunjukkan bahwa ada perbedaan yang signifikan antara kelompok kontrol dan kelompok eksperien ($p < .05$). Berdasarkan hasil analisis tersebut program MAKRO dapat menurunkan gejala depresi dengan sumbangan efektif 30,2% pada pengukuran *follow-up* 5 minggu setelah perlakuan.

Kata kunci: remaja, program MAKRO, depresi

Teenagers are considered as future assets of a country. Therefore, teenagers growing in a conducive environment are invaluable human resource assets. Experiences during teenagehood plays a very important role in the development of individuals. Both success and dissatisfaction during the teenagehood will affect an individual's life quality in the future. Thus, it is recommended that a real effort is taken to straighten the path for youths who are qualified and capable of dealing with life challenges. Teenagehood is a transition period from childhood to adulthood, marked by several changes in several aspects, as physical, pyschological, and social ones. Body shapes, hormonal and sexual organ changes are the early signs of puberty. Those physical changes significantly impact on the development of a youth's psychological aspects. Teenagehood is better known as storm and stress period – a difficult and stressful period filled with emotional tension as an impact of hormonal and physical changes. Three difficult aspects underlying this difficult moment are conflicts with parents, emotional conflict, and reckless behaviors emergence (Arnett, 1999). These conditions worsen youth's behaviors in social life. In this period, teenagers begin to show a totally different social intentions and behaviors towards parents, friends, different sexes, and community. In this transition period, teenagers do not really have clearly defined statuses or roles. This, oftentimes, spurs confusions among the teenagers themselves (Hurlock, 2004).

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Different kinds of changes including internal factors (physical, emotional) and external (social) as mentioned before, are stressors for teenagers (Gibson & Lowe, 2007). Stress is a developing psychological condition individuals face due to burdening situation beyond their strengths. Stress many times is defined as result of evaluation towards stressor (Sarafino, 1998). Evaluation towards stressor which tends to be negative and maladaptive coping selection relate to the height of teenage stress (Goodkind, Ruffolo, Bybee, & Sarri, 2009). The stress generally tend to send negative influence in their lives, among which are, rebellions against parents (Arnett, 1999; Hurlock, 2004), youth delinquency, and drug abuse (Santrock, 2002), anti-social behaviors (Arnett, 1999), and psychological depression vulnerability (Cunningham, 2006). Mahon and Yarcheski, (2000) said that the height of stress is deeply influential towards the height of depression teenagers experience. Several stresses teenagers experience are derived from families and school conditions.

According to Ciccheti and Toth (1998), individual vulnerability towards psychological depressions accelerates in teenagehood. Meta-analysis conducted by Peterson (as cited in Arnet, 1999) in 1993 in 14 researches shows how middle to late teenagehood (15-18 years old) is identical with the swift mood changes that are vulnerable to depression symptoms risk. Based on the result of the *National Survey on Drug Use and Health* (NSDUH) in 2004, approximately 14% teenagers from 12-17 years old reported their depressions which are, at least, once in their lifetimes. If the time span is narrowed into a year, teenagers of 12-17 years old admitting depressions to be as high as 9% or 2.2 million with the highest prevalence is found within age ranges of 16-17 years old. Unfortunately, among those 2.2 million of teenagers, only 40.3% of them have been treated. Yet, the rest has not been treated at all. This is a worrying and depressing fact since the number of teenagers undergoing depressions is accelerating annually (SAMHSA, 2005)

There is no fixed statistical data on the number of depressive teenagers in Indonesia. However, the prediction is getting higher in number. Data from WHO in 2005 (as cited in Andra, 2006) showed that approximately one million suicides worldwide occur annually. The highest suicidal rates occur in teenagers and young adults (15-24 years old). Depression is diagnosed to be the frequent trigger in suicidal cases. This means that a teenage suicidal attempt is a manifestation of a depression symptom. This condition is preceded by despondency symptoms, problem-solving difficulties, guilty feelings, vigorless life, and self-portrait discrepancy (Orbach, Miculincer, Stein, & Cohen, 1998). In one suicidal case of teenagers in Yogyakarta, two female teenagers in one vocational school – *Sekolah Menengah Kejuruan* in Sleman, tried to take their own lives by cutting their wrists and took some drugs mixed with soft drinks. When later assessed, it was found that those two teenagers underwent depression (Utari, 2008).

Depression is defined as depressive mood characterized by intense or extreme sadness, least energy, low interests in life, low confidence and low self-fulfillment. The criteria of the diagnosis of depression according to DSM-IV-TM (American Psychiatric Assosiation, 1994) *major depressive disorder* are characterized by depressive mood, losing interests in activities for about two weeks (including cognitive symptoms, such as pessimism towards life, indecision, disrupted physical functions as in diet and sleeping habits, and significant weight loss or energy loss. Another depression is oftentimes accompanied with loss of general interests and inability in enjoying life fully including interactions with family and friends and school or workplace low achievement (Durand & Barlow, 2006).

The manifestations of depressive symptoms, according to Beck, et al., (1961), are affective symptoms as grief, dissatisfaction, more frequent cries, mood swings, suicidal tendency, withdrawal tendency, indecisiveness, and work slowness; cognitive symptoms including feeling of failure, guilt, punishment expectation, self-hatred, self-accusation, and negative physical self-assessment; physical and vegetative symptoms as insomnia, fatigue, loss of appetite, weight loss, somatic preoccupation, and loss of sexual libido. Depressive symptoms are not only experienced by mentally depressive patients. At certain level, depressive symptoms are also experienced by problematic normal people who are always critical towards themselves and suffer from helplessness (Supratiknya, 2004).

Some factors are identified as the triggers for the development of the depression, among which are, biological, psychological and social reasons (Durand & Barlow, 2006). Biologically, during teenage, changes take place in hormonal production.This triggers hyperactivity of axis in the lymbic system–HPA (Hipotalamus-Pituitary-Adrenal) and increases cortisol secretion and other hormones which act as mediators of depressive symptoms on teenagers (Gibson & Lowe, 2005). A side from that, low serotonin level has been the underlying cause for depressive symptoms. The primary function of serotonin is to regulate neurotransmitter system and low serotonin level triggers the irregularity of neurotransmitter. As a result, individual emotional reactions become uncontrollable, mood swings occur in a more impulsive way. This condition contributes to depressive symptoms (Durand & Barlow, 2006). Another biological factor relates to a genetic one. Higher score in depression is found in teenagers with depressive family background, either

from parents or other family members (Cicchetti & Toth, 1998); 20-40% of depression triggers can be attributed to genes, and the rest is life experience factor (Durand & Barlow, 2006).

Psychological vulnerability comes second after biological factor. This factor includes life experience, personal resources, cognitive vulnerability and family. Life experience factor here refers to a depressing condition among teenagers who lack friends, have divorced parents, and lose family members or close friends. Numerous depressing happenings encountered by individuals impact negatively on individual personality and social support acceptance. That means frequency and intensity of depressive situations teenagers experience will make them pathologically vulnerable (Retnowati, 2008). In accordance with this, negative experience of a teenager is enough to predict the intensity of the depressive symptoms he or she undergoes (Abela & Sullivan, 2003).

Teenager's life experience strongly interacts with personal resources which triggers depression (Retnowati, 2008). Furthermore, it is also clearly stated that personal resources related to control system, way of thinking, and self-respect together with a depressive experience serve as a mediator of depression. This means that a teenager who cannot control a situation and tend to own a negative way of thinking and low self-respect when facing depressing situations is at risk to get depressed. Moreover, depression symptoms oftentimes appear in teenagers with high level of anxiety (Mahon & Yarcheski, 2000), low coping abilities (Garnefski, Legerstree, Kraaij, Kommer & Teerds, 2002; Goodkin, Ruffolo, Bybee, & Sarri, 2009), low assertive-ness (Mueen, Khurshid, & Hassan, 2006), low academic skills, and low social skills (Hammen, Shih, & Brennan, 2004).

The next psychological factor which triggers the depression in teenagers is cognitive vulnerability. As previously mentioned, a negative way of thinking is one of the risk factors responsible for depression symptoms. Based on cognitive theory from Beck 1967 (in Durand & Barlow, 2006), depression is developed from individual tendencies who interpret daily events negatively. According to Beck, depression sufferers view all things with pessimism. They always make cognitive mistakes by thinking negatively about themselves, the world and their futures (depressive cognitive triad). In addition, a chain of negative events during childhood is able to provoke the development of negative scheme and negative belief in several aspects of individual life. In the scheme, one tends to blame oneself, feels responsible for tragedies that happen. Within the negative self-evaluation scheme, one feels unable to do anything rightly. It will, then, result in negativity which actually is trivial; yet, is potentially depressive.

Examination towards components in Beck's cognitive theory confirms that depression symptoms in teenagers are preceded by their inability to deal with negative events which triggers stress during their childhood. Negative experience tends to shape the cognitive scheme of oneself, and causal relationship in early teens negatively (Abela & Sulivan, 2003). Teenagers who are depressed tend to view themselves, the world, and their futures negatively. This pattern has been what individuals believe and caused the depressive symptoms as guilt, fear of failure, despair, and meaninglessness (Dowd, 2004; Gibson & Lowe, 2005; Sarin & Abela, 2005). Despair in learned helplessness-theory of depression has become the crucial cause of depression symptoms. Teenagers undergoing depression oftentimes refer to their attributes that they are helpless and cannot exercise control over the stresses in their lives (either fact-based or not). This condition will bring them into pessimistic mindset and make them easily desperate in dealing with negative experiences in the future (Abramson, Alloy, & Metalsky, 1989).

Another psychological factor that could bring teenagers vulnerable to depression is family. This is highly related to the interaction pattern in the family. Teenage is a period where teenagers face lots of conflicts with other teenagers and parents become stressed and from these, the youths, then, are vulnerable to psychological problems (Arnett, 1999). Their lacking attachment to parents triggers the depression issue like rejection, inferiority, and low emotional adjustment (Santrock, 2002). Although a family can be a risk factor, still it can function as a protector from depression. This is related to family function in building teenagers' psychological resistance. A cohesive and warm family relationship brings teenagers complain less about anxiety and depression, and this relationship becomes a protector factor from psychological depression. The firm attachment to parents and family shields teenagers from emotional pressures related to teenage problems (Santrock, 2002). Teenagers with resistance to psychological problems usually have high self-esteem (Rahmasari, 2007; Retnowati, 2008), quite assertiveness (Mueen, Khurshid, & Hassan, 2006), effective problem solving (Rahmasari, 2007) and adaptive coping strategy (Goodkind, Ruffolo, Bybee, & Sarri, 2009), strong social skills, high adaptability, good conflict management (Hjemdal, Aune, Reinfjell, Stiles, & Friborg, 2007),

A side from biological and psychological factors, there is still another risk factor, namely, social and cultural risk factor. Those factors, more specifically, are gender and social support. The depression level in female teenagers is higher than that in male teenagers. This is due to the fact that female teenagers are more prone to difficulties in adjusting to their self-images than male

teenagers are (Gibson & Lowe, 2005). Aside from that, generally, 70% of depressive patients are females. Cultural factors support men to be independent and powerful. Meanwhile, women tend to be passive and dependent on other people. This situation puts women more at risk emotionally (Durand & Barlow, 2006). The other social risk factor is the lack of social support. Retnowati (2008) said that very low social support might increase the depressive symptoms in teenagers. On the other hand, optimum social supports from friends and families can function as antidotes to effects of depressive experiences.

Generally, depressive symptoms are indicated by the interruption of functions in individual, family, or societal lives. Depressions in teenagers oftentimes come in the form of risk-related behaviors, as smoking, alcohol consumption, drug abuse, juvenile delinquency, risky sexual behaviors, and suicidal attempts (Cicchetti & Toth, 1998; Gibson & Lowe, 2005; Hallfors, Waller, Bauer, Ford, & Halpen, 2005). The depressive symptoms in teenagers badly impact one's life on the next 10-15 years and the symptoms are reflected in suicidal attempts and constraining social lives. Mostly depressive cases are not adequately handled since professionals do not know the adequate treatment for depressive patients (Durand & Barlow, 2006).

Two main approaches frequently employed and effectively proven in depressive cases are cognitive behavioral approach and interpersonal psychotherapy (Durand & Barlow, 2006). The result of meta-analysis in the research report which conducts school-based intervention on child-and-youth depressions reflects that the most effective and the most promising approach on depressive cases is through cognitive behavior (Horowitz & Garber, 2006).

The theoretical model underlying the use of the cognitive behavioral approach to overcome depressions is Beck's cognitive distortions model (cited in Stallard, 2005), which discusses that the development of the depressions is caused by the cognitive distortions and negative self, world, and future concepts. This negativity brings about symptoms like inferiority complex, guilty feelings, and despair (with side effects on emotion, behavior, and motivation). Beside that, Seligman (cited in Stallard, 2005) highlights that depressions worsen due to lack of individual's skills in several important components as low self-esteem, low social skills, and low problem-solving skills. This condition brings about repetitive failures, worsening negative emotions, and low opportunities to enjoy the real activities. Based on those descriptions, intervention with cognitive behavior is conducted by improving the cognition process which brings distortions and biases in viewing a situation. This is done to recognize cognitive mistakes, evaluate and lessen emotional problems related to depressive symptoms. Besides, handling problems with cognitive behavior approach is conducted through teaching adapting skills to manage emotions and behaviors which are responsible for the negative experiences and failures (Stallard, 2005).

A few researches previously employing cognitive behavior approach to overcome depressions, among which are: (1) cognitive and behavior therapies (Retnowati, 1990); (2) intervention of relaxation and cognitive therapy on pa-tients with *medulla spinalis* problems (Kristiyawati, 2001); (3) emotional management training as a recovery program on earthquake teenage victims (Akbar, 2008); (4) positive thinking training (Lestari, 1994). The majority of authors have intervened by focusing on one or two techniques to help overcome depressions. Meanwhile, research works on school-based intervention programs are still limited.

Schools are selected as places to prevent depression program because they are one of the psychosocial environments which is vital to teenage mental health development (Herman, Merrell, Reinke, & Tucker, 2004). Beside that, depressive symptoms in teenagers may impact on their achievements at school. This situation is marked with the diminishing motivation and teenage productivity (Gibson & Lowe, 2005). The result of meta-analysis conducted by Horowitz and Garber in 2006 on 30 research works designing school-based depression intervention program for children and teenagers show some meaningful success. Preventive program on depression is more effective and significant to apply on selective and indicated groups compared to universal group. The target of selective group is subjects with depression risk. Indicated groups focus on subjects with depressive symptoms. Finally, universal groups focus on general subjects or the whole community.

Several samples on school-based depressive symptoms programs are further highlighted. Program with selective target, namely, coping with depression course, has been effectively proven in lowering depressive symptoms in teenagers (13-18 years old) with depressive parents in the follow-up of 12 and 24 months. This program comprises 15 sessions (60 minutes) each week on cognitive restructuring techniques, such as identifying and challenging negative and irrational thoughts (Clarke, et al., 2001).

Program with indicated target is Penn Resiliency Program Children and Adolescent (PRP-CA) and Penn Resiliency Program Parent (PRP-P), which proves to be effective in lowering depressive symptoms with the follow-up of 6 and 12 months with teenagers (as subject) with depressive symptoms between 12-13 years old,

and involves parents in intervention. There are two components of interventions, they are, *cognitive-behavioral therapy* to deal with depressions and skills to deal with social problems. Intervention is given in form of coping skills with social problems to prevent stresses in social situations, such as rejections from friends or environments. This program consists of 12 sessions (with the break-down of eight weekly meetings for 90 minutes each). The material of this program focuses on the understanding on the relationship of minds, emotions, and behaviors; the transformation of mindset; the challenges against negative thinking; the evaluation on mind in viewing situations; assertiveness and negotiations; coping skills; social skills; decision making; problem solving; social problems handling, and overall material reviews (Chaplin, et al., 2006).

The program replication was accomplished through replacing Penn Resiliency Program Parent with Penn Enhancement Program (PEP). Penn Enhancement Program itself consists of discussions on teenage frequent problems, among which are peer pressure, communication skills, friendship, family conflicts, purpose finding, increased self-esteem and self-image. The structured activities are conducted through role-play and guided discussions *Penn Resiliency* and *Penn Enhancement* programs showed significant results in lowering depressions in subjects of 12-13 years old with the follow-up of three years (Gillham, et al., 2007).

Programs with universal targets are *Resourceful Adolescents Program-Adolescents* (RAP-A) and *Resourceful Adolescents Program-Family* (RAP-F) which prove to be significant in lowering teenage depresssions (12-15 years old) with the follow-up of 10 months. Resourceful Adolescents Program-Adolescents comprises 11 sessions with the purposes to introduce students to the potentials of building resistances, increasing self-esteem, transforming negative thoughts through cognitive restructuring, managing emotions and stresses, developing social supports, and managing interpersonal conflicts within families. Resourceful Adolescents Program-Family program which involves parents in giving psychological education on teen development and introducing how to interact harmoniously within families. This program is followed by parents and teens in the last three sessions (Shochet, Dadds, Holland, Whitefield, Harnett, & Osgarby, 2001). Program with universal target is called Problem Solving for Life (PSFL) which proves to be effective in lowering depressions within age range of 12-14 years old with the follow-up of 12 months. This program consists of eight sessions with two main components, they are, cognitive restructuring and problem-solving skills. The materials delivered cover life skills, positive problem-solving skills, and optimistic mindsets (Spence, Sheffield, & Donovan, 2003).

Based on the previous researches, conclusively, depression prevention program in teenagers has several approaches, among which are, integrated cognitive approach, increased coping skills in dealing with stressors, and social skills development (Horowitz & Garber, 2006). Those targeted programs have proved to be effective as a reference to depression prevention program in school-based teenagers (Herman, Merrell, Reinke, & Tucker, 2004).

Observing the previous researches, the writer is interested in developing a training program with the objective to lowering depressions in teenagers. This program is designed based on the three components of intervention referring to the result of meta-analysis from Horowitz & Garber (2006). The first constraint is negative mindset. This kind of mindset can be overcome by mind management techniques. Teenagers, tending to view events negatively, have lower self-esteem, guilt, and despondency. Impacts of those symptoms are deeply influential towards emotions, behaviors, and motivations (Beck, as cited in Stallard, 2005). One of the examples is when teenagers negatively view themselves in relation to their academic achievements, a slightest draw-back even seems to be the worst disaster ever for them. As a result, those teenagers are going to have low self-esteem, seeing themselves as the most useless. A side from that, some guilty feelings surface since they cannot fulfill their parents' expectations and in their behaviors, they tend to be desperate and do not have any courage to try and to fix their mistakes. This strongly highlights the previous explanations on risk factor of individual negative mindsets which play very important roles in triggering depressive symptoms. Mind management techniques from Beck (as cited in Greenberger & Padesky, 2004) discuss methods which emphasizes the importance of evaluation on ideas and beliefs in the moods and behaviors in dealing with an event or a situation.

Mind management techniques are results developed from cognitive therapy for depressions. The main idea in cognitive therapy is that individual perceptions towards an event or an experience have been very influential on emotional, behavioral, and psychological responses. Mind management is done through the teaching of cognitive restructuring techniques, namely, skills to comprehend the relationships of mind-emotion-behavior, to identify moods, to identify automatically negative thoughts, to search for evidence of negative thoughts, to evaluate, to create alternative ideas and to challenge thoughts with positive statements. With those skills, individuals are expected to transform their mindsets by viewing events

in a positive way and this will influence their emotions and behaviors (Greenberger & Padesky, 2004).

Another constraint is defined as lacking abilities and skills to overcome stressors. This condition can be overcome through psychoeducation techniques, relaxation, and imagery. Stressful conditions generate most contributions in the etiology of psychological problems, such as depressions (Durand & Barlow, 2006). Based on stress and coping theories proposed by Folkman, Lazarus, Schetter, DeLongis, & Gruen (1986), there are two types of evaluation processes identified as stress mediator, namely, primary and secondary evaluation processes. Primary evaluation is defined as an individual way of viewing stimulus from environment; therefore, the result of the evaluation can be positive, negative, or neutral. Secondary evaluation is an evaluation of one's abilities to overcome problems, threats, or challenges. The result of the evaluation of those two systems (primary and secondary) is influential in coping selection employed by individuals to overcome stressors (Folkman, et.al., 1986). Lacking skills to overcome stressors is indicated by maladaptive responses in emotions, motivations, behaviors, and physical reactions. This condition triggers depressions among teenagers. Some examples of teenage stressors are grief, more frequent cries, low self-worth, low motivation in studying, inability to sleep, loss of appetite, loss of weight, loss of spirit, fatiguable, and somatic symptoms. Stress management techniques are taught to teenagers to equip them with adaptive skills to manage emotions and behaviors which play important roles in inducing stressors. Stress management techniques debriefing is expected to minimize depressive symptoms level experienced by individuals. Theoretical concept of stress management used in this training is *cognitive-behavioral stress management* (CBSM) along with its core discussion on psychoeducation, relaxation, imagery. This has proven to be effective in lowering anxiety (Brent, 2004) and depressive symptoms (Carrico, Antoni, Weaver,

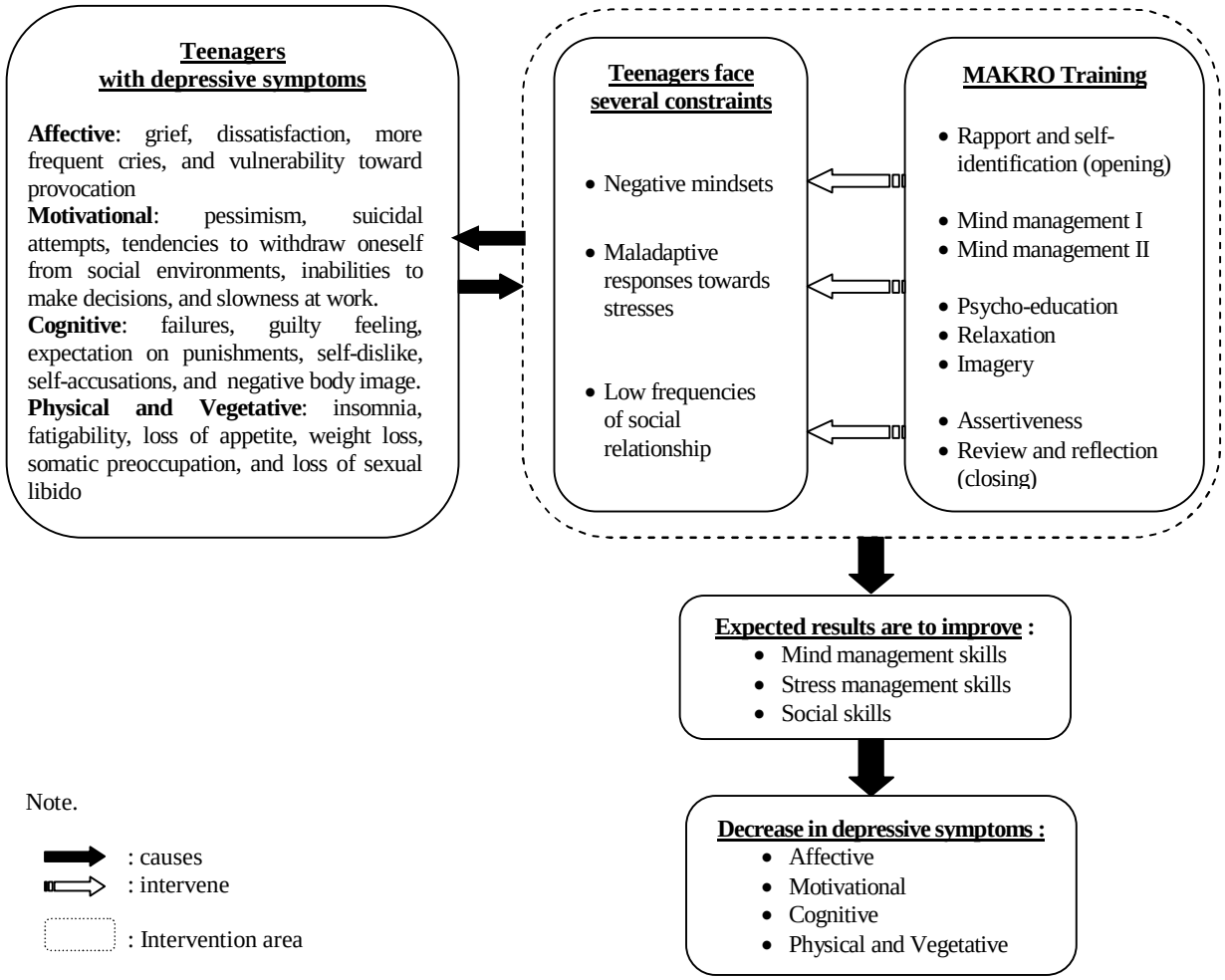


Figure 1. Flowchart of MAKRO training in decreasing teenage depressive symptoms

Lechner, & Schneiderman, 2005; Gail, et al., 2005).

The third constraint is the poor quality of teenage social relationship. This problem can be overcome through debriefing of social skills. Problems in social and interpersonal relationships belong to one of the categories listed in stress-induced depressions (Durand & Barlow, 2006). Interpersonal stress problems as conflicts with parents, friends, boyfriends/ girlfriends, teachers, and communities make teenagers vulnerable to depressions. Aside from that, the impacts of depressions on teenagers oftentimes are visible in psychosocial problems, as in youth delinquency, drug abuse, and alcohol abuse (Hallfors, Waller, Bauer, Ford, & Halpen, 2005). The number of interpersonal and psychosocial problems experienced by teenagers emphasizes the limitation of abilities and social skills teenagers have. Briefing on one social skill technique which is assertiveness is to improve the quality of teenager's social relationship. Non-assertive behaviors are closely related to the depressive symptoms. Non-assertive individuals are strongly repressive towards aggression, anger, hatred, frustration (Rahmasari, 2007) and tend not to express their emotions (Mueen, Khurshid, & Hassan, 2006). Through briefing on assertiveness skills, one is expected to be able to express their thoughts and emotions (both positive and negative), for example, rejecting, saying NO, and showing reactions of confusions or dislikes when interacting with other people. Assertiveness is one of social adaptive skills which are beneficial for briefing teenagers in social relationships that finally they are able to minimize the emergence of both interpersonal conflicts and psychosocial problems which are the mediators of depressions. This research framework can be seen in Figure 1. The depressive symptoms are manifested in several aspects, which are affective, motivational, cognitive, and physical ones.

In teenage, depressive symptoms are influential towards ones with negative mindsets, constrained social relationships, and slow responses towards stressors (Horowitz & Garber, 2006). This is also valid for the other way around. Teenagers who have negative mindsets, social relationship constraints, and slow responses towards stressors are vulnerable to depressions. Based on the previous discussions, interventions through several techniques as mind management, stress management, and social skills are assumed to be ineffective in overcoming depressive symptoms. The author is drawn to design this program in order to overcome depressions and this program covers mind management, stress management, and social skills development titled MAKRO Program which stands for 'Membangun Adaptasi dan Kompetensi Remaja Beresiko' (Building Reckless Youths' Adaptability and Competencies). This program is a psychological intervention which highlights several adaptive skills as well as personal resources exploitation to overcome stressors. This MAKRO Program is designed using behavioral cognitive approach towards depressions. The final result of this MAKRO training program is that the participants will be able to implement techniques they have learnt in daily situations in order to minimize depressive symptoms risks they undergo. The hypothesis proposed in this research is MAKRO Program is able to lower depressive symptoms on the experiment group.

Methods

Subjects

Subjects are students from SMAN (X) – clas XA-F (15-16 years old). The subjects are selected based on the screening result conducted using *Beck Depression Inventory* (BDI). Students meeting the criteria of inclusion are those with middle to high BDI (18-29) and, therefore, become the target of intervention in this research.

These 28 subjects are then divided into two groups, 14 students into the Experiment Group (EG) and the other 14 students into Control Group (CG). Experiment Group consists of 11 female and three male students. Meanwhile, Control Group consists of eight female and six male students. The classification of the subjects are done using the two matched design where two groups of subjects are matched based on the similarities in characteristics which influence the dependent variables (Myers & Hansen, 2002).

Instrument

Beck Depression Inventory (BDI) is a self-inventory and it is employed to reveal the depressive symptoms which include affective symptoms (as grief, dissatisfaction, increased frequencies of cries, and touchy), motivational symptoms (as pessimism, suicidal attempts, tendency to withdraw oneself from social environment, inability to make decisions, and slowness at work), cognitive symptoms (as feelings of failures and of guilt; expectation for punishment, self-hatred, self-accusation, and negative body image), physical and vegetative symptoms (as insomnia, fatigue, loss of appetite and of weight, somatic preoccupation, and loss of sexual libido.

BDI consists of 21 items with 4-6 models of statements (these statements are also answer choices for subjects). Each statement in every item is scored 0, 1, 2, 3. There are items with parallel statements, for example, 1a, 1b, 2a, 2b, 3a, and 3b and they are scored

in the same way. Subjects are allowed to choose more than one answer; yet, only the highest scores are taken. The scores of the subjects are the total sums answers with different levels of depressions. The norms used to classify the intensity of depressions were proposed by Greist and Jefferson (1987), which are, normal (0-9); light (10-15); medium (16-23); and heavy (24-63). BDI was tested on both experiment and control groups for pre-test, post-test and follow-up.

The training module "MAKRO" contains manuals and materials for facilitators in the executions of training process. The point of this MAKRO module is to teach us some adaptive skills along with personal resources maximization to boost teenagers' resistances and abilities to overcome stressors. This MAKRO module is compiled using behavioral cognitive approach concepts for depressions, such as mind and stress management techniques; and social skills. Aside from that, to facilitate participants in comprehending the materials, some worksheets are provided. They also come with manuals to assist participants to understand materials given and to monitor the execution of the techniques taught in every session.

Informed consent sheets used are of two types – one for subjects and the other for parents. The consent sheets for subjects are statements of readiness from subjects to attend the whole training. Meanwhile the consent sheets for parents contain their statements of willingness to permit their sons/daughters to attend the training. Subjects are also asked to sign the informed consent letter before attending the training. Parents' informed consent sheets are given in the forms of their permission for their children to join the training.

Design of Experiment

The research design is pretest and post-test control group design, with randomized-experiment (see Table 1).

Table 1
Design of Experiment

Y1	X	Y2	Y3
Y1	-	Y2	Y3

Note. Y1= Measurement before training (*pre- test*); Y2 = Measurement after training (*post -test*); Y3= Measurement within five weeks after treatment (*follow-up)*; X= Treatment in the form of MAKRO training; - = No training was given

In this design, the influence of treatment on dependent variables will be examined by comparing the dependent variables both from experiment group (after treatment) and control group (before treatment) (Azwar, 2007). The influence of intervention of MAKRO training on teenagers can be seen from the comparison of depression scores on experiment group and control group measured in pre-test, post-test and follow-up.

Intervention

Intervention is in the form of training with the theme Building *Reckless Youths' Adaptation and Competencies Program* (MAKRO) and its goal is to minimize the depression symptoms on teenagers. MAKRO training is conducted through the teaching of three components of skills comprising mind and stress management and social skills. This training consists of four meetings with seven sessions, they are, one opening session, five core sessions, and one closing session. Each session is 90 minutes long, twice a week. The content of the session is as follows (see Table2).

Table 2
Details of Intervention of MAKRO Training

Sessions	
Session 1	Introduction to program Self-psychology
Session II	Psychoeducation on stress and depression Mind Management I
Session III	Relaxation
Session IV	*Imagery*
Session V	Mind Management II
Session VI	Assertiveness
Session VII	Reviews and reflections

The approach employed in this MAKRO training is cognitive behavior for depression. Program introduction and self-psychology are the opening sessions. Mind managements I and II are techniques which employ cognitive therapy principles for depressions. Psycho-education, relaxation, and imagery employ stress management principles; meanwhile assertiveness is one of the techniques to improve social skills. Summary, reflection, and target-setting are in the closing sessions. This MAKRO training is guided by a facilitator and a co-facilitator and is observed by an observer. The qualifications of facilitator and co-facilitator are as follows: (1) The facilitator is a psychologist or a student at Graduate Program of Clinical Psychology who have accomplished his/her internship; (2) Co-facilitator is bachelor's degree holder or graduate program student from psychology department; (3) Knowledgable about depression and experienced in implementing several interventions for teenagers as mind management (cognitive therapy for depression), relaxation techniques and imagery; (4)

Experienced as a facilitator in training for teenagers. Qualification of an observer is that the student from the faculty of psychology must finish Observation course and once joined training for teenagers.

Procedures

Preparation for research. At the beginning, the selection of facilitators, co-facilitators, observers, module testing and screening are conducted. Facilitator and co-facilitator are the students graduate program of Clinical Psychology who have been selected based on certain criteria. The testing of this module was conducted on 30 May 2009 and was attended by thesis advisors, authors, and supporters. Meanwhile, the role-play testing was done by facilitators, co-facilitators, and 6 university students from faculty of psychology as participants.

Screening is used as data for pre-test and conducted on 16 June 2009. Schools give permissions for screening to students from class XA-F (with the total number of 216 students). From the total, 20 students who have BDI scores are identical or within the range of 1-3 points, within the middle to high categories. Randomization is done in every pair to determine the successful participants for both control and experiment groups.

Execution of research. The next stage is the execution of the training, *post-test* and *follow-up*. MAKRO training is usually started with stimulation methods through games, presentation, film, group discussion, experiment, and practices. This training comprises 7 sessions divided into 4 meetings (27 and 30 June; 2 and 4 July 2009). The meetings themselves are in G Building, Room 205, Faculty of Psychology, Gadjah Mada University.

Post-test then was conducted on 14 July 2009 in SMAN X and BDI is given to experiment and control groups in rotation and separately. The author calls 14 students belonging to control group first, in the middle of the class through a note from students' counsellor. Afterwards, other 14 students from experiment group are called after school via SMS. This is done to prevent the leak in information from experiment to control groups since this research is conducted within the same community. During the recess from end of training time to post-test, participants attending the training are asked to fill in their daily self-monitoring forms. These forms contain questions on the progresses participants exerience and techniques they apply in their daily life.

Follow-up was conducted on 14 August 2009 at SMAN X Sleman. The objective of this *follow-up* is to follow up the participants within 5 weeks after training is given by measuring their depression levels. The mechanism of the follow-up is almost the same as that of post-test, which is done through giving BDI to experiment and control groups separately.

Results

Discussion of the research is done in two parts, the quantitative results in the form of group data analysis and the qualitative results in the form of individual (additional) data analysis. The hypothesis was analyzed using Anova Mixed Design. Previously, assumption (normality test) and homogeneity tests had been conducted.

Result of Assumption Test

Based on Table 3 it can be concluded that normality tests on depression variables data during the measurement (before treatment/pre-test), soon after treatment (post-test), and 5 weeks after follow-up, are normally distributed.

Table 3
Result of Normality Test

Measurement	N	K-SZ Scoring	Note
Pre-test	28	1. 214*	Normal distribution
Post-test	28	.568*	Normal distribution
Follow-up	28	.911*	Normal distribution

Note. * = $p > .05$

Mauchly's test of sphericity during pre-test indicated that the scores they earned were homogenous. Also during post-test and 5 weeks after treatment (follow-up) there were homogenous data with significant result $p > .05$ (see table 4).

Table 4
Result of Sphericity Test

Effect on participants		Pre-post follow-up
Mauchly's		.905*
	Greenhouse_Geisser	.913*
Epsilon	Huynh-Felt	1.000
	Lowee	.500

Note. * = $p > .05$

Hypothesis Testing

Data collected from this research are the results of depression scoring of research subjects from the experiment and control groups based on BDI (Beck

Depression Inventory) during pre-test, post-test and follow-up measurement. Data gathered comes from 28 subjects – 14 experiment group and the other 14 from control group. Hypothesis testing is done using Anova Mixed Design to examine the differences between experiment and control groups before and after treatment, and also to know the influence of MAKRO Program to lower depressive symptoms on the experiment group.

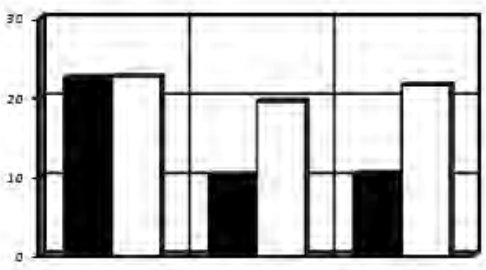
Based on the descriptive statistics (Table 5), there have been decreasing averages of depression scores on experiment group after treatment. The decrease is about 12.29 points at post-test measurement and 12.14 points at follow-up or 5 weeks after training. Depression scores of the control group also experience a 3.14-point decrease in its average (this average is the same as that in post-test measurement) and a 1.07-point decrease in its follow-up. The differences on the averages of depression levels between experiment and control groups can be seen on Figure 2.

Table 5
Descriptive Statistics on Depression Levels

Measurement		Group	
		Experiment	Control
Pre-test	Mean	22.50	22.64
	SD	3.956	3.915
Post-test	Mean	10.21	19.50
	SD	8.460	6.199
Follow-up	Mean	10.36	21.57
	SD	8.354	4.433

Note. *SD* = Standard Deviation

Figure 2 shows depression scores averages from the experiment group are lower than those from control group, both after treatment (post-test) and 5 weeks after treatment.



	Pre-test	*Post-test*	*Follow-up*
■Experiment	22.5	10.21	10.36
□Control	22.64	19.5	21.57

Figure 2. Graph of depression score average differences experiment and control groups before treatment, soon after treatment, and 5 weeks after treatment

Table 6 reveals the testing results, which shows that there is a significant difference in the average of depression levels during *pre-test, post-test,* and *follow-up* measurement (F= 22.392; p< .01). Also, there is a significant difference in depression level between experiment and control groups (F= 13.869; p < .01). A significant difference in the average of depression level was found in both the experiment and the control groups during pre-test and post-test and follow-up with the F score of 11.256; p < .01. The contribution of the interaction of the groups and repeated observation was 30.2%. This means that intervention of MAKRO training program had a significant impact on lowering the depression levels during post-test and follow-up with contribution of training effectiveness on lowering depression levels as high as 30.2%. Figure 3 diplayed visually the decrease of depression rates between experiment and control groups during pre-, post-, and follow-up measurements.

Based on the analysis of the results above, it can be concluded that hypothesis is accepted. MAKRO Program is able to lower the depressive symptoms on the experiment group. The decrease of depressive symptoms from 'middle' category (pre-test) to 'light' category (post-test and follow-up) reflects the success of clinical significance. 'Middle' category in *Beck Depression Inventory* highlights subclinical range which means that individuals with 'middle' depressive symptoms are classified as those who need to be intervened by professionals as psychologists. Intervention in the form of MAKRO helps participants to overcome depressive symptoms by excluding experiment group from subclinical into nonclinical category and the depressive symptoms experienced by the participants are at normal level and have not required interventions from professionals.

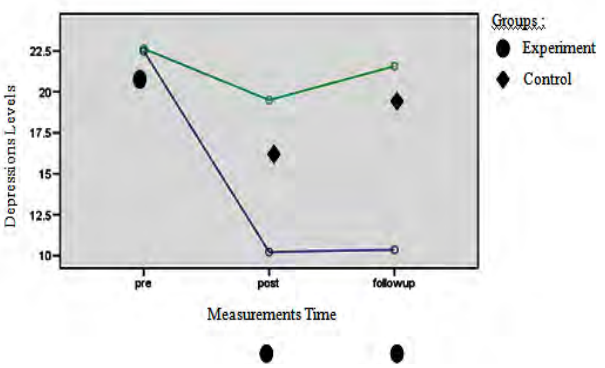


Figure 3. The decrease of depression

Table 6
Summary of Analysis of Variants

Source of Variation	*JK*	*Db*	*RK*	*F*	Eta^2
Repetition	974.310	2	487.155	22.392**	.463
Repetition*group	489.738	2	244.689	11.256**	.302
Errors (repetition)	1131.286	52	21.755		
Group	994.298	1	994,298	13.869**	.348
Error (group)	1863.929	26	71.690		

Note. ** = significant at 1%; *JK* = Number of Squares; *db* = degree of freedom; *RK*= average of squares; *F*= significance; Eta^2 = effective

Discussion

The objective of this research is to examine whether MAKRO Training Program is able to reduce teenage depressive symptoms. Based on previous explanations, it is proven that MAKRO Training Program can lower the depression rate among teenagers (15-16 years old) during post-test and 5-week-follow-up measurements.

The results indicates that there is a difference in depression level averages between experiment and control groups during post-test and follow-up measurements. BDI score averages of experiment group is 10.21 at post-test and 10.36 at follow-up. Meanwhile, control group averages are 19.5 at post-test and 21.57 at follow-up. The decrease in the average of depression scores in experiment group is higher and more significant than that in control group. In brief, subjects who are treated with MAKRO Training Program experience decrease in depression at 5-week-follow-up. Intervention as MAKRO Training is able to overcome depressions from subclinical category (this is a category which needs to be intervened by professionals) to nonclinical one (depression which is still considered normal or needs no interventions from professionals).

MAKRO Training Program contributes effectively to the decrease of depression level of 30.2% (*eta* squared = 0.302). This means that training given to the experiment group has an important role in decreasing depression as high as 30.2%. Then, the rest 69.8% is influenced by other factors which do not become the focus in this research, such as personal resources, life experience, family, and social support. According to Gillham et al. (2006), the effectiveness of an intervention in a program towards depressions will be higher as time passes. This is due to the fact that participants need time to learn and implement skills taught in their daily lives.

The success of MAKRO Training Program in lowering depression symptoms at 5-week-follow-up measurement highly supported the results of meta-analysis conducted by Horowitz and Garber (2006) during their previous thirty researches, on depression-handling program for children and teenagers. Programs with behavioral cognitive approach proved to be effective in overcoming depressions through Penn Resiliency Program and Penn Enhancement Program at the follow-up measurement of three years (Gillham, et al., 2007); Coping with Depression Course with the follow-up of 12 and 24 months (Clarke, et al., 2001); Resourceful Adolescent Program at follow-up of 10 months (Shochet, et al., 2001). In addition to lowering depression as the main goal, this program is to improve problem-solving (Spence, et al., 2003), cognitive, and coping skills; and interpersonal relationship qualities (Horowitz, 2006), and to lower despondency (Shochet, et al., 2001).

The approach using cognitive behavioral model was conducted through the teachings of techniques or skills to overcome daily problems in a practical way. The target of this approach was that participants are enabled to solve their problems by implementing cognitive behavioral strategies which are helpful for individuals to think rationally and to lower depressions. In other words, depressions are prevented through one's overcoming life problems (situational or interpersonal relationships) which might trigger depressive disorder (Fennell, 1993). MAKRO training program is to equip participants with adaptive skills as thought and stress management; and social skills to apply in their daily lives. Based on the results of guided group discussion, the majority of the participants revealed that the skills they had learnt could transform their mindsets, emotions, and behaviors. These skills are useful in overcoming different kinds of emotional and depressing situation problems which can trigger depressive disorders.

One technique in cognitive behavioral approach – cognitive restructuring technique – has oftentimes helped to manage negative emotions, such as, restraining anger and grief. Mindset is one key to comprehend emotional reactions experienced by individuals (Greenberger & Padesky, 2004). In this training, cognitive restructuring techniques were

delivered in two sessions of thought management. During the first session, participants were taught to identify automatically thoughts. In the second session, participants were taught to search for evidences which support and do not support automatically negative thoughts and to discover alternative thoughts which are more positive in dealing with different kinds of situations.

Aside from those two techniques, the use of the concept of imagery practices and materials was to promote positive emotions, with positive imageries through which motivations could be boosted. Positive imageries themselves might potentially cause individuals to be unrealistic and irrational. However, in this MAKRO training, the authors designed the order of the modules in such a way to minimize those risk factors. This was done through the teachings of Mind Management Techniques II in which participants were asked to stay in realistically positive thinking by searching for the facts that supported and did not support their thoughts. In other words, the techniques of thought management could prepare individuals to think positively rational and realistic.

The success of MAKRO training as achieved in this research, was influenced by several important factors among which were training modules, facilitators' roles and subjects' responses towards the training. The modules of the training programs comprised seven sessions with cognitive behavioral approaches covering 2 concepts, namely, materials and techniques.

Materials given are related to enrichment in perspectives with the purpose of sharpening participants' knowledge as psychoeducation and material introduction in each session. The concept of the application of the techniques in this module taught the participants relaxation, imagery, and assertiveness. Every material in training program was delivered using a combination of methods as presentations, group discussions, games, film analysis, and practices. The employment of various methods was thought to be helpful for participants' learning processes in absorbing knowledge. Thus, the development of the further modules could be done through the modification of games, films, or other experiments which are more challenging and helpful for participants' learning processes.

The execution of this MAKRO training program employed group-based approach which supported the success of the training. This was because this approach had a positively curative factor. One benefit was the group intervention, in which the participants could be supported and convinced by other group members. This group could also be used to develop social skills, identify and change behaviors and cognitions of the members (Yalom, 1975). Within this training, group dynamics were visible when it came to the experience sharing processes. Some participants revealed what they had experienced previously. Practising within group made participants feel the universalities of the problems which mean participants became aware that other individuals were also experiencing similar problems. This condition brought the participants into group solidarity. The feeling itself might improve their openness and boost their motivations for a greater change (Ramdhani, 2002).

Aside from modules, the success of a training was also influenced by the enthusiasms of its participants in every session they attended. Active involvement and learning experiences became the basics of the optimum learning transfer and participants, as a result, were not passive (Ramdhani, 2002). Participants revealed many new subjects in the forms of knowledge and experience which they had not learned previously, and through this training, they learnt about it. One of the examples was self-recognition, stress, depression, tension reduction, negative thoughts tendency, thought management and assertiveness. Enthusiasms of the participants did not stop at comprehension level. Furthermore, the participants were drawn to implementing the enthusiasms throughout their daily lives. This is revealed from the supervised interview results and guided group discussion. All participants confirmed that they have applied the techniques they had learned in the training sessions.

The last but not least factor to support the success of a training is facilitator's role. Facilitator is deemed to contribute vastly towards the effectiveness of a training. A trainer not only functions as a leader but also facilitates inter-participants interactions. Based on the evaluation sheets from participants, facilitator in this training was assessed as very good on characters, behaviors, speech clarity, language, encouragement and materials concluding skills. Facilitator was assessed as being able to awaken the participants' drives to learn through thorough material discussion and its fun delivery. In addition, warm and close relationship between the facilitator and the participants optimized the participants' learning drives.

Goldstein (1981) stated that the main objective of a training is that participants will be able to transfer learning materials they learn into daily real practices. In the end, a training is said to be effective when transfer of learning process is considerably smooth. The learning processes during MAKRO training were clearly defined by its qualitative results of analysis.

There was a different process between the subjects with the highest decrease of the depression level and the subjects with the lowest decrease of depression level. Participants with the highest decrease of the depression level showed positive and cooperative responses towards training. Participants with the lowest decrease of BDI scores and some increase on the scores, showed their lacking motivations in applying techniques taught. Generally, participants within this category are endowed with abilities to understand and to implement the methods. However, in its practice, they will tend to be defensive. Participants admitted to earn some benefits after attending the training, but they were still reluctant to implement the skills taught to them and lacking time was also one of their problems. Differences in responses towards training were possibly caused by individual characteristic differences. Individuals with inferior characteristics tended to be defensive and their depression levels were usually high. It would be helpful if they were intervened with individual therapy approach. With intensive approach, subjects were expected to open themselves further and to improve their understanding towards learning materials.

Limitations

Several constraints underlying the limitation of this research were the limitation of measuring tools. In this research, there was only one measuring tool, which was BDI. This BDI measuring tool, when used in the analysis of the calculation of statistical significance, only showed changes in depression levels as a whole. Based on the results of qualitative analysis it was discovered that changes also happened in several aspects, as mindset, emotion, motivation, and social. Additional measuring tools covering those aspects can be done to sharpen the analysis towards gradual process of changes experienced by the participants.

The other limitation in this research was related to the time management in execution. There was a clearly set difference between scheduling and execution. Even though this difference was pondered beforehand, the execution encountered problems. When modules underwent testing, participants taken were from the faculty of psychology students who had characteristics different from real research subjects. Consequently, in the execution of this research, the processes planned had been totally thwarted. This condition heavily influenced the time maximization and the room use scheduling (which exceeded the limit). As a result, role-play sessions on assertiveness were reduced to overcome the timing problems.

The significant results obtained in this research were related to factors influential towards internal validity of the research. The factors were assumed to be the influence of time measurement and the tools used (Myers & Hansen, 2002). The three-time measurement within relatively close time interval during pre-test, post-test and follow-up made possible for participants to learn from their experiences or to feel familiar when they filled in the scales. These conditions might reflect errors in responses. Beside that, demoralization factor triggered the jealousy in control group who had discovered the treatment in the experiment group. As a result, the control group felt disappointed and gave incorrect responses.

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