

The relationship between alexithymia and career decision -making self-efficacy among Tenth and Eleventh - grade students in Muscat Governorate

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Abstract

The purpose of this study was to examine the relationship between alexithymia and career decision -making self-efficacy among Tenth and Eleventh- grade students in Muscat Governorate. Alexithymia Scale (AS), and CDMSE Short Form were administered to a total sample of 556 students of Tenth and Eleventh grades (n = 278) males and (n = 278) females. Findings revealed that the level of alexithymia was less than the mean of items, while the level of CDMSE was more than the mean of items, as well as there was no significant correlational relationship between alexithymia and CDMSE. The results also revealed that there were significant gender differences in alexithymia, while there were no significant gender differences in CDMSE. With regard to GPA, the findings revealed that there were no significant differences in alexithymia, while there were significant differences in CDMSE. Conclusion: It concludes that although there was no significant correlational relationship between alexithymia and career decision-making self-efficacy, alexithymia negatively affects individuals' decision -making in their own lives.

Keywords: Alexithymia, career decision -making self-efficacy, Tenth and Eleventh grades

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Introduction

Alexithymia is one of the psychological concepts that deserves in-depth research; because it reflects the extent to which the individual deals with kinds of feeling in different situations. In general, Alexithymia refers to a disruption in both emotional and cognitive processes such that the person has trouble recognizing his or her own emotions and has a reduced emotional and fantasy life so that he or she seems concerned only with details of everyday life without a sense of direction or purpose (Matsumoto, 2009, p. 28).

Alexithymia, a term coined by Sifneos (1972) (from the Greek: a = lack, lexis = word, thymos = emotion), refers to a specific disturbance in psychic functioning characterized by difficulties in the capacity to verbalize affect and to elaborate fantasies (Taylor, 1984, P.81). Because psychoanalysts and psychotherapists rely on affects and fantasies to gain access to their patients' intrapsychic lives, alexithymic individuals are typically poor candidates for insight-oriented psychotherapies. Patients with reduced

emotional expressiveness and a limited fantasizing ability were described by psychotherapists long before the alexithymia concept was introduced and were referred to like people who are not psychologically minded (Taylor, 1987). Although initially described in the context of psychosomatic illness, alexithymic characteristics may be observed in patients with a wide range of medical and psychiatric disorders (Taylor, 1984).

The clinical construct of alexithymia defines more precisely the phenomenological characteristics of these difficult patients and has led to several hypotheses and to numerous empirical studies that are beginning to shed light on the nature of their cognitive affective disturbance. Sociocultural factors must also be considered when evaluating the alexithymia construct (Taylor, 1987).

According to Taylor (2000), the core features of alexithymia include difficulty identifying feelings and distinguishing them from bodily sensations of emotional arousal, difficulty describing feelings to other people, and an externally oriented cognitive style.

Alexithymia is a trait characterized by “(1). Difficulty identifying feelings and distinguishing between feelings and bodily sensations of emotional arousal; (2). Difficulty describing feelings to other people; (3). Constricted imaginal process, as evidenced by a paucity of fantasies; and (4) a stimulus-bound, externally oriented cognitive style” (Taylor, Bagby, & Parker, 1997, p. 29). Accordingly, the characteristics mentioned above can be summarized into five salient features as follows: (I). A reduction or incapacity to experience emotions, (II). A reduction or incapacity to verbalize emotions; (III). A reduction or incapacity to fantasize; (IV). An absence of tendencies to think about one’s emotions; and (V). Difficulty in identifying emotions (Hendryx, Haviland and Shaw, 1991, Taylor, Ryan, and Bagby, 1985).

Alexithymia is characterized by an impoverished fantasy life and limited imagination, an impaired capacity for empathy, a propensity for impulsive behavior, a tendency to somatize emotions, and a penchant for offering undifferentiated descriptions of emotional experience (Warnes, 1986; Taylor, 2000).

Alexithymic individuals often have constricted imaginations and fantasies, are preoccupied with objects and events in the outside world, and have a limited private, personal internal life. When distressed, these patients are simply aware of not feeling well and usually complain of somatic symptoms, leading to frustrating interactions with their physicians who are unable to find physical causes for the presenting physical complaints. Some view alexithymia as a condition in which affect is communicated through somatic language (Sadock and Sadock, 2000).

Alexithymia is a risk factor for a variety of psychological problems and disorders such as depression, anxiety, and substance use disorders (Honkalampi, Kintikka, Tanskanen, Lehtonen, Viinamaki, 2000; Taylor et al., 1997; Taylor, Parker, Bagby, & Bourke, 1996; Zackheim, 2007). Additionally, research indicates that alexithymia may develop because of early life traumatic experiences and stress (Honkalampi et al., 2004; Lumley, Neely, & Burger, 2007; De Vente, Kamphuis, & Emmelkamp, 2006).

The concept of alexithymia evolved from clinical observations that were initially made on patients with classical psychosomatic diseases. For many years, the psychic disturbance in these patients was conceptualized according to Freud’s model of neurotic pathology, and professionals in psychosomatic medicine attempted to relieve somatic symptoms by identifying and interpreting unconscious emotional conflicts. However, some of the early leaders in psychosomatic medicine believed that psychosomatic diseases could not be explained by analogy with the neuroses; they reported observations, which suggested that it is a disturbance of emotional expressiveness that predisposes people to psychosomatic illnesses (Taylor, 1987).

Other psychological constructs seem similar to alexithymia and may be confused with it. Some constructs represent emotional skills, abilities, or strengths, rather than deficits or limitations. For example, emotion regulation is broader than alexithymia and refers to a wide range of processes, including being aware of emotions, accessing and expressing emotions, and monitoring and controlling emotions (Dahl, 2003).

Emotion regulation is so broad that it is difficult to define, and there are no assessment devices that capture the full range of emotion regulation processes. Emotional intelligence also is broader than alexithymia, and the leading theorists propose four characteristics: perceiving emotions in others, using

emotions to facilitate thought, understanding emotions, and managing emotions (Mayer, Salovey, Caruso, & Sitarenios, 2001). Whereas alexithymia refers to basic emotion processes, emotional intelligence refers more to the application or implications of such basic emotional abilities.

Psychometrically, Vorst and Bermond (2001) developed the Bermond-Vorst Alexithymia Questionnaire (BVAQ), which builds on Nemiah and Sifneos's original definition, and conceptualizes the construct as having the following five measurable traits: (1) Verbalizing emotions (i.e., ability to verbally communicate emotions), (2) Identifying emotions (i.e., ability to identify and differentiate between emotions), (3) Fantasizing (i.e., ability to fantasize, imagine, or daydream), (4) Analyzing emotions (i.e., the tendency or capacity to reflect upon and attempt to explain one's emotions), and (5) Emotionalizing (i.e., ability to experience emotions).

Self-efficacy is the concept, which was firstly coined by Bandura. Bandura's self-efficacy theory is grounded in Social Cognitive Theory (2001). Self-efficacy theory provides explicit guidelines on how to develop and enhance human efficacy. According to this theory, People make causal contributions to their own psychosocial functioning through mechanisms of personal agency. Among the mechanisms of agency, none is more central or pervasive than people's beliefs of personal efficacy (Bandura, 2009).

Bandura defined self-efficacy as perception and belief in one's abilities. He ascertained that one's perception of abilities and human agency shape one's endeavors to achieve. Self-efficacy contains many dimensions and is dependent on the person's cognitions (Bandura, 1982).

Perceived self-efficacy refers to beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations. Efficacy beliefs influence how people think, feel, motivate themselves, and act. A central question in any theory of cognitive regulation of motivation, affect, and action concerns the issues of causality. Efficacy beliefs regulate human functioning through four major processes. They include cognitive, motivational, affective, and selection processes. These different processes usually operate in concert, rather than in isolation, in the ongoing regulation of human functioning (Bandura, 2009).

Self-efficacy is an individual's perceived ability to successfully accomplish established goals. Perceived self-efficacy is a belief that a person can organize and execute the actions necessary to produce particular outcomes. Efficacy beliefs are instrumental in the activities and situations and the direction of personal development (Bandura, 1977).

Perceived self-efficacy also involves self-appraisal and it involves more than simply knowing what to do. Regarding sources of self-efficacy beliefs, four types of influence contribute to individuals' beliefs about their self-efficacy. They are mastery experiences, vicarious experiences, social persuasion, and physiological emotional states (Bandura, 2009).

Self-efficacy theory posits the causal role of efficacy judgments in the development of vocational interests (Bandura, 1986). Occupational self-efficacy and interests have consistently been found to be moderately related. Theoretically, strong career efficacy beliefs should give rise to enhanced occupational interests (Lent, Brown, & Hackett, 1994). Overall, it appears that career self-efficacy is strongly predictive of a wide range of career-related behaviors from early high school through college and beyond (Hackett & Lent, 1992; Lent & Hackett, 1987).

Taylor and Betz (1983) developed the Career Decision Making Self-efficacy (CDMSE) Scale to assess perceptions of efficacy with regard to these five dimensions of career decision making. One assumption guiding this research has been that effective career decision making involves not only the development of skills but also confidence in one's decision-making abilities. They hypothesized that weak decision making self-efficacy could impede career exploratory behavior and the development of decision making skills, and thus may be predictive of career indecision and other problems in career decision making. According to Taylor and Betz (1983), Career decision-making self-efficacy is "an individual's belief that he or she can engage in activities such as accurate self-appraisal, gathering of relevant occupational information, and selecting appropriate goals". As alexithymia is as disruption in both emotional and cognitive processes, and this disruption may result in weak sense or loss of sense of direction or purpose; diminished ability to think or concentrate, or indecisiveness may occur. The ability to make crucial career decisions may be influenced by this disruption. The contention of this logic relationship may be found in Cecchetto, Korb, Ida Rumiati, and Aiello (2017) who investigated the

influence of empathy and alexithymia on behavior and emotional responses while participants performed a moral decision task. Results showed that empathy and alexithymia shaped emotional reactions to moral decisions, but did not bias moral choices. These results add new evidence to the field of moral decision showing that empathy and alexithymia modulate emotional reactions to moral decision. Consequently, Self-efficacy can be strengthened by learning experiences, which include “personal performance accomplishments, observational learning (or modeling), social encouragement and persuasion, and physiological and affective states and reactions” (Lent & Brown, 2013a & 2013b).

Literature included studies conducted to assess alexithymia in children and adolescents, but research into alexithymia and adolescence is extremely limited with the vast majority of studies focusing on alexithymia in adults and patients in clinical and psychiatric settings. Of the studies that have been conducted, considerable support has been found suggesting that adolescent alexithymia is associated with many of the same mental health concerns as found in the adult literature (Easterbrook, 2007). In addition, the literature also included research studies on examining career making decision self-efficacy (CMDSE) in diverse categories of people in different developmental stages. More generally, however, relationship between alexithymia and career making decision self-efficacy (CMDSE) did not receive any interest among researchers, so there are not studies conducted and well documented in this context. This relatively different interest may be due to that the concept of alexithymia is often studied within the context of psychiatry and mental health, while the career making decision self-efficacy is often studied within the context counseling, specifically career counseling. As alexithymia psychiatric concept, the researchers attempt to study it by investigating its relationship with other psychiatric and psychotherapeutic concepts and variables, and they find difficulty to create a rationale to study this concept with other educational and psychological concepts like problem solving and decision making. Consequently, we were very enthusiastic and keen on doing this research to connect psychiatric settings with educational and psychological ones, so this gave the current study great importance and originality to explore the nature of the relationship between alexithymia and CMDSE. Eastbrook (2007) conducted a study to examine TAS-20 among 310 clinical adolescents (mean age = 15.3 years) and 705 community-based adolescents (mean age = 16.3 years). Confirmatory factor analytic results provided good empirical support for use of the TAS-20 in older community-based adolescents. Results from confirmatory factor analyses indicated that female adolescents tended to have greater difficulty identifying feelings than the males. Male adolescents were found to score significantly higher than the females on externally oriented thinking and total TAS-A.

Loas, Braun, Delhaye, and Linkowski, (2017) measured alexithymia in children and adolescents. Four groups were examined (80 healthy children, 105 adolescents with various psychiatric disorders, 333 healthy older adolescents and 505 young adults recruited from universities) by administering Alexithymia Questionnaire for Children (AQC) and the latter two the 20-item Toronto Alexithymia Scale (TAS-20). Findings from this study revealed that alexithymia can be reliably assessed in adolescents using the TAS-20 or AQC, as well as children or adolescents were able to discriminate alexithymia from depression which means that TAS-20 can explore alexithymia in children and adolescents reliably.

Kaur and kaur (2015) conducted a study to investigate the relationship of social anxiety with alexithymia among adolescents. A total of 210 students (105 males, 105 females) from different school of Patiala, Punjab were assessed using Social Anxiety Scale for Adolescents (SAS-A) and Rieffe's Children's Alexithymia Scale. It was found that social anxiety was positively related to alexithymia and female adolescents were higher in social anxiety as compared to male adolescents. Significant gender differences were obtained on only one aspect of alexithymia; that is females were higher than males. Gender difference was not significant on other alexithymia dimensions.

The relation of alexithymia (cognitive and affective deficit in processing, adjustment and verbalizing emotions) with interpersonal problems was explored in (174) high-school students who completed Toronto Alexithymia Scale (TAS-20). Alexithymia was positively correlated with interpersonal problems, high alexithymic adolescents had significantly more interpersonal problems than non alexithymic adolescents. (Puşcaşua, and Usaci, 2016). These findings may go along with those ones revealed by Cerutti, Valastro, Tarantino, Valeriani, Faedda, Spensieri and Guidetti (2016) in their research to explore the relationship between alexithymia and psychosomatic disorders denoted by psychopathological symptoms among 212 adolescents and mothers with migraines who completed the Toronto Alexithymia Scale Findings revealed that factor analysis has consistently yielded three factors that assess the salient features of the alexithymia construct: difficulty identifying feelings, difficulty describing feelings, and externally-oriented thinking.

Furthermore, adolescents and mothers experiencing both migraine and alexithymia demonstrated a higher risk of psychopathology. It seems that these findings demonstrated what were indicated in the study of Sakkinen, Kaltiala-Heino, Ranta, Haataja, & Joukamaa (2007) to assess alexithymia in a sample of 12 to 17-year-old adolescents, and found the prevalence of alexithymia in 15.9% in all participants, 14.6% in males and 17.3% in females, but the gender difference was not statistically significant. These findings were consistent with the results of study conducted by Honkalampi, Tolmunen, Hintikka, Rissanen, Kylma, Laukkanen (2009) and attempted to assess alexithymia among a sample of 13 to 18-year-old adolescents at 7.3% with 4.9% in males and 9.4% in females. The findings revealed that prevalence was higher in females in all age groups but no significant gender difference in alexithymia was observed in this study.

In regard to career making decision self-efficacy, there were relatively considerable studies in literature. These studies varied in target samples and other variables to which this concept correlates. Ziebell (2010) conducted a study to predict the role of person factors, environmental factors, and career maturity in career decision-making self-efficacy in 10th through 12th grade adolescents. Findings indicated that students reported greater levels of career decision-making self-efficacy, as well as career decision-making self-efficacy and vocational outcome expectations were positively related to career choice goals. No significant gender differences were found in career decision-making self-efficacy. These findings are inconsistent with the findings of study conducted by Yat Hung (2007) studying career decision-making self-efficacy in 1216 students from 14 secondary schools in Hong Kong, that is these findings revealed that gender had significant impact on career decision-making self-efficacy scores. This result was proved by Wan Lai Yin (2013) who conducted a study to investigate roles of parental influences, personality and career decision-making self-efficacy in predicting vocational interests and choice goals among Hong Kong secondary school students. Findings from this study revealed that there were significant gender differences in interests, self-efficacy, gender role attitudes, and gender-typicality in aspiration-expectation incongruence. The same results were subsequently maintained by Lozano (2015) whose study findings indicated increased positive significant differences in the inner resources, interpersonal strengths, and work habits subscales on the achievement motivation profile and significant gender differences positively increased for females in the Planning subscale of the career decision self-efficacy scale.

Although in a number of researchers have found no significant differences between males and females on measures of career decision-making self-efficacy (Bergeron & Romano, 1994; Bright, 1996; Wilson, 2000), gender differences have been found in career decision-making self-efficacy for nontraditional careers. For instance, Betz and Hackett (1986) found that females report higher efficacy expectations and outcome expectations for traditionally female occupations than for traditionally male occupations.

It seems as mentioned above that most studies related to alexithymia were conducted with individuals in medical, psychiatric and clinical settings, but there has been little research conducted on normal populations in schools or other educational settings. These studies attempted to examine gender differences in alexithymia, some of them showed that gender differences exist, but others showed no gender differences. With regard to career making decision self-efficacy, there have been studies conducted on examining CMDSE in high school students to show gender differences and its CMDSE relationship to other variables. Unfortunately, there has not been research conducted to examine the relationship between alexithymia and CMDSE. Because alexithymic people have externally oriented thinking, it is postulated that their decision-making will be influenced by external factors, and not attributed to internality.

Problem statement and objective

Alexithymia is difficulty identifying and describing feeling as well as making thinking externally oriented. These features motivate researchers to explore life dimensions and situations that can be influenced positively or negatively by alexithymia. One of these situations for individual is how to make crucial decisions in different life circumstances. Specifically, the authors attempted to examine the relationship of alexithymia and career making decision self-efficacy. It was hypothesized that externally oriented thinking in alexithymic students will negatively affect their career decision making. This study aimed at examining the relationship between alexithymia and CMDSE among Tenth and Eleventh grade students in Muscat Governorate.

Problem questions

This study attempted to answer the following questions: 1) What is the degree of alexithymia and career decision making self-efficacy (CDMSE) among Tenth and Eleventh grade students? 2) Is there a significant correlational relationship between alexithymia and career decision making self-efficacy (CDMSE)? 3) Are there significant effects in alexithymia due to gender, and GPA? 4) Are there significant effects in career decision-making self-efficacy (CDMSE) due to gender, and GPA?

Significance of study

The importance of this study emerges from that the relationship between alexithymia and career decision -making self-efficacy was not previously studied in the literature; because alexithymia was exclusively investigated in most research studies in psychiatric and medical settings as a psychological problem or disorder. Since the subject of alexithymia research studies are classified within the field of psychiatry and psychosomatics; variables whose relationships with alexithymia were studied were psychiatric or psychosomatic ones, such as: depression, migraine, anxiety or substance abuse, but variables related to other life experiences such as academic achievement, or career decision making were not investigated in the context of alexithymia. This study sheds light on examining the relationship between alexithymia and career decision -making self-efficacy among Tenth and Eleventh grade students. This gives it distinction in career counseling in terms of connecting counseling variables with psychological and psychiatric variables. This study is also very important culturally for European and Arab populations; because some minorities which live in Europe descend from Arab and Muslim origins on one hand, some European people work in Arab Gulf states on the other hand, so the Europeans need to understand these minorities and deal with them, which means that it is essential for them to perceive and understand the nature of expressing feelings and making decisions in the Arab context.

Method

Population and Sample

The population of this study consisted of 15350 sophomore and junior students of four public high schools in Muscat Directorate of education in Sultanate of Oman. A random cluster sample of 556 students was selected from the target population with percentage of 3.6%. Of the total size of the sample 50% were males (n = 278) and 50% were females (n = 278) representing the Tenth grade (n = 281) 51%, and the Eleventh grade (n = 275) 49%, their age ranged from 15-17 years old with average of 16.1 years.

Instrumentation

Alexithymia Scale (AS) was developed based on the 20-item Toronto Alexithymia Scale (TAS-20) (Bagby, Parker, & Taylor, 1994) to assess the degree to which individual has Alexithymia. The SA in its primary version was composed of 35 items which measure three subscales: Difficulties identifying feelings and distinguishing them from bodily sensations (DIF), 2) Difficulties describing feelings (DDF), and 3) Externally-oriented thinking (EOT).

Validity

Face validity was assessed by submitting the scale to a panel of experts whose specialization is counseling or psychological measurement. Construct validity was also assessed by conducting Exploratory Factor Analysis on a pilot sample (n=60). Factor Analysis yielded one factor with 28 items; that is, 7 items were deleted because of low loadings, figure 1. Consequently, the final version of the AS items included 28 items, which are responded according to a 5-point Likert-type scale: (extremely = 5, very = 4, moderately = 3, slightly = 2 and not at all =1). The total score (maximum score) obtained by summing up the scores of all items was 140, the minimum score was 28, and the average score was 84. Any score above 84 indicates higher degree of Alexithymia and any score at 84 indicates moderate Alexithymia, while any score below 84 indicates lower degree of Alexithymia.

Reliability

Reliability was expressed by Cronbach Alpha to find internal consistency for all items. The AS has demonstrated solid internal consistency (Cronbach's alpha = 0 .91). as shown in table 1.

Table 1. Alexithymia Items' correlations with the total score.

Item	Correlation	Item	Correlation
1	.458**	15	.570**
2	.539**	16	.457**
3	.576**	17	.394**
4	.591**	18	.484**
5	.623**	19	.483**
6	.667**	20	.544**
7	.616**	21	.613**
8	.498**	22	.622**
9	.639**	23	.455**
10	.573**	24	.606**
11	.590**	25	.523**
12	.597**	26	.415**
13	.610**	27	.573**
14	.629**	28	.245**

** p < 0.01

Table 1. illustrates of Items' correlations with the total score. The maximum correlation was 0.67, while the minimum correlation was 0.25. These correlations were significant at p < 0.01.

The Career Decision Self-Efficacy Short Form. Career decision-making self-efficacy was measured by the 25-item Career Decision-making Self -efficacy Scale—Short Form (CDSE-SF: Betz, Klein, & Taylor, 1996). The CDSE-SF is a 25-item short form of the original Career Decision Self-Efficacy scale. The CDSE-SF assesses five domains including self-efficacy to accomplish accurate self-appraisals, self-efficacy to select specific goals, self-efficacy to formulate plans for the future, self-efficacy to gather occupational information, and self-efficacy to engage in effective problem solving.

Validity

Face validity was assessed by submitting the scale to a panel of experts whose specialization is counseling or psychological measurement. Construct validity was also assessed by conducting Exploratory Factor Analysis on a pilot sample (n=60). Factor Analysis yielded one factor with 21 items; that is, 4 items were deleted because of low loadings, figure 2. Consequently, the final version of the AS items included 21 items, which are responded according to a 5-point Likert-type scale: (complete confidence = 5, much confidence = 4, moderate confidence = 3, very little confidence= 2 and no confidence at all =1). The total score (maximum score) obtained by summing up the scores of all items was 105, the minimum score was 21, and the average score was 63. Any score above 63 indicates higher degree of career decision-making self-efficacy and any score at 63 indicates moderate career decision-making self-efficacy, while any score below 63 indicates lower degree of career decision-making self-efficacy.

Reliability

Reliability was expressed by Cronbach Alpha to find internal consistency for all items. The AS has demonstrated solid internal consistency (Cronbach's alpha = 0 .80) as shown in table 2. Table 2 illustrates Items' correlations with the total score. The maximum correlation was 0.54, while the minimum correlation was 0.32. These correlations were significant at p < 0.01.

Table 2. The CDSE-SF Items' correlations with the total score.

Item	Correlation	Item	Correlation
1	.365**	12	.428**
2	.457**	13	.317**
3	.538**	14	.373**
4	.446**	15	.379**
5	.386**	16	.369**
6	.524**	17	.470**
7	.382**	18	.397**
8	.524**	19	.469**
9	.488**	20	.527**
10	.423**	21	.394**
11	.448**		

** p < 0.01

Statistical tests

Means, standard deviations, t-test, Univariate analysis and Scheffe's test were utilized to answer the study questions; that is data collected from the sample was analyzed by these test using SPSS.

Results and Discussion

Data collected from both groups was analyzed by SPSS. To answer question 1: What is the degree of alexithymia and career decision making self-efficacy (CDMSE) among Tenth and Eleventh grade students? t –test for One-sample was used to find the significance of the difference from the mean of items (M=3). Table 3 illustrates findings of t-test of One- sample.

Table 3. Findings of t-test of One- sample.

	Mean	Std. Deviation	Test Value = 3					
			t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
							Lower	Upper
Alexithymia	2.8864	.75913	-3.530	555	.000	-.11364	-.1769	-.0504
CDMSE	3.8659	.50298	40.592	555	.000	.86587	.8240	.9078

Table 3 shows that the degree of alexithymia was below the mean (M=3); that is, its mean was 2.89. The difference between alexithymia's mean and (M=3) was significant, t (1,555) = -3.530, (P > 0.001). The findings in table 3 also shows that the degree of CDMSE was above the mean (M=3); that is, its mean was 3.87. The difference between CDMSE's mean and (M=3) was significant, t (1,555) = 40.592, (P > 0.001).

The findings of that alexithymia is less common in the school students mean that alexithymia is classified as a psychiatric disorder with psychosomatic symptoms not as a normal problem; namely, it is more common in psychiatric or psychotherapeutic populations. Students who have or develop depressive symptoms are more liable to manifest or demonstrate alexithymic symptoms. This finding is not consistent with the results of previous studies that showed that alexithymia is common in children and adolescents (Sakkinen, Kaltiala-Heino, Ranta, Haataja, & Joukamaa, 2007); (Cerutti, Valastro, Tarantino, Valeriani, Faedda, Spensieri and Guidetti, 2016), (Loas, Braun, Delhaye, and Linkowski, 2017) & (Puşcaşua, and Usaci, 2016).

In addition, the findings also indicated that students in the tenth and eleventh grades had high degree of career decision-making self-efficacy; which means that students in this developmental stage are strongly interested in planning for their career future, so they strive to develop cognitive abilities to reach their career goals and aspirations. In this crucial stage, the students attempted to improve self-exploration and career planning, so it is reasonable for the high school students to have higher career decision-making self-efficacy. This finding is in line with the results of (Ziebell,2010) study which indicated that students had greater levels of career decision making self-efficacy, and study results of (Yat Hung ,2007) which indicated that the high school students had higher expectations on career self-efficacy.

To answer question 2: Is there a significant correlational relationship between alexithymia and career decision making self-efficacy (CDMSE)? Correlation coefficient was calculated and it was found to be (R =0.049, P= 0.252). This correlation was not significant, which means that there was no significant correlational relationship between alexithymia and career decision making self-efficacy (CDMSE). It seems logical that this relationship does not exist, because when individuals have higher scores in a variable, and at the same time have lower scores in other one, it is true to say that the relationship between them is weak or does not exist. Although there were no previous studies in this context unfortunately, this gives the current study power and originality.

With respect to question 3: Are there significant effects in alexithymia due to gender, and GPA? Means and standard deviations were calculated and Univariate Analysis was conducted. Means and standard deviations are illustrated in table 4, and findings of Univariate Analysis are illustrated in table 5.

Table 4. Means and standard deviations of alexithymia scores

Gender	GPA	Mean	Std. Deviation	N
Male	accepted	81.44	19.183	52
	good	78.14	19.740	105
	v good	77.03	18.258	87
	excellent	72.32	21.777	34
	Total	77.70	19.505	278
Female	accepted	85.54	23.774	28
	good	82.92	19.769	48
	v good	84.09	22.603	120
	excellent	83.73	23.710	82
	Total	83.93	22.489	278
Total	accepted	82.87	20.847	80
	good	79.64	19.809	153
	v good	81.13	21.130	207
	excellent	80.39	23.648	116
	Total	80.81	21.260	556

Table 5 shows that there was no significant effect of GPA on alexithymia, $F(3, 555) = 0.930$, ($p = 0.426$, effect size =0.005), while there was significant effect of gender on alexithymia, $F(1, 555) = 11.473$, ($p = 0.001$, effect size =0.021), which means that there were significant gender differences in favor of females whose mean was 83.93 compared to males whose mean was 77.70 as shown in table.4. The findings also showed that there was no significant effect of the interaction of GPA * Gender on alexithymia, $F(3, 555) = 0.587$, ($p = 0.624$, effect size =0.003).

Table 5. Univariate Analysis of the effect of gender, grade and GPA on alexithymia.

Source	SS	df	MS	F	P	Effect size
Corrected Model	9.310a	7	1.330	2.347	.023	.029
Intercept	3618.931	1	3618.931	6386.565	.000	.921
GPA	1.581	3	.527	.930	.426	.005
Gender	6.501	1	6.501	11.473	.001	.021
GPA * Gender	.998	3	.333	.587	.624	.003
Error	310.523	548	.567			
Total	4951.910	556				
Corrected Total	319.833	555				

These findings mean that because of the self-fulfilled prophecy related to parenting styles, girls in childhood even in adolescence are not given opportunity or freedom to express their ideas and feelings, which refers that they are often repressed or punished if they express freely. This finding about ascertaining gender differences in alexithymia is consistent with the research results of (Eastabrook, 2007), (Kaur and kaur ,2015) (Sakkinen, Kaltiala-Heino, Ranta, Haataja, & Joukamaa ,2007) & (Honkalampi, Tolmunen, Hintikka, Rissanen, Kylma, Laukkanen ,2009).

In regard to question 4: Are there significant effects in career decision-making self-efficacy (CDMSE) due to gender, and GPA? Means and standard deviations were calculated and Univariate Analysis was conducted. Means and standard deviations are illustrated in table 6, and findings of Univariate Analysis are illustrated in table 7.

Table 6. Means and standard deviations of CDMSE scores

Gender	GPA	Mean	Std. Deviation	N
Male	accepted	77.6346	10.59417	52
	good	81.8000	10.13600	105
	v good	82.4483	9.91447	87
	excellent	80.2647	10.99396	34
	Total	81.0360	10.35605	278
Female	accepted	75.0000	12.58159	28
	good	77.3830	10.47887	47
	v good	82.4286	9.53101	119
	excellent	84.1205	10.76965	83
	Total	81.3285	10.80108	277
Total	accepted	76.7125	11.32064	80
	good	80.4342	10.41183	152
	v good	82.4369	9.67085	206
	excellent	83.0000	10.93003	117
	Total	81.1820	10.57197	555

Table 7. Univariate Analysis of the effect of gender, grade and GPA on CDMSE.

Source	SS	df	MS	F	P	Effect size
Corrected Model	3512.583a	7	501.798	4.700	.000	.057
Intercept	2793845.141	1	2793845.141	26165.673	.000	.980
GPA	2378.541	3	792.847	7.425	.000	.039
Gender	70.290	1	70.290	.658	.418	.001
GPA * Gender	1039.440	3	346.480	3.245	.022	.017
Error	58406.037	547	106.775			
Total	3719654.000	555				
Corrected Total	61918.620	554				

Table 7 shows that there was no significant effect of gender on CDMSE, $F(1, 555) = 0.658$, ($p = 0.418$, effect size = 0.001), as well as there was no significant effect of the interaction of GPA * Gender on CDMSE, $F(3, 555) = 3.245$, ($p = 0.418$, effect size = 0.001), while there was significant effect of GPA on CDMSE, $F(3, 555) = 7.425$, ($p < 0.001$, effect size = 0.039), which means that there were significant differences in CDMSE due to GPA. To find the direction of significant differences in GPA levels, Scheffe’s test was used as illustrated in table 8.

Table 8. Scheffe’s test

(J) GPA	(I) GPA	Mean Difference (I-J)	Sig.
good	accepted	-.1777	.078
v good		-.2726(*)	.001
excellent		-.2994(*)	.001
accepted	good	.1777	.078
v good		-.0949	.353
excellent		-.1217	.256
accepted	v good	.2726(*)	.001
good		.0949	.353
excellent		-.0268	.974
accepted	excellent	.2994(*)	.001
good		.1217	.256
v good		.0268	.974

Table 8 shows that there were significant differences between accepted level and both very good, and excellent in favor of very good and excellent.

These findings mean that males and females in high schools receive the same career counseling services and resources, as well as they have the same developmental characteristics because of minor age differences. These services often focus on developing and improving self-awareness, self-exploration and self-planning in students. This implies that providing career counseling programs for students in high schools help them to make career choice, which results in developing their abilities to plan their career future in the long run. This finding is consistent with the research results of (Betz and Hackett ,1986), (Wan Lai Yin ,2013), & (Yat Hung ,2007) which showed significant gender differences in career decision making self-efficacy, but this finding didn’t go along with the research results of (Lozano,2015). (Bergeron & Romano, 1994; Bright, 1996; Wilson, 2000), (Ziebell, 2010).

Conclusion

The study concludes that although there was no significant correlational relationship between alexithymia and career decision-making self-efficacy, alexithymia negatively affects individual's decisions in life. Because alexithymic individual has externally –oriented thinking, it is reasonable to imply that he/she will make decision based on external factors, such as people ideas and conceptions. Family, school and community are more influential on the decisions of individual with alexithymia. Alexithymia has received a great deal of interest by the researchers in many European states. They conducted different research study on diverse categories of children and adolescents. From our viewpoint, alexithymia is strongly related to cultural factors, namely, there are cultural differences in expressing and understanding feelings between Arab populations and European ones that is the latter are more open to feelings compared to Arab people who have suppression in feeling expression. In addition, career decision -making self-efficacy has also received a great deal of interest in European studies, that is the problems of career decision making paid the researchers' attention to seek for the best counseling solutions by using the most effective strategies to improve career decision making in students of secondary schools (Gymnasiums). This study included some implications related to counseling specifically career counseling. Other implications may be viable to psychology, psychiatry and psychosomatics.

References

- Bagby, R. M., Parker, J. D. A., & Taylor, G. J. (1994). The twenty-item Toronto Alexithymia Scale-1. Item selection and cross-validation of the factor structure. *Journal of Psychosomatic Research*, 38, 23-32.
- Bandura, A. (1977) Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191-215.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122-147.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review Psychology*, 52, 1-26
- Bandura, A. (2009). Exercise of personal and collective efficacy in changing societies. In Albert Bandura (Ed.). *Self-efficacy in Changing Societies*. Cambridge: Cambridge University Press, pp.1-45.
- Bergeron, L. M., & Romano, J. L. (1994). The relationships among career decision-making self-efficacy, educational indecision, vocational indecision, and gender. *Journal of College Student Development*, 35, 19-24.
- Betz, N. E., & Hackett, G. (1986). Applications of self-efficacy to understanding career choice behavior. *Journal of Social and Clinical Psychology*, 4, 279-289.
- Betz, N. E., Klein, K., & Taylor, K. M. (1996). Evaluation of a short form of the Career Decision-Making Self-Efficacy scale. *Journal of Career Assessment*, 4, 47-57.
- Bright, J. L. (1996). *Gender and role salience in the prediction of undergraduates' career decision-making self-efficacy*. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI 9705679).
- Cecchetto, C., Korb, S. Ida Rumiati, R. and Aiello, M. (2017). Emotional reactions in moral decision-making are influenced by empathy and alexithymia. *Social Neuroscience*, DOI: 10.1080/17470919.2017.1288656.
- Cerutti, R. Valastro, C. Tarantino, S. Valeriani, M. Faedda, N. Spensieri, V. and Guidetti, V. (2016). Alexithymia and psychopathological symptoms in adolescent outpatients and mothers suffering from migraines: a case control study. *The Journal of Headache and Pain*, 17(39), DOI 10.1186/s10194-016-0640-y.
- Dahl, R.E. (2003). The development of affect regulation: bringing together basic and clinical perspectives. *Annals of the New York Academy of Sciences*, 1008, 183–188. [PubMed: 14998884].
- De Vente, W., Kamphuis, J., & Emmelkamp, P. (2006). Alexithymia, risk factor or consequence of work-related stress? *Psychotherapy and Psychosomatics*, 75(5), 304-311.
- Eastabrook, J.M. (2007). *Assessment of adolescent alexithymia: Examining the ability of the TAS -20 to measure alexithymia in samples of community and clinical adolescents*. (Thesis). Retrieved from ProQuest Dissertations, Theses- Library, and Archives Canada.

- Honkalampi, K., Hintikka, J., Tanskanen, A., Lehtonen, J., & Viinamäki, H. (2000). Depression is strongly associated with alexithymia in the general population. *Journal of Psychosomatic Research, 48*(1), 99-104.
- Hackett, G., & Lent, R. W. (1992). Theoretical advances and current inquiry in career psychology. In S. D. Brown & R. W. Lent (Eds.), *Handbook of Counseling Psychology* (2nd Ed., pp. 419-452). New York: Wiley.
- Hendryx, M.S, Haviland M.G, and Shaw, D.G. (1991). Dimensions of alexithymia and their relationship to anxiety and depression. *Journal of Personality Assessment, 6*, 227-237.
- Honkalampi, K., Tolmunen, T., Hintikka, J., Rissanen, M.L., Kylma, J., and Laukkanen, E. (2009). The prevalence of alexithymia and its relationship with Youth Self-Report problem scales among Finnish adolescents. *Comprehensive Psychiatry, 50*, 263-268.
- Kaur, H. and Kaur, S. (2015). Social Anxiety in Relation to Alexithymia among Adolescents. *Journal of Psychosocial Research, 10*(2), 421-429.
- Lent, R. W., & Hackett, G. (1987). Career self-efficacy: Empirical status and future directions [Monograph]. *Journal of Vocational Behavior, 30*, 347-382.
- Lent, R.W., Brown, S.D., & Hackett, G. (1994). Toward a unifying social cognitive Theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior, 45*, 79-122.
- Lent, R.W. & Brown, S.D. (2013a). Understanding and facilitating career development in the 21st century. In R.W. Lent & S.D. Brown (Eds.), *Career development in counseling: putting theory and research to work* (pp. 1-26). Hoboken, NJ: Wiley.
- Lent, R.W. & Brown, S.D. (2013b). Social cognitive model of career self-management: Toward a unifying view of adaptive career behavior across the life, span. *Journal of Counseling Psychology, 60*. 557-568. DOI: 10.1037/a0033446.
- Ioana, A., & Pușcașu, D. U. (2015). The impact of alexithymia on interpersonal relationships in adolescence. *Romanian Journal of Romanian Applied Psychology, 7*(1), 321-325.
- Loas, G.A., Braun, S. Delhaye, M. and Linkowski, P. (2017). The measurement of alexithymia in children and adolescents: Psychometric properties of the Alexithymia Questionnaire for Children and the twenty-item Toronto Alexithymia Scale in different non-clinical and clinical samples of children and adolescents. *PLOS ONE 12*(5): e0177982. <https://doi.org/10.1371/journal.pone.0177982>.
- Lozano, M.M. (2015). *The effects of the connect to success academy on high school student's achievement motivation*. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI 3712631).
- Lumley, M. A., Neely, L. C., & Burger, A. J. (2007). The Assessment of Alexithymia in Medical Settings: Implications for Understanding and Treating Health Problems. *Journal of Personality Assessment, 89*(3), 230-246.
- Matsumoto, D. (2009). *The Cambridge dictionary of psychology*. Cambridge: Cambridge University Press.
- Mayer, J.D, Salovey, P., Caruso, D.R, and Sitarenios G. (2001). Emotional intelligence as a standard intelligence. *Emotion, 1*, 232-242. [PubMed: 12934682].
- Pușcașua, A.I. and Usaci, P.D. (2016). The Impact of alexithymia on interpersonal relationships in adolescence. *Romanian Journal of Experimental Applied Psychology, 7*(1), 321-325.
- Sadock, B.J. and Sadock, V.A. (2000). *Kaplan & Sadock's Comprehensive Textbook of Psychiatry*. New York: Lippincott Williams & Wilkins Publishers.
- Sakkinen, P., Kaltiala-Heino, R., Ranta, K., Haataja, R., and Joukamaa, M. (2007). Psychometric properties of the 20- item Toronto Alexithymia Scale and prevalence of alexithymia in a Finnish adolescent population. *Journal of Psychosomatic research, 48*, 154-161.
- Taylor, G.J., (1984). Alexithymia: concept, measurement, and implications for treatment. *American Journal of Psychiatry 141*, 725-732.
- Taylor, G.J., (1987). Alexithymia: culture and class relationships: A symposium. *Transcultural Psychiatric Research Review, 4*, 85-95.
- Taylor, G.J., (2000). Recent developments in alexithymia theory and research. *Canadian Journal of Psychiatry 45*, 134-142.
- Taylor, G. J., Bagby, R., & Parker, J. (1997). *Disorders of affect regulation: Alexithymia in medical and psychiatric illness*. New York, NY US: Cambridge University Press.
- Taylor, G.J, Ryan, D., and Bagby, R, M. (1985). Toward the development of a new self-report alexithymia scale. *Psychotherapy and Psychosomatics, 44*, 191- 199.

- Taylor, K. M, & Betz, N. E. (1983). Applications of self-efficacy theory to the understanding and treatment of career indecision. *Journal of Vocational Behavior*, 22, 63-81.
- Taylor, G. J., Parker, J. A., Bagby, R., & Bourke, M. P. (1996). Relationships between alexithymia and psychological characteristics associated with eating disorders. *Journal of Psychosomatic Research*, 41(6), 561-568.
- Vorst, H. C. M., & Bermond, B. (2001). Validity and reliability of the Bermond-Vorst Alexithymia Questionnaire. *Personality and Individual Differences*, 30, 413–434.
- Wan Lai Yin, W. (2013). *Roles of parental influences, personality and career decision-making self-efficacy in predicting vocational interests and choice goals among Hong Kong secondary school students*. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI 3578888).
- Warnes, H., (1986). Alexithymia, clinical and therapeutic aspects. *Psychotherapy and Psychosomatics* 46, 96–104.
- Wilson, L. M. (2000). *The relationship between parental attachment, career decision-making self-efficacy, gender, race and career indecision*. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI 9973260).
- Yat Hung, C. (2007). *Career decision-making self-efficacy and outcome expectations in secondary student school-to-work transition*. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI 3302426).
- Zackheim, L. (2007). Alexithymia: the expanding realm of research. *Journal of Psychosomatic Research*, 63(4), 345-347.
- Ziebell, J.L. (2010). *Promoting Viable Career Choice Goals through Career Decision-Making Self-Efficacy and Career Maturity in Inner-City High School Students: A Test of Social Cognitive Career Theory*. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI 3422537).

The analysis of education principle implementation in an online counseling approach: a preliminary study based on analysis from a Rasch modeling perspective

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Abstract

Education as part of universal human activities can occur in any form and situation, where it is seen through the learning process. The counseling process which is an integral part of education also undergoes a transformation of service processes and methods. However, the research about the application of the education principles in the long-distance counseling process has not been available well until now. This research aims to study the implementation of the principles of education in the online counseling process through a rasch modeling perspective. The sample in this study amounted to 174 people spread across Indonesia with various types of demographics. The results of the study show that the application of the principle of education in online counseling services can significantly suppress the problematic condition of the respondent. In addition, in certain cases, online counseling services are carried out as a quick or first aid to the problematic conditions experienced by the client. The implementation that will be discussed from this approach relates to development of self potential, self-control, personality development, independence development, development of intelligence and skills

Keywords: Education principle, online counseling, Rasch model

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Introduction

The individuals that have mental hygiene are individuals who lead effective lives with structured positive behavior patterns (Hanum, Prayitno, & Nirwana, 2015; Jayanti, Romlah, & Saregar, 2016; Sudarsana, 2017). These individuals have a developing life, both from intellectual abilities, independence, having self-control, religious-spiritual abilities, and various skills that are useful for themselves, society and the country (Arafani, Ilyas, & Zikra, 2018; Hashim, 2018; Wijaya & Tori, 2018). This is reflected in the principles of implementing education in Indonesia. However, various conditions from within and outside the individual could hinder such self-development, thus creating an effective daily life condition disrupted.

Psychologically healthy living conditions are important conditions that are often missed by individual and professional attention (Ancker et al., 2015; Owens et al., 2017; Scheid & Wright, 2017; Segal, Qualls, & Smyer, 2018). Exposure to data from the World Health Organization (WHO) suggests that mental health condition of Indonesian adolescents shows that 5% of the population experiences anxiety, 7% experiences feelings of loneliness, and there are more than 20 % teenagers become victims of bullying (World Health Organization, 2017). This happens because of the high gap between the

availability of professional staff who can provide counseling services to help clients with the number of individuals experiencing problems. Another issue that is the cause of the lack of optimal counseling services in Indonesia is the low information obtained by individuals regarding acceptable services related to the problem.

To overcome these conditions and the implementation of the principles of education through counseling services, it is necessary to develop an approach, method and media that supports the existence of remote (distance) counseling services, namely online counseling services (Jones, 2018; Mishna, Fantus, & McInroy, 2017; Otten, Birnie, Ranchor, & van Langen, 2016; Stommel & Te Molder, 2015). Online counseling services are the services that provided by professionals (counselors) to clients that aims to deal with disturbed daily conditions of effective life, the development of independence and self-control through the formation of positive behaviors structured in the frame of education principles with internet media and platforms that support them. (Ardi, Putra, & Ifdil, 2017; Ardi, Viola, & Sukmawati, 2018; Ardi & Yendi, 2013; Ifdil & Ardi, 2013). The implementation of online counseling services at the beginning of its development was carried out through web and system assistance that enabled the interaction of counselors and clients, but in its development there have been developed more interactive and real-time platforms, for example through the development of online counseling service applications with the Android platform (Cipolletta & Mocellin, 2018; Cipolletta, Votadoro, & Faccio, 2017; Marchiori & Cantoni, 2018; Sweet et al., 2017).

The basic of the online counseling approach development is based on the potential of internet media which has proven to have experienced a very significant increase in the last few decades. In terms of internet usage alone, currently in Indonesia, there is an increase of 500% in 2015 compared to year, 2000. It is known that more than 50% of Indonesia's population (120 million residents) are active internet users (Arjadi, Nauta, & Bockting, 2018). In the latest developments, the use of Smartphone as one of the most recent internet platforms constitutes 95% of the total internet users (Asosiasi Penyedia Jasa Internet Indonesia, 2015).

This great potential can be used as a counseling services with long distance formats (Ardi et al., 2018). The implementation of remote counseling through internet media will open up opportunities for various clients who cannot meet the counselor in a short time (Ardi et al., 2019; Daharnis et al., 2018; Fitria et al., 2018) (in the sense that the problems experienced are an important problem to immediately consult with the counselor) (Amichai-Hamburger, Klomek, Friedman, Zuckerman, & Shani-Sherman, 2014; Kofinas et al., 2014; Wong, Bonn, Tam, & Wong, 2018), clients who experience various obstacles in meeting counselors, reluctant clients meeting the counselor in the first session, as well as the conditions of other clients who need immediate treatment (Ballesteros & Hilliard, 2016; Hintz, Frazier, & Meredith, 2015; Pordelan, Sadeghi, Abedi, & Kaedi, 2018; Sampson & Makela, 2014). In another point of view, the existence of online counseling will open the opportunity to expand information about various aspects that can be handled by the counselor, where these aspects have not been known or unknown by the wider community in Indonesia. With these conditions, phenomena, and assumptions, various possibilities for online counseling services can be analyzed, which first conduct an acceptability service analysis and then examine various forms of implementation of the principle of education in online counseling services. This was done with the aim of strengthening online counseling hegemony and reviewing the legality, empirical basis, and theoretical online counseling services in the future.

Method

Participant

In this research, the respondents that involved were 174 people with diverse demographic variants. This study involved respondents consisting of 25.85% men and 74.15% women, 31.79% working, and the remaining 68.21% are respondents who have not worked.

Measuring

This study uses the Acceptability of Mental-Health Mobile App Survey (AMMS) with Cronbach Alpha-KR20 value of 0.89. This inventory measures the level of acceptance of respondents to counseling services by using a remote/distance format based on the internet and measuring several aspects that related to the acquisition of respondents in the service. In addition, the validity condition of the measuring instrument is also known through the uni-dimensionality inventory value that produces raw variance

explained by measure conditions of 50.7% and the total unexplained variable in 11.1%, so that this meets instrument validation requirements, which is this instrument can explain the measured conditions well.

Data Analysis

The findings and field data were analyzed using Rasch analysis. This test was aimed to obtaining robust and accurate data on the outcomes and conditions of the respondents. Testing using Rasch analysis is done through Winstep software version 4.01 and datasets from research can be accessed in the Open Science Framework. In addition to the analysis using the Rasch model, testing was also conducted with an analysis of network psychometric through JASP software. This test is done to see the relationship conditions and the contribution between items in real-time and accurately through networks.

Results and Discussions

The measurement is done to see the condition of uni-dimensionality of the item and see the sense of bias of the item through a series of tests through Knox Cube Test (KCT) in Figure 1. Based on the conditions of the KCT, it is known that in general the bias condition is not seen comprehensively, but there are some respondents who are thrown away from the mean line. This condition can be seen from the dash line that shows the trend-line of research data. The black curved shows an estimate of 95% of the trust value and significance of the data collected, this is obtained because each point has its own confidence interval. The interpretation of this condition shows that there are some respondents who experience gender bias (Y-axis and X-axis). There was one respondent from a female who was biased towards the response item, and three respondents from the male who experienced a bias response. With the condition that at least there is a bias in the respondents, it can be concluded that the acquisition of respondents' acceptability conditions for online counseling services is more reliable. This will affect the analysis process and the level of acceptance of the research conclusions. In the condition of the data in Figure 1, it can be concluded that the level of acceptance of the measurement results (logit measure) on items for each respondent is acceptable. This is based on the condition that respondents who experience bias are not classified as numerous and include error measurement that can be tolerated (the boundary conditions will also be supported by the Outfit measure data in Table 1.

The next analysis that needs to be done on the acceptance of respondents to take part in online counseling sessions is in terms of the characteristics of the items answered by respondents and then seen the empirical score conditions, compared to the expected item response model and the Test of Information Function (TIF) carried out in one test. The test results are presented in Figure 2.

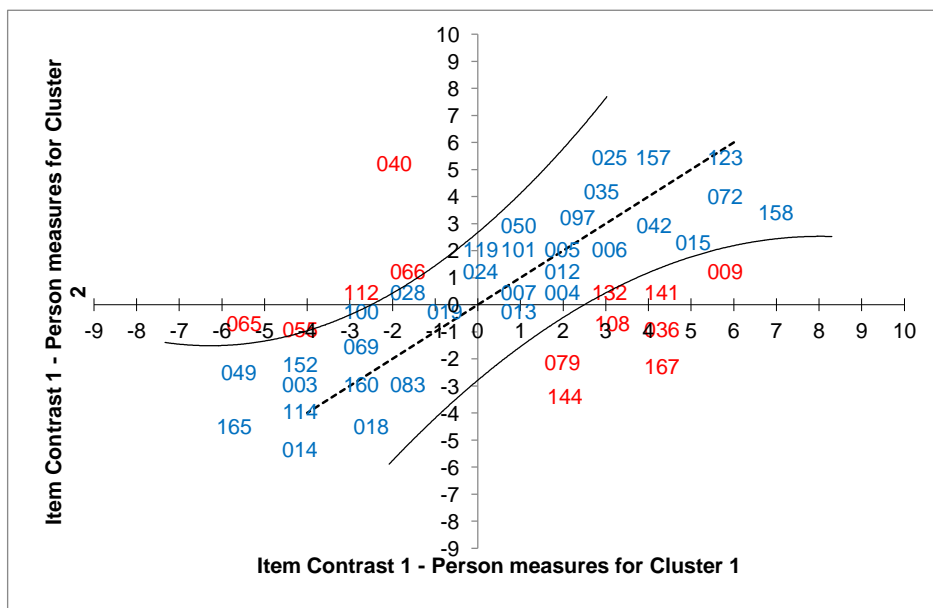


Figure 1 Item Contrast 1 - Person measures for Clusters 1 and 2

There are several items with extreme answers when compared to other items. This condition becomes an important reference in analyzing the items and conditions of the respondents so that in the end they will be able to see how their implementation in counseling practices is part of the education process.

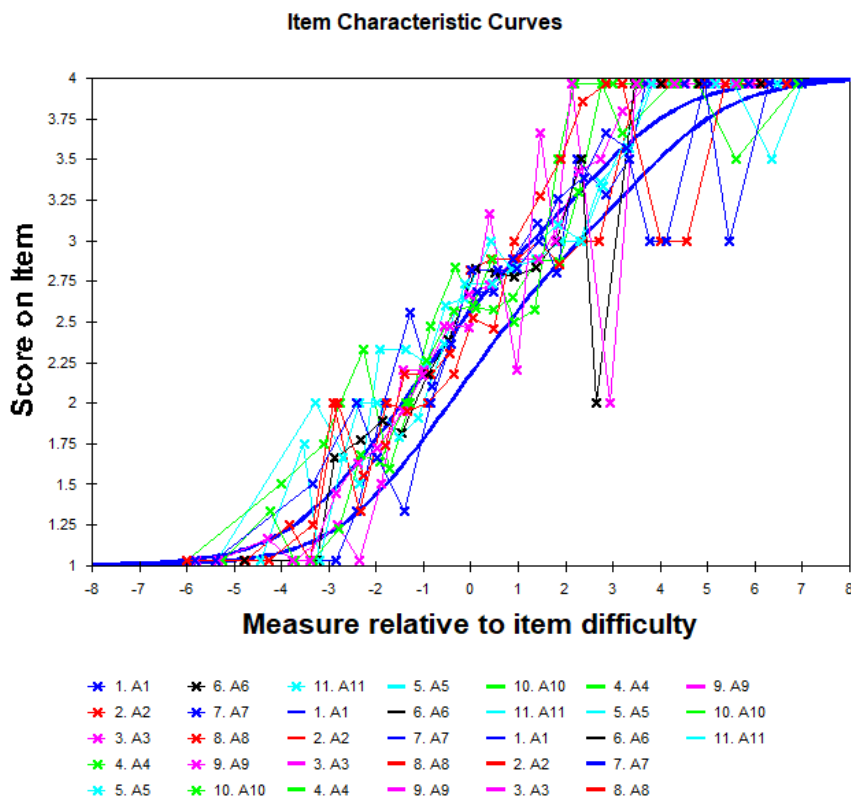


Figure 2 Item Characteristic Curves based on Score Item and measure relative to item difficulty

The achievement conditions in Figure 2 show that items A6 and A9 are two items with extreme characteristic conditions when compared to the model curve and the TIF curve. The achievement of items through item characteristic charts will affect the condition of item categorization through variable map items (wrights map). This map will display the level of acceptability of the respondent's conditions for online counseling services.

As explained in Figure 3, it is known that there are respondents who have a high, moderate and low acceptability level in online counseling services. The finding that all items are in a moderate condition can be interpreted that items can clearly divide clearly which respondents are close to the mean logit and which ones are at high and low levels clearly and robustly. This is a strong basis for grouping respondents on the based on question items. On the other hand, the high level of respondents' acceptance of online counseling services can be interpreted that this service with remote formats can be one of the accurate media to help clients solve their problems. With the high interest of respondents in accepting the format of online counseling services, this will have an impact on the substance of the provision of counseling services as an integral part of education. In other words, the implementation of the educational process which is currently experiencing dynamics along with technological changes and unlimited distance and time, counseling services can also carry out the same process.

The next condition that can encourage the occurrence of online counseling services in implementing education is to conduct psychometrics network analysis of the conditions of acceptability of online counseling services, the results of the analysis in Figure 4.

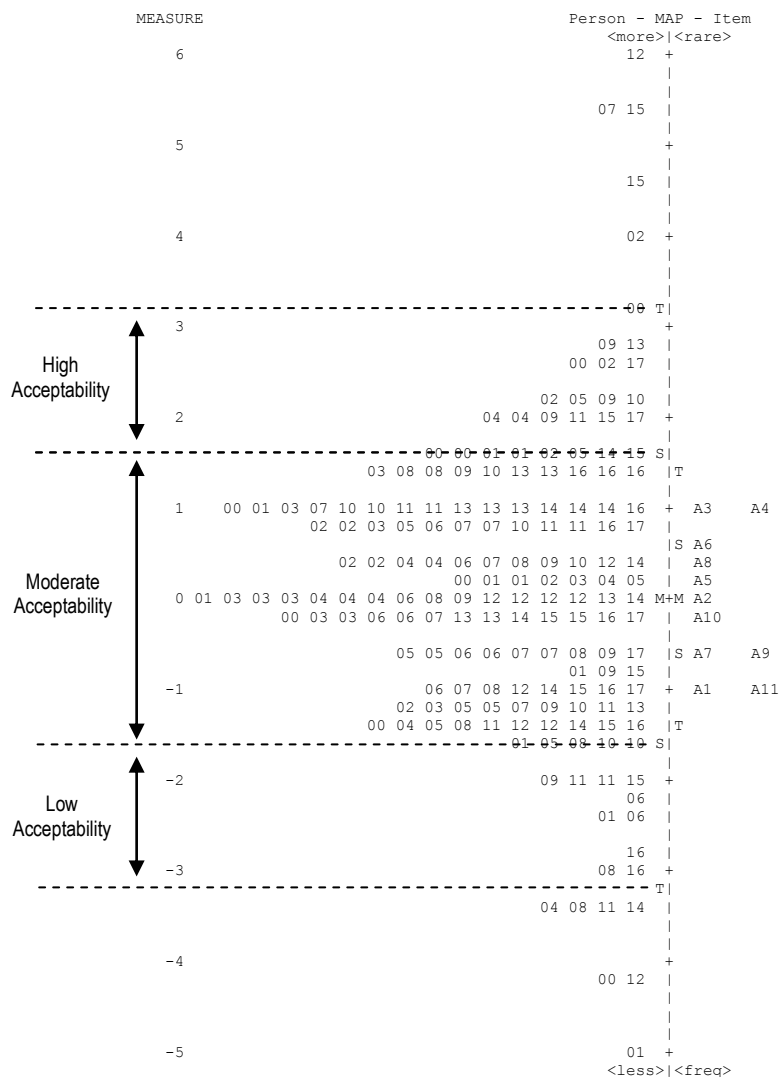


Figure 3 Wright Map of Online Counseling Acceptability

Psychometric network analysis shows that there are some related items and indicators of online counseling services and their relation to the respondent's behavior towards the service. Through this analysis, we can see a strong correlation with the green line as a correlation with a positive direction, and a red line that indicates the opposite condition. In Figure 4, it can be seen that some conditions that have a strong correlation are in items A2 and A7, where this condition means that the respondent has a strong desire to find important information about his mental health condition, where the conditions and solutions regarding the disruption of his life want they found through online counseling services and Smartphone applications.

When viewed based on the acquisition conditions of logit values on items that have a strong correlation with each other, it is known that in general the respondent's logit value for online counseling services and the availability of mental health information through applications are classified as high and tend to be above the mean. This indicates directly that online counseling services are one of the alternative service formats that have great potential, especially in the face of the segmentation of generations who are currently accustomed to using internet technology. The study of the implementation of the format of online counseling services in the study of its implementation of education will be discussed further in the section discussion.

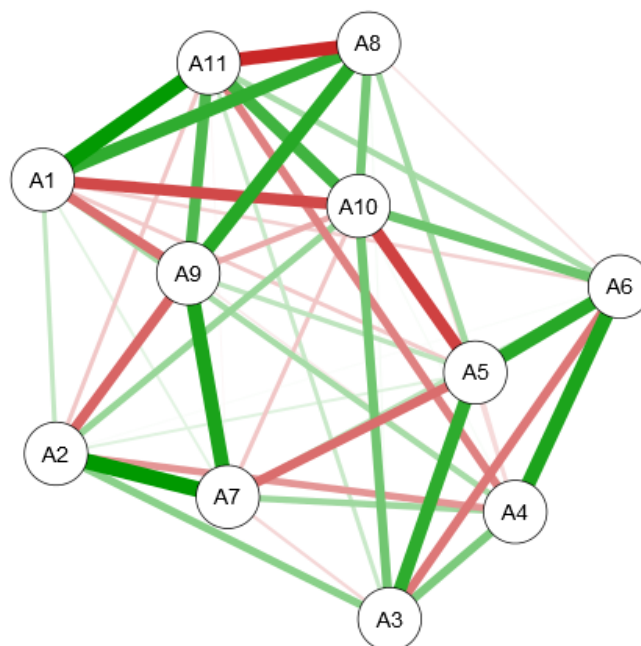


Figure 4 The acceptability network model of respondents who had received mental health intervention by internet

The study of the education principle implementation through counseling services began with a study of the conditions of acceptability of the online counseling service. This is based on the condition of the respondents' high acceptance of online counseling services, so that the level of acceptance will facilitate the process of implementing the education process itself.

In accordance with the study presented in the introduction, the implementation of the value of education in counseling services is in accordance with the educational foundation of the national education system. The application of the educational principle cannot be separated from the grid or blueprint revealed by inventory. The analysis and study related to the application of the principles of education are outlined as follows:

Development of self potential

As an integral part of education, counseling services aim to develop the client's self-potential when the service takes place in a condition that is disrupted or in a condition to be optimally developed (Ardi, 2017; Ardi & Maizura, 2018). The results showed that respondents' desire to seek counseling services through online (long distance) format was in the high category, this was evidenced by the acquisition of logit for the condition of respondents wanting to obtain information about self-development and mental health through online counseling applications of -0.51 (logistic rescaling value 44.91, with MNSQ 0.75 Outfit). This proves that with the existence of remote formats, the process of developing self potential can still be done, which in this case is proven by the high interest of respondents to gain knowledge and information about their potential.

Self-control

Self-control is the ability to guide behavior and suppress impulses that arise from within that can result in maladaptive behavior (Ardi & Erlamsyah, 2017; Ardi & Sukmawati, 2017; Daharnis, Ardi, & Ifdil, 2018). In another definition, self-control is a regulation of a person's physical, psychological and behavioral processes. The counseling process basically addresses and intervenes in the development of self-control abilities. Based on the research findings, it is known that respondents prefer to contact counselors through an online counseling application to raise the issue, this can mean that instead of channeling disrupted daily effective conditions through other media (such as social media), respondents prefer to seek online counselors.

Personality development

One of the most crucial aspects in the counseling process is the development of the client's personality. This also happens in the process of online counseling services (Chung, 2014; Galassi, 2017). The client's need for positive personality development is evidenced by the achievement in terms of the desire that the psychological condition is always monitored by the counselor through online counseling with a logit value of 0.53, 52.9 rescaling logit and MNSQ Outfit of 0.87, meaning that the implementation of the principle of education in developing personality respondents through online counseling services are very possible. Various approaches to counseling can be done through the use of the internet-based remote format. An empirically proven approach can help clients in developing personalities and alleviating problems through online media such as the Cognitive Behavior Therapy (CBT) approach, Rational Emotive Behavior Therapy (REBT) and Solution Focused Brief Counseling (SFBC). These various approaches, especially SFBC, are approaches that are in line with the characteristics of long-distance counseling services, given the objectives and objectives of the approach and the value of match interventions with the media counseling used (Franklin, Zhang, Froerer, & Johnson, 2017; Kramer, Conijn, Oijevaar, & Riper, 2014; Pichot & Coulter, 2014).

Independence Development

One of the objectives of national education is independent individuals. The development of independence is in the area of counseling services, both from individual counseling services as well as classical formations. With these various formats, the development of independence can also be done through online counseling services. So that the development of independence with characteristics; (1) understand and accept themselves positively and dynamically, (2) understand and accept the environment objectively and dynamically, (3) make appropriate decisions, (4) direct themselves according to the decision, (5) realize themselves optimally, can be done effectively (Hanum et al., 2015; Marjohan, 2012; Prayitno, 2009; Prayitno & Amti, 2004). The conditions of independence that are realized through online counseling services can be carried out efficiently, this is supported by the enthusiasm of the respondents to get services through the remote format. Of course the service is supported by a variety of effective approaches used through this format.

Development of intelligence and skills

Intelligence and skills are two aspects that support each other in individual self-development (Ardi & Sisni, 2018; Daharnis et al., 2018). The educational process in essence leads to the condition that individuals can survive in various conditions that require the use of intelligence and skills. One of the real efforts in developing intelligence and skills is by providing counseling services. Through an online counseling service approach, the development of intelligence and client skills will be optimized through various advantages of online counseling services, such as ease of information and the speed of response of counselors in responding to client problems. But the thing that needs to be considered in this approach is that not all types of client problem conditions can be intervened through remote formats. In some conditions, online counseling services are as initial aid or first aid for problematic conditions in clients.

Conclusions

Online counseling services basically also carry out the principle of education, in accordance with the basis of counseling services in conventional / face-to-face counseling. The difference between online counseling and conventional approaches is on service delivery media, service settings, service formats and approaches taken. In this regard, online counseling services use an effective approach to this type of problem with short and powerful interventions. Some of these approaches include the approach to Solution Focused Brief Counseling (CBT), Cognitive Behavior Therapy (CBT) and Rational Emotive Behavior Therapy (REBT), in which various approaches have been examined for use through a series of previous researches. Further on the implementation of the principle of education in online counseling services is also related to the conditions of acceptability of online counseling services. The application of the principle of education will only occur with the acceptance of the service by the client. The condition of clients who are more comfortable interacting with counselors and the need to obtain services from counselors through online media opens up a great opportunity in the process of implementing the online counseling service. By analyzing the conditions of acceptability, it can be concluded that the implementation of education in online counseling services can be effectively and efficiently carried out.

However, in some aspects and cases of clients, not all problems can be resolved thoroughly through online counseling sessions. In this case, it still requires further sessions in face-to-face format.

References

- Amichai-Hamburger, Y., Klomek, A. B., Friedman, D., Zuckerman, O., & Shani-Sherman, T. (2014). The future of online therapy. *Computers in Human Behavior, 41*, 288–294.
- Ancker, J. S., Witteman, H. O., Hafeez, B., Provencher, T., Van de Graaf, M., & Wei, E. (2015). The invisible work of personal health information management among people with multiple chronic conditions: qualitative interview study among patients and providers. *Journal of Medical Internet Research, 17*(6).
- Arafani, A., Ilyas, A., & Zikra, Zi. (2018). Learning Management of UNP's Students and its Implication to Guidance and Counseling. *International Journal of Research in Counseling and Education, 1*(3), 1–7. <https://doi.org/10.24036/0022za0002>
- Ardi, Z., Rangka, I. B., Ifdil, I., Suranata, K., Azhar, Z., Daharnis, D., ... Alizamar, A. (2019). Exploring the elementary students learning difficulties risks on mathematics based on students mathematic anxiety, mathematics self-efficacy and value beliefs using rasch measurement. In *Journal of Physics: Conference Series* (Vol. 1157, p. 32095). IOP Publishing.
- Ardi, Z., Sukmawati, I., Ifdil, I., Afdal, A., Rangka, I. B., & Suranata, K. (2018). Exploring the acceptability of internet-based mental health mobile app services using network psychometrics analysis. In *Journal of Physics: Conference Series* (Vol. 1114, p. 12106). IOP Publishing.
- Ardi, Z. (2017). Unsuitable Majoring: Does the Reorientation Would Help the Student for Revitalize Learning Activities? In *Proceedings of the 9th International Conference for Science Educators and Teachers (ICSET 2017)*. Paris, France: Atlantis Press. <https://doi.org/10.2991/icset-17.2017.69>
- Ardi, Z., & Erlamsyah, E. (2017). Peningkatan Kualitas Penulisan Artikel Ilmiah bagi Kepala Sekolah. *Jurnal Aplikasi IPTEK Indonesia, 1*(1), 25–34.
- Ardi, Z., & Maizura, N. (2018). The Psychological Analysis of Divorce at Early Marriage. *International Journal of Research in Counseling and Education, 1*(3), 27–32.
- Ardi, Z., Putra, M. R. M., & Ifdil, I. (2017). Ethics And Legal Issues In Online Counseling Services: Counseling Principles Analysis. *Jurnal Psikologi Pendidikan Dan Konseling: Jurnal Kajian Psikologi Pendidikan Dan Bimbingan Konseling, 15–22*.
- Ardi, Z., & Sisin, M. (2018). The Contribution of Assertive Technique Behavioral Counseling to Minimize the Juvenile Delinquency Behavior. *Jurnal Konseling Dan Pendidikan, 6*(2), 67–77.
- Ardi, Z., & Sukmawati, I. (2017). *Social Media and the Quality of Subjective Well-Being; Counseling Perspective in Digital Era. Open Science Framework*. October.
- Ardi, Z., Viola, K., & Sukmawati, I. (2018). An Analysis of Internet Abuses Impact on Children's Moral Development. *JPPi (Jurnal Penelitian Pendidikan Indonesia), 4*(1), 44–50. Retrieved from <http://jurnal.iicet.org/index.php/jppi/article/view/192>
- Ardi, Z., & Yendi, F. M. (2013). Konseling Online: Sebuah Pendekatan Teknologi Dalam Pelayanan Konseling. *Jurnal Konseling Dan Pendidikan, 1*(1), 1–5.
- Arjadi, R., Nauta, M. H., & Bockting, C. L. H. (2018). Acceptability of internet-based interventions for depression in Indonesia. *Internet Interventions, 13*(April), 8–15. <https://doi.org/10.1016/j.invent.2018.04.004>
- Asosiasi Penyedia Jasa Internet Indonesia. (2015). Profil pengguna internet indonesia. Jakarta: Asosiasi Penyedia Jasa Internet Indonesia.
- Ballesteros, J. L., & Hilliard, R. C. (2016). US-Based Latina/O College Students' Attitudes toward Online Counseling. *International Journal for the Advancement of Counselling, 38*(4), 269–285.
- Chung, J. E. (2014). Social networking in online support groups for health: how online social networking benefits patients. *Journal of Health Communication, 19*(6), 639–659.
- Cipolletta, S., & Mocellin, D. (2018). Online counseling: An exploratory survey of Italian psychologists' attitudes towards new ways of interaction. *Psychotherapy Research, 28*(6), 909–924.
- Cipolletta, S., Votadoro, R., & Faccio, E. (2017). Online support for transgender people: an analysis of forums and social networks. *Health & Social Care in the Community, 25*(5), 1542–1551.
- Daharnis, D., Ardi, Z., Alizamar, A., Ifdil, I., Rangka, I. B., & Suranata, K. (2018). Adaptation and validation of mathematics anxiety: Rasch and network psychometrics analysis. In *Journal of Physics: Conference Series* (Vol. 1114, p. 12113). IOP Publishing.

- Daharnis, D., Ardi, Z., & Ifdil, I. (2018). The Improved of Counselor Competencies through Scientific Article Writing Training Using Digital Citation Application. *Jurnal Konseling Dan Pendidikan*, 6(1), 8.
- Fitria, L., Ifdil, I., Erwinda, L., Ardi, Z., Afdal, A., Sari, A. P., ... Churnia, E. (2018). Exploring internet addiction on adolescents. In *2018 Workshop on Multidisciplinary and Its Applications: Applied Mathematics, Computer Science, Information Systems, and Information Technology, WMA-Mathcomtech 2018* (Vol. 1114). Universitas Putra Indonesia YPTK, Padang, Indonesia: Institute of Physics Publishing. <https://doi.org/10.1088/1742-6596/1114/1/012076>
- Franklin, C., Zhang, A., Froerer, A., & Johnson, S. (2017). Solution Focused Brief Therapy: A Systematic Review and Meta- Summary of Process Research. *Journal of Marital and Family Therapy*, 43(1), 16–30.
- Galassi, J. (2017). *Strengths-based school counseling: Promoting student development and achievement*. Routledge.
- Hanum, M., Prayitno, P., & Nirwana, H. (2015). Efektifitas Layanan Konseling Perorangan Meningkatkan Kemandirian Siswa Dalam Menyelesaikan Masalah Belajar. *Konselor*, 4(3), 162–168.
- Hashim, H. (2018). Application of technology in the digital era education. *International Journal of Research in Counseling and Education*, 1(2), 1–5. <https://doi.org/10.24036/002za0002>
- Hintz, S., Frazier, P. A., & Meredith, L. (2015). Evaluating an online stress management intervention for college students. *Journal of Counseling Psychology*, 62(2), 137.
- Ifdil, I., & Ardi, Z. (2013). Konseling Online Sebagai Salah Satu Bentuk Pelayanan E-konseling. *Jurnal Konseling Dan Pendidikan*, 1(1), 15–22. Retrieved from <http://jurnal.konselingindonesia.com/index.php/jkp/article/viewFile/4/193>
- Jayanti, R. D., Romlah, R., & Saregar, A. (2016). Efektivitas Pembelajaran Fisika Model Problem Based Learning (PBL) melalui Metode POE terhadap Kemampuan Berpikir Tingkat Tinggi Peserta Didik. In *Seminar Nasional Pendidikan* (pp. 208–214).
- Jones, J. (2018). *Combining the Creative Therapies with Technology: Using Social Media and Online Counseling to Treat Clients*. Taylor & Francis.
- Kofinas, J. D., Varrey, A., Sapra, K. J., Kanj, R. V., Chervenak, F. A., & Asfaw, T. (2014). Adjunctive social media for more effective contraceptive counseling: a randomized controlled trial. *Obstetrics & Gynecology*, 123(4), 763–770.
- Kramer, J., Conijn, B., Ojevaar, P., & Riper, H. (2014). Effectiveness of a web-based solution-focused brief chat treatment for depressed adolescents and young adults: randomized controlled trial. *Journal of Medical Internet Research*, 16(5).
- Marchiori, E., & Cantoni, L. (2018). Applying the counseling-learning approach to a tourism-related massive open online course. *Journal of Teaching in Travel & Tourism*, 18(1), 58–74.
- Marjohan. (2012). *Biografi Keilmuan Prayitno dalam Ranah Konseling dan Pendidikan*. Padang: UNP Press.
- Mishna, F., Fantus, S., & McInroy, L. B. (2017). Informal use of information and communication technology: Adjunct to traditional face-to-face social work practice. *Clinical Social Work Journal*, 45(1), 49–55.
- Otten, E., Birnie, E., Ranchor, A. V., & van Langen, I. M. (2016). Online genetic counseling from the providers' perspective: counselors' evaluations and a time and cost analysis. *European Journal of Human Genetics*, 24(9), 1255.
- Owens, J., Entwistle, V. A., Cribb, A., Skea, Z. C., Christmas, S., Morgan, H., & Watt, I. S. (2017). "Was that a success or not a success?": a qualitative study of health professionals' perspectives on support for people with long-term conditions. *BMC Family Practice*, 18(1), 39.
- Pichot, T., & Coulter, M. (2014). *Solution-focused brief therapy: Its effective use in agency settings*. Routledge.
- Pordelan, N., Sadeghi, A., Abedi, M. R., & Kaedi, M. (2018). How online career counseling changes career development: A life design paradigm. *Education and Information Technologies*, 1–18.
- Prayitno. (2009). *Wawasan Profesional Konseling*. Padang: UNP Padang.
- Prayitno, & Amti, E. (2004). *Dasar-dasar Bimbingan dan Konseling*. Jakarta: Rineka Cipta.
- Sampson, J. P., & Makela, J. P. (2014). Ethical issues associated with information and communication technology in counseling and guidance. *International Journal for Educational and Vocational Guidance*, 14(1), 135–148.
- Scheid, T. L., & Wright, E. R. (2017). *A handbook for the study of mental health*. Cambridge University Press.
- Segal, D. L., Qualls, S. H., & Smyer, M. A. (2018). *Aging and mental health*. John Wiley & Sons.

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- Stommel, W., & Te Molder, H. (2015). Counseling online and over the phone: When preclosing questions fail as a closing device. *Research on Language and Social Interaction*, 48(3), 281–300.
- Sudarsana, I. K. (2017). Optimalisasi Pemahaman Ajaran Tri Hita Karana Dalam Meningkatkan Karakter Siswa Sekolah Dasar (Perspektif Psikologi Pendidikan). *Prosiding Senada 2*, 250–256.
- Sweet, K., Hovick, S., Sturm, A. C., Schmidlen, T., Gordon, E., Bernhardt, B., ... Scheinfeldt, L. (2017). Counselors' perspectives of genomic counseling following online receipt of multiple actionable complex disease and pharmacogenomic results: A qualitative research study. *Journal of Genetic Counseling*, 26(4), 738–751.
- Wijaya, H. E., & Tori, A. R. (2018). Exploring the role of self-control on student procrastination. *International Journal of Research in Counseling and Education*, 1(2), 6–12. <https://doi.org/10.24036/003za0002>
- Wong, K. P., Bonn, G., Tam, C. L., & Wong, C. P. (2018). Preferences for Online and/or Face-to-Face Counseling among University Students in Malaysia. *Frontiers in Psychology*, 9, 64.
- World Health Organization. (2017). *Mental Health Status of Adolescents in South-East Asia: Evidence for Action*. Retrieved from <http://www.who.int/iris/handle/10665/254982>

Psychological Well-Being of Youth Inventory on Domestic Violence Victims: Rasch Model Analysis

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Abstract

Domestic violence is a long-standing phenomenon in society with physical and psychological impacts on the victims, witnesses and observers. This research, therefore designed an instrument to examine the psychological well-being of adolescents living with parents experiencing domestic violence. The instrument designed, was tested with 30 students of the vocational high school in Padang City, and analyzed using rasch models. The test results describe that the instrument is feasibility utilized to measure the psychological well-being of adolescents living with domestic violence victims with a reliability value of 0.89 and 0.91 for individuals.

Keywords: Psychological well-being, domestic violence, rasch model, youth

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Introduction

Family is the smallest social miniature in a community which comprises of adults, adolescents and children with each responsible of the well-being of the other (Kurniawan, 2015; Tutwiler, 2017). Its problems are quite worrisome to the community (Afdal, 2015; Berg, Kiviruusu, Karvonen, Rahkonen, & Huurre, 2017; Tseng & Hsu, 2018). The most rife phenomenon is the discovery of cases of violence (Herzberger, 2019; Roberson & Wallace, 2016), carried out against wives (women) and their children (Anjani, 2016; Borneo, 2016; Merung, 2016; Rasool, 2016; Utama Hs, 2017). This does not only affect the perpetrators (Cantos, Goldstein, Brenner, O'Leary, & Verborg, 2015; McMurrin & Gilchrist, 2008; Ulloa & Hammett, 2016) but also victims, witnesses and observers (Kimball, 2016; Mardiyati, 2015; Montgomery, Just-Østergaard, & Jervelund, 2019; Novianti, 2008; Ulloa & Hammett, 2016; Van der Kolk, 2017). Domestic violence on victims, especially family members, has a profound physical and psychological impact (Afdal, 2015).

According to the 2017 Women's Commission data in Indonesian, domestic violence/ personal relations, and violence against wives was ranked first with over 5,784 cases, which was followed by 2,171 courtship violence cases, 1,799 cases of violence against girls and the remaining were attributed to ex-husband, ex-boyfriend, and against domestic workers (Azriana, Chuzaifah, Y., Nurherwati, S., Indraswari, & Amiruddin, 2017).

Similarly, a report from the electronic media Antara Sumbar in 2018 reported that violence against women in the city of Padang was predominately domestic (Nasution, 2018) with 73 cases in 2017 (Utama Hs, 2017). Reports from the West Sumatra News electronic media which were also reported by the

Chairperson of the Padang Pariaman Family Welfare Consultation Institution (*Lembaga Konsultasi Kesejahteraan Keluarga/LK3*), stated that family issues were related to domestic violence (Redaksi, 2018).

Domestic violence affects both victims and perpetrators (Espinoza & Warner, 2016). Its impact comprises of direct victims, and witnesses such as parents (Callaghan, Alexander, Sixsmith, & Fellin, 2018). Its various forms on children in the household include physical, psychological, sexual and social violence, which means that its greatly affects them in the family (Cook et al., 2017; Katz, 2016; Kimball, 2016). Kondisi psikologis anak yang tinggal dengan orang tua KDRT Seringkali mendapatkan stresor dari kondisi keluarga (Perkins, Wood, Varjas, & Vanegas, 2016). Such conditions are also influenced by other factors which triggers the emergence and symptoms of stress in individuals (Alizamar et al., 2018). Stress tends to arise due to pressure or tension which comes from dissonance between a person and the surrounding environment (Zola, Fadli, & Ifdil, 2018).

The impact of domestic violence on children both physically and psychologically includes wounds, bruises, lumps, ashamed of meeting other people, alienating themselves from the environment, and the loss of relations such as its perpetrators and victims (Anggraeni, 2013). In addition, children living with violent parents have psychological problems (Anderson & Saunders, 2003; Callahan, Tolman, & Saunders, 2003; Ham-Rowbottom, Gordon, Jarvis, & Novaco, 2005; Tolman & Rosen, 2001; Victor, Grogan-Kaylor, Ryan, Perron, & Gilbert, 2018) and tend to be always unhappy. The research findings also explain that they experience psychological trauma (Mardiyati, 2015). According to Hupper, psychological well-being is showed to have a well-functioning state of life which is a combination of feelings and proper self-functioning (Megawati & Megawati, 2015).

However, the psychological well-being of adolescents living with domestic violent parents, are yet to be identified. The existing instruments are related to the measurement of Psychological Well-Being of students (children and adolescents) with reading difficulty (Lindeblad, Svensson, & Gustafson, 2016) using an instrument known as the Back Youth Inventory. Furthermore, other existing instruments related to victims of domestic violence measures the comparison of socio-economic status, social support, mental status of women victims using domestic violence inventory (Vameghi, Akbari, Majd, Sajedi, & Sajjadi, 2018). Studies related to this topic uses its inventory (Avdibegovic, Brkic, & Sinanovic, 2017; Cunha & Goncalves, 2016; White & Satyen, 2015) with no instruments measuring the psychological well condition of adolescents living with domestic violence parents. Based on this, it is necessary to have a measurement instrument to identify the condition of the psychological well-being of respondents, such as children. Therefore, this article discusses the instruments for measuring the psychological well-being of adolescents experiencing domestic violence.

Method

This instrument measures the condition and psychological well-being of adolescents with a specific population experiencing domestic violence. This instrument was developed using the theory of psychological well-being based on the following self-acceptance, positive relations with others, environmental mastery, purpose in life, personal growth and autonomy (López-Torres Hidalgo et al., 2010; Ryff, 1984; Ryff & Singer, 2008). This instrument contains measurements of the psychological well-being and condition of adolescents living domestic violent parents. This instrument consists of a total of 50 items which were all positive statements, analyzed using the Rasch model. However 8 items were not utilized, therefore, only 42 items with a reliability value of 0.89 and 0.91 for a person. The sampling were 30 students (17 girls and 13 boys) chosen based on the criterium questionnaire of domestic violence victims. The data is accessible at osf.io/mv6e8.

Results and Discussion

Validity

The validity of an instrument means the extent to which it is measured. Hence, the validity of this instrument examines the extent to which it measures the psychological well-being of adolescents. its analysis uses a PCA (Principal Component Analysis) of residuals which analyzes the extent to which the diversity of instruments should be measured. PCA analysis has two parameters, the first is the total raw variance in observation value (<20%) with both consisting of total raw unexplained variance values (<15%) (Linacre, 2011). This is detailed in table 1.

Table 1. Standardized Residual variance in Eigenvalue units = Item information units

	Eigenvalue	Observed	Expected
Total raw variance in observations =	76.9101	100.0%	100.0%
Raw variance explained by measures =	26.9101	35.0%	35.7%
Raw variance explained by persons =	7.2747	9.5%	9.6%
Raw variance explained by items =	19.6353	25.5%	26.0%
Raw unexplained variance (total) =	50.0000	65.0%	64.3%
Unexplned variance in 1st contrast =	6.7363	8.8%	13.5%
Unexplned variance in 2nd contrast =	5.1573	6.7%	10.3%
Unexplned variance in 3rd contrast =	4.4602	5.8%	8.9%
Unexplned variance in 4th contrast =	4.1814	5.4%	8.4%
Unexplned variance in 5th contrast =	3.4074	4.4%	6.8%

Based on Table 1, it is seen that the total raw variance result is 35.0% which is not much different from the expected value of 35.7%. This shows that the minimum unidimensional requirement of 20% has been fulfilled based on criteria (Linacre, 2011). The results of the unexplained variance of all (1st to 5th) are below 15% which shows that the level of independence of items in the instrument is good. Therefore, this result states that the unidimensional requirements which illustrates what this instrument measured, such as the Psychological Well-Being of adolescents living with violent parents are measured.

Item Validity

The measure item reveals a statistical fit, with the parameters used to show the match between infit and outfit from the mean square using a middle squared value of 1.0 or the ideal range 0.5 > MNSQ < 1.5, Z-standardized values with a square value of 0.0 or with an ideal range of -2.0 > ZSTD < +2.0 (Bond, Fox, & Lacey, 2007; Boone, Staver, & Yale, 2013; Sumintono & Widhiarso, 2015) and Point Measure Correlation (Pt Measure Corr) with a value range of 0.4 < Pt Measure Corr < 0.85 (Sumintono & Widhiarso, 2015). A more detailed information is seen in table 2.

Table 2. Item Statistic (Outfit MNSQ, Outfit ZSTD, Pt Measure Corr)

No	Number of Item	Construct Item	Outfit MNSQ	Outfit ZSTD	PT Measure Corr	Inform.
Self Acceptance						
1	15	Remain grateful even though the family is not harmonious	1.84	2.8	.33	Not used
2	17	Keep listening to other people's talk about parents	1.71	2.4	.06	Not used
3	33	Aware of the shortcomings that are owned, including family conditions	1.07	.4	.26	Used
4	16	Able to understand other people's talk on family	1.20	.9	.39	Used
5	18	Parental fights at home do not interfere with well-being	1.00	.1	.22	Used
6	34	Feel worthy of being treated well by others	.77	-1.0	.30	Used
7	1	Learn many things about life	.64	-1.4	.43	Used
8	19	Parenting patterns make adults mature to face problems	1.43	1.7	.44	Used
9	35	Accepting family conditions that are being experienced	1.11	.5	.44	Used
Positive Relations With Others						
10	2	Easily familiar with new people	1.32	1.3	.21	Used
11	20	Speak well to others even when they are angry	1.14	.6	.69	Used
12	36	Parents motivate to care for friends that are suffering	.77	-9	.46	Used
13	3	Confidence in establishing closeness with other people	.68	-1.4	.29	Used
14	21	With the present conditions, it's normal to be friends with anyone	.78	-9	.63	Used
15	37	Take pleasure in seeing others happy	.68	-1.3	.49	Used
16	42	Friendships last a long time even though family conditions are problematic	.86	-5	.57	Used
17	4	Participate in activities carried out in the home environment	1.20	.9	.39	Used
18	22	Parents participate in every activity that	1.25	1.1	.44	Used

		requires their presence				
19	38	Opinions are heard during classroom activities.	1.43	1.7	.44	Used
Autonomy						
20	5	Plan something that is carried out, thanks to parental support	1.14	.6	.69	Used
21	23	Capable of carrying out plans made even though they are constrained by costs	.63	-1.7	.67	Used
22	39	Keep expressing opinions despite conflicting with the opinions of many people	.79	-.9	.54	Used
23	43	Not affected by mockery and ridicule about family	1.38	1.5	.44	Used
24	6	Able to make decisions without being influenced by others	1.13	.6	.30	Used
25	24	Feel proud of parents and help in choosing and making independent decisions	.83	-.6	.65	Used
26	40	Look for various information before making a decision	.50	-2.4	.72	Used
27	7	Ask the opinions of close friends people on family conditions	1.93	3.1	-.01	Not used
28	25	Think of the good and bad ways of solving family problems	.75	-1.0	.58	Used
29	41	Able to determine a way out of every problem	.73	-1.2	.51	Used
Purpose in Life						
30	8	Ensure the family is better before fixing	.88	-.4	.39	Used
31	26	Have life goals	.63	-1.2	.70	Outlier (Not Used)
32	44	Trying to improve self competence	.86	-.5	.57	Used
33	9	Able to live life well despite parental problems	1.07	.4	.26	Used
34	27	The current family condition is a valuable lesson for	.77	-.9	.63	Used
35	45	Gained a lot of experience while trying to help improve family conditions	.67	-1.4	.60	Used
Personal Growth						
36	10	Able to socialize with other people	.50	-2.5	.68	Used
37	28	Family circumstances make a useful experience in future	.59	-1.8	.46	Used
38	46	Receive input from friends to help improve family conditions	1.76	2.6	.31	Not used
39	11	Love to learn many positive things	.45	-2.5	.69	Not used
40	29	Determined to make parents proud	1.52	1.7	.26	Not used
41	47	Looking for additional income to help the family income	1.26	1.1	.49	Used
Environmental Mastery						
42	12	Able to avoid people that make you uncomfortable	.77	-.9	.46	Used
43	30	Capable of carrying out activities , even though there are a lot of distractions	1.00	.1	.41	Used
44	48	Able to study properly despite the poor learning facilities	1.01	.1	.49	Used
45	13	Accepted in friendship groups despite knowing about family conditions	2.07	3.5	.17	Not used
46	31	Understand the treatment of classrooms	1.15	.7	.25	Used
47	49	Try not to be emotional assuming your friend alludes to the conditions at home	1.18	.8	.51	Used
48	14	Complete the tasks given by the teacher despite living in an non-conducive environment	.92	-.3	.57	Used
49	32	Able to study well at home even irrespective of any form of interference	.56	-2.0	.52	Used
50	50	Keep trying to make the task as good as possible to acquire good grades	.91	-.2	.55	Used

Table 2 shows that 5 items were misfit because MNSQ and ZSTD outfits its value, while the PT Measure Correlation passed the ideal range, of 7, 13, 15, 17, 46. Furthermore, item 11 is misfit because its MNSQ and ZSTD passed the ideal range. Item number 29 MNSQ outfit misfit, while the PT Measure Correlation passed the ideal range. Furthermore, the MNSQ, and ZSTD outfit along with the PT Measure Correlation items, each passes through the ideal range. Therefore, items are maintained because they are still very good at measuring the psychological well-being of students. Based on explanation, the items considered not to be used numbers 7, 11, 13, 15, 17, 29 and 46.

Person Validity

The determination and validity of respondent instruments using variable maps shows the distribution and ability of respondents on the left and the distribution of difficulty levels of items on the right (Sumintono & Widhiarso, 2015). This is seen in Figure 1.

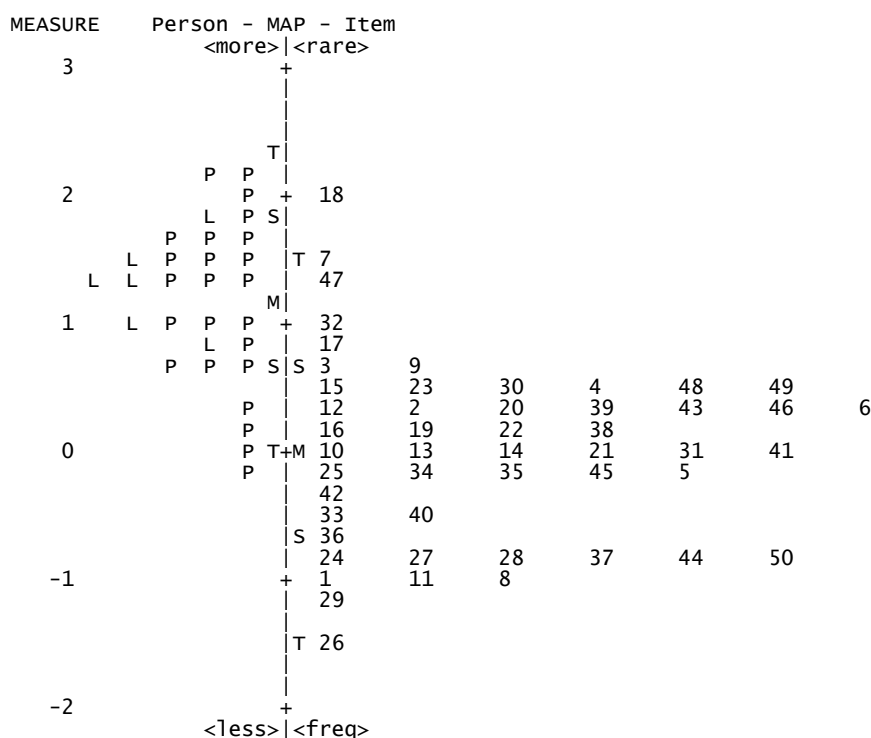


Figure 1. Person Map

Based on Figure 1, the first left wright map shows that there are three students (women) with higher level of ability (more than +2 logit). While the lowest level of respondent's ability is below 0 logit which shows that their respondent's ability to answer questions is high. Secondly, on the right wright map explains the distribution of item logit values, with item 18 having the highest difficulty level (+2.04 logit), conducted by 3 students with the above ability (+2 logit) which means that students have the probability to work on this problem correctly. Meanwhile, item number 26 is a problem that almost all students tend to carry out correctly, a low logit value (-1.49 logit) or means that the question is too easy compared to the respondent's ability. It quotes that students have goals in life. Thirdly, comparing the distance between M-S-T (mean, 1SD and 2SD) in the variable maps above shows that on the left side of the map the distribution of students' ability is smaller than the level of item effectiveness on the right. In this context a person's ability shows little diversity compared to items. This means that the level of ability of respondents in working on instruments is high, which means that the instrument tends to measure the ability high, medium and low respondents. In conclusion, based on the results of misfit items and a person's ability, 8 items were aborted, namely 7, 11, 13, 15, 17, 26, 29 and 46.

Reliability

Reliability means the consistency or stability of a measurement instrument. The information on the reliability of people and items is seen in the summary statistics in table 3.

Table 3. Summary of 30 Measured Person

	TOTAL		MEASURE	MODEL	INFIT		OUTFIT	
	SCORE	COUNT		S.E.	MNSQ	ZSTD	MNSQ	ZSTD
MEAN	191.1	50.0	1.20	.19	1.04	-.1	1.00	-.3
P.SD	18.6	.0	.61	.01	.49	2.3	.45	2.2
S.SD	18.9	.0	.62	.01	.50	2.4	.46	2.3
MAX.	219.0	50.0	2.23	.22	2.33	5.1	2.14	4.6
MIN.	145.0	50.0	-.21	.17	.35	-4.6	.34	-4.7
REAL RMSE	.21	TRUE SD	.57	SEPARATION	2.78	Person	RELIABILITY	.89
MODEL RMSE	.19	TRUE SD	.58	SEPARATION	3.10	Person	RELIABILITY	.91
S.E. OF Person MEAN = .11								

Person RAW SCORE-TO-MEASURE CORRELATION = 1.00

CRONBACH ALPHA (KR-20) Person RAW SCORE "TEST" RELIABILITY = .91 SEM = 5.47

Table 4. Summary of 50 Measured Item

	TOTAL		MEASURE	MODEL	INFIT		OUTFIT	
	SCORE	COUNT		S.E.	MNSQ	ZSTD	MNSQ	ZSTD
MEAN	114.7	30.0	.00	.24	.98	-.2	1.00	-.1
P.SD	12.9	.0	.72	.02	.39	1.5	.39	1.5
S.SD	13.0	.0	.72	.02	.40	1.5	.40	1.5
MAX.	137.0	30.0	2.04	.32	2.00	3.3	2.07	3.5
MIN.	73.0	30.0	-1.49	.21	.41	-2.8	.45	-2.5
REAL RMSE	.26	TRUE SD	.67	SEPARATION	2.58	Item	RELIABILITY	.87
MODEL RMSE	.24	TRUE SD	.67	SEPARATION	2.78	Item	RELIABILITY	.89
S.E. OF Item MEAN = .10								

Item RAW SCORE-TO-MEASURE CORRELATION = -.99

The table 3 can be simplified as shown in table 5.

Table 5. Summary Statistics Measured Person and Item

Summary Measured	Statistics	Measure	MNSQ		Reliability	Cronbach Alpha (KR-20)
			INFIT	OUTFIT		
Measured Person		1.20	1.04	1.00	.91	.91
Measured Item		.00	.98	1.00	.89	

Table 4 shows that the mean values of 30 and 50 people are 1.20 and .00 respectively, which is above the mean item. Furthermore, their reliability scores are .91 and .9, which shows that the quality of the answers provided by the respondent is excellent and the quality of the items used in the measurement is also good. The cronbach alpha value (KR-20) is .91 which indicates that the interaction between people and item is good. Besides that, the sensitivity value of people + 1.04 logit (INFIT MNSQ) answer pattern and the sensitivity value is +1.00 logit (MNSQ OUTFIT). While the item has a +.98 logit (INFIT MNSQ) sensitivity value with an overall value of +1.00 logit (MNSQ OUTFIT) which indicate that it is still in the

ideal range ($+0.5 > MNSQ < +1.5$) (Sumintono & Widhiarso, 2015). This shows that the items have a very good quality for the conditions of measurement performed (Bond & Christine M. Fox, 2015; Boone et al., 2013; Sumintono & Wahyu Widhiarso, 2015) which indicates that 30 people are serious in working on the instrument.

Conclusions

This instrument meets the validity and reliability requirements of, both item and individuals. A total of 8 items were considered misfit while 7, 11, 13, 15, 17, 26, 29 and 46 were utilized.

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References

- Afdal, A. (2015). Pemanfaatan Konseling Keluarga Eksperensial untuk Penyelesaian Kasus Kekerasan dalam Rumah Tangga. *Jurnal EDUCATIO: Jurnal Pendidikan Indonesia*, 1(1).
- Alizamar, A., Ifdil, I., Fadli, R. P., Erwinda, L., Zola, N., Churnia, E., ... Rangka, I. B. (2018). The Effectiveness of Hypnotherapy in Reducing Stress Levels. *Addictive Disorders & Their Treatment*, 17(4), 191–195.
- Anderson, D. K., & Saunders, D. G. (2003). Leaving an abusive partner: An empirical review of predictors, the process of leaving, and psychological well-being. *Trauma, Violence, & Abuse*, 4(2), 163–191.
- Anggraeni, R. D. (2013). Dampak Kekerasan Anak Dalam Rumah Tangga. *Artikel Ilmiah Hasil Penelitian Mahasiswa*, 1(1).
- Anjani, S. D. (2016). *Penegakan hukum tindak pidana kekerasan dalam rumah tangga dengan menggunakan konsep hukum progresif (studi kasus pada Polsek Natar)*. Universitas Lampung.
- Avdibegovic, E., Brkic, M., & Sinanovic, O. (2017). Emotional profile of women victims of domestic violence. *Materia Socio-Medica*, 29(2), 109.
- Azriana, Chuzaifah, Y., Nurherwati, S., Indraswari, & Amiruddin, M. (2017). *Lembar fakta catatan tahunan (catahu) 2016: Kekerasan terhadap perempuan meluas: Mendesak negara hadir hentikan kekerasan terhadap perempuan di ranah domestik, komunitas dan negara*. Jakarta.
- Berg, N., Kiviruusu, O., Karvonen, S., Rahkonen, O., & Huurre, T. (2017). Pathways from problems in adolescent family relationships to midlife mental health via early adulthood disadvantages—a 26-year longitudinal study. *PLoS One*, 12(5), e0178136.
- Bond, T. G., & Christine M. Fox. (2015). *Applying the Rasch Model Fundamental Measurement in the Human Sciences Third Edition*. New York: Routledge Taylor and Francis Group.
- Bond, T. G., Fox, C. M., & Lacey, H. (2007). Applying the Rasch model: Fundamental measurement. *In the Social Sciences (2nd)*. Citeseer.
- Boone, W. J., Staver, J. R., & Yale, M. S. (2013). *Rasch analysis in the human sciences*. Springer.
- Borneo, J. (2016). Analisis kriminologi terhadap kekerasan dalam rumah tangga di kecamatan Pontianak Utara. *Jurnal Hukum Prodi Ilmu Hukum Fakultas Hukum Untan (Jurnal Mahasiswa S1 Fakultas Hukum) Universitas Tanjungpura*, 4(3).
- Callaghan, J. E. M., Alexander, J. H., Sixsmith, J., & Fellin, L. C. (2018). Beyond “witnessing”: Children’s experiences of coercive control in domestic violence and abuse. *Journal of Interpersonal Violence*, 33(10), 1551–1581.
- Callahan, M. R., Tolman, R. M., & Saunders, D. G. (2003). Adolescent dating violence victimization and psychological well-being. *Journal of Adolescent Research*, 18(6), 664–681.
- Cantos, A. L., Goldstein, D. A., Brenner, L., O’Leary, K. D., & Verborg, R. (2015). Correlates and program completion of family only and generally violent perpetrators of intimate partner violence. *Behavioral Psychology/Psicologia Conductual*, 23(3).
- Cook, A., Spinazzola, J., Ford, J., Lanktree, C., Blaustein, M., Cloitre, M., ... Liataud, J. (2017).

- Complex trauma in children and adolescents. *Psychiatric Annals*, 35(5), 390–398.
- Cunha, O. S., & Goncalves, R. A. (2016). Severe and less severe intimate partner violence: From characterization to prediction. *Violence and Victims*, 31(2), 235–250.
- Espinoza, R. C., & Warner, D. (2016). Where do we go from here?: Examining intimate partner violence by bringing male victims, female perpetrators, and psychological sciences into the fold. *Journal of Family Violence*, 31(8), 959–966.
- Ham-Rowbottom, K. A., Gordon, E. E., Jarvis, K. L., & Novaco, R. W. (2005). Life constraints and psychological well-being of domestic violence shelter graduates. *Journal of Family Violence*, 20(2), 109–121.
- Herzberger, S. D. (2019). *Violence within the family: Social psychological perspectives*. Routledge.
- Katz, E. (2016). Beyond the physical incident model: How children living with domestic violence are harmed by and resist regimes of coercive control. *Child Abuse Review*, 25(1), 46–59.
- Kimball, E. (2016). Edleson revisited: Reviewing children's witnessing of domestic violence 15 years later. *Journal of Family Violence*, 31(5), 625–637.
- Kurniawan, M. I. (2015). Tri Pusat Pendidikan Sebagai Sarana Pendidikan Karakter Anak Sekolah Dasar. *PEDAGOGIA: Jurnal Pendidikan*, 4(1), 41–49.
- Linacre, J. M. (2011). *A user's guide to Winsteps-Ministep: rasch-model computer programs*. Chicago, IL: Winsteps.com.
- Lindeblad, E., Svensson, I., & Gustafson, S. (2016). Self-concepts and psychological well-being assessed by Beck Youth Inventory among pupils with reading difficulties. *Reading Psychology*, 37(3), 449–469.
- López-Torres Hidalgo, J., Bravo, B. N., Martínez, I. P., Pretel, F. A., Postigo, J. M. L., & Rabadán, F. E. (2010). Psychological Well-Being, Assessment Tools and Related Factors. *Psychological Well-Being (Edited by Ingrid E. Wells)*. Hauppauge: Nova Science Publishers, 77–113.
- Mardiyati, I. (2015). Dampak Trauma Kekerasan Dalam Rumah Tangga Terhadap Perkembangan Psikis Anak. *Raheema*, 2(1).
- Mcmurran, M., & Gilchrist, E. (2008). Anger control and alcohol use: Appropriate interventions for perpetrators of domestic violence? *Psychology, Crime & Law*, 14(2), 107–116.
- Megawati, E., & Megawati, E. (2015). *Hubungan antara perilaku prososial dengan psychological well-being pada remaja*. Universitas Udayana.
- Merung, P. V. (2016). Kajian Kriminologi Terhadap Upaya Penanganan Kasus Kekerasan Dalam Rumah Tangga (KDRT) Di Indonesia. *Veritas et Justitia*, 2(2), 397–423.
- Montgomery, E., Just-Østergaard, E., & Jervelund, S. S. (2019). Transmitting trauma: a systematic review of the risk of child abuse perpetrated by parents exposed to traumatic events. *International Journal of Public Health*, 64(2), 241–251.
- Nasution, M. S. (2018, March 8). Kekerasan terhadap perempuan di Padang didominasi KDRT. *Antara Sumbar*.
- Novianti, I. (2008). Fenomena kekerasan di lingkungan pendidikan. *Insania*, 13(2), 324–338.
- Perkins, C., Wood, L., Varjas, K., & Vanegas, G. (2016). Psychological well-being of children and youth in Mexico. In *International Handbook of Psychological Well-Being in Children and Adolescents* (pp. 115–135). Springer.
- Rasool, S. (2016). Help-seeking after domestic violence: the critical role of children. *Journal of Interpersonal Violence*, 31(9), 1661–1686.
- Redaksi. (2018). Banyaknya Permasalahan Keluarga Membuat LK3 Padang Pariaman Prihatin. *Berita Sumbar*. Retrieved from <http://beritasumbar.com/banyaknya-permasalahan-keluarga-membuat-lk3-padang-pariaman-prihatin/>
- Roberson, C., & Wallace, P. H. (2016). *Family violence: Legal, medical, and social perspectives*. Routledge.
- Ryff, C. D. (1984). Personality development from the inside: The subjective experience of change in adulthood and aging. *Life-Span Development and Behavior*, 6, 243–279.
- Ryff, C. D., & Singer, B. H. (2008). Know thyself and become what you are: A eudaimonic approach to psychological well-being. *Journal of Happiness Studies*, 9(1), 13–39.
- Sumintono, B., & Wahyu Widhiarso. (2015). *Aplikasi Pemodelan Rasch pada Assesment Pendidikan*. Cimahi: Trim Komunikata Publishing House.
- Sumintono, B., & Widhiarso, W. (2015). *Aplikasi pemodelan rasch pada assessment pendidikan*. Trim Komunikata.
- Tolman, R. M., & Rosen, D. (2001). Domestic violence in the lives of women receiving welfare: Mental

- health, substance dependence, and economic well-being. *Violence against Women*, 7(2), 141–158.
- Tseng, W.-S., & Hsu, J. (2018). *Culture and family: Problems and therapy*. Routledge.
- Tutwiler, S. J. W. (2017). *Teachers as collaborative partners: Working with diverse families and communities*. Routledge.
- Ulloa, E. C., & Hammett, J. F. (2016). The effect of gender and perpetrator–victim role on mental health outcomes and risk behaviors associated with intimate partner violence. *Journal of Interpersonal Violence*, 31(7), 1184–1207.
- Utama Hs, A. (2017). *Hak-hak istri siri yang mengalami kekerasan dalam rumah tangga (KDRT) perspektif Undang-Undang No 23 Tahun 2004 Tentang Penghapusan Kekerasan Dalam Rumah Tangga (UU PKDRT)*. UIN Sunan Ampel Surabaya.
- Vameghi, R., Akbari, S. A. A., Majd, H. A., Sajedi, F., & Sajjadi, H. (2018). The comparison of socioeconomic status, perceived social support and mental status in women of reproductive age experiencing and not experiencing domestic violence in Iran. *Journal of Injury and Violence Research*, 10(1), 35.
- Van der Kolk, B. A. (2017). Developmental trauma disorder: toward a rational diagnosis for children with complex trauma histories. *Psychiatric Annals*, 35(5), 401–408.
- Victor, B. G., Grogan-Kaylor, A., Ryan, J. P., Perron, B. E., & Gilbert, T. T. (2018). Domestic violence, parental substance misuse and the decision to substantiate child maltreatment. *Child Abuse & Neglect*, 79, 31–41.
- White, M. E., & Satyen, L. (2015). Cross-cultural differences in intimate partner violence and depression: A systematic review. *Aggression and Violent Behavior*, 24, 120–130.
- Zola, N., Fadli, R. P., & Ifdil, I. (2018). Chromotherapy to reducing stress. *OSF Preprints*, 26.

Modifying the implementation of group guidance service for improving the quality of guidance and counseling services to school students

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Abstract

The aim of this research was to analyze and interpret previous studies on the modification of group guidance service implementation, using a qualitative approach that involves case study's strategies. The findings showed that the average score results of implementing group guidance with modification has better score than without guidance. The suggestions recommended for developing discipline learning include the adoption of bibliotherapy in enhancing self-concept. Meanwhile, other modifications were conducted through Role Playing to improve self-adaptation, the study of the Holy Al-Qur'an verses for motivation, Audio Visual Media for self concept, Assertive Training for interpersonal communication, REBT to eliminate fear, Modeling to improve Self Efficacy, and Reality Counseling was performed to develop self-adaptation. In addition, it is hoped that Guidance and Counseling teachers/Counselors recuperate the quality of service with the implementation of group guidance service through several modifications.

Keywords: Counseling modification, guidance and counseling service, group guidance

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Introduction

There is a need for services that help solve a variety of students' problems in the current era, which is attainable through the modification of guidance and counseling services. This practice is necessary to improve the skills required by the counselor, hence the study is inspired by the desire to reveal several findings that have previously been covered by previews of studies by college students. The results of instrument implementation through observation, interview, teacher's subject report and class, as well as documentation study, instigate the need for guidance and counseling service, which plays an important role in the development process. This is also related with the function of understanding, placing and delivering, development and problem solving in all aspects, utilizing group guidance.

Nursihan (2003:31) reported group guidance as a form of service for individual students conducted in a group situation, while Prayitno (2012:149) reported on its propensity to lead dynamical groups towards discussions on several beneficial aspects that enhance the progress of members. This implementation is expected to prevent and effectively solve potential problems, emphasising on activation and dynamization, while the role of a group leader is important in controlling activities. In addition, numerous studies have been conducted in post graduate programs in relation with the modifications needed for completing studies on the implementation of group guidance service, Guidance and Counseling

program, Educational Program, and UNP. These further explained the advantages and subjective preference of execution with modification, as against without.

Group guidance service with modification immerses several techniques, including role playing, bibliography, audio visual, and suggestion. With reference to results on previews studies, the nature of techniques adopted served as a source of variation in effectiveness of modifications towards solving individual problems. Group guidance service helps school students to develop a personality, social relation ability, learning activity, job/position and decision making, and also the conduction of a particular activity through dynamical groups. This is practiced where either the service is preferred for school or its implementation is beneficial, on the basis that once service covers several school students.

There are sets of materials that needs to be conveyed, hence the need for a modification in the implementation service, which is attainable through the limitation of (1) time from teacher of guidance and counseling/counselor during effective hours, (2) existential of counselor rather than school students (at a ratio of 1 counsellor/teacher of guidance and counseling: 150 students), and (3) the demand developing quality services. Furthermore, advancements in each of these areas is necessary for improving the quality of guidance and counseling service, while several considerations and arguments contribute towards supporting the importance of this research.

Method

This research was conducted through a qualitative approach, using case study, and a collection of previous findings obtained from post graduate students. These served as a basis for deep investigation needed to ascertain the several modifications performed, how they occurred and why, nature of the results, degree of effectiveness, and possibilities of futuristic implementation. Furthermore, modifications in implementing group guidance service were previously conducted on the data obtained, which was followed by analysis using the following steps that evaluate their results description, through a particular modification, including: (1) common activity, (2) specific activity, (3) concluded events /phenomenon, (4) dynamical group present, and (5) results of the group guidance event. Therefore, the opinion on the situation was explained, and the data cited in the form of document reports, with descriptions written in details, concerning attitude/behavior amongst group members. This was initiated with the process that points out the perception of an outcome, as well as an enriched illustration with other related theories, which was followed by the conduction of triangulation with lectures on group guidance subject, and thesis guidance, based on a particular modification. During the activities, the phenomenon from an interlinked group members' perspective were comprehended and the data were related with the context interpreted, followed by the collection, development, interpretation, classification, grouping, deep analysis, drawing conclusion, and establishing theories, based on the evidences available.

Results and Discussions

Results

The current research discusses nine results of previews studies, which include: Misda Fitri (2015) used 5 commons steps to conduct a study on group guidance, which include building, changing, activity, conclusion and finishing. Furthermore, the average pretest score for the experimental group was 80.4, which increased to 115.5 after the treatment, alongside suggestions. Meanwhile, the control group had a value of 80.3, which became 92.2 after the provision of group guidance service without suggestion within a few meeting. Despite the shortcomings, the control group was observed to have developed in discipline, which was lesser than the experiment. This practice was, therefore, assumed to confer a better influence on the development of discipline amongst school students.

Erdawati, (2015) conducted a similar study using 5 common steps, encompassing building, changing, activity, conclusion and finishing. The results showed the development in the aspect of self-concept amongst those provided with group guidance, using bibliotherapy as a modification, which appreciated from an average pretest score of 86.88 to 163.44. In addition, the control group had a value of 86.11, which further increased to 119.88. Based on analysis, the development of personal concepts through the use of bibliotherapy is seen to be relatively better.

Yogi Damai Syaputra, (2016) conducted group guidance through role playing modification technique, adopting the 5 related steps. The results revealed an average score of personal adaptation from control group students (pretest) of 86.6, which increased to 116.9 (posttest), while the value obtained for the experiment group was 85.9 and 135.4 for pretest and posttest, respectively. This indicates an elevation in the ability for personal adaptation amongst participating members, where role playing technique lead to strong feelings about the problems faced currently.

Dyla Fajhriani. N, (2016) conducted group guidance using the verse holy Qur'an in the five related steps, through the modification of topics discussed, associated with the aim of developing learning motivation. Furthermore, group members were provided with the opportunity to explore holy Qur'an verses based on related topics, and the results show an average pretest score of 104.38 for the experiment group, while the control was 105.75. Conversely, the posttest values were better at 144.25, and 199.13, respectively, with the exhibition of similarities in their progress, although the experimental group was relatively better. This practice was, therefore, concluded to be highly effective in the process of developing learning motivations.

Fery Anggara, (2016) conducted a study on group guidance using the steps of building, changing, activity, conclusion and finishing, with the nature of the leader as the modification parameter. This involved the invitation of 3 figure models (participant modeling), ordered to assist in topic discussions, speak out on what is thought, and also perceived in wider situations and in related conditions. The study by Fery Anggara runs through a single experiment group, and the result shows an increase in the score of self-efficacy amongst school students at 31.66. Meanwhile, the value for posttest on self-efficacy further developed, characterized by an elevation in the level of effectiveness while facing examinations. In addition, the pretest score was 126.00, which increased to 157.66 after the treatment (modeling), indicating a rise in self-efficacy after the reception of group guidance services through modification modelling.

Hayu Stevani, (2016) reported on the performance of group guidance in four steps, which include building, changing, followed by activity, and finishing, which specifically served as the modification. In addition to the topic discussion, 6 sections of its activities related to REBT theory were conducted, encompassing the ABCD model (Avent, Belief, Consequence, dispute, Effective). The finishing step was characterized by the provision of group members with related homework assignments, where the results showed a decline in the scores for anxiety in the experimental group after guidance treatment alongside Rational Emotive Behavior Therapy. This practice was compensatory, with an average value of 136.1, subsequently placed in the middle category, while the posttest value of 111.5 is classified as low, further indicating a reduction in the anxiety to speak in front of a class.

Siti Muyana, (2016) performed a study on group guidance through four steps, including building, changing, activity, and finishing, where the modification parameter of audio visual media was used to enhance the self-concept of school students. Furthermore, the group leaders played a video that correlates with the discussed topic in the form of an audio visual representation.

The pretest average score of the control group in terms of self-concept was 100.44, which was classified in the less category, encompassing participants that enrolled for treatment through group guidance only. Furthermore, the posttest score obtained was 113.56, which was preferred to the previous value, and classified in the middle category. Meanwhile, the experiment group was 100.89 (less category), and following the enrollment for treatment with audio visual media modification, the posttest score became 124.78 (good category). The result further showed the existence of differences in self-concepts between enrolled group members with audio visual media and others.

Kiki Mariah, (2016) conducted a study on group guidance through five steps, encompassing building, changing, activity, conclusion, and finishing, and the modification adopted during its implementation was the reality counseling approach. The result showed an improvement in the score for self-adaptation of 28.58, based on the pretest and posttest values of 138.25 and 166.83 (well category), respectively. Meanwhile, the score after treatment of self-adaptation was significant, and more effectively enhanced by the school environment, leading to the possible conclusion that practicing group guidance service through counseling reality approach is more effective in the development of self-adaptation.

Kristinus Sembiring, (2016) studied group guidance with four steps, including building, changing, activity, and finishing, applying the modification tool of Assertiveness Training technique through role playing. In the control group, the average pretest score was 169.0 (very less category), which increased to 189.3 (less category), while the value from the experiment group was 172.4 (very less category), which increased to 238.8 (high category), known to subsequently improve interpersonal communication ability. This particularly caused an increase in comparison with the control group, indicating the propensity of a greater impact towards the promotion of students' interpersonal ability.

Summary of Results

There are previous presentations on the explanations of the results for each study modification. However, the ease of checking the quality of guidance and counseling services developed through group guidance modifications required the summary presentation of the comparison between pretest and posttest control and experiment group as seen below:

Table 1. Comparison between Pretest and Posttest with the use of Non Equivalent Control Group Planning

No	Modification	Control Group		Experiment Group	
		Pretest	Posttest	Pretest	posttest
1.	Power in developing learning discipline	80,3	92,2	80,4	115,5
2.	<i>Bibliotherapy</i> in developing self-concept	86,11	119,88	86,88	163,44
3.	<i>Role Playing</i> in developing self-adaptation	86,6	116,9	85,9	135,4
4.	Verse of Holy Qur'an in developing learning motivation	105,75	119,13	104,38	144,25
5.	Audio Visual Media in developing self-concept	100,44	113,56	100,89	124,78
6.	<i>Assertive Training</i> in developing interpersonal communication	169,0	189,3	172,4	238,8

As illustrated in table 1, the development of results from the control and experiment group involved the adoption of group guidance, although the level of significance was revealed through the use of several particular modifications. This is characterized by the higher effectiveness in developing several abilities.

Table 2. Comparison between Pretest and Posttest with the use of One Group Pretest-Posttest Design planning

No	Modification	Experiment Group	
		Pretest	Posttest
1	<i>REBT</i> to solve anxiety	136.1	111.5
2	<i>Modeling</i> to develop self-efficacy	126.00	157.7
3	Counseling Reality to enhance self-adaptation	138.25	166.8

Table 2 shows information that indicates the effectiveness of group guidance through the use of several specific modifications in developing a variety of abilities, including the elimination of anxiety, without the immersion of control group.

Discussion

Group Guidance with the Use of Modification Suggestion

The study by Fitri, (2015) titled “the Effectiveness of Group Guidance Service in Developing Learning Discipline for School Students with the Use of Modification Suggestion” revealed the comparably greater achievement in learning discipline at the experiment group after an enrollment for the guidance service. This was in line with the findings of Fijriani (2012) which conducted a study termed “Effectiveness of Implementing Suggestion in Group Guidance Service to Develop Self Esteem for School

Students". The result demonstrated the effectiveness of executing the adoption of suggestion while performing group guidance services through the development of student's self esteem, and also known as an important research benefit, obtained through the conveyance of words and motivation. Furthermore, this practice stimulates other aspects intended for development, especially those in line with discipline.

Group Guidance with the Use of Modification Bibliotherapy

Numerous studies have shown the capacity for group guidance modified with *bibliotherapy* to effectively develop student self-concept. Erdawati (2015) on the study termed "Effectiveness of Group Guidance Service with the Use of Modification *Bibliotherapy* to develop self-concept", reported on the improved average *posttest* score amongst enrolled students over the control group. This was also in line with the study by Solikin (2015:154), which affiliates the reading activity of *bibliotherapy* with student age, inside therapy, and therapy, followed by a discussion related to real problems acquired in the environment. Hence, an enhanced effectiveness in the development of self-concept is confirmed.

Group Guidance with the Use of Role Playing

The result of a study by Syaputra (2016) in the report titled "Effectiveness of Group Guidance Service with the Use of Role Playing as a modification Technique in the Development of Self-Adaptation amongst School Students" showed an enhancement in school students' ability to adapt in the environment. This was a continual process, characterized by the need for self-adaptation, hence students were invited to address personal interactions and communications, provide opinions and ideas, and also think through the process of role playing. Therefore, they were observed to have successfully controlled and managed personal emotions and face frustrations, and also adopt objective and realistic applications, collectively identified as characteristics of positive self-adaptation.

This finding is in line with the opinion of Syah (2010:193), which demonstrated role playing as an effort to solve problems, especially with regards to social live, including self - adaptation on an action. Flora (2014:37) reported on the aspect of role playing, which hopefully affiliates students with a case, characterized by the development of thought processes and desires, despite the provision of preferred achievements on an interpersonal level. This was related to the study outcomes demonstrating the contribution of group guidance and the use of role playing technique for eliminating the act of bullying in the academic years 2012/2013.

Results of the study by Fatimah (2015:28) designed a modification that required the use of role playing technique, and the results proved an enhanced effectiveness of self-efficacy. Others, including the differences in gains scores scale before and after treatment, indicate the observation of significant development, and after the participants enrollment the treatment category demonstrated better values. Meanwhile, counselors possibly used this model as a pathway for services, subsequently assisting the Junior High School student to obtain self-efficacy.

Group Guidance with the Use of Modeling Modification

A study conducted by Anggara (2016) using 1 experiment group showed an increase in student score for self-efficacy, which effectively developed from the *pretest* value in the aspect of facing examination, especially for those that enrolled to use the *modeling* modification. A study by Astuti (2015) titled "the implementation of group guidance using a modeling technique in the development of autonomous learning for students" showed a positive ability. In summary, the utility of group guidance techniques combined with modeling modification was observed to more effectively ensure an upgrade in self-efficacy and autonomy.

Group Guidance with the Use of Holy Qur'an verses

Results from the study by Fajhriani N, (2016), titled "the Effectiveness of Group Guidance Service with the use of Verse of Holy Qur'an to develop learning Motivation of School Students," showed the development of learning motivation in both experiment and control group after treatment, which was better expressed in the experimental group. Furthermore, this approach was concluded to be effective in the development of learning motivations.

This finding is supported by the study of Gudnanto, dkk (2013:18), where the model of islamic guidance and counseling used to develop self-concept was designed on the basis of Islamic concept in the aspect of Al-Qur'an and Circumcision. Gudnanto, dkk (2013:24) argued about the recommendation of religious group guidance model, and its differentiation from others, which is due to the assumption that

Al-Qur'an is God's word transferred to prophet Muhammad SAW and written in papers. This was performed narratively from one person to another over the generations, and also by those that read its verse during worship. Furthermore, the existence enables each Muslim to reach a perfection of live in the world and eternity, and also serves as a guide during decision making, in order to be distinct from other creatures and obtain the blessings of Allah SWT. Moreover, Hadits consists of several words, attitudes, determinations and agreements of the Prophet, which has turned into laws in the Islamic religion, while Stapa, Yusuf, and Shaharudin (2012:14) argued about the potential for "Al-Qur'an to provide knowledge, achievement, and development through God's permission. Hence, group guidance using verses of Al-Quran was an effective approach in the development of learning motivation.

Group Guidance with the Use of REBT (Rational Emotive Behavior Therapy) Modification

The results of a study from (2016) about "the Effectiveness of Group Guidance Service with the Use of Rational Emotive Behavior Therapy Modification Approach to Solve Anxiety of College Student" showed a decrease in the anxiety score of the experiment group after receiving the treatment of group guidance service, utilizing the Rational Emotive Behavior Therapy approach. Moreover, the result of a study by Suhendri, dkk, (2012) about "the Effectiveness of Rational-Emotive Group Counseling to Help School students Eliminate Their Anxiety in Facing Examination" demonstrated the effectiveness of this approach. Therefore, the basic concept indicates that humans exist with the potential of either to think rationally and be honest, or irrationally and bad. Also, they tend to possess the desire of self-maintenance, alongside thinking, speaking, loving, the creation of interactions with others, growth and personal actualization, Corey (2009:238). Corey in Ellis (2006:463) further concluded that humans speak, evaluate, and force themselves.

Sugiharto (2005:17) reported on the inspiration of wrong attitude perspective approach by means of irrational thinking during rational emotive counseling. Hence, a single person is unable to think sensibly, resulting from the inability to reason clearly about current and future times, as well as reality and imagination. This leads to a dependence on what others think, which is a tendency possessed by parent and the society, subsequently transferred through several media. The aim of counseling, therefore, is to repair the attitude, perception, the thought process, belief and also improve a clients' irrational and non-logic views into rational and logical forms, in order to ensure personal enhancement, and improve self-actualization through positive cognitive and affective attitude. Moreover, destructive emotional problems are also eliminated, encompassing the sense of anxiety, guilty, sinfulness, worry, hesitance, and anger.

This finding is supported by the study of Yahya & Mustaffa (2012) entitled "the Application Of Rational Emotive Behaviour Therapy In Addressing The Problems Of Bullying at School: A Case Study. Malaysia: Fakulti Pendidikan, Universiti Teknologi Malaysia" which revealed the effectiveness of implementing REBT towards the elimination of bullying problems in schools. Furthermore, a study by Alabi dan Lami (2015), titled "Efficacy of Client-Centred (CCT) and Rational Emotive Behavior Therapies (REBT) in Reducing Bullying Behaviour Amongst School Adolescents in Ilorin, Nigeria", proved the applicability of CCT and REBT counselling approach. In summary, it is concluded that group guidance through REBT modification is an effective technique in the compensation and provision of solutions to the problem of anxiety amongst school students.

Group Guidance with the Use of Audio Visual Media Modification

A study by Muyana, (2016) revealed the existence of differences in self-concept amongst members in each group guidance service, with or without audio visual media. The average pretest score in the control and experiment group were less, and collectively increased, which was better in the experiment group.

There are numerous strategies in guidance and counseling that are applicable in helping school students solve personal problems. For example, the use of narcotics is possibly attenuated through an understanding of its dangers, using video media during group guidance, followed by discussion sessions. Rahayu (2013:129) selected this technique as a result of the effectiveness in developing a student's comprehension ability, due to the enhanced ease of understanding. Rahayu (2013:134) claimed that utilizing video media enables student's to appreciate the dangerous of narcotics at grade VIII-D of the State of the Junior High School 2 Ngoro.

The study by Mudjiono and Fadri (2016:14) demonstrated the positive effect of group guidance using audio visual media, which emphasizes on the important role of interpersonal relations development

within the society. This was supported by the study of Ni Wyn Candriasih, dkk, (2013), which ascertained the impact of this technique in the process of enhancing student empathy. Hence, group guidance with the use of audio visual modification was identified as an effective means to develop self-concept.

Group Guidance with the Use of Counseling Reality Modification

According to the study by Mariah (2016), entitled “the Effectiveness of Group Guidance Service with the Use of Counseling Reality Approach in Developing Self-Adaptation of School Students in School Environment” the average posttest scores of self-adaptation increased from the pretest. This is in line with the study by Rusdiantie H, and Nursalim M, (2014) entitled “the Implementation of Group Counseling Reality in the Development of Discipline amongst students at VIII-F grade in the State of Junior High School 1 Balongbendo, known to reveal discipline.

This was also supported by Guridham (in Mustaffa and Ilias, 2013), which explained the success of a single man in adapting to instances where feelings ought to be managed, characterized by emotional intelligence while establishing interactions with others. Furthermore, stress and anxiety are known to be natural indicators that ensue in new places, leading to a personalized experience for each individual, as a single man is better able to cope with the proper management of stress and anxiety.

Group Guidance with the Use of Assertive Training Modification

Kristinus Sembiring (2016) in a study, titled “The Implementation of *Assertiveness Training* through Role Playing Method in Group Guidance” expressed the effectiveness of developing interpersonal communication ability amongst school students. The results of a research by Turina, dkk, (2016), “Implementation of Assertive Training Technique in Developing Self-Efficacy on Grade VII Students of the State of Junior High School 29 Bandar Lampung” proved the capacity for implementing assertive training, which enables trained skill to provide opinions, display confidence during presentations in public places, demonstrate more effective communication skills in social live, good communication, and others. Bishop (1999:76) reported on the affiliation of assertiveness with self-efficacy, which is attained alongside the ability to provide pricing, arguments, and respect others.

Turina dkk, (2016) associated the use of assertive training with some significant findings. For example, the created pathway for teachers of Guidance and Counseling to develop the personal aspects of students, based on the ability to serve as a personal confidant and the characteristics to foster a social environment. This is supported by the study of Thilbault and Kelley (in Ahmadi, 2007:95), which argued about peoples’ perception on the creation of groups or communities, as well as the act of affiliating being happy participating with the pleasure received, and harm or cost paid. Hence, the occurrence of a sense of happiness amongst school students is known to foster the ease of mixing with one another, subsequently providing the opportunity to properly observe and understand each activity properly. Hence, it is important to maintain an assertive training atmosphere to enhance the felling of pleasure for all students, in order to ensure the conduction of significant activities. In summary, the application of guidance with the use of assertive training through role playing technique was identified as an effective method for the development of interpersonal communication competence.

Conducting Triangulation between Lectures on Group Guidance Subject, and Thesis Advisor of College Students in the Implementation of Group Guidance Activities

A discussion was conducted with lectures on group guidance subject and thesis advisors in Focus Group Discussion (FGD) during a Guidance and Counseling Program, in relation with the study gains of students intended for this evaluation. The results obtained from participants showed various additions and suggestions as shown below: 1) Determine the validity of results by checking the evidences of the studies, including videos, planning the implementation of services, programs, materials/topics, and reports.; 2) Identify the common and specific steps used in relation with a modification; 3) Implement a specific group guidance service, which is needed to explain special information on modifications at the initial stage.

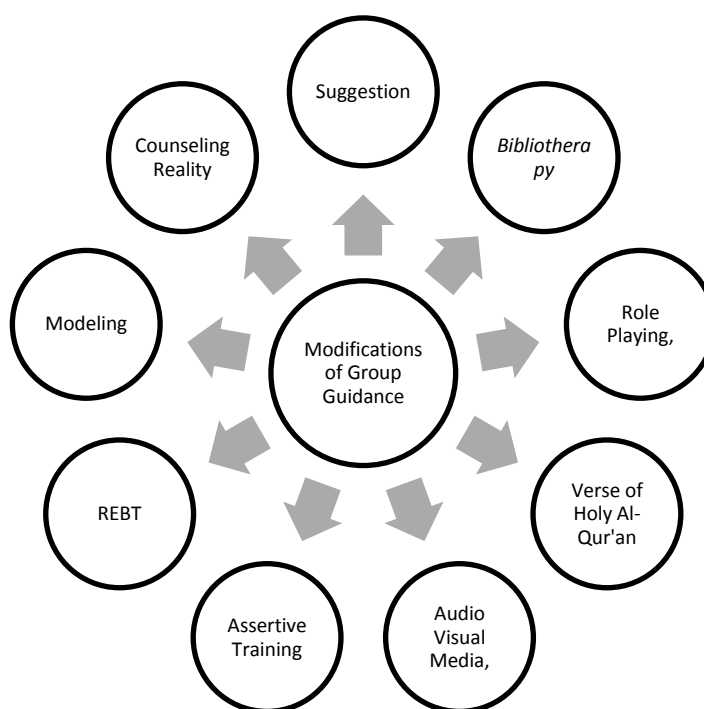
According to the results of the present study, focus group discussion members in the aspect of guidance demonstrated an enhanced effectiveness in the use of a particular technique/strategy for developing the intended characteristic to be performed by Guidance and Counseling teachers. This includes learning discipline, achievement, self-concept, motivation, self-efficacy, and interpersonal communication, hence it is important to determine the implementation, using a specific method. In addition, the present study analyzed the results obtained by college students and discussed in journals, which is further elaborated in the discussion chapter of this report, to strengthen the research outcome.

Interpreting the Data related to Its Contexts Occurred in the Implementation Group Guidance Activity with the Use of Particular Modification.

Based on table 1 and 2 mentioned above, a recapitulation of studies conducted by post graduate students was presented from pretest to posttest, and the differences between control and experiment groups were also considered. In addition, the gains were expressed as the differences between the recorded scores, where the experiment group involved the use of better modifications, technique/strategy and approach.

During the implementation activity, group guidance activity with modifications made students more active, and high spirited, further promoting the possession of high self-esteem, through the suggestions of Guidance and Counseling teachers, known to serve as group leaders. Therefore, school students obtained new understanding and demonstrated a better positive self-concept, through the use of bibliotherapy modification, as well as learning motivation with the use of Al- Qur'an verses that affect the heart and mind. These students had better self-adaptation, characterized by high spirit, with the tendency to follow group guidance using audio visual media, following the implementation of reality counseling by the teachers. Furthermore, students were observed to be more assertive in establishing communications with others, as those in colleges tend to exhibit greater confidence through role playing in group guidance, as observed in Picture 1.

Picture 1. Modifications of Group Guidance



Conclusions

Based on the results and discussion, it is concluded that conducting Group Guidance was effective for students, using appropriate modification strategy/technique related with the variables to be developed. These modifications involve the adoption of a particular approach, which includes conferring suggestions, *bibliotherapy*, counseling reality and *modeling*, the verse of Al-Qur'an, *REBT*, *role playing*, audio visual media, and *assertive training*. Furthermore, the study suggests that teachers of Guidance and Counseling conduct group guidance through modifications that are related with the goal, in order to enhance effectiveness. Also it is recommended that group leaders are more creative in conducting proper guidance activities, using the several modifications available.

References

- Alabi, Y. L. dan Lami, M. M. (2015). Efficacy of Client-Centred and Rational Emotive Behavior Therapies in Reducing Bullying Behaviour among in School Adolescents in Ilorin, Nigeria. *International Journal of Instruction*, (Online), Vol. 8, No. 1 (<http://files.eric.ed.gov/fulltext/EJ1085293.pdf>, diakses pada tanggal 25 Desember 2016).
- Anggara, F. (2016). "Efektivitas Layanan Bimbingan Kelompok dengan Modeling dalam Meningkatkan Efikasi Diri Peserta didik dalam Menghadapi Ujian". Tesis. BK FIP UNP
- Corey, G. (2010). *Teori dan Praktek: Konseling dan psikoterapi*. Terjemahan oleh E. Koeswara. Bandung: Rafika Aditama.
- Chairani, N. (2015). "Potensi Bibliotherapy dalam mengurangi kecemasan akibat hospitallisasi pada anak usia sekolah". *Jurnal*. ISSN 2338-4700
- Ellis, Albert dan Bernard, Michael E. (2006). *Rational Emotive Behavioral Approaches to Childhood Disorders : Theory, Practice and Research*. USA : Springer Science+Business Media, Inc.
- Erdawati. (2015). "Efektivitas Layanan Bimbingan Kelompok dengan Menggunakan Bibliotherapy untuk Meningkatkan Konsep Diri". Tesis. BK FIP UNP.
- Fajhriani, D. (2016). "Efektivitas Layanan Bimbingan Kelompok dengan Menggunakan Ayat-ayat Alquran untuk Meningkatkan Motivasi Belajar Peserta didik di MTs. Alfurqan Padang". Tesis. BK FIP UNP
- Fatimah, D. (2015). "Pengembangan Model Bimbingan Kelompok dengan Teknik Role Playing untuk Mengembangkan Kepercayaan Diri Peserta didik". *Jurnal*. *Jurnal Bimbingan Konseling* 4 (1). Prodi Bimbingan dan Konseling, Program Pascasarjana, Universitas Negeri Semarang, Indonesia
- Fijriani.(2012). "Efektivitas Penerapan Sugesti pada Layanan Bimbingan Kelompok dalam Meningkatkan Self Esteem Peserta didik (Studi Eksperimen di Sekolah Menengah Atas Al-Kautsar Bandar Lampung)". *Jurnal*. BK FIP UNP
- Fitri, M. (2015). "Efektivitas Layanan Bimbingan Kelompok dalam Meningkatkan Disiplin Belajar Peserta didik dengan Sugesti". Tesis. BK FIP UNP.
- Flora, R. (2014). "Mengurangi Perilaku Bullying Kelas X-4 Melalui Pemberian Layanan Bimbingan Kelompok Teknik Role Playing di SMA Negeri 12 Medan Tahun Ajaran 2012/2013. *Jurnal*. *Saintech* Vol. 06 No. 02-Juni 2014. ISSN No. 206-9681
- Gudnanto. (2013). "Model Bimbingan dan Konseling Islami untuk Meningkatkan Konsep Diri Peserta didik". *Jurnal Bimbingan Konseling* 2 (1) (2013). Prodi Bimbingan dan Konseling, Program Pascasarjana, Universitas Negeri Semarang, Indonesia.
- Mariah, K. (2016). " Efektivitas Layanan Bimbingan Kelompok dengan Pendekatan Konseling Realitas dalam Mengembangkan Penyesuaian Diri Peserta didik di lingkungan Sekolah pada Peserta didik Kelas X SMAN 1 Sungai Tarab". Tesis. BK FIP UNP.
- Mustaffa, C.S., dan Ilias, M. (2013). Relationship between Students Adjustment Factors and Cross Cultural Adjustment: A Survey at the Northern University of Malaysia. *Journal of Intercultural Communication Studies*, (Online), Vol. XXII, No. 1, 279-300, (diakses 3 Mei 2017).
- Muyana, S.(2016). "Efektivitas Pelaksanaan Layanan Bimbingan Kelompok dengan Menggunakan Media Audio Visual untuk Meningkatkan Konsep Diri Peserta didik di SMK Negeri 9 Padang". Tesis. BK FIP UNP.
- Ni Wyn Candriasih, Gd Sedanayasa, Tjok Rai Partadjaja. (2013) "Penerapan Bimbingan Sosial Berbantuan Media Audio Visual Untuk Mengembangkan Empati Peserta didik Kelas VIIID3 SMP Negeri 2 Sawan. *Jurnal*. *Bimbingan Konseling*, Singaraja: Universitas Pendidikan Indonesia.
- Nurihsan, Achmad Juntika. (2003). *Dasar-dasar Bimbingan dan Konseling*. Bandung: Mutiara.
- Prayitno. (2012). *Seri Layanan Konseling*. Padang: FIP UNP.
- Rusdiantie, H dan Nursalim, M. (2014). "Penerapan Konseling Kelompok Realita untuk Meningkatkan Disiplin Peserta didik Kelas VIII.F SMP Negeri 1 Balongbendo". *Jurnal*. Volume 5 Nomor 01 , 1-8. BK FIP Universitas Negeri Surabaya.
- Sembiring, K (2016). "Penerapan Assertiveness Training melalui Metode Bermain Peran dalam Bimbingan Kelompok untuk Meningkatkan Kemampuan Komunikasi Interpersonal Peserta didik". Tesis. BK FIP UNP

- Solikin, A. (2015). "Bibliotherapy sebagai Sebuah Teknik dalam Layanan Bimbingan dan Konseling". *Anterior Jurnal*, Volume 14 Nomor 2, Juni 2015, Hal 154 – 161. Program Studi Bimbingan dan Konseling Fakultas Keguruan dan Ilmu Pendidikan Universitas Muhammadiyah Palangkaraya.
- Stapa, Zakaria, Yusuf, Norahizah, and Shahrudin, Amdul Fatah. (2012). "Education According to Alquran and Sunnah and Its Role in Strengthening the Civilization of Ummah". *Journal Hadhari Special Edition*, 7 – 22.
- Stevani, H. (2016). "Efektivitas Layanan Bimbingan Kelompok dengan Pendekatan Rational Emotive Behavior Therapy untuk Mengatasi Kecemasan Mahasiswa (Studi Pada Mahasiswa IAIN Imam Bonjol Padang)". Tesis. BK FIP UNP
- Suhendri, dkk. (2012). "Efektivitas Konseling Kelompok Rational-Emotif Untuk Membantu Peserta didik Mengatasi Kecemasan Menghadapi Ujian". *Jurnal. Prodi Bimbingan Konseling, Program Pascasarjana, Universitas Negeri Semarang, Indonesia*
- Syah, M. (2010). *Psikologi Pendidikan*. Bandung: Remaja Rosdakarya
- Tohirin. (2013). *Bimbingan dan Konseling di Sekolah dan Madrasah (Berbasis Integrasi)*. Jakarta: Raja Grafindo Persada.
- Syaputra, Y.D. (2016). "Efektivitas Layanan Bimbingan Kelompok dengan Menggunakan Teknik Role Playing dalam Meningkatkan Penyesuaian Diri Mahasiswa Tahun Pertama Program Studi Bimbingan dan Konseling di STAIN Batusangkar". Tesis. BK FIP UNP.
- Turina, dkk. (2016). "Penggunaan Teknik Assertive Training dalam Meningkatkan Rasa Percaya Diri Pada Peserta didik Kelas VII SMP N 29 Bandar Lampung". *Jurnal*.
- Yahya, N & Mustaffa, M. S. (2012). *Application Of Rational Emotive Behaviour Therapy In Addressing The Problems Of Bulliyng In The School: A Case Study*. Malaysia: Fakulti Pendidikan, Universiti Teknologi Malaysia. *Journal of Educational Psychology & Counseling, (Online) Volume 6* (diakses pada tanggal 25 Desember 2016).

Increasing long jump performance through plyometric exercises

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Abstract

Low athlete's long jump performance is attributed to the unsystematic training approach. Therefore, this study aimed to determine the effect of plyometric training on athlete performance. It was a quasi-experiment comprising of 32 athletes who were selected through purposive sampling. The instrument used in the long jump test is under the standard of the Indonesian Athletics Association (PASI), and the data analysis used a t-test. The results of the data analysis showed significant differences in athlete performance before and after plyometric training. This study recommends adjusting athletes' long jump performance using Plyometric Exercises.

Keyword: Plyometrik Exercise, and Long Jump

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Introduction

Long jump is one of athletic sports widely carried out in the community. According to (Iswandi & Purnomo, 2013; Church et al., 2017), long jump is a type of jump number alongside infectious, high, and pole jumps. In this study, jump away involves moving the whole body from certain points by running then rejecting, floating in the air, and landing (Thompson, 2019; Fraser et al., 2019). Generally, it is a movement that requires jump lifting of legs upfront while in the air by making repulsion on one leg to reach the far distance (Later, 2017a; Organism et al., 2019). It is an athletic number that combines speed, strength, and agility to land as far as possible from the point of repulsion (Iswandi & Purnomo, 2013; Qi et al., 2019).

Long jump is divided into four phases, including prefix, repulsion, drift, and landing (Yadav & Paris, 2014; Michailidis, Tabouris, & Metaxas, 2019). Prefix is the initial movement in the form of running to gain the speed for repulsion or jumping. According to (Yadav & Uparosiya, 2014), the purpose of the prefix is to accelerate to a maximum controlled speed when taking off. The higher speed at taking off helps to move to a long distance. The speed attained from the prefix is called horizontal speed and it provides strength for upward repulsion upfront (Stojanović, Ristić, McMaster, & Milanović, 2017; Wyss et al., 2019).

In this study, the squat style long jump number is discussed. According to (Ballesteros, 1993; Church et al., 2017) Squat long jump result from horizontal velocities during prefix with vertical power from the strength of the repulsive leg. In this athletic sport, the implementation of the activity begins with a quick run prefix and then jumping with a body lift movement from one point to another. The techniques in this athletic branch are grouped into several stages (Kariyala, Hobara, & Zushi, 2018; El-Asher, Hassan, Taiar, & Tipp, 2019).

The repulsion or pedestal is a rapid movement between running, starting and floating (Dissent, 1992; Asadi, Ramirez-Campillo, Arazi, & SeAZ de Villarreal, 2018). According to (Hafiz, Arwin, & Shorten, a. a.), footstool or repulsion of the foot needs to be strong to achieve sufficient jump height without losing the forward speed. The purpose of repulsion is to create a vertical impulse through the center of gravity while maintaining balance and control, and involves placing the foot with the knee bent for repulsion with the leg straight. This process is enhanced by lifting the arms and legs (Yadav & Paris, 2014). The repulsion distance is the horizontal length between the prefix line and the jump repulsion board when flying. The jumper distance starts at the center of the moving mass from take off to Jump landing (Wakai & Linthorpe, 2005; Kim et al., 2018).

The jumper needs to reach the furthest distance by not losing body balance when landing (Dissent, 1992; Stojanovic et al., 2017; Wilke et al., 2019). The main goal is to avoid falling back into the pit. Essentially, the pit measures leap from the location where the body contacts the sand closest to the take off point (Yadav & Paris, 2014; Karcher & Buchheit, 2017). When jumping at a low take off angle, there is a high horizontal speed at landing. For this reason, the feet can be far in front of the body without the risk of falling backward. (Lutheran, N. P., Guzman, M. S., & Bridgett, 2005) (Marchant, Griffith, Partridge, Beesley, & Porter, 2018; Tufano et al., 2018). One might appear to be falling backward and to prevent this, the point of weight needs to be brought to the front by bending for the body and knees to dock. Several factors influence the ability of a jumper, including speed, explosive strength of leg muscles, flexibility and coordination of motion (Yani, 2015; Seattle, phylogeny, Koski, Ojanen, & Carolinian, 2019; Cohen & Negra, 2017).

Plyometric training is often used in connecting repetitive jump and movements or stretch strain reflexes from the muscles to produce explosive reactions (Radcliffe, J., & Farentino, 2015; Beato, Bianchi, Cortella, Merlini, & Durst, 2018). This is based on the plyometric training on individual prerequisites (Froelich, M., Felder, H., & Reuter, 2014). It is important to ensure that the level of stimulation and scope of training does not cause very tight artificial structures. The long jump performance increase during the simulation competition when the oligomeric conditioning exercise is carried out 3 minutes before each experiment. This improvement is attributed to the progressive increase in the vertical speed of takeoff, while there is no effect on horizontal speed (Bodanis, G. C., Tsokkos, A., & valgus, a. a.; Whitehead, Schett, Michigan, & Martin, 2018; McKinlay et al., 2018).

Depth jump exercise refers to the training which starts with standing on a high gymnastic box (65-75 cm), falling to the mat on the floor with two legs, and jumping upfront before returning to the top of the box to for the next jump. This activity is often carried out in the determined stimulus (Radcliffe, J., & Farentino, 2015; Silva, Neiva, Marques, Izquierdo, & Marinho, 2018). Depth jump training requires one to jump down as fast as possible. It is similar to a long jump where after starting the prefix the student makes a repulsion on the board and jumps as far as possible. It is supposed to be conducted to improve jumping ability (Earp, Newton, Cormie, & Blazeovich, 2017; Settle et al., 2019).

Method

This was a quasi-experiment focusing on the difference in the long jump performance of athletes in SMP Negeri 3 Batang Kapas after being subjected to plyometric exercises. The population involved 58 students, though 32 were selected through purposive sampling technique. The preliminary data was obtained by measuring the ability of athletes of State Junior High School 3 Batang Kapas with a long jump test under the standards union of every Indonesian athletic (PASI). Each exercise was conducted in 16 meetings with a frequency of three times a week and a duration of 60 minutes per meeting. After a plyometric exercise, the final test out with the long jump test was conducted. This was meant to determine the difference in the increase in students' abilities after taking part in the training (Negra et al., 2017). T-test was used to analyze the data as a prerequisite for the analysis of the normality test with the piliform and the variance homogeneity tests with the F test at the confidence levels $\alpha = 0.05$.

Results and Discussions

Based on the experimental research design, there are two groups of data described separately.

Table 1. Long Jump Performance Data Pretest- Posttest after plyometric

No	Group	N	Highest score	Lowest score	Average	Standard Deviation
1	Pretest	32	400	320	350,31	22,91
2	Posttest	32	410	320	374,66	22,53

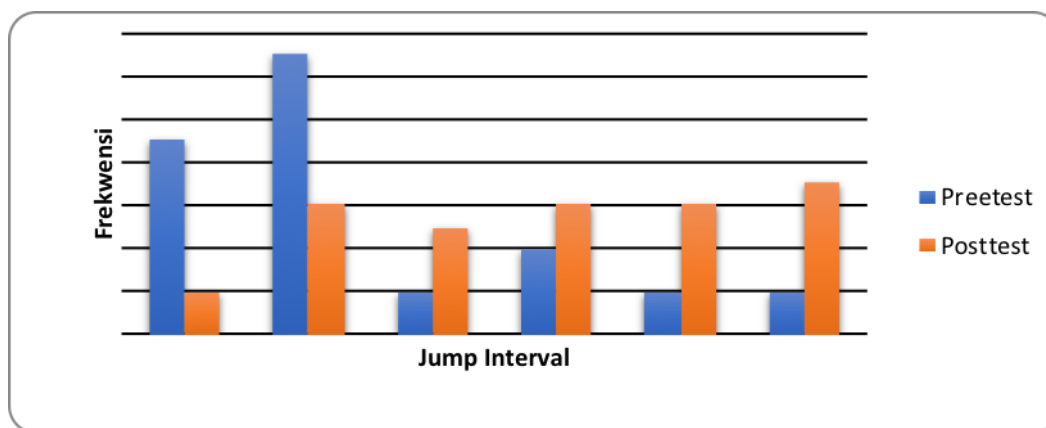
Table 1 shows an increase in scores before and after since the high score increased by 10 points. The average score also increased. The distribution of long jump performance data is described in the frequency distribution table below:

Table 2. Distribution of long jump performance data

Interval Class	Pretest	Percentage	Posttest	Percentage
(320 - 335)	9	28.13%	2	6.25%
(336 - 351)	13	40.63%	6	18.75%
(352 - 367)	2	6.25%	5	15.63%
(368 - 383)	4	12.50%	6	18.75%
(384 - 399)	2	6.25%	6	18.75%
(400 - 415)	2	6.25%	7	21.88%
Total	32		32	

Table 2 shows the long jump performance improved between before and after the training. The difference is in the pretest and posttest columns, where the interval class increases significantly in the posttest, proving that Plyometric training improves long jump performance.

The frequency distribution of achievement motivation scores can also be seen in the diagram below:



Picture 1. Long jump performance chart

As an analysis prerequisite test, normality and homogeneity were conducted. The normality test in the two groups of pretest and posttest data is normally distributed while the homogeneity test results of all analysis groups show they were homogeneous. Research hypothesis testing used a t-test with $\alpha = 0.05$. The

results of the analysis of the hypothesis show 1) there are significant differences in the long jump performance before and after a plyometric exercise; 2) the athlete's long jump performance after a plyometric training is better than before the training.

A good and appropriate form of training is an important thing a trainer needs to choose and design since it affects the athlete's long jump ability. Plyometric exercises increase the explosive power. This study used depth jump training, which is the most popular form of limb Plyometric exercise meant to develop the ability of explosive limb muscles. In case it is good and correct, it produces maximum leg muscle strength. During the long jump, explosive power is a very supportive physical condition and increases the long jump ability if it is good.

Conclusions

From this study, the following conclusions are drawn 1) There are significant differences in long jump performance before and after plyometric exercises; 2) The athlete's performed better after plyometric training than before the training. To improve performance, a plyometric needs to be used.

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References

- Adisasmita, Y. (1992). *Olahraga pilihan atletik*. Jakarta: Depdikbud.
- Asadi, A., Ramirez-Campillo, R., Arazi, H., & Sáez de Villarreal, E. (2018). The effects of maturation on jumping ability and sprint adaptations to plyometric training in youth soccer players. *Journal of Sports Sciences*, 36(21), 2405–2411. <https://doi.org/10.1080/02640414.2018.1459151>
- Ballesteros, J. M. (1993). *Pedoman Dasar Melatih Atletik*. Jakarta: Program Pendidikan & Sistem Sertifikasi Pelatih Atletik. Persatuan Atletik Seluruh Indonesia.
- Beato, M., Bianchi, M., Coratella, G., Merlini, M., & Drust, B. (2018). Effects of Plyometric and Directional Training on Speed and Jump Performance in Elite Youth Soccer Players. *Journal of Strength and Conditioning Research*, 32(2), 289–296. <https://doi.org/10.1519/JSC.0000000000002371>
- Bogdanis, G. C., Tsoukos, A., & Veligeas, P. (n.d.). Improvement of Long-Jump Performance During Competition Using a Plyometric Exercise. *International Journal of Sports Physiology and Performance*, 12(2), 235.
- Bogdanis, G. C., Tsoukos, A., Methenitis, S. K., Selima, E., Veligeas, P., & Terzis, G. (2019). Effects of low volume isometric leg press complex training at two knee angles on force-angle relationship and rate of force development. *European Journal of Sport Science*, 19(3), 345–353. <https://doi.org/10.1080/17461391.2018.1510989>
- Chaabene, H., & Negra, Y. (2017). The effect of plyometric training volume on athletic performance in prepubertal male soccer players. *International Journal of Sports Physiology and Performance*, 12(9), 1205–1211. <https://doi.org/10.1123/ijssp.2016-0372>
- Chu, D. A. (1998). *Jumping Into Plyometrics*. California: Leisure Press.
- Earp, J. E., Newton, R. U., Cormie, P., & Blazevich, A. J. (2017). The Influence of External Load on Quadriceps Muscle and Tendon Dynamics during Jumping. *Medicine and Science in Sports and Exercise*, 49(11), 2250–2259. <https://doi.org/10.1249/MSS.0000000000001361>
- El-Ashker, S., Hassan, A., Taiar, R., & Tilp, M. (2019). Long jump training emphasizing plyometric exercises is more effective than traditional long jump training: A randomized controlled trial. *Journal of Human Sport and Exercise*, 14(1), 215–224. <https://doi.org/10.14198/jhse.2019.141.18>
- Fraser, B. J., Blizzard, L., Tomkinson, G. R., Lycett, K., Wake, M., Burgner, D., ... Magnussen, C. G. (2019). The great leap backward: changes in the jumping performance of Australian children aged 11–12-years between 1985 and 2015. *Journal of Sports Sciences*, 37(7), 748–754. <https://doi.org/10.1080/02640414.2018.1523672>
- Iswandi, F., & Purnomo, E. (2013). Hubungan Sprint Dan Daya Ledak Otot Tungkai Terhadap Hasil

- Lompat Jauh gaya jongkok. *Jurnal Pendidikan Dan Pembelajaran*, 2(4).
- Karcher, C., & Buchheit, M. (2017). Shooting performance and fly time in highly trained wing handball players: Not everything is as it seems. *International Journal of Sports Physiology and Performance*, 12(3), 322–328. <https://doi.org/10.1123/ijsp.2016-0055>
- Kariyama, Y., Hobara, H., & Zushi, K. (2018). The Effect of Increasing Jump Steps on Stance Leg Joint Kinetics in Bounding. *International Journal of Sports Medicine*, 39(9), 661–667. <https://doi.org/10.1055/a-0633-9308>
- Kavanaugh, A. A., Mizuguchi, S., Sands, W. A., Ramsey, M. W., & Stone, M. H. (2018). Long-term changes in jump performance and maximum strength in a cohort of national collegiate athletic association division i women's volleyball athletes. *Journal of Strength and Conditioning Research*, 32(1), 66–75. <https://doi.org/10.1519/JSC.0000000000002214>
- Linthorne, N. P., Guzman, M. S., & Bridgett, L. A. (2005). Optimum take-off angle in the long jump. *Journal of Sports Sciences*, 23(7), 703.
- Marchant, D. C., Griffiths, G., Partridge, J. A., Belsley, L., & Porter, J. M. (2018). The Influence of External Focus Instruction Characteristics on Children's Motor Performance. *Research Quarterly for Exercise and Sport*, 89(4), 418–428. <https://doi.org/10.1080/02701367.2018.1512075>
- McKinlay, B. J., Wallace, P., Dotan, R., Long, D., Tokuno, C., Gabriel, D. A., & Falk, B. (2018). Effects of plyometric and resistance training on muscle strength, explosiveness, and neuromuscular function in young adolescent soccer players. *Journal of Strength and Conditioning Research*, 32(11), 3039–3050. <https://doi.org/10.1519/JSC.0000000000002428>
- Michailidis, Y., Tabouris, A., & Metaxas, T. (2019). Effects of plyometric and directional training on physical fitness parameters in youth soccer players. *International Journal of Sports Physiology and Performance*, 14(3), 392–398. <https://doi.org/10.1123/ijsp.2018-0545>
- Negra, Y., Chaabene, H., Sammoud, S., Bouguezzi, R., Abbes, M. A., Hachana, Y., & Granacher, U. (2017). Effects of Plyometric Training on Physical Fitness in Prepuberal Soccer Athletes. *International Journal of Sports Medicine*, 38(5), 370–377. <https://doi.org/10.1055/s-0042-122337>
- Qi, F., Kong, Z., Xiao, T., Leong, K., Zschorlich, V. R., & Zou, L. (2019). Effects of combined training on physical fitness and anthropometric measures among boys aged 8 to 12 years in the physical education setting. *Sustainability (Switzerland)*, 11(5). <https://doi.org/10.3390/su11051219>
- Radcliffe, J., & Farentinos, R. (2015). High-Powered Plyometrics. *2E. Human Kinetics*.
- Ramirez-Campillo, R., Álvarez, C., García-Hermoso, A., Ramírez-Vélez, R., Gentil, P., Asadi, A., ... Izquierdo, M. (2018). Methodological Characteristics and Future Directions for Plyometric Jump Training Research: A Scoping Review. *Sports Medicine*, 48(5), 1059–1081. <https://doi.org/10.1007/s40279-018-0870-z>
- Santtila, M., Pihlainen, K., Koski, H., Ojanen, T., & Kyröläinen, H. (2019). Physical Fitness and Body Anthropometrics Profiles of the Female Recruits Entering to Voluntary Military Service. *Military Medicine*, 184(1–2), E200–E205. <https://doi.org/10.1093/milmed/usy145>
- Silva, L. M., Neiva, H. P., Marques, M. C., Izquierdo, M., & Marinho, D. A. (2018). Effects of Warm-Up, Post-Warm-Up, and Re-Warm-Up Strategies on Explosive Efforts in Team Sports: A Systematic Review. *Sports Medicine*, 48(10), 2285–2299. <https://doi.org/10.1007/s40279-018-0958-5>
- Stojanović, E., Ristić, V., McMaster, D. T., & Milanović, Z. (2017). Effect of Plyometric Training on Vertical Jump Performance in Female Athletes: A Systematic Review and Meta-Analysis. *Sports Medicine*, 47(5), 975–986. <https://doi.org/10.1007/s40279-016-0634-6>
- Thompson, B. J. (2019). Does work-induced fatigue accumulate across three compressed 12 hour shifts in hospital nurses and aides? *PLoS ONE*, 14(2). <https://doi.org/10.1371/journal.pone.0211715>
- Tufano, J. J., Malecek, J., Steffl, M., Stastny, P., Hojka, V., & Vetrovsky, T. (2018). Field-based and lab-based assisted jumping: Unveiling the testing and training implications. *Frontiers in Physiology*, 9(SEP). <https://doi.org/10.3389/fphys.2018.01284>
- Varanoske, A. N., Wells, A. J., Kozlowski, G. J., Gepner, Y., Frosti, C. L., Boffey, D., ... Hoffman, J. R. (2018). Effects of β -alanine supplementation on physical performance, cognition, endocrine function, and inflammation during a 24 h simulated military operation. *Physiological Reports*, 6(24). <https://doi.org/10.14814/phy2.13938>
- Wakai, M., & Linthorne, N. P. (2005). Optimum take-off angle in the standing long jump. *Human Movement Science*, 24(1), 81–96.
- Wang, C.-C., Fang, C.-C., Lee, Y.-H., Yang, M.-T., & Chan, K.-H. (2018). Effects of 4-week creatine

- supplementation combined with complex training on muscle damage and sport performance. *Nutrients*, 10(11). <https://doi.org/10.3390/nu10111640>
- Whitehead, M. T., Scheett, T. P., McGuigan, M. R., & Martin, A. V. (2018). A comparison of the effects of short-term plyometric and resistance training on lower-body muscular performance. *Journal of Strength and Conditioning Research*, 32(10), 2743–2749. <https://doi.org/10.1519/JSC.0000000000002083>
- Wilke, J., Kaiser, S., Niederer, D., Kalo, K., Engeroff, T., Morath, C., ... Banzer, W. (2019). Effects of high-intensity functional circuit training on motor function and sport motivation in healthy, inactive adults. *Scandinavian Journal of Medicine and Science in Sports*, 29(1), 144–153. <https://doi.org/10.1111/sms.13313>
- Wyss, T., Roos, L., Studer, F., Mäder, U., Beuchat, C., & Staub, K. (2019). Development of physical fitness performance in young Swiss men from 2006 to 2015. *Scandinavian Journal of Medicine and Science in Sports*, 29(4), 586–596. <https://doi.org/10.1111/sms.13376>
- Yadav, M., & Uparosiya, N. (2014). Survey on MANET: Routing protocols, advantages, problems and security. *International Journal of Innovative Computer Science & Engineering*, 1(2), 12–17.
- Yani, A. (2015). Pengaruh Metode Latihan Sirkuit, Metode Konvensional dan Motivasi Berprestasi Terhadap Kemampuan Lompat Jauh Gaya Jongkok. *Primary: Jurnal Pendidikan Guru Sekolah Dasar*, 4(2), 134.
- Yusutria, M. A. (2017a). Profesionalisme Guru Dalam Meningkatkan Kualitas Sumber Daya Manusia. *Curricula: Journal of Teaching and Learning*, 2(1).
- Yusutria, M. A. (2017b). Profesionalisme Guru Dalam Meningkatkan Kualitas Sumber Daya Manusia. *Curricula: Journal of Teaching and Learning*, 2(1).
- Zarei, M., Namazi, P., Abbasi, H., Noruzyan, M., Mahmoodzade, S., & Seifbarghi, T. (2018). The effect of ten-week FIFA 11+ injury prevention program for kids on performance and fitness of adolescent soccer players. *Asian Journal of Sports Medicine*, 9(3). <https://doi.org/10.5812/asjms.61013>