ORIGINAL ARTICLE Received 22 January. 2019 Accepted 27 June. 2019

Vol. 8, Issue 3, 131-138, 2019

Academic Journal of Psychological Studies

ISSN: 2333-0821

ajps.worldofresearches.com

The Effectiveness of Self-Compassion Therapy, Acceptance and Commitment Therapy and Combination Therapy on Self-Efficacy of Type 2 Diabetes

Maryam Izadi Laybidi[1], Ahmad Ghazanfari[*2]

1. M.A. Student of Public Psychology, Shahrekord Branch, Islamic Azad University, Shahrekord, Iran.
2. Associate Professor of Psychology, Shahrekord Branch, Islamic Azad University, Shahrekord, Iran.

A B S T R A C T

The emergence and occurrence of mental disorders requires that psychological factors and physical symptoms simultaneously be closely related to each other. Diabetes is the most common chronic metabolic disease. The present study aimed to compare and compare the efficacy of compassion therapy and acceptance and commitment therapy and on the self-efficacy of patients with type 2 diabetes the city of Lenjan has been dealt with. The statistical population used in this study was all type II diabetic patients referred to Clinics, among whom 48 (in 4 groups of 12) were selected through available sampling method and divided into two experimental groups and a control group were randomly replaced. The data collection tool was Sheerer and Maddox (1982) general self-efficacy questionnaire. About 11.5% of the changes in self-efficacy scores are explained by acceptance, compassion, and combination therapy, therefore, the treatment of compassion therapy has a significant effect on the self-efficacy of type 2 diabetes in patients with adherence and combination therapy. Considering the effect of self-efficacy and acceptance and commitment and combination on increasing self-efficacy in patients with type 2 diabetes, these therapies, along with medical treatments for diabetic patients, are suggested.

Keywords: Self-Efficacy, Acceptance And Commitment Treatment, Self-Efficacy Therapy, Type 2 Diabetes.

INTRODUCTION

Diabetes is the most common chronic metabolic disease in humans and one of the most important causes of death and disability in many countries of the world, which is the fifth cause of death in the world(Chaudhury et al., 2017) and about 150 Millions of people in the world are affected(Ghorbani, 2013).

According to the World Diabetes Organization (WDO), the incidence of diabetes is estimated to increase from 336 million people in 2011 to 552 million in 2030 (Lv et al., 2013). People with diabetes at high risk for acute diabetes related complications Such as hypoglycemia and the risk of chronic complications of diabetes, such as cardiovascular disease, kidney disease, blindness, and ambulatory amputations, are associated with physical damage to the end members(Fekrat, Kashanian, & Jahanpour, 2004; Shim, Lee, Toh, Tang, & Ko, 2012).

[*] . Corresponding Author: Ghazanfari, A.

DOI: In prossing

To cite this article: Izadi Laybidi, M., Ghazanfari, A. (2019). The Effectiveness of Self-Compassion Therapy, Acceptance and Commitment Therapy and Combination Therapy on Self-Efficacy of Type 2 Diabetes. *Academic Journal of Psychological Studies*, 8 (3), 131-138.

The chronic course of diabetes mellitus not only reduces the quality of life(McCrimmon, Ryan, & Frier, 2012) and exacerbates the physical problems of people with diabetes(Gregg, Engelgau, & Narayan, 2002), but also causes cognitive problems and memory problems over time(Kawamura, Umemura, & Hotta, 2012; McCrimmon et al., 2012; Reijmer, van den Berg, Ruis, Jaap Kappelle, & Biessels, 2010). Concomitant depression with diabetes also exacerbates the complications and cognitive deficits that diabetics face. Research suggests that psychological interventions can be effective in the treatment of mental problems in people with diabetes(Gonzalez, Tanenbaum, & Commissariat, 2016; Rubin & Peyrot, 2001; Steed, Cooke, & Newman, 2003).

The concept of self-efficacy was designed and completed by Bandura (1982), and was introduced as a key variable in clinical, educational, social, developmental, health and personality psychology. The fact that self-efficacy is in addition to on the adaptation of illness and treatment, it has also been shown to improve health and behavioral changes(Cervone, 2000). Treatment-based acceptance and commitment (ACT) by Hayes in the late 1980s came from behavioral approaches to treatment(Hayes, Levin, Plumb-Vilardaga, Villatte, & Pistorello, 2013). Behavioral therapy was conceptualized in three groups or three generations, including behavioral therapy, cognitive-behavioral therapy (CBT), and the "third generation" or "third wave" of behavioral therapy(Herbert & Forman, 2011; Nurius & Macy, 2008).

In treating the third wave, attempts are made to increase the individual's psychological relationship with his thoughts and feelings instead of changing the cognition(Dobson & Dozois, 2019). ACT has a roots in behaviorism, but is analyzed by cognitive processes(Hayes et al., 2013). Adoption and commitment treatment by integrating admission and awareness interventions in commitment and change strategies will help caregivers to achieve vivid, targeted, and meaningful lives. Unlike the classical approach to cognitive-behavioral therapy, the purpose of the ACT is to deform or abundance Thoughts and emotions are not annoying, but their main purpose is to strengthen psychological flexibility.

Psychological flexibility is the ability to contact the moments of life and change or stabilization of behavior, which corresponds to the circumstances of the situation, in accordance with the values of the individual. In other words, it helps people to have a more rewarding life even though they have unpleasant thoughts, emotions and emotions. Self-compassion is related to the feelings of self-love and concern and care for others, but does not mean self-orientation or the preference of others to their needs. Having an attitude of self-esteem that raises the individual's mindset is called mindfulness(Fabbro, Crescentini, Matiz, Clarici, & Fabbro, 2017; Richard, Halliwell, & Tenenbaum, 2017).

It is contradictory to have a sense of self-compassion that a person behaves violently and judiciously, but the conscious mind of this component consists in the fact that he observes them clearly instead of ignoring their imperfections.

METHODOLOGY

In this research, after obtaining the necessary permissions, the Vice-Chancellor for Research and Isfahan Therapy Management Technology, was referred to the Social Security Hospital of Lenjan in Zarinshahr for sampling. After explaining the objectives of the study, the participants received written consent from them and, in order to observe the ethics of the research, it was stated that until the end of the eight sessions they had to attend, unless the therapist considered the presence of a particular person in the group, then the individual was

removed and the individual Another is replaced by similar conditions. Then, by sampling method, 48 individuals were selected based on the entry and exit number.

Finally, the subjects were randomly divided into three groups: treatment of compassion therapy, admission and combining therapy, and control. After performing a pre-test (self-efficacy test) from all three groups, an independent variable, self-efficacy treatments and acceptance and commitment, were performed on the experimental group. Compassion-based therapy was performed in 8 sessions of 1 hour and a half, admission and commitment therapy was performed in 8 sessions of one hour and a half. At the end of the eighth session, four post-test groups (self-efficacy test) were performed and two months after the pre-test) were performed and two months after the posttest the two groups were evaluated in the follow up phase. The complicated therapy package based on compilation based on Neil's book and Gilbert's protocol, which has been proved by researchers and its effectiveness on other variables, is matched according to the variables of the present study.

RESULTS

In order to investigate the hypothesis of the research, the method of analysis of variance between-group, in-group or mixed variance analysis has been used. The reason for using this statistical method is to investigate the experimental design. Due to the fact that each group has been quantified three times, we are faced with a recurring pattern and a repeated measure of variance analysis has been used. On the other hand, due to the nature of the comparison
between the research groups, the method of analysis of variance is mixed (Intra-group-inter-group).

The reason for not using covariance analysis is that for analyzing each hypothesis, covariance analysis should be performed 2 times (i.e. once for the post test and once for follow up). This will cause the measurement error to go up. So, instead of twice an analysis of covariance is
conducted, analyzing research hypotheses with a test. Using repeated variance analysis requires several assumptions, which will further describe these statistical assumptions. Before using the variance analysis method, first, the basic assumptions of this test are examined.

Shapiro-Wilk test was used to test the distribution of variables. In Table 1, the Shapiro-Wilk test for the self-efficacy variable was measured in three different self-efficacy variable was measured in three different stages and divided into experimental group.

Table 1. Shapiro-Wilk test to check the normal distribution of dispersion of self-efficacy scores

stage	**Group**	**Shapiro-Wilk**		
		Test value	df	**Sig.**
Pre-test	Treatment based on admission and commitment	0.909	12	0.206
	Compassion-based therapy	0.852	12	0.038
	Combination therapy	0.984	12	0.995
	Control	0.927	12	0.362
Post-test	Treatment based on admission and commitment	0.944	12	0.551
	Compassion-based therapy	0.956	12	0.733
	Combination therapy	0.615	12	0.0001
	Control	0.876	12	0.078
Follow up	Treatment based on admission and commitment	0.964	12	0.832
	Compassion-based therapy	0.945	12	0.569
	Combination therapy	0.89	12	0.119
	Control	0.919	12	0.279

According to Table 1, it is clear that the Shapiro-Wilk test size is not statistically significant at any stage and for any group. This result is due to the normal distribution of self-efficacy dispersion.

To test this default, the box test was used and the results are presented in the table below.

Table 2. Box test for the homogeneity study of the resonance covariance matrix

M Box Statistic	F	Df.1	Df.2	Sig.
44.8	2.179	18	6841.3	0.053

According to the report presented in Table 2, the box test is not meaningful, indicating that this is the default. This presumption was examined by Levin's test. The results are presented in the following table.

Table 3. Levin test for the analysis of the variance of the error variables of the self-efficacy variable

Stage	F	Df.1	Df.2	Sig.
Pre-test	1.095	3	44	0.361
Past-test	1.387	3	44	0.259
Follow up	0.069	3	44	0.976

According to Table 3, Levine's test size is not significant at any stage for the self-efficacy variable, which suggests the establishment of this statistical presumption. To test the spatial default, the test was used. The result of the test is reported in Table 4.

Table 4. Default Sphere for self-efficacious variable scores

Inside the subject	W	Chi^2	df	Sig.
Frequent factor	0.41	23.01	2	0.001

Given that the size of the test is not significant for the self-efficacy variable, so the sprite default is established. In Table 5, the test results of the subject's work are reported for the analysis of the second hypothesis.

Table 5. Comparison tests with Green House correction (self-efficacy)

Source of variance		SS	df	MS	F	Sig.	η^2
Frequent Agent	Assuming sprite	632.6	2	316.3	5.692	0.005	0.115
	Green house correction	632.6	1.81	348.1	5.692	0.006	0.115
	Felt Hyun Correction	632.6	2	316.3	5.692	0.005	0.115
	The lowest range Correction	632.6	1	632.6	5.692	0.021	0.115
Group interaction and recurrent factor	Assuming sprite	225.4	6	37.5	0.676	0.669	0.044
	Green house correction	225.4	5.4	41.3	0.676	0.655	0.044
	Felt Hyun Correction	225.4	6	37.5	0.676	0.669	0.044
	The lowest range Correction	225.4	3	75.1	0.676	0.571	0.044
Error	Assuming sprite	4889.8	88	55.5			
	Green house correction	4889.8	79.9	61.1			
	Felt Hyun Correction	4889.8	88	55.5			
	The lowest range Correction	4889.8	44	111.1			

Regarding the reported results in Table 5, it is clear that all statistical tests indicate that group interaction and frequent factor (self-efficacy) are significant for self-efficacy. This is a result of at least one of the treatments based on admission and commitment, shuffle and combination on the self-efficacy of people with diabetes. Regarding the size of the η for the group interaction agent and the frequent factor, it is clear that about 11.5% of the changes in self-efficacy scores are explained by acceptance and commitment based, compassionate, and combination therapies.

In other words, the result of the research suggests the effectiveness of acceptance and commitment based, compassionate and hybrid therapies to increase self-efficacy. Based on the results obtained from the second hypothesis, at least one treatment based on acceptance, commitment, compassion and combination has been shown to increase self-efficacy in diabetic patients. As a result, the second hypothesis of the research is confirmed.

Table 6. Testing the linearity of the dependent variable of self-efficacy

Source	Method	SS	df	MS	F	Sig.
Efficacy	Linear	585.09	1	585.09	12.12	0.001
	Nonlinear	47.5	1	47.5	0.756	0.389
Self-efficacy; groups	Linear	175.03	3	58.3	1.209	0.318
	Nonlinear	50.4	3	16.8	0.267	0.848

According to Table 6, the self-esteem score of subjects regardless of the type of group is followed only by the linear trend in the post-test and follow-up stage, i.e. with the experimental intervention of self-efficacy in the post-test phase, and the self-efficacy score in the follow-up phase also increases.

In the group interaction and the self-efficacy of the linear and nonlinear process, the subjects score is presented at different levels of the dependent variable according to the group. F (209.1) shows that the linear trend of the subjects' scores in the different levels of the self-efficacy variable in the test and control groups is the same.

Table 7. Bonferroni post hoc test for self-efficacy self-efficacy comparison in time series

Scale	A	B	Mean difference (A-B)	Std. Error	Sig.
Resilience	Pretest	Post-test	1.25	1.745	1
		Follow up	4.938	1.418	0.003
	Post-test	Follow up	3.687	1.374	0.031

According to Table 7, there is no significant difference between the pre-test scores and post-test scores, but there is a significant difference in self-efficacy. There is also a significant difference between post-test scores and follow-up scores. The self-efficacy score has changed in the follow-up phase. The effect of the course of treatment with the passage of time has been significantly reduced. A multivariate covariance analysis was used to examine the difference between the test and control groups and the results are presented in the following tables.

Table 8. ANOVA test, difference between test and control groups

Coefficient	Value	Hyp. df	df Error	F	Sig.	η	Power
Pelly Effect	0.267	2	43	7.818	0.001	0.267	0.937
Wilx Lambda	0.733	2	43	7.818	0.001	0.267	0.937
Hoteling Effect	0.364	2	43	7.818	0.001	0.267	0.937
Biggest Roy Root	0.364	2	43	7.818	0.001	0.267	0.937

According to Table 8, at least one of the interventions affects the self-efficacy score of the subjects in the post-test phase and 26.7% of the variance of the self-efficacy score is explained by the interventions.

Table 9. Bonferroni post hoc test to compare the effect of interventions on paired self-efficacy

Scale of treatment		Treatment	Mean difference	Std. Error	Sig.
Efficacy	Based on acceptance and commitment	Compassion	4.69	2.44	0.371
		Combination	11.22	2.44	0.0001
		Control	7.03	2.44	0.038
	Compassion	Combination	6.53	2.44	0.064
		Control	2.33	2.44	1

According to Table 9, the mean of self-efficacy score in the treatment group based on acceptance and commitment and the group of compassion is not significant, but the mean score of the treatment group based on admission and commitment is significant with combination therapy. Also, compassion-based therapy with combination therapy and group Controls did not have a significant difference. Averages show that treatment of admission and commitment was more effective than combined therapy, but it does not differ significantly from compassion-based therapy. Also, combined therapy with compassion-based therapy is not as effective as effective. Figure 1 shows the self-efficacy score in the pre-test, posttest and follow up of the four groups of acceptance and commitment therapy, and the compassion-based therapy group, the combination therapy group and the control group.

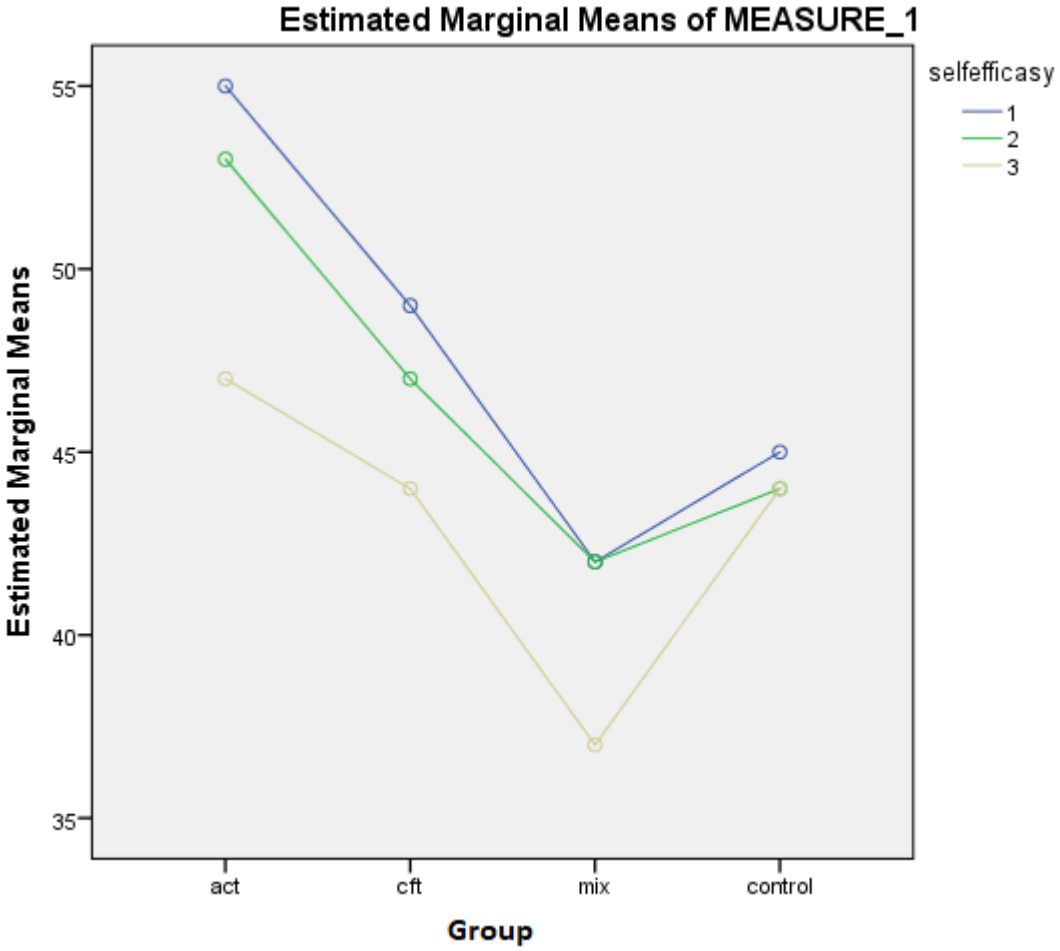

Figure 1. Self-efficacy score in the pre-test, post-test and follow up of the four treatment groups

According to the graph 1, the self-efficacy score in pre-test, post-test and follow-up of the four groups of acceptance and commitment therapy, and the compassion-based therapy group, the combination therapy group and the control group, indicate that the self-efficacy score in the post-test and follow-up of the pre-test in the treatment The combination has declined. From the chart, it can be said that acceptance therapy is more effective than said that acceptance therapy is more effective than compassion-based therapy and combination therapy.

Based on the results, acceptance and commitment therapy has been effective on the self-efficacy of diabetes patients and has led to an increase in the self-efficacy of these patients.

Comparison of treatments showed that treatment of admission and commitment was more effective than combination therapy, but with compassion-based therapy, there was a difference does not have. Comparison of treatments showed that treatment of admission and commitment was more effective than combined therapy but was not different from compassion-based therapy. Combination therapy with compassion-based therapy did not differ significantly, that is, it was effective.

CONCLUSION

According to the analysis of the results in Table 5, about 11.5% of the currency is affected by changes in self-efficacy scores by admission, compassion and combination therapy, therefore, the treatment of adolescence's compassion therapy and combined commitment and treatment have been shown to increase self-efficacy in type 2 diabetic patients. Self-management of people with type 2 diabetes can be managed using admission and commitment therapy, which increases blood sugar control. Blood. In other words, in this study, as with other psychosomatic diseases, psychological disorders as interveners can play a role in the onset of diabetes, disease, prognosis and improvement. Self-compassion is related to your feelings of love and concern and care about others, but it does not mean self-orientation or the preference of your own needs to others.

Having a favorable attitude towards the self-consciousness that makes the mind's mind balanced is called the mind of consciousness. Mindfulness means to have a non-judgmental and receptive attitude towards oneself, in such a way that one sees his thoughts and feelings that they do not need to be changed or abandoned. It is imperative for people to fully experience compassion it takes a conscious mindset. In other words, they should not avoid the experience of painful feelings because it is necessary to know their feelings in order to have a sense of self-sacrifice.

Having a sense of self-compassion is in contradiction with the fact that a person behaves violently and judiciously, but the conscious mind of this component consists in the fact that instead of overlooking their defects, one can clearly see them. It has changed and the person has found new ways to cope with the problems that ultimately can be said to increase the self-efficacy of patients with type 2 diabetes, due to the effect that this effects on the insight and effectiveness of the individual. The results of this study showed that self-efficacy the results of this study showed that self-efficacy based therapy and treatment of admission and commitment to self-efficacy of type 2 diabetes patients were effective. These treatments are third generation psychological treatments that focus on interventions targeting the needs of patients with chronic illnesses. Regarding the effects of self-efficacy and self-acceptance and commitment and combination on improving self-efficacy in patients with type 2 diabetes, this treatment is recommended to psychologists, psychiatrists and other therapists.

Considering the results of numerous studies on the role of psychological factors in various physical diseases, the existence of psychological treatments along with other medical treatments is necessary and necessary. It is suggested that these patients simultaneously receive psychiatric and psychotherapy services.

REFERENCES

Bandura, Albert. (1982). Self-efficacy mechanism in human agency. *American psychologist, 37*(2), 122 .
Cervone, Daniel. (2000). Thinking about self-efficacy. *Behavior modification, 24*(1), 30-56 .
Chaudhury, Arun, Duvoor, Chitharanjan, Dendi, Reddy, Sena, Vijaya, Kraleti, Shashank, Chada, Aditya,

. . . Montales, Maria Theresa. (2017). Clinical review of antidiabetic drugs: implications for type 2 diabetes mellitus management. *Frontiers in endocrinology, 8*, 6 .

Dobson, Keith S, & Dozois, David JA. (2019). *Handbook of cognitive-behavioral therapies*: Guilford Publications.

Fabbro, Anastasia, Crescentini, Cristiano, Matiz, Alessio, Clarici, Andrea, & Fabbro, Franco. (2017). Effects of mindfulness meditation on conscious and non-conscious components of the mind . *Applied Sciences, 7*(4), 349 .

Fekrat, M, Kashanian, M, & Jahanpour, J. (2004). Risk factors in women with gestational diabetes mellitus. *Razi Journal of Medical Sciences, 11*(43), 815-820 .

Ghorbani, Ahmad. (2013). Phytotherapy for diabetic dyslipidemia :evidence from clinical trials. *Clinical Lipidology, 8*(3), 311-319 .

Gonzalez, Jeffrey S, Tanenbaum, Molly L, & Commissariat, Persis V. (2016). Psychosocial factors in medication adherence and diabetes self-management: implications for research and practice. *American Psychologist, 71*(7), 539 .

Gregg, Edward W, Engelgau, Michael M, & Narayan, Venkat. (2002). Complications of diabetes in elderly people: Underappreciated problems include cognitive decline and physical disability: British Medical Journal Publishing Group.

Hayes, Steven C, Levin, Michael E, Plumb-Vilardaga, Jennifer, Villatte, Jennifer L, & Pistorello, Jacqueline. (2013). Acceptance and commitment therapy and contextual behavioral science: Examining the progress of a distinctive model of behavioral and cognitive therapy. *Behavior therapy, 44*(2), 180-198 .

Herbert, James D, & Forman, Evan M. (2011). The evolution of cognitive behavior therapy. *Acceptance and mindfulness in cognitive behaviour therapy. Understanding and applying the new therapies* , ۳-۲۵.

Kawamura, Takahiko, Umemura, Toshitaka, & Hotta, Nigishi. (2012). Cognitive impairment in diabetic patients: can diabetic control prevent cognitive decline? *Journal of Diabetes Investigation, 3*(5), 413-423 .

Lv, Qin, Meng, Xian-Fang, He, Fang-Fang, Chen, Shan, Su, Hua, Xiong, Jing, . . . Zhu, Zhong-Hua. (2013). High serum uric acid and increased risk of type 2 diabetes: a systemic review and meta-analysis of prospective cohort studies. *PloS one, 8*(2), e56864 .

McCrimmon, Rory J, Ryan, Christopher M, & Frier, Brian M. (2012). Diabetes and cognitive dysfunction. *The Lancet, 379*(9833), 2291-2299 .

Nurius, Paula S, & Macy, Rebecca J. (2008). Cognitive-Behavioral Theory. *Comprehensive handbook of social work and social welfare, 2* .

Reijmer, Yael D, van den Berg, Esther, Ruis, Carla, Jaap Kappelle, L, & Biessels, Geert Jan. (2010). Cognitive dysfunction in patients with type 2 diabetes. *Diabetes/metabolism research and reviews, 26*(7), 507-519 .

Richard, Véronique, Halliwell, Wayne, & Tenenbaum, Gershon. (2017). Effects of an Improvisation Intervention on Elite Figure Skaters' Performance, Self Esteem, Creativity, and Mindfulness Skills. *The Sport Psychologist, 31*(3), 275-287 .

Rubin, Richard R, & Peyrot, Mark. (2001). Psychological issues and treatments for people with diabetes. *Journal of clinical psychology, 57*(4), 457-478 .

Shim, YT, Lee, J, Toh, MPHS, Tang, WE, & Ko, Y. (2012). Health-related quality of life and glycaemic control in patients with Type 2 diabetes mellitus in Singapore. *Diabetic Medicine, 29*(8), e241-e248 .

Steed, Liz, Cooke, Debbey, & Newman, Stanton. (2003). A systematic review of psychosocial outcomes following education, self-management and psychological interventions in diabetes mellitus. *Patient education and counseling, 51*(۱), 5-15.