

# Health promotion lifestyle program in improving health for subjects with high-risk status of mental illness

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## Background and Aims

The health promotion and illness prevention is a major issue in World Health Organization and the major policy in Taiwan. Early finding for people with high-risk mental status plays the important role in mental health promotion. In evidence data, before specific psychotic symptoms appear, individuals may experience a period of nonspecific prodromal symptoms and growing functional impairment. Early interventions may alter the natural course of mental diseases and improve treatment outcomes. This study aimed to understand the effects of the health promotion lifestyle program in reducing physical and psychological symptoms and improving general quality of life to preventing mental disability for young adults at high-risk status of mental illness.

## Purpose

To describe the effect of the health promotion lifestyle program in reducing physical and psychological symptoms and improving quality of life to preventing mental disability for young adults at high-risk status of mental illness.

## Methods

The clinical trial experimental design was used for this study. Participants will be randomly assigned into experimental and control groups. Four scales and objective physical assessments were used for evaluating study outcomes. Data of pre- and post-tests were analyzed by pair-t-test. The effects of program were evaluated by independent t-test on post-test for two groups.

## Results

A total of 1657 young adults were approached, including undergraduate students in two universities and two clinics. Among them, 126 young adults meet the screen criteria and agreed to participate this study and signed inform consent. We interviewed all 116 potential participants and evaluated their mental status. Finally, we recruited 60 study participants for this study. Therefore, 49 study subjects completed pre-test, including 19 males (38.8%), 30 females (31.2%). The results showed no significant differences among two groups in pre-test. After intervention, the results of paired test showed 4 study variables had been improved in experimental group, including hip circumference ( $t=2.76$ ,  $p<.05$ ), state anxiety ( $t=4.38$ ,  $p<.001$ ), trait anxiety ( $t=2.36$ ,  $p<.05$ ), and quality of life ( $t=2.53$ ,  $p<.05$ ). There was no significant improvement found in study variables for subjects in control group. However, there were 2 subjects on set during this period. The results of post-test for two groups, 4 study variables were found significant differences, including trait anxiety ( $t=2.68$ ,  $p<.05$ ), health promotion lifestyles ( $t=2.18$ ,  $p<.05$ ), environmental section of quality of life ( $t=2.14$ ,  $p<.05$ ), and total quality of life ( $t=3.10$ ,  $p<.01$ ).

Table 1 Description of Variables for All Subjects (N=49)

Variables	Mean	SD	Min.	Max.	Skew	Kurtosis
BMI	22.35	4.27	15.60	33.80	.78	.44
Systolic Blood Pressure	113.16	15.62	88.00	148.00	.32	-.65
Diastolic Blood Pressure	69.98	11.12	32.00	96.00	-.73	1.84
Waist Circumference	74.97	12.28	58.00	108.00	.74	.03
Hip Circumference	116.54	146.81	80.00	1111.00	6.90	47.69
Body fat	28.97	40.42	8.60	301.00	6.76	46.38
State Anxiety	46.73	7.82	28.00	62.00	.13	-.28
Trait Anxiety	55.06	6.92	36.00	68.00	-.82	.32
Schizotypal	11.14	4.14	1.00	20.00	.04	-.32
Self-actualization	9.73	2.02	7.00	16.00	.89	.24
Health Responsibility	7.16	2.07	4.00	12.00	.26	-.43
Exercise	8.02	2.15	4.00	14.00	.74	.47
Nutrition	9.96	2.09	5.00	14.00	-.30	-.05
Interpersonal support	10.33	2.59	4.00	16.00	-.07	-.13
Stress Management	9.90	2.06	5.00	15.00	.29	.14
Health Promoting Lifestyle	55.10	8.00	40.00	71.00	.02	-.80
Physical	13.08	1.81	10.29	17.14	.39	-.62
Mental	11.37	1.70	8.67	16.00	.44	-.34
Social	11.49	2.30	7.00	16.00	-.20	-.71
Environmental	13.72	1.68	9.33	17.33	-.74	.96
Quality of Life	55.55	6.42	40.29	73.02	.19	.44
Moderate exercise	218.43	384.68	.00	2180.00	3.55	15.05

Pretest for two groups

Variable	Experimental Group		Control Group		t-test
	Mean	SD	Mean	SD	
BMI	22.84	3.31	22.57	3.89	.90
Systolic Blood Pressure	109.95	16.25	111.30	19.18	-.63
Diastolic Blood Pressure	69.00	12.23	71.00	12.74	-1.05
Waist Circumference	74.03	10.76	73.53	11.04	.39
Hip Circumference	95.95	6.45	93.63	7.55	2.76*
Body fat	24.85	4.02	24.50	4.57	.49
State Anxiety	46.95	9.55	42.05	8.73	4.38***
Trait Anxiety	54.80	7.84	51.50	6.94	2.36*
Schizotypal	9.55	3.53	9.10	4.15	.69
Health Promoting Lifestyle	56.15	7.10	58.70	7.13	-1.50
Quality of Life	55.35	7.52	59.38	7.65	-2.53*
Moderate exercise	164.69	322.30	106.52	113.28	.80

Post-test for two groups

Variable	Experimental Group		Control Group		t-test
	Mean	SD	平均值	SD	
BMI	22.57	3.89	22.38	7.34	-.08
Systolic Blood Pressure	111.30	19.18	111.50	18.63	.02
Diastolic Blood Pressure	71.00	12.74	68.25	6.75	-.42
Waist Circumference	73.53	11.04	71.63	18.58	-.28
Hip Circumference	93.63	7.55	93.75	12.71	.03
Body fat	24.50	4.57	24.58	7.94	.03
State Anxiety	42.05	8.73	46.00	12.03	.78
Trait Anxiety	51.50	6.94	56.50	2.08	2.68
Schizotypal	9.10	4.15	9.75	6.18	.27
Health Promoting Lifestyle	58.70	7.13	56.75	3.30	-5.3
Moderate exercise	106.52	113.28	78.75	85.28	-.46
Quality of Life	59.38	7.65	57.73	8.27	-.39
Physical	14.00	2.12	14.14	2.30	.12
Mental	11.90	2.06	11.67	2.07	-.21
Social	12.30	2.39	10.00	1.41	-1.8*
Environmental	14.33	2.43	15.67	1.75	1.04

## Implication for nursing

This study results can provide the short-term evidence outcomes of the early finding and early prevention process in improving health for young adults at high-risk status of mental illness. The outcomes can provide evidence knowledge of health promotion lifestyle program in improving general physical and psychological health for young adults with high-risk status of mental illness.