

Anxiety, Social Support and Quality of Life of Pregnant Women after Previous Abortion

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Abstract

*Abortion represents a complex biological and psychological event. It is considered one of the crises women can have. **Objective:** Identify anxiety, social support and quality of life for pregnant women after previous abortion. **Setting:** The study was conducted at the antenatal clinic of El-Shatby Maternity University Hospital. **Subjects:** The study comprised 80 pregnant women with history of abortion. **Tools:** four tools were utilized for data collection; a socio-demographic and obstetric data sheet, multidimensional Scale of Perceived Social Support, trait anxiety inventory structured interview schedule (TAI), and World Health Organization quality of life scale (WHOQOL-BREF). **Results:** The results of this study revealed that about two third of the studied subjects (61.30%) were in the age group range from 30 to less than 40 years, the social support was perceived strong by two third of studied women (66.3%). Fourteen percent of the women had mild level of anxiety, 62.5% of them had moderate quality of life while 15% had poor quality of life. There is a negative statistical significant correlation between social support and women's anxiety level, and a positive statistical significant correlation was found between social support and quality of life. The women with one year lapse after last abortion received more support than women with less than one year lapse. **Conclusion:** In conclusion, social support, level of anxiety and quality of life are correlated and mothers psychological support during a pregnancy after abortion. **Recommendations:** Counseling for these women to enhance their mental health beside physical care at this critical stage in their life.*

Keywords: Abortion; Pregnant Women; Stress; Anxiety; Quality of Life.

Introduction

Pregnancy and abortion are important public health concerns. Emotional and psychological effects following abortion are more common than physical side effects and can range from mild guilt to more serious complications such as depression. The emotional side effects of having an abortion are just as real as physical side effects. Several studies on the impact of prior pregnancy loss on subsequent pregnancy revealed high levels of suffering and a mixture of hope and fear^(1,2).

Early pregnancy failure is the most common complication of pregnancy worldwide and in recent decades abortion has received considerable attention. Its legality and availability have often generated controversy. A study conducted in rural

areas of China found that the ratio between spontaneous abortion and pregnancies was 12.0%⁽⁴⁾. Abortion represents a difficult and distressing life event for a woman. It may be a loss of a future child, of motherhood, and of part of self. Also it may engender doubts regarding the ability to procreate. It was found that women with a history of pregnancy loss showed higher levels of anxiety during their subsequent pregnancy than women without prior loss. Another recent study reveals that, prior abortion poses serious mental health risks for women and psychiatric complain, which further increase the risk of obstetric complications, pregnancy symptoms, and adverse pregnant outcomes. Therefore, exploring the type and magnitude of the impact of previous abortions on pregnant women's mental health has significant implications for determining high-risk groups and preventing

psychological disease and adverse pregnancy outcomes⁽⁵⁻¹⁰⁾.

Increase the risk for obstetric and mental health disturbance related to lack of social support. Social support refers to the emotional and material resources that are provided to an individual through interpersonal communications. Social support is an exchange of resources between at least two individuals; resources perceived by the provider or the recipient are intended to promote the health of the recipient. Perception of social support during times of stress may have a positive impact on health by helping alter perceptions of threat, lower anxiety, and increase coping ability. Additionally, cognitive aspects of social support may serve as a buffer, attenuating physiological reactivity to stress. Pregnancy is one of the critical situations for women in which the need for social support is felt more than ever and requires precise and effective attention. It significantly affects some women's life with stress while others do not get affected even when they encounter the most severe and dangerous conditions⁽¹¹⁻¹³⁾.

A large body of evidence shows that social support improves physical and mental health. Social support is associated with better health during pregnancy and the postpartum period, and with reduced depression among new mothers, abortion patients, and other groups. There is evidence that social networks change during the transition to parenthood^(14,15).

Emotional social support or the feeling that one is cared about, has been found to be strongly and consistently associated with good health and well-being. A study of women who experience emotional difficulty after abortion found that lack of emotional support was a key reason for their negative feelings. Emotional social support has been found to be associated with reduced odds of negative emotional response after an abortion. Studies of women in the postpartum period have emphasized that

emotional and sinecure social supports are particularly important during this time⁽¹⁶⁻¹⁷⁾.

Quality of life is playing important role in increasing or decreasing the stress level. The role of quality of life in the pregnant women perceived stress has been well documented. This means that pregnant women with poorer quality of life experience greater stress during pregnancy rather than their counterparts who enjoy a more desirable quality of life⁽¹⁸⁾.

World Health Organization has defined quality of life as the "individuals' perception of their sense of well-being regarding their values, demands and goals". Poor quality of life can result in some adverse symptoms during pregnancy such as heart burn, nausea and vomiting, legs cramp, as well as dyspnea. In turn these undesirable outcomes can increase the rate of stress among pregnant women with poor quality of life especially those with prior abortion. Hence, according to its positive impact on pregnancy outcomes with decreasing the perceived stress by pregnant women, it seems that knowledge about mothers' quality of life is crucial for planning care services for both mothers and their babies⁽¹⁹⁾.

Aim of the Study

The aim of this study is to identify level of anxiety, social support and quality of life of women who are pregnant after last abortion.

Research Question:

What are the relations between level of anxiety, social support and quality of life of women who are pregnant after last abortion?

Materials and Method

Materials

Design: This study used a descriptive research design.

Setting: It was conducted at the antenatal clinic of El-Shatby Maternity University

hospital affiliated to University of Alexandria.

Subjects: The program Epi info 7 was used to estimate the subject size based on the following, the population size=84, Expected frequency 50%, acceptable error 10%, confidence co-efficient 95%. It reveals a minimum sample size 45. Accordingly, the study subjects comprised 80 pregnant women after last abortion attending the antenatal clinic, free from medical diseases and willing to participate in the study.

Tools: Four tools were utilized for data collection:

Tool I: A structured interview data sheet

It was developed by the researchers. It involved data related to socio-demographic characteristics such as age, level of education, occupation, residence, family type and family income. It also comprised obstetric history such as gravidity, parity, number of abortions, spacing between last abortion and present pregnancy, planning for pregnancy.

Tool II: Multidimensional Scale of Perceived Social Support

It was developed by Zimet et al. (1988)⁽²⁰⁾. This scale was used to measure subjects' perceived strength of their social support. It is a 12-item scale that measures perceived support from three domains: family, friends, and significant other. The higher scores suggest greater levels of perceived social support. Each item was rated on a 3 point likert scale. The total score ranged from 12-36. Each subject's perceived social support strength was ranked as follows: Weak social support 12-19. Fair social support 20 - 27. Strong social support 28-36.

Tool III: Trait Anxiety Inventory structured interview schedule (TAI)

This tool was originally developed and revised by Charles Spielberger (1983)⁽²¹⁾. It can be used in clinical settings to diagnose anxiety and to distinguish it from depressive

syndromes. It is also often used in research as an indicator of caregiver distress. An Arabic version of this tool was published by Ghada AL-Khasawneh (2007). It comprised of 20 items, 10 positive and 10 negative statements, each statement was rated on a 4 point likert scale ranging from 1 to rarely and 4 to always. The scoring was reversed for the positive statements (1, 3, 6, 7, 10, 13, 14, 16, 17 and 19).each item will scored on 4 point Likert scale, the total score ranged from 20 to 80. Higher scores indicate greater anxiety. Each subject's trait anxiety level was ranked as follows: low anxiety 20-34, mild anxiety 35-49, moderate anxiety 50-64 and severe anxiety 65-80.

Tool IV: World Health Organization Quality Of Life Scale (WHOQOL-BREF)

It was originally developed by the World Health Organization (2004) to measure the perceived quality of life⁽²²⁾. It was translated into Arabic language and adapted to suit the Egyptian culture and to fit the specific domains and aspects of postnatal quality of life. It comprised 20 items covering 5 main domains. Namely: physical health (3 items), psychological health (4 items), newborn's status (5 items), social relationships (2 items), surrounding environment (5 items) in addition to overall perception of health (1 item).Each item was rated on a 3 point likert scale ranging from 1 for poor quality of life and 3 for good quality of life. The total score ranged from 20-60. Each subject's perceived quality of life was estimated according to her total score as follows: poor QOL 20-32, fair QOL 33-45, good QOL 46-60.

Method

- Permissions for data collection were obtained from the responsible authorities of the study setting after explanation of the aim of the study. Tool I was developed by the researchers after review of relevant and recent literature.
- Tool two, three and four were adapted from the already published Arabic

versions. The Cronbach's Alpha test proved that the tools are reliable.

- Tools were tested for content validity by a jury of seven experts in the field of psychiatric nursing and mental health and Obstetric and gynecologic nursing.
- A pilot study was carried out on 10 pregnant women with previous history of last abortion, who were excluded from the study subjects to ascertain the relevance, clarity, and applicability of the tools.
- The purpose of the study was explained to each pregnant woman with history of last abortion before present and an informed verbal consent to participate in the study was obtained from her.
- Data were collected through individual interview, conducted in total privacy to assure confidentiality of information and its utilization only for the purpose of the research. The researcher interviewed the pregnant women with last abortion who attend the antenatal clinic. Each interview lasted from 30 to 50 minutes according to cooperation of the women. The desired numbers (80) was reached.

Ethical considerations:

For each recruited subject an informed oral consent was obtained after explaining the purpose of the study. In addition, anonymity, privacy, freedom to withdraw from the study at any time and confidentiality of data were all emphasized prior starting the interview.

Statistical Analysis

Data were fed to the computer and analyzed using IBM SPSS software package version 20.0. (Armonk, NY: IBM Corp) Qualitative data were described using number and percent Quantitative data were described using mean, standard deviation.

Significance of the obtained results was judged at the 5% level. The used tests were Student t-test, for normally distributed quantitative variables, to compare between two studied groups. F-test (ANOVA) for normally distributed quantitative variables, to compare between more than two groups. Pearson coefficient, to correlate between two normally distributed quantitative variables.

Results

Table (1) shows the distribution of the studied pregnant women with history of abortion according to their socio-demographic data. It was observed that about two third of the studied subjects(61.30%) were in the age group ranging from 30 to less than 40 years with a mean age of 31.44 ± 5.26 . The majority of the studied subjects (70%) had primary or secondary level of education. As regard, occupation almost all studied subjects were housewives and the majority of them (76.3%) lived in urban areas. Regarding type of family, 85% of the pregnant women live in nuclear family and the majority of women (82.5%) stated that they haven't enough income.

Table (2) shows the distribution of the studied pregnant women with previous history of abortion according to their obstetric data. It was observed that the majority (76.3%) of the studied subjects had four times and more pregnancy with a mean number of pregnancy (4.55 ± 1.50). About two thirds of the studied subjects had only one time previous abortion (63.8%) with a mean number (1.68 ± 1.14). Regarding previous parity 67.5 of the studied sample had previous one or two times of parity with mean (2.20 ± 1.17). As regards duration between abortion and current pregnancy, 73.8of the studied subject had one year and more duration. Concerning planning for the current pregnancy more than half of them (55%) were planning for pregnancy.

Table (3) shows the distribution of the studied pregnant women with previous

history of abortion regarding score of perceived social support scale, trait anxiety, and quality of life scales. As regard the level of perceived social support among the subject, two third of studied women perceive strong support (66.2%) and (16.3%) of the subjects had weak social support, with a mean of 32.74 ± 8.48 .

Concerning the level of anxiety 40% of the women have mild level of anxiety, while 16.3 of the sample have moderate level of anxiety, with a mean of 52.51 ± 10.49 . The quality of life scale, revealed that 62.5% of the sample had moderate quality of life and 15% of them had poor quality of life with a mean of 49.63 ± 17.64 .

Table (4) this table shows the correlation between social support, anxiety and quality of life scales with each other for studied pregnant women who had previous abortion. There is negative statistical significant correlation between social support and women's anxiety level, i.e. increase perceived social support lead to decrease level of anxiety and vice versa ($r = -0.674$). And there was a positive statistical significant correlation between social support and quality of life, i.e. increase perceived social support lead to decrease level of anxiety ($r = 0.708$).

Also, it was observed that there was a negative statistical significant correlation between women's anxiety level and women's quality of life, i.e. increase level of anxiety associated with low quality of life ($r = -0.584$).

Table (5) shows the relation between social support, anxiety and quality of life with demographic data of the studied pregnant women with previous history of abortion. This table shows that the residence has a statistical significant difference with social support and quality of life. The studied women who living in rural areas perceive social support more than women living in urban areas ($F = 2.459$), the same direction with quality of life ($F = 2.640$). As regard to type of family there was a

statistical significant difference in the level of social support, for women life in extended families than in nuclear families ($t = 4.060$), the same direction was found with quality of life with no statistical significant difference was observed. Regarding the monthly income there was a statistical significant difference was found between income and social support and quality of life, i.e. increase the monthly income associated with increased level of social support and quality of life ($t = 3.893$ and 4.759) respectively.

Table (6) shows the relation between social support, anxiety and quality of life with reproductive history of the studied pregnant women with previous history of abortion. It was observed that no statistical significant difference between reproductive history of the women and level of social support, level of anxiety and quality of life unless the duration between last abortion and current pregnancy. The women who lapse more than one year after last abortion receive more support than other women who lapse less than one year ($t = 2.049$).

Discussion

Eustress presents opportunities for women to personal growth, and can improve mother health and motivate her to do her best. But increase stress affects negatively her health. It is almost impossible to fully comprehend the impact of adverse pregnancy outcomes on subsequent pregnancy. Fetal death, repeated spontaneous abortion, preterm deliveries and early neonatal deaths represent abrupt interruptions of personal and family adaptations to pregnancy and demand new adaptations to unexpected situation. These events can generate anxiety during future pregnancies and affect the mothers' quality of life. Pregnancy loss occurs at a time at which a new life is expected, and there may be no visible child, memories or shared experiences. Moreover, society may not recognize the significance of this type of loss for the parents. In a study on parents following a perinatal loss or sudden infant

death, reported that a gradual reduction in the symptoms of depression and anxiety occurred over time. However, even 30 months after the loss, the parents continued to have almost twice as much psychological stress as shown by the parents in the control group. Women with histories of recurrent abortion seem to have poorer quality of life and greater symptoms of anxiety during their subsequent pregnancy than do those without these adverse pregnancy outcomes. Study showed that for women with a history of early pregnancy loss, subsequent pregnancy anxiety was higher in early pregnancy versus late pregnancy. Armstrong (2004) found that greater rates of anxiety during pregnancy among women who had a previous abortion^(4,23-25).

Moreover, several investigators have described symptoms of psychological disturbance among mothers with histories of previous abortion. Approximately half of mothers report high levels of symptoms of anxiety and, the prevalence of stress and symptoms of depression are higher during pregnancy than during other periods of life, particularly among those vulnerable populations an association between symptoms of anxiety and depression during pregnancy and adverse pregnancy outcomes such as preterm birth and low birth weight has been described in previous publications. Few studies to the date of present study have evaluated the relationships between anxiety, quality of life, and social support life among pregnant women with last abortion⁽²⁶⁻²⁷⁾.

Social support is defined as information leading the subject to believe that he is cared for and loved, esteemed, and a member of a network of mutual obligations. The evidence that supportive interactions among people are protective against the health consequences of life stress is proved. Studying of social support is very important, where the social support can buffer the intensity of stress during pregnancy especially with previous history of abortion i.e. increase her level of hope, and self-

efficiency. The result of the present study the perceived social support, two thirds of studied women perceive strong support this may be due to the nature of the Egyptian family, whose emotionally perceive pregnancy and child birth one of the main function of women, and This support and genuine sorrow feeling lead families to try to provide support for pregnant women especially those who had previous abortion. Those social supports can explain results related to the level of anxiety, where more than half of the women in this study had mild and moderate degree of anxiety during the present pregnancy. Consequently, this of course led to moderate quality of life, as presented study in the current study in which a negative statistical significant correlation between social support and women's anxiety level i.e. increase perceived social support lead to decrease level of anxiety also social support is related to increase level quality of life and visa versa. These finding were supported by a recent study done proved that, quality of life influences the specific-pregnancy anxiety rate directly. In the present study about half of the studied women whose plan for their pregnancy, this may be another cause for their perception of social support and mild level of anxiety^(25,28,29).

Certain factors seemed affect social support and quality of life among the studied pregnant women, this including areas of living, and type of family. These results showed that pregnant woman who living in rural areas had social support and quality of life more than women living in urban areas. Also living in extended family significantly affecting the level of social support and quality of life, this is understandable as being supported by different family members enhance support and allow for other more communication and ventilation⁽³⁰⁾.

Regarding the monthly income there was a statistical significant difference was found between income and social support and quality of life, i.e. increase the monthly

income associated with increased level of social support and quality of life. Lack of adequate family income leads to a lot of stress and decrease quality of life as result of decrease the resources. Mothers with high level of education, empower her to seek high quality health care services.

Regarding the occupation, the housewife receives more social and quality of life and less anxiety than employee women. This may be related to mother's employment increase stress due to obligation to play a multiple role at the same time, such as being employer, and at the same time mother wife housekeeper.....etc. which in turn affects her quality of life, but may decrease stress because she hasn't time to about herself. In addition, the studied women who lapsed more than one year after last abortion receive more support than other women who lapsed less than one year. This may be attributed to the family member fear from lateness of pregnancy.

Conclusion

It is important to understand the effect of the last abortion on women to give the appropriate support and increase their quality of life and for better understanding of their needs at this critical situation. Managing anxiety affect the course of the current pregnancy, as well as the future relationship between the mother and the child.

Recommendations

- Social support program for women had low education, low income to improves well-being long-term health and for the mother and family.
- Provide counseling services after abortion, before another pregnancy, and continue during pregnancy.
- Develop anxiety management and self-help group and encourage women to joint it.
- Make program to increase the social network of the women to give her more chance for ventilation and decreasing the responsibilities on her.

Table (1): Distribution of the studied pregnant women with previous history of abortion according to their socio-demographic data

Socio-demographic data	No.	%
Age		
<30	27	33.8
30	49	61.3
≥40	4	5.0
Min. – Max.	17.0 – 48.0	
Mean ± SD.	31.44 ± 5.26	
Level of education		
Illiterate	22	27.5
Primary education	32	40.0
Secondary education	24	30.0
University education	2	2.5
Occupation		
Housewife	78	97.5
Employee	2	2.5
Residence		
Urban	61	76.3
Rural	19	23.8
Type of family		
Nuclear	68	85.0
Extended	12	15.0
Monthly income		
Enough	14	17.5
Not Enough	66	82.5

Table (2): Distribution of the studied pregnant women with previous history of abortion according to their obstetric data

Obstetric data	No.	%
Gravidity		
2	5	6.3
3	14	17.5
≥ 4	61	76.3
Min. – Max.	2.0 – 8.0	
Mean ± SD.	4.55 ± 1.50	
Abortion		
1	51	63.8
2	15	18.8
3	8	10.0
≥ 4	6	7.5
Min. – Max.	1.0 – 6.0	
Mean ± SD.	1.68 ± 1.14	
Parity		
1	26	32.5
2	28	35.0
3	14	17.5
≥ 4	12	15.0
Min. – Max.	1.0 – 6.0	
Mean ± SD.	2.20 ± 1.17	
Duration between abortion and current pregnancy		
<1 Year	21	26.3
≥1 Year	59	73.8
Min. – Max.	0.08 – 11.0	
Mean ± SD.	2.71 ± 2.65	
Planning for the current pregnancy		
Yes	44	55.0
No	36	45.0

Table (3): Distribution of the studied pregnant women with previous history of abortion regarding perceived social support scale, trait anxiety, and quality of life scale

Scales	No. (80)	%
Perceived social support scale		
Weak social support (range from 12-19)	13	16.3
Fair social support (range from 20-27)	14	17.5
Strong social support (range from 28- 36)	53	66.2
Total score	32.74± 8.48	
% score	66.92± 30.30	
Trait anxiety scale		
Low anxiety (range from 1-34)	35	43.7
Mild anxiety (range from 35 -49).	32	40.0
Moderate anxiety (range from 50 -65).	13	16.3
Total score	52.51 ± 10.49	
% score	54.19 ± 17.48	
Quality of life scale (QOL)		
Poor QOL (range from 1-32)	12	15.0
moderate QOL (range from 33-45)	50	62.5
Good QOL (range from 46 -)	18	22.5
Total score	39.85± 7.06	
% score	49.63± 17.64	

Table (4): Correlation between social support, anxiety and quality of life scales with each other of the studied pregnant women with previous history of abortion

		Social support	Anxiety	Quality of life
Social support	r		-0.674*	0.708*
	p		<0.001*	<0.001*
Anxiety	r			-0.584*
	P			<0.001*

r: Pearson coefficient

*: Statistically significant at $p \leq 0.05$

Table (5): Relation between social support, anxiety and quality of life with demographic data of the studied pregnant women with previous history of abortion

Socio-demographic data	Social support	Anxiety	Quality of life
Age			
<30	68.65 ± 24.05	51.79 ± 17.39	49.17 ± 16.14
30	66.18 ± 34.05	53.98 ± 17.34	50.51 ± 18.46
≥40	64.29 ± 24.05	72.92 ± 9.85	41.88 ± 19.72
F(p)	0.072(0.931)	2.659(0.076)	0.451(0.639)
Level of education			
Illiterate	71.75 ± 31.75	52.50 ± 18.33	53.86 ± 20.48
Primary education	66.85 ± 30.65	53.33 ± 17.38	48.20 ± 15.94
Secondary education	62.35 ± 29.82	56.53 ± 17.21	47.29 ± 17.58
University education	69.64 ± 27.78	58.33 ± 25.93	53.75 ± 12.37
F(p)	0.365 (0.779)	0.267(0.849)	0.661 (0.579)
Occupation			
Housewife	67.17 ± 30.63	53.91 ± 17.57	49.81 ± 17.82
Employee	57.14 ± 10.10	65.0 ± 11.79	42.50 ± 3.54
t(p)	0.460 (0.647)	0.844(0.379)	0.576 (0.566)
Residence			
Urban	63.23 ± 31.92	54.02 ± 18.83	47.34 ± 18.53
Rural	78.76 ± 20.98	54.74 ± 12.62	56.97 ± 12.09
t(p)	2.459* (0.018*)	0.191 (0.849)	2.640* (0.011*)
Type of family			
Nuclear	63.71 ± 31.41	53.77 ± 17.82	48.35 ± 17.61
Extended	85.12 ± 12.63	56.53 ± 15.96	56.88 ± 16.66
t(p)	4.060* (<0.001*)	0.501 (0.618)	1.558 (0.123)
Monthly income			
Enough	82.91 ± 11.40	47.50 ± 12.64	61.43 ± 7.51
Not Enough	63.53 ± 31.99	55.61 ± 18.11	47.12 ± 18.18
t(p)	3.893* (<0.001*)	1.591 (0.116)	4.759* (<0.001*)

F,p: F and p values for ANOVA test

t, p: t and p values for Student t-test

*: Statistically significant at $p \leq 0.05$

Table (6): Relation between social support, anxiety and quality of life with reproductive history of the studied pregnant women with previous history of abortion

%score	Social support	Anxiety	Quality of life
Gravidity			
2	80.71 ± 5.42	53.0 ± 2.74	57.0 ± 15.55
3	56.38 ± 31.86	59.52 ± 19.08	45.54 ± 19.98
≥ 4	68.21 ± 30.72	53.06 ± 17.75	49.96 ± 17.28
F(p)	1.436(0.244)	0.786 (0.459)	0.821(0.444)
Abortion			
1	68.77 ± 31.16	52.71 ± 18.25	50.44 ± 17.28
2	63.57 ± 32.96	55.78 ± 18.29	44.17 ± 22.35
3	53.57 ± 25.82	61.67 ± 11.48	45.63 ± 10.42
≥ 4	77.38 ± 18.44	52.78 ± 16.08	61.67 ± 9.04
F(p)	0.876(0.457)	0.655 (0.583)	1.622(0.191)
Parity			
1	61.54 ± 29.25	56.99 ± 15.88	49.71 ± 18.06
2	75.64 ± 26.55	48.15 ± 15.78	48.21 ± 16.33
3	58.93 ± 36.23	61.55 ± 17.44	48.93 ± 17.31
≥ 4	67.56 ± 32.03	53.61 ± 21.71	53.54 ± 21.49
F(p)	1.393(0.252)	2.269 (0.087)	0.257(0.856)
Duration between abortion and current pregnancy			
<1 Year	55.78 ± 28.58	55.40 ± 16.15	46.55 ± 17.60
≥1 Year	70.88 ± 30.14	53.76 ± 18.05	50.72 ± 17.67
t(p)	2.049*(0.048*)	0.367 (0.715)	0.930(0.355)
Planning for the current pregnancy			
Yes	66.48 ± 28.84	51.25 ± 16.81	51.70 ± 16.26
No	67.46 ± 32.41	57.78 ± 17.85	47.08 ± 19.11
t(p)	0.143(0.886)	1.680 (0.097)	1.169(0.246)

F,p: F and p values for ANOVA test

t, p: t and p values for Student t-test

*: Statistically significant at $p \leq 0.05$

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