Comparative Exploration of Psychological Health and Subjective Well-being among Fertile and Infertile Females

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ARTICLE DETAILS

ABSTRACT

Psychological health directly affects life satisfaction especially to those women who face social and family pressure about their infertility. A wide range of research studies comparing fertile and infertile women documented that there is negative impact of infertility on subjective well-being and global life satisfaction (Abbey et al., 1991, 1992; Callan, 1987; Callan & Hennessey, 1988). The present study was aimed to investigate the impact of psychological health on life satisfaction among fertile and infertile females. Through the convenience sampling technique, a sample of 310 (N=310) fertile and infertile women was selected whose age ranged between 25 to 50 years. Demographic variables included age, employment status, level of education, duration of marital life, type of marriage and family system for both fertile and infertile females. To be included in sample, Women must have been diagnosed with infertility (primary or secondary), they must not have adopted any child, and marriage duration must be at least 2 years and must not have past history of psychiatric illness. General Health Questionnaire (GHQ-28) was used for current psychological health and Satisfaction with Life Scale (SWLS) was used to measure life satisfaction. Data was analyzed by using SPSS version 21. Descriptive statistics, Regression analysis, ANOVA and t-test were used to analyze the data. Results have shown that psychological health has impact on life satisfaction in both fertile and infertile groups of women. Furthermore, results show that level of life satisfaction and psychological health is more prevalent in educated and employed women as compared to uneducated and unemployed women. To conclude, this study will be helpful in resolving psychological problems of the infertile females. Education can increase awareness about infertility and infertile females can meet the challenges of the society and can stand with better health and emotions.

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1. Introduction

Infertility is an important domain of clinical work that has stimulated a remarkable degree of research worldwide. Psychological complications associated with infertility have been documented well in developed and less developed nations of the world (Sami and Ali, 2006). In almost all societies marriage and childbearing is considered as the major part of life but in Pakistan motherhood is considered as almost an obsession. This ideology has some cultural roots; hence, we may find many couples who become parents by the time of their first anniversary. But this statement is not applicable to every couple. Some partners do not bear children and especially women have to face social stigma of infertility. Therefore, due to active pressure of society, infertility or childlessness is considered as worst misfortune (Forrest & Gilbert, 1992). In Pakistan, countless consideration is given to have children immediately after marriage. There are expectations from spouse, family, friends and society that put women in an awkward situation. Women if remain infertile for many years, is considered as curse for family. Also, men are highly pressurized for second marriage which also creates psychological frustration and causes many psychological health problems for women. They lose their satisfaction with life due to unhealthy psychological aspects of life. Therefore, the present study aimed to investigate the possible impact on psychological health and life satisfaction among infertile women and compare the level of psychological health and life satisfaction between fertile and infertile women.

The term infertility means being unable to get pregnant. Those women who cannot stay pregnant may also fall in the category of infertile women. Both men and women can become victims of infertility but in our society women are considered to be the most focusing personnel in every aspect. As this research is limited to women infertility only, therefore all data related to women infertility will be discussed (Slade, 1981). There are many problems of infertility. They may be biological, hereditary or may be psychological. Life crisis theory of infertility proposed by Menning (1997) stated that infertility is a negative event and results in stress and depression. This theory is focused on different ways to cope up with stress produced due to infertility problem. A life crisis is something that is unexpected transition or something that has negative impact on the recipient (Schlossberg, Waters, & Goodman, 1995). It is included that many persons who want to become parents and unable to do so is the worst event in their life. This leads to strong life crisis and someone may think that he or she has lost the most important role of their life. Some other authors have argued that if the problem of infertility is left untreated it may become chronic issue and needs some extra intervention techniques (Berg & Wilson, 1991; Forrest & Gilbert, 1992).

Many studies were designed to investigate the effects of infertility on psychological health. It was reported that both men and women suffered psychologically and emotionally from the problem of infertility. They showed higher level of stress emotionally. It was concluded that infertility is the root cause of stress in both men and women (Bell, 1981; Bernstein et al., 1985; Daniluk, 1988; Eisner, 1963; Freeman et al., 1987; Link & Darling, 1986; O’Moore et al., 1983; Platt et al., 1973; Slade, 1981; Valentine, 1986).

Emotional reactions to the problem of infertility often range from extreme to less extreme. They include anger, depression (Mahlstedt, & Bernstein, 1987) and feelings of guilt (Abbey et al., 1994). According to the end of the diagnosis of infertility one of the partners may feel guilty and this is the basis of most of the marital rifts. Many marriages have conflicts due to the problem of infertility. Anger depression and guilty feelings makes a person imperfect for the other partner (Abbey et al., 1994).
There are several variables that are associated with infertility that affects women health in several ways. Over the years it has been highlighted that the most obvious consequences of infertility is the loss of control on one's life (Cousineau, 2007). This might be explained by the most common fact that in early age's messages regarding importance of parenthood and especially motherhood are spread all over. For a woman when she becomes infertile, it is very hurting for her as she received stigma and discriminating behaviors. In this way it becomes very disturbing and stressful for her to be infertile (Deka, 2010). In a study, “Recovery From Traumatic Loss: A Study of Women Living Without Children After Infertility,” which was done in University of Pennsylvania in 2007, Marni Rosner, DSW, LCSW, a New York City-based psychotherapist, explored the fact the women with infertility rebuilt their identity and their other sides of life. These women need special attention as their infertility is crippling to their identity.

Those women who chose to be childless, at any stage of life they feel isolation even if they have joined many available support groups or such organizations. One of the reasons is that these groups only focus on in-vitro fertilization and adoption but these groups do not focus on the support of women who choose to be childless. According to Rosner, Isolation of infertile women is mainly due to reaction of society towards trauma of being infertile. In this area education is the critical factor. Educated infertile women try to cope with the situation and can maintain their inner self quite satisfied to lead a better life ahead (Rosner, 2007). Parents and peers or those who have small children sometimes pose social pressure on infertile women. Due to which women starts thinking that whether she is good to fit in her family of origin or not. This results in poor psychological health and life satisfaction (Rosner, 2007). Infertility has great impact on woman’s relationship with her family members at large. Infertile women may experience painful changes. Woman’s partners may give more attention to their siblings or parents or friends with kids. Significant shifts in relationship of partners and family members have been studied by Rosner in her research. Lack of empathy and support is experienced by infertile women (Rosner, 2007).

Infertility is although a social situation, many studies discussed its impacts on the relationships. It is strongly argued that females become more discontent and they develop a sense of loss over the time as compared to males. Females who suffer with infertility with the passage of time they become dissatisfied with themselves and their marriage. The challenge of infertility creates a great deal of strain in both males and females (Greil, 1997).

There is great trouble when one partner wants to do everything to have children and other one limit to do anything. If this issue is not resolved between two partners there are possibilities of separation. In this case an open, honest and very clear communication is very important factor. Infertile couple should develop a clear vision about having children and to have a family (Experts, 2017).

Most of the time people consider psychological health as being healthy from mind or being happy. But many psychologists consider it as positive emotions. When emotions are positive, person feels healthy psychologically and physically also. And we all know very well that positive emotions are very beneficial for everyone. These positive emotions encourage us to learn new things, to grow and to face every situation (Ryff, 1989).

On the other hand, apart from the positive emotions there is much more in it. It includes a purposeful life as literature suggest that a satisfied life means that a person is having a purpose of spending life and is having a direction in life. Life is not considered as time pass but a satisfied person enjoys the life and try to fulfill the goals of life. Most often psychologists use the term mental well-being for such kind of happiness that is based on meaning, a purpose and fulfilling a person’s potential.
Psychological health effects how people think, feel and behave. It helps us to determine how to manage stress and how to make relations with others. It helps in decision making in our daily life activities. It is important in every life stage from childhood to adulthood (Mandell, 1995). If people have positive mental health, it allows people to Realize the full potential they have so they can face problems with more strength. People cope with the stresses of daily life. They know how to face difficulties. They Work productively and professionally. When they join any organization their work is considered as best because they know to deal psychologically. These people make meaningful contributions to the society (McQuillan, et al., 2007).

The concept of life satisfaction was embedded in 18th century but it was the start of 19th century when the term life satisfaction was known to people and it provided a great deal of sense of goodness. The concept of life satisfaction influenced the development of welfare state (White & Jacob, 2003). According to Sumner (1966), life satisfaction is “A positive evaluation of the conditions of your life, a judgment that at least on balance, it measures up favorably against your standards or expectations”. An assessment of overall feelings and attitudes about one’s life at a specific time period that ranges from positive to negative we can say that life satisfaction is the member of three indicators of well-being that are Life satisfaction, Positive effect and Negative effect (Diener, 1984). It was reported by a researcher Veenhoven in 1984, that the difference of satisfaction is greater between single and with partner than between poor and rich. This is actually explained as deprivation. It is very clear from the research that singles have something lacking that is very important for life.

It is a known fact that females are prone to suffer from psychological disturbances especially in those societies where female is considered to be responsible for the non-conception of child. Employment status, no education and social and family pressure also contribute to psychological problems, low mental health and low satisfaction with life. (Alhassan, & Muntaka, 2014)

In a research conducted by Dyer SJ, Abrahams et al. (2005), infertility related psychological problems were addressed and they concluded that infertility has negative impact on life satisfaction of infertile females. Another study was conducted by Tahir et al., 2004, and they reported that rates of infertility are rising to almost 22%. A cross sectional survey was done on 7,628 out-patients from Gynecology and Obstetrics Department at the Federal Government Services Hospital, Islamabad. In this survey, researchers found the frequency of infertility in Pakistan was 7% (Shaheen, et al., 2010). Numerous studies have been conducted to examine the mental health of infertile women. Research found that primary infertility is the major reason of psychological distress (Greil, 1997). It was concluded that infertility has negative impact on psychological health of women. Due to which many problems related to self and society develop.

In a study (Shakeri et al., 2006) researchers concluded that 44% infertile women suffer from mental health problems and anxiety. Many factors like unemployment, illiteracy, behavior of husband and family pressure have been found associated with high levels of depression in middle income countries. In contrast fertile women lead a life with less number of mental stressors than infertile women do. Educated women has better standard of living and they can better cope up with society than uneducated women both fertile and infertile (Nisar & Gadit, 2004). Women have to face numerous psychological health problems when it comes to infertility. It is reported in a research that Pakistani childless women become focal point after some years of marriage. They have to face social and family pressure for conceiving a child. With the passage of time these women are blamed for their infertility. And they are considered as “bad luck”, “barren” or “curse” on their family (Ahmed & Robson, 1998). In
another study chances of psychological disorders were 2.5 times higher in infertile women than fertile women. Also two times higher than infertile men. Researchers concluded that prevalence of psychological disorders like depression, anxiety, phobia were more in infertile women than fertile women (Nourbala, 2009).

A cross sectional study was conducted by Abbasi et al., in 2016 to examine the frequency of depression and anxiety. Using 70 participants they concluded that depression and anxiety were higher in infertile women than fertile women. Edelmann and Laffont (1997) have documented that lower life satisfaction, isolation and high levels of stress are associated with primary infertility. A systematic literature review “psychiatric morbidity among infertile women” done by Hussain in 2010 revealed that many studies have been conducted in Pakistan identifying the psychological problems of infertile women. There is a recent study conducted in which it was revealed that life satisfaction and psychological health of working women is higher as compared to non-working women among infertile group (Bhatti, et al., 1999; Begum & Hassan, 2014).

A wide range of studies compared fertile and infertile women documented that there is negative impact of infertility on subjective well-being and global life satisfaction (Abbey et al., 1991, 1992; Bromham; Callan, 1987; Callan & Hennessey, 1988). Many studies have been conducted on infertility examining the association of different psychological variables with infertility. They found that infertility is linked with psychological distress in women experiencing childlessness. Authors concluded that infertile women have lowered psychological health and it turns into lower level of life satisfaction (Greil, 1997; Lecours, & Sabourin, 1989).

Different authors found that both infertile women and men due to some circumstances experienced high level of depression and lowered satisfaction with life than infertile couples who were infertile by choice. Many researches have explored this matter that what are the psychological problems of infertile couples by circumstances and by choice. Infertile women by circumstances cannot lead a satisfied life. These people face difficulties in life and cannot meet the challenges of infertility as compared to perfect fertile couples do (Connidis & McMullin, 2002). According to some researchers women who are seeking treatments of infertility feels that society is not accepting them or in other words they feel socially unacceptable. They face every person in the society who talks about them and who wants to know the reason of their infertility. Due to this reason they feel low level of life satisfaction. This thing triggers out the sense of anxiety and guilt in infertile females (Greil, & McQuillan, 2011). Mindes et al. (2003) revealed that among infertile women, the symptoms of depression are known and these depression symptoms are the signs of emotional see-saw that swings between optimism and hope on one side and depression and hopelessness on the other side. Mindes et al. (2003) thus studied and reported that infertile women especially those who live in separate families face more psychological distress as compared to fertile women. Psychological health plays an important role in an active prediction of life satisfaction of a person and it is very important in infertile couples. Because if psychological health would be perfect, life satisfaction would automatically come to an optimized level. In recent years this issue has been studied by many authors and special attention has been given by researchers on the psychological problems faced by infertile women. Some authors have found low levels of psychological health associated with life satisfaction (Murphy et al. 2005; Bray & Gunnell, 2006; Desousa et al. 2008; Beutel et al. 2010).

A good amount of research links psychological health with life satisfaction but still there are number of limitations to these researches. A very low number of researches have checked the impact of psychological/mental health on life satisfaction especially among fertile and infertile females and very few studies compared this impact between fertile and infertile women. Therefore, the present research
has been done to investigate the impact of psychological health on life satisfaction among fertile and infertile women in Pakistan and to compare the infertile and fertile women.

Facing the stigma of infertility women suffer from the psychological problems like they feel anxiety, they are depressed sometimes, they cannot focus on daily activities, they lose hope to have children. In some severe cases women lose their senses to such extent that she gets suffered from psychological disorders. These disorders include anxiety, depression, bipolar disorder, mood disorders, behavioral disorders and schizophrenia (Bhatti, et al., 1999). Infertile women in our culture when suffering from psychological problem lose the level of life satisfaction overall (Bhatti, et al., 1999).

In light of above mentioned traditional treatments of society with infertile women, the present study was aimed to investigate the impact of psychological health and life satisfaction among fertile and infertile women of Pakistan. This research will be helpful investigating the ties that are bound to infertility of women in Pakistani society. In more detailed explanation of results, the present study will explore the importance of awareness and education of infertile women so that they learn to face the challenge of infertility. This study will be helpful for infertile women so that they can maintain their psychological health and can upgrade their life satisfaction. There are few studies which focus on examining the impact of psychological health on life satisfaction in Pakistani women. This study will fruitfully explore the unresolved questions related to infertility. In a feminine infertility paradigm, the current research will assist health care professionals to provide psychological counseling and psychiatric help, if required, when treating an infertile female.

Objectives:
The main objectives of this research were:
1. To investigate the impact of Psychological Health on Life Satisfaction among fertile and infertile women.
2. To compare the level of life satisfaction and psychological health among Infertile and fertile women
3. To compare the level of life satisfaction in different groups of education between fertile and infertile women
4. To compare the level of Psychological health and life Satisfaction on other demographic variables among fertile and infertile women.

2. Method
2.1 Participants
The current study was held at local infertility or family planning clinics, hospitals and gynecology centers of Multan District (Pakistan). For the collection of data researcher took help from clinicians and staff working at the health centers described above. Convenience, non-probability, sampling was used according to the nature of the study. Sample for the present study comprised of 310 females but some participants refused to fill general health questionnaire as it was lengthy. So, 304 final respondent women, who were fertile and infertile, summed up the data. There were 150 fertile women and 154 infertile women participants of this study. Age range was between 20 to 50 years including educated and uneducated females.

Inclusion criteria for the infertile females was; women must be married, must be diagnosed with infertility (primary or secondary), they must not adopted any child, marriage duration must be at least 2 years and must not have past history of psychiatric illness. And criteria for fertile women were marriage, having kids and duration of marriage was same like infertile women.
The present investigation has psychological health as independent variable and life satisfaction as dependent variable. Other background or demographic variables under study were age of participants, occupation of respondent, education, length of marital life, family system, and type of marriage and employment status of the respondent.

2.2 Instruments

Data from the respondents were collected by using demographic sheet which included items about Age, education, employment status, duration of marriage and type of marriage and questionnaires about general health and life satisfaction.

2.3 General Health Questionnaire-28 (GHQ-28; Goldberg & Hillier, 1979)

General Health Questionnaire (GHQ-28) was used to examine the current and short term changes in psychological health of respondents. This is a good device for the screening process of minor psychiatric disorders of general medical care out patients. It is a self-administered questionnaire that focuses on two major areas; first is inability to do normal functioning, second is suffering from new or disturbing phenomenon. GHQ-28 is having four basic areas or factors for assessment, first is Somatic symptoms (total 8 items, Have you recently been feeling in need of a good tonic?), anxiety and insomnia (8 items, Have you recently felt constantly under strain?), social dysfunctioning (8 items, Have you recently felt that you are playing a useful part in things?) and depression (8 items, Have you recently found yourself wishing you were dead and away from it all?). Likert-type scale format is used for each response option to questions that ranges from 0 to 3; Not at all to much more than usual (Chung & Prevezas, 2006).

By using test-retest procedure reliability of GHQ-28 on 87 cases of psychiatry was .90 (Goldberg & Hillier, 1979). In actual the GHQ-28 was developed by David Goldberg. It has been translated and validated in different languages and found useful on numerous populations as the reliability of the scale was reported as .90 by the authors (Nagyova I, et al. 2000). GHQ-28 was translated in Urdu version by Nashi Khan, Sumera Jabeen and Rukhsana Kausar in University of Punjab, Pakistan which was used in this study. Its reliability was checked and found proper questionnaire for screening out psychological problems (Riaz & Reza, 1998). The reliability calculated for GHQ in the present study was .79 for 28 items.

2.4 Satisfaction with Life Scale (Ed Diener, 1985)

The satisfaction with life scale was developed by Diener and his colleagues in 1985. This scale was designed to measure over all cognitive life satisfaction. It is comprised of 5 items on which participants indicate their agreement or disagreement. Its administering time is 5 minutes. This is a seven point scale ranges from strongly agree (7) to strongly disagree (1). This is found a valid and reliable scale for the measurement of life satisfaction (Diener & Griffin, 1985). Satisfaction with life scale is translated in many languages to apply in different cultures accordingly. Urdu translation was done by M. Mustafa Butt and his colleagues from GC University, Lahore, Pakistan which was used in this study.

Coefficient alpha for the scale ranged from .79 to .89 which indicated high internal consistency of the scale. The life satisfaction scale was found to have test retest correlation as .84, .80 over an interval of a month (Diener & Griffin, 1985). The reliability calculated in this study for the SWLS is .70 for 5 items. The scoring method used for life satisfaction scale is to use the aggregated sum of scores. Possible range of scores is 5 to 35 and the neutral score of satisfaction with life scale is considered as 20 all scores above 20 are considered as satisfied to extremely satisfied while lower than 20 score presents dissatisfaction.
2.5 Procedure

The study under consideration is on the topic of impact of psychological health on life satisfaction among fertile and infertile females. For the purpose of investigation the researcher used convenient sampling technique to approach the participants easily. At first the questionnaires asking questions about psychological health and life satisfaction were got distributed. Participants were approached to their respective study settings (colonies and clinics).

Researcher greeted the participant females. They were told about the purpose of the study and its significance and they were explained that how and why this study will be helpful to spread awareness about infertility. At first, their consent for participation in the research was taken. After taking their complete approval and willingness, they were explained about the study objectives and its significance to society was discussed. Then participants were given demographic sheet, GHQ-28 and satisfaction with life scale to fill comfortably. At first the participants did not get the questionnaires because some were not well educated. So they were explained about the scales and questions asked. Both questionnaires were in Urdu translated versions. Every participant consumed different duration of time. Some took less time to fill the questionnaires and some participants took more time. After completion of questionnaires, sheets including demographic sheet, psychological health questionnaire and life satisfaction scale sheet were collected from the participants and they were thanked with due respect. They were given contact details for further correspondences. Participants were given complete assurance to keep their particulars in secret and will be used for the purpose of research only. After the completion of both questionnaires, participants were appreciated. After completing the data collection process, next step was to analyze this data to extract results. For this purpose SPSS version 21 software was used to analyze the data. In this regard descriptive statistics, regression analysis, independent sample t-test and one way ANOVA were applied to get the output.

Results

Table 1

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>n</th>
<th>SWLS</th>
<th></th>
<th>PH</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 or less than 20</td>
<td>72</td>
<td>12.37</td>
<td>3.77</td>
<td>47.1</td>
<td>12.01</td>
</tr>
<tr>
<td>21 to 30 Years</td>
<td>115</td>
<td>12.19</td>
<td>4.18</td>
<td>52.57</td>
<td>11.06</td>
</tr>
<tr>
<td>31 to 40 Years</td>
<td>93</td>
<td>12.33</td>
<td>4.15</td>
<td>51.20</td>
<td>10.72</td>
</tr>
<tr>
<td>41 to 50 Years</td>
<td>24</td>
<td>11.12</td>
<td>3.67</td>
<td>49.20</td>
<td>14.34</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matric/below matric</td>
<td>226</td>
<td>11.71</td>
<td>3.71</td>
<td>50.15</td>
<td>11.94</td>
</tr>
<tr>
<td>Intermediate</td>
<td>22</td>
<td>12.36</td>
<td>5.03</td>
<td>52.72</td>
<td>10.66</td>
</tr>
<tr>
<td>Graduate</td>
<td>24</td>
<td>12.25</td>
<td>3.69</td>
<td>54.25</td>
<td>07.18</td>
</tr>
<tr>
<td>Masters</td>
<td>32</td>
<td>15.43</td>
<td>4.40</td>
<td>49.68</td>
<td>12.67</td>
</tr>
<tr>
<td>Marriage duration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>02-5 years</td>
<td>116</td>
<td>12.63</td>
<td>4.52</td>
<td>47.25</td>
<td>12.28</td>
</tr>
<tr>
<td>6-10 Years</td>
<td>143</td>
<td>11.80</td>
<td>3.53</td>
<td>53.68</td>
<td>10.25</td>
</tr>
<tr>
<td>11-15 years</td>
<td>31</td>
<td>12.25</td>
<td>3.97</td>
<td>49.77</td>
<td>11.27</td>
</tr>
</tbody>
</table>
Descriptive Statistics of demographic variables for life satisfaction and psychological health scale (n = 304).

Note. M = Mean, SD = Standard Deviation, SWLS = Satisfaction with life scale, PH = Psychological health

Table 2a

Regression analysis to check the impact of Psychological Health on Satisfaction With Life among fertile women (N = 150)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>15.828</td>
<td>1.201</td>
<td>13.178</td>
<td>0.000**</td>
</tr>
<tr>
<td>Psychological health</td>
<td>.066</td>
<td>.024</td>
<td>-.220</td>
<td>-2.748</td>
</tr>
</tbody>
</table>

Note. **p < 0.01, R = 0.220, R² = 0.049, Adjusted R² = 0.042, F (1,148) = 7.552

Above table shows the linear regression analysis to predict the life satisfaction based on psychological health among fertile women (n = 150). A significant regression equation was obtained F(1,148) = 7.552, p < .000, with an R² of 0.049. Value shows that there is a significant impact of psychological health on level of satisfaction with life among fertile women.

Table 2b

Regression analysis to check the impact of psychological health on satisfaction with life among infertile women (n = 154)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t-statistic</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>20.873</td>
<td>2.523</td>
<td>8.274</td>
<td>0.000**</td>
</tr>
<tr>
<td>Psychological health</td>
<td>.155</td>
<td>.042</td>
<td>.284</td>
<td>3.648</td>
</tr>
</tbody>
</table>

Note. **p < 0.01, R = 0.284, R²= 0.080, Adjusted R² = 0.74, F = 13.36, df =142
Above table shows the linear regression analysis to predict the life satisfaction based on psychological health among fertile women (n=154). A significant regression equation was obtained $F(1,152) = 13.306, p < .000$, with an $R^2$ of 0.080. Value shows that there is significant impact of psychological health on level of satisfaction with life among fertile women.

While comparing both tables of simple linear regression for both groups’ fertile and infertile females it has revealed that both groups of fertile and infertile women showed significant impact of Psychological health on life satisfaction. Infertile females have statistically higher significant impact of psychological health on life satisfaction as compared to fertile women.

### Table 3
*Over all Mean score, t-value of psychological health and life satisfaction on the status of fertility and infertility (n = 304).*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Status of fertility</th>
<th>n</th>
<th>$M$</th>
<th>SD</th>
<th>t-value</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction With Life</td>
<td>Fertile</td>
<td>150</td>
<td>12.67</td>
<td>4.417</td>
<td>2.054</td>
<td>.041**</td>
</tr>
<tr>
<td></td>
<td>Infertile</td>
<td>154</td>
<td>11.73</td>
<td>3.581</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychological health</td>
<td>Fertile</td>
<td>150</td>
<td>59.12</td>
<td>13.62</td>
<td>-11.155</td>
<td>.000**</td>
</tr>
<tr>
<td></td>
<td>Infertile</td>
<td>154</td>
<td>45.39</td>
<td>11.58</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. **P < .05, M = Mean, SD = Standard Deviation,*

Above table shows the results of t-test to measure the overall level of psychological health and satisfaction with life among fertile and infertile women. Mean score for life satisfaction of fertile women ($M = 12.67$, $SD = 4.417$) is higher as compared to infertile women ($M = 11.73$, $SD = 3.581$) which indicate that fertile women have higher level of satisfaction with life as compared to infertile women. $p < .05$ shows that there is significant difference found among fertile and infertile women.

In contrast of psychological health significant differences were also found between two groups of fertile and infertile women ($p < .05$). Psychological health is also higher in fertile women ($M = 59.12$, $SD = 13.62$) as compared to infertile women ($M = 45.39$, $SD = 11.58$).

### Table 4a
*Mean, Standard Deviation and t- value for fertile women with categories of employed (n = 37) and unemployed women (n = 113) on the Psychological health and life satisfaction scale*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Employment status</th>
<th>n</th>
<th>$M$</th>
<th>SD</th>
<th>t-statistic</th>
<th>$p$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Health</td>
<td>Employed</td>
<td>37</td>
<td>50.51</td>
<td>13.058</td>
<td>3.279</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>113</td>
<td>46.32</td>
<td>11.697</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>Employed</td>
<td>37</td>
<td>14.68</td>
<td>5.281</td>
<td>-.737</td>
<td>0.001**</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>113</td>
<td>12.02</td>
<td>3.903</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Note. $M =$ Mean, $SD =$ Standard Deviation, $P > .05$, **$p < .05$

**Table 4b**

Mean, Standard Deviation and t-value for infertile women with categories employed ($n = 37$) and unemployed women ($n = 113$) on the Psychological health and life satisfaction scale

<table>
<thead>
<tr>
<th>variables</th>
<th>Employment status</th>
<th>$N$</th>
<th>$M$</th>
<th>$SD$</th>
<th>$t$-statistic</th>
<th>$p$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Health</td>
<td>Employed</td>
<td>37</td>
<td>59.59</td>
<td>6.610</td>
<td>-.554</td>
<td>0.014**</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>113</td>
<td>57.28</td>
<td>6.574</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>Employed</td>
<td>37</td>
<td>12.30</td>
<td>3.620</td>
<td>-1.112</td>
<td>0.001**</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>117</td>
<td>11.55</td>
<td>3.516</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. $M =$ Mean, $SD =$ Standard Deviation, **$p < 0.05$

Table 4a shows the mean score for psychological health of fertile employed women ($M = 50.51$, $SD = 13.058$) is higher as compared to unemployed women ($M = 46.32$, $SD = 11.697$) and life satisfaction is also higher in employed fertile ($M = 14.68$, $SD = 5.281$) as compared to unemployed fertile women ($M = 12.02$, $SD = 3.903$). Table for fertile women revealed statistically significant differences between the groups for psychological health as compared to life satisfaction.

Comparing with the table for infertile women, significant differences were also found between two groups of employed and unemployed women ($p < .05$). Psychological health ($M = 59.12$, $SD = 13.62$) and life satisfaction ($M = 12.30$, $SD = 3.62$) is found higher among employed infertile women as compared to infertile unemployed women. There are significant differences between the groups of employed and unemployed women among infertile women ($p < .05$).

**Table 5a**

Mean, Standard Deviation and t-value for fertile women with categories of family system on the Psychological health and life satisfaction scale

<table>
<thead>
<tr>
<th>Variables</th>
<th>Family system</th>
<th>$n$</th>
<th>$M$</th>
<th>$SD$</th>
<th>$t$-statistic</th>
<th>$p$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Health</td>
<td>Joint</td>
<td>99</td>
<td>47.97</td>
<td>14.91</td>
<td>3.279</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>Nuclear</td>
<td>51</td>
<td>47.24</td>
<td>14.34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>Joint</td>
<td>99</td>
<td>13.36</td>
<td>4.22</td>
<td>-.737</td>
<td>0.001**</td>
</tr>
<tr>
<td></td>
<td>Nuclear</td>
<td>51</td>
<td>12.40</td>
<td>4.71</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. $M =$ Mean, $SD =$ Standard Deviation, $P > .01$, **$p < .05$
Table 5b
Mean, Standard Deviation and t-value for infertile women with categories of family system, joint (n = 124) and nuclear (n = 30) on the Psychological health and life satisfaction scale

<table>
<thead>
<tr>
<th>Variables</th>
<th>Family system</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>t-statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Health</td>
<td>Joint</td>
<td>124</td>
<td>59.35</td>
<td>6.94</td>
<td>-1.66</td>
<td>0.027**</td>
</tr>
<tr>
<td></td>
<td>Nuclear</td>
<td>30</td>
<td>58.13</td>
<td>4.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>Joint</td>
<td>124</td>
<td>12.70</td>
<td>3.94</td>
<td>0.914</td>
<td>0.362</td>
</tr>
<tr>
<td></td>
<td>Nuclear</td>
<td>30</td>
<td>11.49</td>
<td>3.46</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. M = Mean, SD = Standard Deviation, P < .05, **p > .05  df = 152

Table 5a shows that mean score for psychological health of fertile women in joint family system ($M = 47.97, SD = 14.915$) is higher as compared to nuclear family system ($M = 47.24, SD = 14.28$) and life satisfaction is also higher in joint family system ($M = 13.36, SD = 4.22$) as compared to nuclear family system ($M = 12.40, SD = 4.71$). Table shows no statistically significant differences between the groups of joint and nuclear for psychological health ($p > .05$) but significant differences were found for life satisfaction ($p < .05$).

Table 5b shows that mean score for psychological health of infertile women in joint family system ($M = 59.35, SD = 6.94$) is higher as compared to nuclear family system ($M = 58.13, SD = 4.71$) and life satisfaction is also higher in joint family system ($M = 12.70, SD = 3.94$) as compared to nuclear family system ($M = 11.49, SD = 3.46$). Table shows statistically significant differences between the groups of joint and nuclear for psychological health ($p < .05$) but no significant differences for life satisfaction ($p > .05$) among infertile women.

Comparing both groups of fertile and infertile women, it is found that psychological health and life satisfaction is found more in joint family system group as compared to nuclear family system group.

3. Discussion

The present study was aimed to investigate the impact of mental health on life satisfaction among fertile and infertile females. This study also compared the level of psychological health and life satisfaction among fertile and infertile women. Results of the study supported the hypotheses and revealed that psychological health has significant impact on life satisfaction in both groups of fertile and infertile women. Results of the present study are consistent with the findings of a study (Berger, 1977) which indicated that psychological health has little but positive impact on satisfaction with life among infertile women.

During the research under consideration the researcher have noticed different attitudes of the fertile and infertile women in the area of Multan regarding this project. The permission sorting process was not quite easy and was time consuming in some local clinics but the attitude of the authorities was also very encouraging as the heads were quite keen about the results of the research. The process of initiating data collection from infertile women was quite pervasive but by the time the things get easier after having some experience. The behavior of the women was negligent toward the tools provided to them as GHQ-28 was lengthy and it was like a burden to them. To eliminate this factor the researcher was there to help them. But some respondents could have entered information under peer influence.
After conducting the research the researcher is of the view that the current situation of infertile women as compared to fertile women are not up to the mark as they face social pressure from the social as well as from their own internal self. While noticing social factors infertile women face lots of influence from the society regarding the problem of infertility, according to a research conducted in April, 2013 infertile women are prone to lower level of life satisfaction and lowered psychological health due to the influence by their family, friends or peers, which if gone prolong results in an chronic mental issues like generalized anxiety, depression, schizophrenia, lower self-esteem and lower self-confidence. The research further elaborates that infertile women with certain personality traits are often linked with psychological distress and lowered level of satisfaction with life (White & Jacob, 2003).

In the first hypothesis of the present study it was expected that psychological health has significant impact on life satisfaction. After analysis it was found that psychological health has statistically significant impact on life satisfaction among both groups of fertile and infertile women. For the fertile women it is also commonly observed that they are mentally satisfied and they lead better life. As the time passes they become more satisfied with their life. This is supported by a study conducted by Jain & Hornstein (2005) who found the significant impact of psychological health on life satisfaction of fertile and infertile women.

In the second hypothesis it was expected that psychological health and life satisfaction would be more among fertile as compared to infertile group of women. Results of the present research supported the second hypothesis. A recent study was conducted to investigate the life satisfaction of infertile women by using twin comparison approach. Researchers found that there is a positive association of satisfaction with life and having children. The research findings of the previous researchers explained that life satisfaction is associated with having children. Those women who have children and are fertile are highly satisfied with their life (Kohler et al., 2005). This research supports our second hypothesis that there would be lower level of life satisfaction in infertile women.

The third hypothesis of the study was also supported by the findings that there will be higher levels of psychological health and life satisfaction in fertile employed women as compared to infertile women. There is a substantial amount of research in the field of fertility and infertility which documented higher level of life satisfaction and psychological health among fertile women (Lucas et al., 2004). The findings of the present study are consistent with the results of another study indicating that working fertile women have higher level of life satisfaction as compared to non-working group. Employment is the important factor for satisfaction with life especially for infertile women (Begum & Hassan, 2014).

The results of the study supported the forth hypothesis that there will be higher levels of psychological health and life satisfaction in fertile and infertile women living in joint family system as compared to women living in nuclear family system. Findings of the present study supported the hypothesis and showed that there are statistically significant differences among the joint and nuclear family system of the two groups fertile and infertile. The results are also supported by a recent study which concluded that psychological health owns differences in less and more marriage durations among infertile women. In support of the results, it is explained that house wives might face lower psychological pressure than working ladies so their psychological health remains higher (Mirowsky & Ross, 2003).

In the fifth hypothesis it was expected that psychological health and life satisfaction will significantly differ among different age groups of fertile and infertile women. Findings of the present study revealed no statistically significant differences among age groups in both fertile and infertile
women. One possible explanation is that sample has heterogeneity. Any other confounding variable may contribute to make age groups similar on the basis of life satisfaction and psychological health. Contrary to the results of the present research many studies reported that the level of life satisfaction and psychological health differ significantly among different age groups. Elder women have higher psychological health as compared to younger. In case of life satisfaction it is also reported higher in elder ones (Bryce & Balmer, 1989).

Findings of the present study were contrary to the expectation in the sixth hypothesis that psychological health and life satisfaction will significantly differ among different groups marriage duration among fertile and infertile women. It is revealed by analysis that in different groups marriage duration no statistically significant differences were found in both fertile and infertile women. One possible explanation for these non-significant results is that there was small sample size which indicates that there might be some confounding variables that limited the differences. Another explanation may be that sample bias may occur as the researcher took sample from only one area of convenience. These non-significant findings raised a new question in this area to be answered in future.

This study supported the first part of seventh hypothesis that life satisfaction differ according to the levels of education, educated women have more life satisfaction than uneducated in both groups fertile and infertile women. Psychological health had not reached the level of statistical significance among groups of education. One possible explanation for the findings of the research is that uneducated women do not take burden of education. Furthermore, larger sample size may verify the hypothesis. The present study also supported the second part of the seventh hypothesis that life satisfaction has statistically significant differences among education groups. Women who have done masters are more satisfied as compared to women who have done matric. It is supported by a study which concluded that life satisfaction has significant differences among fertile and infertile women in different education levels (Mirowsky& Ross, 2003). Authors of this research documented that life satisfaction was reported more in educated women and more for those women who were in the criteria of masters and graduation. In the second part of their study authors have reported that psychological health is more in those women who are well educated. They gave the reason that education increases awareness in women and they know how to cope up with the challenges of the infertility. They can stand with the norms of the society and make productive contributions for their next infertile generations (Mirowsky& Ross, 2003).

4. Conclusion

The research under consideration was done on the topic “impact of mental health on life satisfaction: A comparison between fertile and infertile females”. In Pakistan women face social pressure due to infertility. Many studies have done to sort out the problems of infertility. It is finally concluded from the findings that psychological health has significant impact on life satisfaction of fertile and infertile women. Significant differences on the scales of psychological health and life satisfaction were found with respect to education and employment status but no significant differences were found on the criteria of age groups and duration of marriage. Psychological health and life satisfaction is found higher in employed and women living in joint family system as compared to unemployed and nuclear family system women in both groups of fertile and infertile women. Furthermore it is concluded from the findings of the present study that the risk groups for lower levels of life satisfaction and psychological health are those who are unemployed, having lower education and living separately. This research has drawn clearly that education can produce positive sparks in infertile women and they can also live happily. Apart from education employment can also change the concept of being infertile alone and unhappy. It is concluded from this research that employment can add positive aspects in the life of
infertile women.

The present study has extended the existing literature on fertility and infertility by studying the picked up the gaps in previous studies so that infertile women can stand up with equal rights to fertile women. The present study will open doors for the researchers interested in understanding the psychology of infertile women.

5. Limitations

The research under consideration was conducted to find the impact of psychological/mental health on life satisfaction among fertile and infertile females. During the investigation process researcher faced some limitations that are discussed here. First of all, sample size was not enough to generalize the results. Secondly, only Multan region was visited for data collection. Participants found the questionnaire of psychological health more difficult than life satisfaction. Thirdly, the attitude of infertile women was quite uninteresting as most of them did not want to show that they are infertile.

6. Suggestions

For further researcher, it is suggested to increase the sample size and to take sample from different cities of the Pakistan. In this way the findings of the further studies can be generalized over the whole population. Moreover, in further research, technique and tools for data collection can be replaced by new and more reliable tools. Furthermore, qualitative researches can be conducted to study deeply the deficiencies of the infertile women facing in their lives. It is further suggested to conduct consultation programs to make fertile and infertile women aware of their problems and can cope up with their issues.

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