

An overview of the impact of Infertility on the Psychological Well-being of couples

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Abstract

Background: Infertility is one of the most distressing experiences in a couple's life. It requires long-term care and medications which would impact on various aspects of health including the psychological well-being of couples. Stress is known to increase infertility in both men and women. Acknowledgment of the emotional, social, and psychological wellness of infertility couples could contribute to their quality of life.

Aim: The present study aimed to provide a comprehensive review of the research focused on the impact of infertility on the psychological wellbeing of couples.

Methods: The present review study was conducted to find the studies regarding couples with infertile including women and men. It would be done through searching databases viz., Google scholar, Web of science, SCOPUS, Medline, PubMed, and Science direct by using key words such as infertile, infertility, psychological wellbeing, depression, anxiety, and marital satisfaction. This systematic search was conducted on April 2020. Totally, twenty-four related articles were retrieved. Out of them, twelve articles were specifically focused on the psychological wellbeing of infertility were reviewed.

Results: As indicated by the existing literature, the psychological wellbeing of infertile women has increased recently, and the average psychological wellbeing is accounted for to be higher in urban communities contrasted with rural. Furthermore, the educational interventions and consultations that have been greater impact on the psychological wellbeing of infertility using different strategies have to a great extent added to the improvement of this factor.

Suggestions: Based on the findings of these studies, psychosocial interventions and other approaches have been recommended to mental health professionals working with men and women experiencing infertility.

Key words: *Infertility, Psychological wellbeing, Stress, Distress, Intervention.*

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Introduction

Infertility is being added to the list of life stressors for numerous heterosexual couples that are experienced in middle adulthood. Even though meaningful life choices are available for couples' difficulty with conception, this medical problem become one of the great life stressor for young couples. Couples has also preferred primarily on becoming biological parenthood only not any other choices including adoption, surrogacy, and foster care. Globally, around 10 to 15% of young married couples experiences infertility. When couples begin to seeking infertility treatments, they will be suffering more because of the treatment procedures involved intrusive therapeutic inquires and various methods. However, 3% of couples recommended to undergo for assisted reproductive technologies (ART) and more than 97% of couples recommended for in vitro fertilization (IVF) (Ishihara et al. 2015).

On 2009, World health organization (WHO) joined with International committee for monitoring assisted reproductive technologies (ICMART) suggests that the clinical definition of infertility as refers to a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse (Zegers-Hochschild et al. 2009; Larsen, 2005). This as one of the gold standard definition which have currently followed by clinical practices and research studies.

Infertility has numerous perspectives including physical, emotional, social, financial and psychological aspects (Sherrod, 2004). These perspectives elaborate that each dimension has plays a major role on infertility. Thus, it concludes that infertility can lead to major bio-psycho-social disorders (Drosdzol & Skrzypulec, 2009). More than half of infertile couples suffer from psychological issues globally. When pregnancies ending up in abortions, stillbirths and new born deaths, that also creates prolonged stress which leads to many psychological issues and affects psychological well-being of the couples.

The impact of stress on infertility has been established at sometimes. It progressively considered both a determinants and as a result of decreased fertility (Klonoff-Cohen, Chu, Natarajan & Sieber, 2001). However, when reviewed relevant literature, there is inconsistencies existing in theoretical, and conceptual background on infertility-stress oriented research.

Psychological well-being includes various psychosocial factors viz., social support, self-efficacy, self-esteem, emotional reactivity, anxiety, depression, psychological distress, marital adjustment and more. Within this, the two main dimension such as emotional reactivity and psychological distress are highly related to couples' emotional adjustment (Fassino, Piero, Boggio, Piccioni & Garzaro, 2002; Wang, Li, Zhang, Zhang, Yu & Jiang, 2007; Wischmann, Scherg, Strowitzki & Verres, 2009). The role of perceived social support in stress reduction in infertile couples has not been addressed thoroughly. Furthermore, it is recognized that the literature is a mixture of scientific and anecdotal studies, expert reviews and empirical studies. In addition, the impact of depression and anxiety or other related psycho-social and medical factors on fertility have also been investigated in recent years. However, the results have been varied because of cultural differences.

Despite some evidence of the impact of infertility on psychological well-being have been systematically reviewed in some countries, it has been studied before two decades. Moreover, in India, such type of review studies is not well documented. Hence, a systematic review is timely needed presently. The aim of the present review is to examine the studies related to psychological well-being of infertility couples and to providing direction for future research for reducing its impact with infertile couples.

Material and methods

Search strategy and selection criteria

Electronic databases viz., Google scholar, PubMed, PsychINFO, Scopus-Elsevier, ISI Proceedings, and CTRI registry in India, were searched with time limit between 2010 and February 2020. It has been categorized into two, India and rest of the world. The search terms in databases were “infertility”, “infertile couples”, “psychological well-being”, “stress”, “depression” and “Anxiety”. The combination of these key words were used as searching strategy in this review article. Further, all the articles which were comes under the inclusion criteria were examined and reviewed.

Inclusion and exclusion criteria

In the present review study has been followed the below inclusion criteria conscientiously: (1) have published between 2010 and February 2020, (2) has been published in English, (3) participants must be couples both men and women, (4) subject of the studies must be infertility and psychological well-being including stress, depression and anxiety of infertile couples, (5) descriptive, prospective or retrospective cohort study, case-control study, cross-sectional study, experimental or quasi-experimental, and randomized controlled trial were considered eligible.

The exclusion criteria have been adopted in this study as: (1) couples with children, (2) other than English language, all languages are excluded, (3) psychometric studies developing or testing psychological well-being scales or tests, and (3) studies lacking full text availability.

Search results

While entered single or combination of the keywords into databases, 34 studies were found and the selected articles were reviewed. In the first phase, researcher reviewed the abstract of articles and removed the articles which were not matched in the inclusion criteria. At the end of the first phase, the researcher finalized 22 studies. Further, in the second phase, researcher read the full-texts of selected articles and those articles that did not available was excluded again. Hence, finally, 18 articles met with the required criteria which includes 11 International article, 6 Indian article and 2 review article. Such articles have been selected for further research process. All the selected articles have been listed in Table 1.

Table 1:

International Studies					
Author(s)	Purpose	Sample size	Research Design	Instrument	Outcomes
Massarotti et al. (2019)	To evaluate levels of anxiety and depression in women, correlated with infertility and treatment	89	Prospective study	HADS, FQoL	Higher level of anxiety and general distress found in patients under treatment for female infertility
Pasztor, Hegyi, Dombi, & Nemeth, (2019)	To review the literature regarding the psychological aspects of infertility	-	Systematic review	Self-survey studies including STAI, BDI	The psychological burden of infertile men are above the average
Collins, (2018)	To explore better insight into how infertility affects the roles and daily life	21	Qualitative research study	Role checklist	Infertility has the potential impact on every area of a female's life
Mahadeen, Mansour, Al Halabi, Al Habashneh, & Bani Kenana, (2018)	To examine the psychosocial wellbeing of infertile couples	248	Cross sectional correlational study	MDS PSS, BDI-II, PSM, COPE Inventory, LOT-R, SLS	Depression is very common among infertile couples, also lack of social support, low level of life satisfaction
Hess, Ross, & Gililand Jr, (2018)	To examine infertility induced psychological	58	Convergent Mixed-Method	GHS, PET	Infertile women lived with martial tensions, criticism from relatives,

	distress and coping strategies among women in Mali		design		and stigmatization from the community.
Ilacqua, Izzo, Emerenziani, Baldari, & Aversa, (2018)	The impact of quality of life and psychological stress on male fertility	-	Systematic review	-	Modification of lifestyle through integrated program can prevent infertility and psychological stress
Karaca, & Unsal, (2015)	To determine the factors affecting the psychosocial problems of infertile Turkish women	118	Qualitative approach	FPI	Infertile women suffers various psychosocial problems and they adopt emotion-focused coping methods.
Dooley, Dineen, Sarma, & Nolan, (2014)	To examine factors predicting infertility distress in male partners	167	Cross-sectional design	GHQ-12, FPI, DAS, MRAS, RSES	Poor 'Relationship Satisfaction' was significantly correlated with high infertility distress
Gao et al. (2013)	To investigate the incidence of sexual dysfunction and psychological burden associations in infertile men	2410	Observational study	PEDL, IELT, IIEF-5, SAS, SDS	Anxiety and depression were more prevalent in infertile than fertile men
Ahmadi, Montaser-Kouhsari, Nowroozi, & Bazargan-Hejazi,	To evaluate the prevalence of depression and its socio-demographic correlates with infertile men	114	Descriptive study	Socio-Demographic form, BDI	Depression among Iranian infertile men is remarkably higher in comparison with Western countries

(2011)					
Chachamovich et al. (2010)	To explore the impact of the psychological distress on QoL's dimensions in men experiencing infertility	162	Cross-sectional survey	Socio-demographic form, SF-36, WHOQOL-BREF, BAI and BDI	Subthreshold depression and anxiety as major predictors of QoL in men experiencing infertility
Indian Studies					
Bhaskar, Ramanathan, & Hoksbergen, (2018)	To compare the perceived psychological well-being between Indian men and women undergoing fertility treatment	200	Survey design	Kuppuswamy's Socioeconomic Scale, PGWBI	Fertility treatment does influence the psychological wellbeing of Indian men and women
Devika, Roy, & Sarkhel, (2017)	To assess the impact of infertility on experience of emotional trauma, belief pattern and formation of psychopathology	60	Cross-sectional comparative study	IES, SC-90, and IBS	The impact of emotional trauma and irrational belief was greatest in the male-related infertility couples.
Patel et al. (2016)	To estimate the predictors of infertility specific stress in males diagnosed with primary infertility	300	Cross-sectional study	Semi-structured questionnaire, PET	The stress is associated with deteriorating mental and physical health in men seeking fertility treatments
Ramamurthi, Kavitha,	To evaluate psychological	150	Cross-sectional	A structured and	Infertile women had difficulty in

Pounraj, & Rajarajeswari, (2016)	impact of infertility and coping strategies employed in women population attending infertility OPD		study	validated proforma	falling asleep, high levels of anxiety, decrease in weight, feeling guilt, feeling of pessimism and suicidal tendency.
D'Souza Vinitha, & Shobha, (2015)	To assess the psychosocial wellbeing and coping strategies among infertile women	180	Cross-sectional study	Psychosocial well-being Questionnaire	Infertile women have disturbed psychosocial wellbeing
Vas, (2013)	To assess the stress level of childless couples	50 Couples	Descriptive correlational study	-	Both husbands and wives had moderate stress and average coping behaviour toward childlessness

HADS-Hospital Anxiety and Depression Scale, FQoL-Fertility Quality of Life, STAI-State Trait Anxiety Inventory, BDI-Beck Depression Inventory, MDSPSS-Multidimensional scale of perceived social support, BDI-II-Beck Depression Inventory-II, PSM-Psychological Stress Measure, LOT-R-Life Orientation Test-Revised, SLS-Satisfaction with Life Scale, GHS-General Health Status, PET-Psychological Evaluation Test, FPI-Fertility Problem Inventory, GHQ-12-General Health Questionnaire-12, DAS-Dyadic Adjustment Scale, MRAS-Male Role Attitudes Scale, RSES-Rosenberg Self-Esteem Scale, PEDL-PE Diagnostic Tool, IELT-Intravaginal Ejaculatory Latency Time, IIEF-5-International Index of Erectile Functions, SAS-Self-Rating Anxiety Scale, SDS-Self-rating Depression Scale, SF-36-Health Survey Short Form-36, WHOQOL-BREF-World Health Organization Quality of Life, BAI-Beck Anxiety Inventory, PGWBI-Psychological General Well-Being Index, IES-Impact of Event Scale, SC-90-Symptom Checklist-90 Revised, IBS-Irrational Belief Scale

Discussion

Infertility is one of the long-term trauma on the journey of marriage. It consists of both painful and stressful experience for not only women but also men. A number of factors determine the emotional and other responses to infertility which includes some demographic factors, clinical factors, and psychosocial variables. Mutual support with one another is the best possible way to cope with infertility. Men's support would be protecting women against negative thoughts, loneliness, guilty feeling and suicidal tendency. Lack of social support will increase the stress level of an infertile woman. Infertile women who were not satisfied with the support from their partner had higher in anxiety than others.

In the reviewed literature, depression, and anxiety as mostly emphasized as the expressions of the intrapersonal aspects. Interpersonal consequences might be creating problems in the relationship, unsatisfied sexuality, or possibly a decrease in the frequency of sexual intercourse. Furthermore, it leads to decrease the overall psychological well-being of the infertile couples. In addition, the most frequent psychological disorders among infertile couples are anxiety and depression. Most of the studies highlight a stronger emotional burden on infertile women. Infertility-related stress also plays significant role in the infertile women's psychological well-being which symptoms includes deep sadness, emptiness, social isolation and fear of the future without children.

Social withdrawal and avoidance had been the most prevalent and ineffective coping strategies used among infertile women. Particularly, most of infertile women avoid to interact or mingle with those expecting a baby or who had already children. Also, in this study revealed that infertile couples had moderate perceived social support from family members and others. Also noted that, lacking of studies connection between sexual and psychological well-being.

In overall, psycho educational interventional programs for improving infertile couples' empowerment in coping with stressful situations could improve their psychological well-being. Furthermore, psychotherapy interventions also helpful for decreasing psychological problems with different integrative approaches in infertile women would be needed to come out of these issues. It would help to decreasing stress, anxiety and depression as well as increasing psychological well-being. These integrative interventional approaches could improve not only the psychological well-being of infertile couples but also overall mental health of them.

Conclusion

In the present review study concludes that infertile couples have experience of disturbed psychosocial well-being and they seek social support in order to cope with the infertility stress. Thus, infertility make an impact on infertile couples psychological well-being. Various integrative interventional approaches help to adjust with the infertility as well as increasing psychological well-being of infertile couples. Therefore, it is the responsibility of healthcare professionals to implement integrative intervention module with the help of psychologist, psychosocial worker and other experts to support and providing counselling to them can improve their psychological well-being.

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