

Conference Paper

Validity of The Fertility Quality of Life (FertiQol) Questionnaire in Indonesian Infertile Women

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Abstract

Introduction. Infertility in Indonesia has an estimated prevalence as high as 22.3%, with the nature of the problem and its treatment could be devastating, it could affect quality of life and vice versa influence successful of the treatment. The Fertility Quality of Life (FertiQol) Questionnaire was specifically designed for infertility couples and has been demonstrated to have good properties. Studies in several countries has showed consistency in validity and reliability of the questionnaire. Precedently there has been no published study about FertiQol in Indonesia, this preliminary study is to measure validity and reliability of FertiQol questionnaire among Indonesian infertility women.

Material & Methods. This is a cross-sectional study, a written FertiQol Questionnaire Indonesian version (www.FertiQol.org) were distribute to Infertility clinic in Cipto Mangunkusumo General Hospital, total of 129 women completed the questionnaire. Statistical analysis used SPSS version 23.0. The questionnaire were tested for validity with Pearson's correlation with two tailed and Cronbach α coefficient for reliability.

Results. FertiQol were completed by 129 women with infertility problem. The mean of total FertiQol score was 70.49 ± 11.44 , score for emotional, mind/body, relational, environment and tolerability was respectively 63.79 ± 18.86 ; 66.05 ± 18.22 ; 75.19 ± 15.11 ; 68.99 ± 18.63 ; 75.64 ± 16.55 ; 66.23 ± 19.17 . Reliability of FertiQol was high (Cronbach $\alpha > 0.70$) with every item of questionnaires was valid ($r > 0.1729$).

Conclusion. This study showed that FertiQol Indonesian version are valid and reliable in measured quality of life among infertility women in Indonesia.

Keywords: FertiQol, quality of life, infertility, validity, Indonesia

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1. Introduction

Infertility in Indonesia has an estimated prevalence as high as 22.3% [1]. Clinical struggles and technology improved outcomes in infertility patients, however since the nature of the problem and its treatment can be devastating it could be associated with psychological distress.

Previous psychosocial studies strongly demonstrate a high incidence of negative effects to infertility and its treatment which affect overall life satisfaction and well-being, success of treatment, willingness to continue with treatment, treatment evaluation and the long-term satisfaction people can hope to achieve if treatment is unsuccessful and they remain childless. Therefore the need to measure and take into account Quality of life (QoL) in infertility is crucial, and could lead to improved patient outcomes [2].

Recently, a condition specific QoL measurement tool, specifically designed for infertile couples, has been developed and used internationally. The Fertility Quality of Life (FertiQoL) questionnaire. This tool has been demonstrated to have good psychometric properties, and its usefulness has been validated in a several study comparing the FertiQoL tool with generic QoL measurement instruments [3,4].

By far there has been no published study about quality of life in infertile couples in Indonesia, this preliminary study is to measure validity and reliability of FertiQoL in Indonesia infertility couples.

2. Material and Methods

This is a cross-sectional study, a written FertiQoL questionnaires were distribute to infertility clinics in Yasmin Clinic, Cipto Mangunkusumo hospital and Infertility private clinics. The FertiQoL tool is a self-report questionnaire. It is specifically designed for infertile patients to asses their QoL by experts from the European Society of Human Reproduction and Embryology (ESHRE) and the American Society of Reproductive Medicine (ASRM).

Two main modules compose the FertiQoL tool: The Core FertiQoL module and the optional Treatment module. There are 24 items in the Core FertiQoL module and 10 items in the Treatment FertiQoL module. The 24 items from the Core FertiQoL are categorized into four domains, including the emotional, cognitive and physical (marked as mind/body), relational, and social domains. The emotional domain evaluates the impact of infertility on emotions, such as sadness, resentment, or grief. The mind/body domain refers to the influence of infertility on physical health, cognition, and behavior. The relational domain and the social domain are used to quantify the impact of infertility on partnership and on social aspects (e.g., social inclusion, expectation, and support), respectively. The optional treatment module consists of two domains that are used to assess the environment and tolerability for the treatment for infertility. Items from these domains are presented in the questionnaire randomly and rated on a scale of 0 to 4. The subscale and total FertiQoL scores are computed and transformed to achieve a range of 0 to 100, where higher scores indicate better QoL. The FertiQoL tool has been translated into 20 different languages, including Indonesia language, and is available on the FertiQoL website (<http://www.fertiql.org/>). In our study, the Indonesian version of the FertiQoL questionnaire was used as the measurement instrument for QoL of Indonesia infertile couples.

The FertiQol questionnaire were given to women who were undergoing fertility management in Yasmin Clinic from September 2015 to January 2016, total of 129 FertiQol questionnaires were filled by participants voluntary and anonymously with surveys were available during interviews for further explanation.

3. Data analysis

SPSS version 23.0 was used for statistical analysis. Validity of questionnaires was test by pearson correlation with two tailed score. The internal consistency of each subscale was calculated by using Cronbach's a coefficient, it was considered to be acceptable as good internal consistency occurs when Cronbach's a is 0.70 or greater.

4. Results

Demographic characteristic of the participants in this study including age, educational level, income, duration infertility, and area of living is shown in table 1. A total of 150 FertiQol questionnaires were collected, twenty-one invalid questionnaires with incomplete information were exclude, 129 copies of valid questionnaires were later analyzed.

The total and subscale scores are shown in table 2. The lowest subscale mean scores as emotional score (63.79 ± 18.86) with average core and treatment score were 70.05 ± 13.36 and 70.94 ± 14.17 , internal consistency were high in almost subscale questionnaires (> 0.70) except in relational domain, it had lowest score 0.663, deleting one item (Q6: "Are You satisfied with your sexual relationship even though You have fertility problems?") from the relational subscale would yield a Cronbach a of 0.693, which improved the reliability this subscale instrument.

We also made validity test for FertiQol with Pearson correlation (2-tailed) with r score among subscales and with total score were all > 0.1729 , it shown that all questionnaires in FertiQol Indonesian version were valid, data was shown in table 3.

5. Discussion

Several previous researches such as Aarts et al revealed that FertiQol is a more sensitive, reliable and valid measure of Qol in infertile women than general measures of QoL such as the WHO-BREF and SF-36 and it showed high reliability in the Dutch population, Pei-Yang Hsu et al, also found that FertiQol in general had good reliability score. To the best of our knowledge, however no previous study has evaluated validity and reliability of FertiQol questionnaires in infertile women in Indonesia [3].

Our study revealed similar results with good internal consistency was found in almost subscale, only in relational domain had slightly low internal consistency, this finding indicated that modification for relational domain is needed to gain better reliability. In table 2 we found that the lowest score was in emotional subdomain, this result was similar with the Dutch study, also with similar mean result in other

	Number	Percentage
Age (y)		
<31	40	31
31-35	40	31
35-40	35	27.1
>40	14	10.9
Mean ± SD	33.87±5.189	
Educational level		
≤High school	23	17.8
Bachelor	76	58.9
≥master	30	23.3
Income (Rp)		
<3 mil	19	14.7
3 mil-10 mil	70	54.3
10 mil-20 mil	21	16.3
>20 mil	12	9.3
Infertility (y)		
min	1	
max	29	
Mean ± SD	5.39±4.172	
Area of living		
Jakarta	69	53.5
Around Jakarta	37	28.7
Java island	11	8.5
Outer island	12	9.3

TABLE 1: Characteristic of participants.

	Mean	SD	Cronbach a
Emotional	63.79	18.86	0.774
Mind/body	66.05	18.22	0.790
Relational	75.19	15.11	0.663
Social	68.99	18.63	0.723
Environment	75.64	16.55	0.776
Tolerability	66.23	19.17	0.732
Core	70.05	13.36	0.894
Treatment	70.94	14.17	0.760
All questionnaires	70.49	11.44	0.898

TABLE 2: Fertiqol scores.

	Pearson Correlation	Emotional	Mind/body	Relational	Social	Environment	Tolerability	Total
emotional		1	0.780	0.325	0.706	0.235	0.375	0.847
Mind/body		0.780	1	0.318	0.680	0.186	0.429	0.834
Relational		0.325	0.318	1	0.414	0.228	0.183	0.560
Social		0.706	0.680	0.414	1	0.211	0.386	0.835
Environment		0.235	0.186	0.228	0.211	1	0.255	0.495
Tolerability		0.375	0.429	0.183	0.386	0.255	1	0.571
Total		0.847	0.834	0.560	0.835	0.495	0.571	1

TABLE 3: Validity test.

subdomain and total score. Unfortunately until now there are no definite cut-off scores to determined who need extra counseling in subdomain [3,4].

There were few limitations of the study, we only included infertile women in this study, and the male side of the problem was not searched. Also we not compare FertiQoL with other QoL instrument therefor there are no definite cut-off scores.

In Conclusion, FertiQoL Indonesian version was valid and reliable for measure QoL infertile women in Indonesia, the advantages of this questionnaires are it has several subdomain which could be used for tailored counseling if needed and could show that Infertility problem could reduce QoL someone.

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