

ABSTRACT

Introduction: Subfertility is a disease of the reproductive system. Clinically it is defined as a ‘failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse’ (WHO, 2014). In human society, a basic family consists of father, mother and children. Subfertility makes families incomplete and unstable. It can affect all aspects of family life causing various psychological and emotional disturbances affecting both male and female partner leading to frustration, depression, hopelessness, guilt and eventually conflicts. It is therefore a major family issue that needs to be addressed with utmost care and confidentiality. Diagnosis of subfertility itself is a life crisis and most couples would end up with devastating psychological consequences. Their quality of life is poor compared to that of fertile couples.

Objective: To assess the prevalence, healthcare needs, and quality of life of subfertile couples in Colombo district and development of a community public healthcare service package for subfertility.

Methods: This study was a community based cross sectional study that included a sample of 3420 currently married women in reproductive age (15-49). It was conducted using stratified cluster sampling method to assess the prevalence of primary and secondary subfertility in all the Medical Officer of Health (n= 18) areas in Colombo district. Three hundred and eighty-nine subfertile couples who were identified in the cross-sectional study were included in the healthcare needs and quality of life assessments. Healthcare Needs Assessment (HNA) tool was developed with qualitative techniques and its validity and reliability were confirmed with a cross-sectional validation study done in Kelaniya Medical Officer of Health (MOH) area. The Fertility Quality of Life (FertiQoL) tool, developed at Cardiff University was culturally adapted to suit our society. The FertiQol tool validity and reliability was assessed. Data were collected with an interviewer administered questionnaire by trained pre-intern medical graduates to assess the healthcare needs and quality of life of subfertile couples. Service availability for subfertility management in MOH Units, secondary and tertiary care hospitals and registered private sector hospitals in Colombo district were assessed with two checklists. Based on the above findings a service package was developed after obtaining expert opinion, to improve community public healthcare for subfertility management in MOH areas.

Results: A total of 3104 currently married women in reproductive age in Colombo district responded to the interviewer administered questionnaire, yielding response rate of 90.8%. The point prevalence of primary and secondary subfertility was 6.1% and 8.4% respectively. The five-factor model for the HNA tool that emerged in the exploratory factor analysis was confirmed as the best model for the male and female by the confirmatory factor analysis carried out in Kelaniya MOH area. Out of the 431 couples eligible for the healthcare needs and quality of life assessments 389 couples responded, yielding a response rate of 90.2%. Healthcare needs were assessed under 5 domains. When considering the unmet healthcare needs among subfertile couples, ‘Information needs on treatment’ domain showed the highest prevalence rate in both male (89.9%, 95% Confidence Interval (CI) = 86.5-92.5) and female partners (84.0%, 95% CI= 80.1-87.3). The second most prevalent domain for female (83.2%, 95% CI=79.2-86.6) and male (86.8%, 95% CI= 83.1-89.8) subfertile partners was the ‘Psycho-social needs’ domain.

The median of the ‘Total FertiQoL’ for male partners was 68.3 (IQR: 60.2-77.2) and for female partners median was 65.2 (IQR: 58.0-73.5). The difference of the quality of life of male and female partners of couples was significant with using the Wilcoxon signed-rank test. Advanced age, longer duration of the marriage, education level, having at least one living child were found to be significantly associated with Quality of Life of subfertile couples.

Out of the 18 MOH units in Colombo district, in five units 27.7% a referral had been made to a secondary or tertiary care unit for further management during the preceding month. Seminal fluid analysis facility was available only in 57.1% of government sector secondary and tertiary care hospitals and in 84.3% of private-sector hospitals/clinics with subfertility management facilities in Colombo. With regard to Assisted Reproductive Techniques (ART), none of the government sector hospitals had In Vitro Fertilization (IVF), Intracellular Sperm Injection (ICSI), egg sharing or donation facility. Only one (14.2%) of government sector hospital had sperm bank facility. Out of all the registered private sector hospitals and clinics with subfertility treatment facilities, 12.5% had IVF, ICSI, and sperm bank facilities. A service provision package was developed with the assistance of expert, based on present study findings and after identifying areas of services needed to be provided at MOH level. A training package was developed to improve the knowledge and attitudes of Public Health Midwives that included a lecture

series and a handbook which included eight main components covering basic information on subfertility, management, counseling of subfertile couple and the role of primary healthcare workers.

Conclusion and Recommendations: The prevalence of secondary subfertility was higher than the primary subfertility. Newly developed HNA tool is a valid and reliable tool to assess healthcare needs of subfertile couples. Prevalence of unmet healthcare needs was high among both male and female partners of subfertile couples. Quality of life is higher among male partner of the subfertile couple and among subfertile individuals having at least one child. Pilot testing of the developed package and making necessary modification to improve the service delivery for subfertile couples as well as improving the ART facilities in government sector hospitals are recommended.

Key words: Subfertility, Healthcare needs, Quality of life, Associated factors, Management of subfertility.