TOPIC: effectiveness of perinatal health counselling on the pregnancy outcome of mothers with HIV attending the prevention of parent to child transmission (PPTCT) center of Coimbatore.

ABSTRACT

Motherhood is of great importance to many, and perhaps most, to HIV positive women. HIV in pregnancy is a bio-psychosocial phenomenon, as its impact is not only limited to the immune system, but also on the psychological functioning, culture, religion and other social factors. Parent-to-child transmission accounts for 5.4% of the newly infected cases. In the absence of any intervention, mother-to-child transmission rates range from 15-45%. This rate can be reduced to levels below 5% with effective interventions. There is a strong focus of PPTCT programs on the use of drugs to prevent HIV, with little importance given to the social and behavioural aspects of such intervention. Pregnancy and the postpartum period represent important opportunities to intervene to address the health of HIV positive women. Counselling can motivate the women during pregnancy and in the postpartum period to change behaviours that may negatively affect their health and the health of their infants. This study was undertaken to assess the effectiveness of a specific perinatal health counselling on the specific pregnancy outcome of mothers with HIV in terms of attitude towards pregnancy with HIV, coping with pregnancy and HIV, knowledge on neonatal wellbeing and perceived postnatal quality of life.

Objectives

The objectives of the study were to assess and compare the specific pregnancy outcome components of mothers with HIV in the intervention group and control group, assess and compare the specific clinical characteristics of mothers with HIV in the
intervention group and control group, associate selected socio-demographic characteristics & general clinical profile with the specific pregnancy outcome components of mothers with HIV, associate the selected socio-demographic characteristics & general clinical profile with the specific clinical characteristics of the mothers, associate the specific clinical characteristics with specific pregnancy outcome components of mothers with HIV and to determine the correlation among the specific pregnancy outcome components. The conceptual framework for this study is an integration of Quality caring model by Joanne Duffy (2003), and Trans-theoretical model of behaviour change by James Prochaska (1977).

Materials and Methods

Mixed method approach with control group post-test-only design was adopted in the study. Qualitative exploration was involved in developing a quantitative instrument -The Pregnancy Outcome of Mothers with HIV (PROMO-HIV) scale which was tested and found to have a strong internal consistency ($\alpha = 0.87$). The researcher developed instrument was used to assess the specific pregnancy outcome of mothers with HIV after providing specific perinatal health counselling (SPHC) which is a counselling intervention facilitated by the investigator and rendered to mothers with HIV attending the PPTCT. An intervention module (SPHC module titled “You can have a healthy pregnancy if you are HIV positive”) was developed. Content validity index showed 100% agreement for the intervention module. Intervention program was rendered three times in 3 sessions. Each session of the intervention progressed through five phases. Phase-I: Introduction, Phase-II: Period of Catharsis, Phase-III: Identifying specific problems and needs, Phase-IV: Counselling with SPHC module, Phase-V: Termination phase. The study was conducted after obtaining permission from the Program Officer, TamilNadu AIDS Control Society (TANSACS), Coimbatore District. A consecutive sample of 40 mothers with HIV (20
mothers in the intervention group and 20 mothers in the control group) registered with the PPTCT centre of Coimbatore Medical College Hospital between May 2013 and November 2014 were recruited for the study.

Results

The intervention and control group were comparable and were found to be homogenous in terms of their socio-demographic characteristics, general clinical profile and specific clinical characteristics.

The mean age of the sample subjects was 27 years. Majority i.e. 9(45%) of the mothers in both the groups were in the age group of 26-30. In the intervention group 10(50%) mothers had high school education and 12(60%) mothers in the control group had high school education. In the intervention group 14(70%) mothers were from rural area compared to 9(45%) mothers in the control group. About 19(95%) mothers in the intervention group and 20(100%) mothers in the control group belonged to Hindu religion. The socio-economic status of 10(50%) mothers in the intervention group and 11(55%) mothers in the control group was very poor. About 20(100%) in the intervention group and 18(90%) in the control group were engaged in work. All the women in both the groups were married and one woman in the intervention group was a widow.

In terms of general clinical profile, in the intervention group 5(25%) mothers had HIV duration of 6-12 months and were diagnosed with HIV during their regular antenatal check up, 5(25%) mothers had been diagnosed and living with AIDS for 1-2 years, 1(5%) mother had been living with HIV for 2-4 years, 3(15%) mothers had HIV history of 4-6 years and 6(30%) mothers had a greater than 6 year history of living with HIV. In the control group 7(35%) mothers had HIV duration of 6-12 months and were diagnosed with HIV during their regular antenatal check up, 4(20%) mothers had been diagnosed and living with AIDS for 1-2 years, 4(20%) mothers had been living with HIV for 2-4 years,
3(15%) mothers had HIV history of 4-6 years and 2(10%) mothers had a greater than 6 year history of living with HIV.

Gestational age of majority 10(50%) of the mothers in both the groups at the time of recruitment for the study was 16–20 weeks. About 13(65%) mothers in the intervention group were pregnant for the first time (primigravida) and 7(35%) mothers had more than one pregnancy (multigravida). In the control group 10(50%) mothers were pregnant for the first time, and 10(50%) mothers had more than one pregnancy. Route of infection for majority of the mothers, 17(85%) in the intervention group and 19(95%) in the control group was their husband. Majority of the husbands, 18(90%) in the intervention group and 19(95%) in the control group were HIV positive. Majority of the mothers 18(90%) in both the groups reported disclosing their HIV status to their husband, 8(40%) mothers in the intervention group and 10(50%) mothers in the control group reported disclosing to both husband and parents.

Assessment of specific clinical characteristics showed that in the intervention group 7(35%) mothers underwent caesarean section and 13(65%) mothers had normal vaginal delivery. In the control group 10(50%) mothers underwent caesarean section and 10(50%) mothers had normal vaginal delivery. In the intervention group 6(30%) newborns had a birth weight of less than 2.5 kilograms and 14(70%) had a birth weight of greater than 2.5 kilograms. In the control group 9(45%) newborns had a birth weight of less than 2.5 kilograms and 11(55%) had a birth weight of greater than 2.5 kilograms. About 8(40%) mothers in the intervention group had CD4 count between 400 to 600 and 12(60%) of the mothers had CD4 count above 600. In the control group 1(5%) mother had CD4 count less than 400, and 13(65%) mothers had CD4 count between 400 to 600, and 6(30%) mothers had CD4 count above 600. HIV status of the infant tested at 6 weeks postpartum showed that all the babies were HIV negative.
The comparison of specific pregnancy outcome components showed that the mean scores of the intervention group were higher than the control group and were found to be statistically significant ($p=0.001$).

Comparison of post-test scores of respondents for the component ‘attitude towards pregnancy with HIV’ showed a mean post-test score of 34.40 in the intervention group and the mean post-test score of 30.10 in the control group and the computed ‘$t$’ value 4.867 was statistically significant ($p=0.001$). In the comparison of post-test scores of respondents for the component ‘coping with pregnancy and HIV’, the mean post-test score of the intervention group was 44.75 and the mean post-test score of the control group was 41.00 and the computed ‘$t$’ value 3.470 was statistically significant ($p=0.001$). For the component ‘knowledge on neonatal wellbeing’, the mean post-test score of the intervention group was 48.50 and the mean post-test score of the control group was 41.50 and the computed ‘$t$’ value 8.337 was statistically significant ($p=0.001$). For the component ‘postnatal quality of life’, the mean post-test score of the intervention group was 46.40 and the mean post-test score of the control group was 42.90 and the computed ‘$t$’ value 4.474 was statistically significant ($p=0.001$). In the overall comparison of post-test scores of respondents’ for specific pregnancy outcome, the mean score of post-test of the intervention group was 173.55 and the post-test scores of the control group was 155.50. The mean post-test scores of the intervention group were higher than post-test scores of the control group with an average increase of 18.050 in the intervention group. The computed ‘$t$’ value 7.086 was found to be statistically significant ($p=0.001$).

Specific perinatal health counselling intervention had no association with the specific clinical characteristics of the mothers with HIV.

The socio-demographic characteristics, general clinical profile and specific clinical characteristics were not significantly associated with the specific pregnancy outcome of
mothers with HIV.

Conclusion

Specific perinatal health counselling intervention was effective in improving specific pregnancy outcome (attitude towards pregnancy with HIV, coping with pregnancy and HIV, knowledge on neonatal wellbeing and perceived postnatal quality of life). Overall mean scores for specific pregnancy outcome were higher in the intervention group, which was statistically significant (p=0.001). The results of the study supported the hypothesis that specific perinatal counselling influences the specific pregnancy outcome of mothers with HIV. Similar findings have been reported in studies which suggest that the counselling sessions have reduced the burden of depression and structured psychosocial support should be offered to HIV-positive pregnant women to prevent poor mental health outcomes, promote early childhood development, and potentially impact HIV-related disease outcomes in the long term. The findings of this study provides basis for incorporation of psychosocial care into routine antenatal care of mothers with HIV.

Keywords: HIV; pregnancy; specific perinatal health counselling; specific pregnancy outcome; attitude towards pregnancy; coping with pregnancy and HIV; knowledge on neonatal care; perceived postnatal quality of life.