Recidivism Among Women Charged With Prostitution Who Participated In At Least Six Months Of Residential Rehabilitation Compared To Community Controls.
D Nelson, R Leonard

Citation

Abstract
This study was designed to determine the efficacy of an intensive residential rehabilitation program for women charged with prostitution compared to women charged with prostitution in the same county who never participated in this program. Using Illinois State Police records we compared what percent of women had any criminal charge following their participation in the rehabilitation program, and the time to that first charge, for the 16 women who completed the program versus 98 women who had never entered it. We found that 50% of the program vs 79% of the non-program participants had at least one criminal charge (p<0.05) corresponding to an incidence rate ratio of 0.43 (95% CI, 0.18 to 0.89) favoring the program. To our knowledge, this is the first comparative study of a program designed to help women leave prostitution.

BACKGROUND
The lives and deaths of prostitutes have received very little academic study. Almost all rigorous analysis regarding prostitutes has focused on them being risk factors for others acquiring sexually transmitted diseases (STDs), some authors even call prostitutes 'vectors' of disease, a term usually used to refer to non-human hosts. Interventions directed at prostitutes almost only target containment of their STDs rather than helping them escape prostitution for their own physical and mental health benefits. To our knowledge, no studies have scientifically examined any intervention to help women leave prostitution. The purpose of this study was to examine the impact of a residential rehabilitation program on helping women leave prostitution and cease all criminal activity compared with those who did not participate in this program.

METHODS
HYPOTHESIS AND STUDY DESIGN
This is a retrospective closed cohort study where exposure is PORA (Positive Options Referrals and Alternatives) rehabilitation. Our hypothesis is that women who participated in PORA for at least 6 months have a lower rate of recidivism (regardless of the criminal charge) than a representative community sample.

Given the anticipated small sample sizes we deliberately avoided doing subgroup or multivariable analysis of the subjects. This study was approved by the Springfield Research Committee Involving Human Subjects.

INTERVENTION
PORA is a non-profit, single facility organization located in Springfield, IL (Sangamon County) that opened August 11 1997 and provides temporary residential rehabilitation to women trying to leave prostitution. Largely run by volunteers, women receive free boarding, meals, mental health counseling (including substance abuse), and support to complete their General Educational Development (GED) or other educational goals and referrals for community jobs.

Subject definitions, data ascertainment and outcome measure
The exposed subjects were defined as those women who completed at least 6 months of residential rehabilitation at PORA. The unexposed (control) women were defined as all women who had at least one prostitution charge in Sangamon County from August 11 1997 through November 3 2008 but never entered PORA.

In cooperation with the Sangamon County Clerk of the Circuit Court and the IL State Police, we received the official, comprehensive criminal charges on all PORA and non-PORA women from the early 1970s through Nov 3 2008. We and legal authorities confirmed the unique identity
for each woman based on her full name, date of birth, State identification (ID) and cross-compared dates of criminal charges if there was suspicion for using pseudonyms.

Because a woman with multiple charges may have one dropped during plea-bargaining, we a priori specified as our outcome any criminal charge, not just prostitution. For the PORA women we defined their graduation date as the onset of the observation period but since the non-PORA women were never enrolled we randomly assigned one of 7 dates to each in a proportion similar to the PORA women’s graduation years (Table 1), refer to them as pseudo-graduation dates and used them as the onset of their observation period.

We used Microsoft Access 9 (Redmond, WA) for data management and SPSS 10 (Chicago, IL) for randomly assigning pseudo-graduation years to the non-PORA women.

STATISTICAL ANALYSIS

We a priori defined our Type 1 error as a two-sided alpha of less than 0.05. Because of the small sample size, we used Fisher’s exact test to compare the proportion of PORA versus non-PORA women who had at least one criminal charge in the observation period. Because the assumption of proportional hazards was not met using the global test of Grambsch and Therneau, we could not use the log-rank or Cox proportional hazards methods to compare survival curves so instead used classical incidence rate ratios with the exact method to calculate a point estimate and corresponding confidence interval. Due to non-Gaussian distributions we list minimum, maximum and median counts for descriptive purposes and dichotomized each subject as having at least one or no charges for analytic purposes.

We used STATA 7.0 (College Station, TX) for all analysis.

RESULTS

Sixteen women completed at least 6 months of PORA rehabilitation from August 11 1997 through November 3 2008. Ninety-eight non-PORA women who were charged with prostitution in this same interval in Sangamon County were identified. The year of graduation for the PORA women and pseudo-graduation assignment for non-PORA women is shown in Table 1. The median observation in days until a charge or censorship (i.e., no charge by Nov 3 2008) was 1180 for PORA (min of 11, max of 2887) and 487 (min of 1, max of 3413) for non-PORA women.

Eight of the sixteen (50%) PORA versus 77 of the 98 (79%) non-PORA women (p=0.03) had at least one criminal charge following their graduation or pseudo-graduation date, respectively. Figure 1 shows the survival curves of each group using a Kaplan-Meier graph, the corresponding incidence rate ratio is 0.43 (95% CI, 0.18 to 0.89) favoring the PORA intervention.

The type of criminal charge varied, Table 2 shows all charges irrespective of the date.

Figure 1

Table 1. The year of graduation for the PORA women and pseudo-graduation assignment for non-PORA women.
Figure 2

Table 2. Number of criminal charges for PORA and non-PORA women at any time.
Figure 3
Figure 1. Graphical display comparing the percentage of women (y-axis) who remain free of any criminal conviction over time between those who were in PORA (pora1) versus those who were never in PORA (pora0). The analysis time is days since graduation (for PORA women) or pseudograduation (for the non-PORA women).

DISCUSSION
Considerable research has been done to show that women often enter prostitution through coercion or through desperation to avoid homelessness or as a means to support a drug addiction. The violent abuse women suffer has also been described by several authors, both before and during their lives in prostitution\(^2,3\). The following quote from Duchesne's report succinctly describes the Canadian experience more than a decade ago: “Between 1991 and 1995, 63 known prostitutes were murdered. Almost all were female (60); seven of them were juveniles aged 15 to 17. Most deaths were related to the trade: 50 prostitutes were thought to have been killed by clients, and 8 by pimps or in a drug-related incident.”\(^2\)

While there has been some interest in recidivism related to prostitution, this appears to be focused on the client (“john”) rather than the prostitute\(^4\) and the few interventions with published results also focus on the “johns”\(^5,6\). The First Offender Prostitution Program (FOPP) based in San Francisco is the most well known program on interventions and the published research focused on the “john’s” recidivism\(^6\) but there is mention at an academic website that approximately 5.1% of the women and 7% of the girls in contact with the sponsoring program left prostitution: “In a little over three years, FOPP has served 1,280 girls, 5,072 women, and 1,512 male customers. Through the program’s intervention, 260 women and 90 girls have left prostitution,”\(^7\). Not taking away from that program’s efforts, it’s not known what the attrition rate is in that community so no comparative statistics are available thus the intervention’s success is unclear which is important when one considers different levels of treatment intensity in establishing what is necessary to achieve success.

To our knowledge, this is the first comparative study to examine the impact of any program to help women escape prostitution. We found that, while recidivism is high among PORA graduates, it is substantially lower when compared to community controls and is likely among the best observed anywhere. We attribute the success in part to the comprehensive nature of the therapy: literally 100% support for the woman as she tries to start a new life. The program requires a temporary though great investment of resources that may be necessary to achieve a lasting effect. Although such resources are expensive, a casual glance at Table 2 raises the possibility that the direct cost to the community (i.e., through loss of life due to murder or loss of material wealth due to theft) and the indirect costs (e.g., law enforcement) of not helping women leave prostitution may be expensive such that there may be savings to the community for investment in rehabilitation though reducing the suffering to the women themselves may be the greatest savings.

This study design is a retrospective, observational cohort so has inherent limitations in attributing a causal association to the success seen by the PORA graduates. It is possible that some of the women left IL but we do not expect PORA versus non-PORA participants to have had different travel experiences so such classification should be non-differential and if anything drive the difference towards the null. A strength of the study is that we had State rather than just county level criminal records and a comprehensive list of all women charged in the county of interest. While a randomized controlled trial may ultimately be done to better study this or related interventions, the findings lend credibility to the efficacy of the PORA intervention.

ACKNOWLEDGEMENTS
We are grateful for the help of the Sangamon County Clerk of the Circuit Court and the Illinois State Police in providing reports of criminal charges on all subjects. This study was completed without any financial support. Neither Ms. Nelson nor Dr. Leonard received any funds from PORA.
Recidivism Among Women Charged With Prostitution Who Participated In At Least Six Months Of Residential Rehabilitation Compared To Community Controls.

References

2. Duchesne D: Street Prostitution in Canada. Statistics Canada; Catalogue no. 85-002-XPE Vol. 17 no. 2
Author Information

Dee (Veandra) Nelson
Positive Options Referrals and Alternatives (PORA)

Ralph Leonard, MD, MPH
Internist, North Carolina