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Publication Details

Collier, R. R. (2013). The Impact of Domestic Violence upon Default from Colposcopy Services (Master of Medicine / Surgery (Thesis)). University of Notre Dame Australia. http://researchonline.nd.edu.au/theses/81

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THE UNIVERSITY OF NOTRE DAME AUSTRALIA

The Impact of Domestic Violence upon Default from Colposcopy Services

Student: Ms Rachael Collier

Student number: 20085151

Principal supervisor:

Professor Julie Quinlivan (University of Notre Dame Australia)

Secondary supervisor:

Associate Professor Rodney Petersen (Edith Cowan University)

Degree: Masters in Research (Medicine)

Executive summary

Intimate partner violence (IPV) is common. Statistics vary, but several surveys (Chalk R & King, 1998; Tjaden & Thoennes, 2000; Quinlivan & Evans, 2001; Quinlivan & Evans, 2005; McLennon, 1996; Wathen & MacMillan, 2003; Grande & Hickling, Taylor, & Woolacott, 2003), place the lifetime prevalence of IPV against women at between 25% to 30% and the annual prevalence between 2% to 12% (McLennon, 1996; Tjaden and Thoennes, 2000; Wathen et al., 2003). IPV is associated with adverse healthcare outcomes in women. It is common co-morbidity in women presenting to healthcare services.

Much, but not all, of the adverse healthcare outcomes can be explained by direct acts of violence causing physical damage and psychological symptomatology. However, violence alone does not completely explain the picture of poor health outcomes that impact upon disease manifestation in many organ systems and particularly in suboptimal responses to standard treatment and management programmes.

In prevalence studies, women exposed to domestic violence have higher rates of both presentation for care and for retreatment, suggesting that they also have poorer rates of cure which cannot be directly explained by exposure to violence (Chalk & King, 1998; Tjaden & Thoennes, 2000; McLennon, 1996). These poor outcomes contribute towards the high cost of care in patients exposed to domestic violence (Chalk & King, 1998; Tjaden & Thoennes, 2000).

We hypothesized that default from care could be a causal pathway by which IPV impacts upon clinical management and leads to adverse outcomes beyond the direct impact of the violent action.

In the present study, our hypothesis was that women exposed to IPV would demonstrate high rates of default from colposcopy services and eventual loss to care despite optimal hospital practices to encourage attendance.

A cohort of women were followed up over a three year period to determine the rate of default and loss to follow up. No previous prospective study has sought to follow women exposed to violence to determine whether adverse outcomes may be explained by care default.

Methods

Institutional ethics committee and informed patient consent were obtained. A prospective cohort study was performed. The patient population consisted of all women booked to attend a colposcopy service at the Sunshine Hospital over a 12 month period. The Sunshine hospital services a population of 500,000 in the western region of Melbourne, Australia. The area has high index of socioeconomic disadvantage (Wei Leng Kwok, "Women in Melbourne's West" n.d.). Sunshine hospital is the main provider of women's health services in the region.

The study specifically included all women, regardless of their primary language. Non English speaking women and women in whom English was a second language were included by the use of medical interpreters and appropriate information sheets. This was to ensure that the data reflected as far as possible, an 'all comers' approach to the prevalence of domestic violence in the attending population. All women were provided with an information sheet by a research assistant and following informed consent, were invited to complete a short screening questionnaire. Of note, the process of obtaining informed consent and completion of the questionnaire were only obtained when the woman could be spoken to privately without a partner being present.

The interviews were conducted in a room attached to the clinical service room to ensure privacy. All women who made a disclosure of domestic violence were offered referral to ongoing counselling and social support services. The clinic had a safe back exit in case of a threatening disclosure of violence.

The completion of the questionnaire was undertaken by questions being read to the patient in her primary language by the research assistant or via a qualified medical interrupter if required. If the patient gave consent, information in relation to the domestic violence was also disclosed to the woman's attending doctor. However if the women wished this information to remain confidential, this information was not disclosed. Likewise all women were offered the opportunity to have the information disclosed to the hospital social support services. Demographic questionnaires were also read to the patient and addressed age, race, parity, smoking status, housing stability and the Yale single item depression screen.

Women were then followed through matching of their hospital unit code through the hospital computerised appointment system. Information on all appointments to colposcopy clinics over the next 36 month period of follow-up was then extracted.

Outcomes of every clinics booking were determined and coded as follows:

1) Patient attended;
2) patient default – first, second and third occasion;
3) hospital default (this occurred if the hospital could not provide the service on the day the patient attended);
4) rebooked at patient request;
5) rebooked at hospital request; and
6) lost to follow up.

Lost to follow up occurred when a patient failed to attend despite receiving three letters and three appointment times as well as a final registered letter, which required a signature at point of delivery to ascertain that it had been delivered and received, along with a final letter being sent to the patient's referring general practitioner.

Data were presented as number and percentage for discreet variables and as mean and standard deviation for continuous variables that had a normal distribution. Skew data were described as median and interquartile range. Chi square tests with Yates Correction were undertaken to compare discreet data except where the cell size was less than 5 when Fisher Exact test was utilised. Student t-test was used for continuous data. Multivariate linear regression models were performed that included variables associated with default or loss to follow up at p-value of 0.1 or less on univariate analysis. Analyses were undertaken using Minitab 16 (Melbourne University, Victoria, Australia 2011; 10), on a computerised database. A p-value of 0.05 was considered significant.

Results

Of 581 women approached to participate in the trial, consent was obtained from 574 women (99%). One woman subsequently withdrew whilst completing the questionnaire. In six cases a partner came into the room during the process of completing the questionnaire. In this scenario the research assistant had been advised to stop and change to another activity as issues of female safety were paramount. In these cases ascertainment of domestic violence was not able to be determined. One other woman gave ambiguous responses to IPV questions and her data were also excluded. Thus final outcome data were available on 566 women.

The average age of the study population was 33.7 years and the majority were Caucasian. A quarter had never been pregnant and one third were nulliparous.

Half were current or ex smokers. A majority of women reported having a current sexual partner. Almost one third of women had presented with pap smears demonstrating a high grade abnormality.

Overall 33% of the study cohort reported IPV within 12 months of the survey. Whilst in 14.5% of the cohort the female reported being the sole recipient of violence, in a further 16.6% of the cohort, the women reported that they had both received and been the perpetrator of violence. In these cases, the majority of women reported that they had responded to verbal, emotional or physical intimidation with violence. In only 1.9% of the cohort did the woman report being the sole perpetrator of violence.

Women exposed to violence were more likely to default from colposcopy once (26.2% vs 7.4%; $p<0.0001$), twice (11.2% vs 3.2%, $p=0.0001$), or thrice (10.7% vs 2.4%, $p<0.0001$). They were more likely to be lost to follow up (8.0% vs 1.1%, $P<0.0001$).

In multivariate analysis, variables found to have an association with default from colposcopy on univariate analysis with a p-value of 0.1 or less were included in the model. These variables were: exposure to domestic violence, housing instability and a positive Yale Depression screen. The demographic variables of age, smoking, English as first language and parity were also included in the model. The only variable with a significant association with default and loss to follow up was exposure to domestic violence ($p=0.002$).

Discussion

The present study indicates that exposure to domestic violence is a significant independent association of recurrent default from colposcopy services. It is also associated with significantly higher rates of loss to follow up. This association persisted in multivariate analysis.

High rates of default from care and loss to follow up are reported widely in the literature in relation to colposcopy and antenatal clinical services (Quinlivan & Evans, 2001; Quinlivan & Evans, 2005; Balasubramanil, Orbell, Hagger, Brown & Tidy, 2008; Miller, Siejak & Schroeder, 1997). Default from care adds considerable cost to the public health system and can result in longer waiting periods for access to care. Despite various interventions that have been trialled in the research literature such as reminder letters, text messages, partial and full booking of lists, default remains a clinical problem (Balasubramani et al., 2008; Lester & Wilson, 1999).

Exposure to domestic violence may be a barrier to women's access to colposcopy and completion of programs of care. This failure may result in suboptimal healthcare outcomes and further aggravate the damage done to women. It may be necessary for clinical services to screen for domestic violence and to provide flexibility for these vulnerable women to access care beyond rigid appointment systems. Strategies that direct default strategies in a targeted manner are more likely to be effective than nondirected strategies.

Acknowledgements

This project would not have been possible without the support of many people.

Above all, I want to offer my sincerest gratitude to my Principal Supervisor Professor Julie Quinlivan. Throughout this journey you have offered me an abundance of support and encouragement and it was with your patience and knowledge that I attribute the level of this master's degree. You have always inspired me to keep going and believed in me and without your guidance this thesis would not have been written. I truly could never have wished for a more knowledgeable and friendlier supervisor.

My Secondary Supervisor, Associate Professor Rodney Petersen, you have been a great support, always friendly and approachable. It was with your guidance that I was introduced to the wonderful world of research many years ago.

Above all, I would like to thank my husband Michael for his love and encouragement, for keeping me going and for sharing my wish to reach this goal of completing this task. My beautiful children Erin-Jo, Jake, Bailey and Ellie who have had to endure me throughout this process – I love you all very much.

Quote

"What is the recipe for successful achievement? To my mind there are just four essential ingredients: Choose a career you love, give it the best there is in you, seize your opportunities, and be a member of the team". Benjamin Franklin Fairless

Abbreviations

IPV	Intimate Partner Violence
WHO	World Health Organization
HPV	Human papilloma virus
CIN	Cervical Intraepithelial Neoplasia
LLETZ	Large loop excision of the transformation zone
RANZCOG	Royal Australian and New Zealand College of Obstetricians and Gynaecologists

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