

CHLAMYDIA TRACHOMATIS INFECTION IN SAMOAN WOMEN: PREVALENCE AND RISK FACTORS

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BACKGROUND

Knowledge about genital *Chlamydia trachomatis* infection in the Pacific is limited to studies of antenatal women. In Samoa, these studies have reported age-specific Chlamydia prevalences of 39.4%, 44.6%, 28.0% and 17.8% in women aged 15–19, 20–24, 25–29 and 25–44 years respectively.^{1–3}

We aimed to complement these data with population-based estimates of Chlamydia in Samoan women from a survey investigating Chlamydial infertility.

METHODS

- From July 2012–July 2013 41 (85%) of 48 selected villages across Samoa participated in the survey.
- Village representatives generated lists of women aged 18–29 years currently residing in each village.
- A survey team, including trained interviewers and a nurse, visited each village; firstly they determined eligibility: Women were excluded if they had not had sex or if they were using contraception (as this study was also ascertaining infertility status).
- Eligible women who gave informed consent then provided a urine sample for Chlamydia testing by nucleic acid amplification and completed a behavioral questionnaire.
- Half of the women listed as being aged 18–29 years were present for eligibility screening, and a quarter of these women were eligible for the study, resulting in a sample of 239 women.
- Associations between Chlamydia infection and possible risk factors were explored using logistic regression.

RESULTS

■ The prevalence of Chlamydia was 37.2% and 34.0% in those aged 18–24 and 25–29 years, respectively (see Table).

■ Age was not significantly associated with Chlamydia prevalence; lifetime number of sexual partners and relationship status were the only significant correlates.

TABLE: THE PREVALENCE OF CHLAMYDIA INFECTION AND ASSOCIATED DEMOGRAPHIC AND SEXUAL BEHAVIOUR FACTORS FOR INFECTION IN SEXUALLY ACTIVE SAMOAN WOMEN

Variable	Total, N	Positive, n (%)	Odds ratio (95% CI)	Adjusted odds ratio (95% CI)	P-value for adjusted
Age					
18-24	145	54 (37.2)	1.0	1.0	
25-29	94	32 (34.0)	0.87 (0.51–1.48)	1.45 (0.82–2.56) ¹	0.20
Highest Qualification					
Tertiary	45	16 (35.6)	1.0	1.0	
Secondary	129	50 (38.8)	1.15 (0.57–2.33)	1.36 (0.66–2.83) ²	0.41
Primary or nil	65	20 (30.8)	0.81 (0.29–2.27)	1.04 (0.34–3.15) ²	0.95
Relationship Status					
Married/Defacto/Widowed	164	49 (29.9)	1.0	1.0	
Single	75	37 (49.3)	2.29 (1.35–3.88)	1.92 (1.02–3.62) ³	0.04
Age at first intercourse					
≥20 years	108	36 (33.3)	1.0	1.0	
<20 years	131	50 (38.2)	1.23 (0.75–2.04)	1.23 (0.75–2.04) ⁴	0.41
Number of Sexual partners in previous 12 months					
1	164	54 (32.9)	1.0	1.0	
≥2	75	32 (42.7)	1.52 (0.72–3.19)	1.78 (0.82–3.86) ⁴	0.14
Number of sexual partners in lifetime					
1	127	35 (27.6)	1.0	1.0	
2	72	33 (45.8)	2.22 (0.83–5.94)	2.89 (1.03–8.06) ⁵	0.04
≥3	40	18 (45.0)	2.15 (1.01–4.57)	3.07 (1.17–8.00) ⁵	0.02

* Association not altered beyond 10% following multivariate analysis.

Factors included in final multivariable models: 1 Relationship status, past pregnancy; 2 Past pregnancy, weekly alcohol consumption; 3 Past pregnancy; 4 Past pregnancy, smoking status; 5 Past pregnancy, smoking status

CONCLUSIONS

The prevalence of Chlamydia was very high, even in sub-groups with low levels of risk behaviour, such as those in stable relationships with only one lifetime partner. Furthermore, use of barrier contraception in Samoa was previously found to be extremely uncommon (<1%),⁴ therefore, these women are likely to be representative of most sexually active women in Samoa. The prevalence was very similar to that found in antenatal surveys, suggesting that the estimates are robust, and confirming that there is a very serious Chlamydia epidemic in Samoa.

Given the low levels of reported risk behaviour amongst these women and high prevalence of Chlamydia, a study amongst men is needed to better understand the epidemiology in Samoa. Studies with further assessment of the impact on Chlamydia on pelvic inflammatory disease and infertility and strategies for sustainable control are also urgently needed.

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DISCLOSURE OF INTEREST STATEMENT

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