



HIV PREVALENCE AMONG EMPLOYEES WORKING FOR A PROVINCIAL GOVERNMENT IN SOUTH AFRICA: A CROSS-SECTIONAL SURVEY

Geoffrey Setswe, Khangelani Zuma, Ntombizodwa Mbelle, Leickness Simbayi, Johan van Zyl, Sean Jooste and Gladys Matseke
Human Sciences Research Council

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HUMAN SCIENCES RESEARCH COUNCIL

INTRODUCTION

- The aim of the study was to determine HIV prevalence among GPG employees.
- Specific objectives of the study were to:
 - Determine the **HIV prevalence** among GPG employees
 - Describe the **risk profile** of GPG employees with regard to HIV infection
 - Identify **groups** of GPG employees who are **at higher risk** for HIV infection in order to focus appropriate interventions

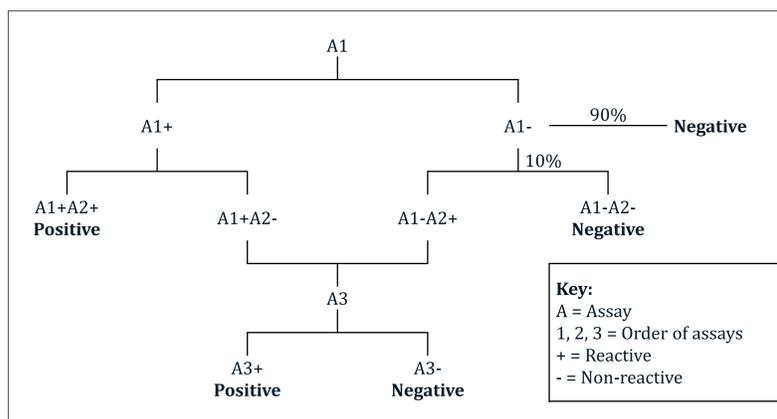
METHODS

- Study population:** 153,462 Gauteng provincial government employees in 13 departments.
- Study design:** A stratified random sampling design was used to select the sample for this study. Employees in the 9 small departments were grouped together and sampled disproportionately, while employees in 4 large departments were each sampled proportionately.
- Sample size:** A total of 3,679 eligible individuals were sampled in 183 clusters. Formula for the sample size (n):

$$n = D \left[Z_{1-\alpha/2} \sqrt{2P(1-P)} + Z_{1-\beta} \sqrt{P_1(1-P_1) + P_2(1-P_2)} \right]^2 / (P_2 - P_1)^2$$
- The questionnaire included:**
 - Knowledge and beliefs about HIV and AIDS
 - Attitudes towards HIV and AIDS, and people living with HIV and AIDS (PLWHA)
 - Behavioural practices
- HIV testing methods:**
 - Dried blood spot (DBS) specimens were collected from each consenting (survey and blood) participant
 - DBS specimens were tested for HIV-1 antibodies using a combination of three licensed latest-generation HIV-1 enzyme-linked immunoassays (EIAs).

HIV testing strategy

A combination of 3 licensed latest-generation HIV-1 enzyme-linked immunoassays (EIAs) was used to test for HIV-1 antibodies.



FINDINGS

Demographic characteristics

	Males		Females		Chi2 P	Total	
	n	%	n	%		n	%
Sex of respondents							
Male						866	28.4
Female						1657	71.6
Race					.01		
African	781	89.5	1393	85.2	.01	2174	86.4
White	55	6.9	188	11.1	.01	243	9.9
Coloured	21	2.5	44	2.5	.97	65	2.5
Asian	10	1.1	31	1.2		41	1.1
Age in years					<.01		
19-30	182	17.5	294	13.5	.08	476	14.6
31-40	247	29.1	424	23.8	.07	671	25.4
41-50	234	28.5	493	33.0	.17	727	31.7
51 and above	205	24.9	449	29.7	.11	654	28.3
25 to 35	220	23.5	376	19.0		596	20.3
30 to 45	120	15.6	256	16.9		376	16.5

HIV PREVALENCE

- HIV prevalence among GPG employees was **12.5%**.
- Marital status, particularly civil marriage seems to be protective for both males and females as HIV prevalence among them was lowest at **6.7%**.
- GPG workers, who had **post Grade 12 or were permanently employed**, had **lower levels of HIV prevalence**.

- Women who reported having had more than **1 partner in the past 12 months, prevalence was significantly high**. This was also the case among women who have had concurrent partnerships.

HIV prevalence by demographics and by sex and race

Variable	Males			Females			Total		
	n	% HIV +	95% CI	n	% HIV+	95% CI	n	% HIV+	95% CI
Sex									
Female							1572	13.1	[11.2, 15.2]
Male							817	11.4	[8.7, 14.7]
Race									
African	741	12.3	[9.4, 15.8]	1327	15.1	[12.9, 17.5]	2074	14.2	[12.4, 16.1]
White	48	0		173	0		221	0	
Coloured	18	7.2	[1.0, 37.3]	39	7.0	[1.7, 24.1]	57	7.0	[2.3, 19.8]
Asian	9	0		29	0		38	0	

HIV prevalence by demographics and socio economic factors by age, marital status and by sex

Variable	Males		Females		Total		
	n	% HIV +	n	% HIV+	n	% HIV+	95% CI
Age in years							
19-30	176	4.1	275	8.8	451	7.1	[4.6, 11.0]
31-40	228	20.7	402	23.3	633	22.3	[18.5, 26.6]
41-50	219	11.7	470	13.8	691	13.2	[10.5, 16.6]
51 and above	194	5.7	425	6.1	636	5.9	[4.1, 8.5]
Marital status							
Married, civil	420	6.6	690	6.8	1118	6.7	[5.1, 8.7]
Married, traditional	104	18.4	129	12.5	233	14.9	[10.1, 21.4]
Never married	237	12.0	423	23.2	660	19.8	[16.2, 24.0]
Separated/ Divorced	19	48.2	160	15.3	179	18.0	[12.0, 25.9]
Living together or not married	20	31.4	31	13.1	51	20.5	[8.5, 41.5]
Windowed	9	21.6	127	18.7	136	18.8	[12.3, 27.7]

HIV prevalence by demographics and socio economic factors by highest qualification and by sex

Variable	Males		Females		Total		
	n	% HIV +	n	% HIV +	n	% HIV +	95% CI
Highest qualifications							
Up to Standard 6 or Grade 8	116	14.4	96	19.7	215	17.3	[11.3, 25.6]
Standard 7 - 9 or Grade 9-11	129	15.6	135	20.3	264	18.5	[13.5, 24.7]
Standard 10 or Grade 12	177	14.8	278	19.1	456	17.6	[13.5, 22.7]
Certificate/diploma	230	9.5	600	12.1	832	11.4	[9.0, 14.4]
Bachelor degree	97	7.9	291	7.9	388	7.9	[5.3, 11.6]
Postgraduate degree	64	6.4	172	7.3	238	7.0	[3.9, 12.3]

HIV prevalence by demographics and socio economic factors by sex

Variable	Males		Females		Total		
	n	% HIV +	n	% HIV +	n	% HIV +	95% CI
Relocated to take up present job							
Yes	159	15.3	215	14.0	377	14.4	[10.7, 19.1]
No	633	10.1	1343	13.0	1981	12.2	[10.5, 14.4]
Living away from family as a result of work							
Yes	193	16.8	265	13.6	460	14.8	[11.3, 19.1]
No	611	9.7	1290	13.1	1906	12.2	[10.5, 14.4]
Head of household							
Yes	548	11.4	612	19.0	1163	15.9	[13.4, 18.9]
No	149	8.4	766	9.5	917	9.4	[7.3, 11.9]

HIV prevalence by demographics and socio economic factors by sex

Variable	Males		Females		Total		
	n	% HIV +	n	% HIV +	n	% HIV +	95% CI
Modern type house							
Flat	576	9.0	1339	12.3	1921	11.5	[9.8, 13.3]
Back room	64	5.8	103	9.0	167	8.0	[4.1, 15.2]
Informal structure	97	18.0	60	22.7	158	19.7	[13.0, 28.7]
Other	57	26.7	49	20.1	106	23.2	[14.6, 34.9]
Rent or own the dwelling							
Own dwelling/room	20	8.5	15	39.4	36	20.7	[9.1, 40.5]
Rent the dwelling/room	472	10.5	1127	11.9	1606	11.5	[9.7, 13.5]
Provided for by household head	218	12.0	273	9.4	492	10.3	[7.4, 14.2]
Live with friends	111	15.7	165	28.0	276	23.7	[17.9, 30.8]
Other	1	0	1	0	2	0	
Area where you live							
Suburb or high rise area	10	1.4	6	30.1	16	15.4	[2.5, 56.6]
Township	211	5.1	555	7.0	767	6.6	[4.7, 9.3]
Informal area	537	13.1	938	15.8	1482	14.9	[12.9, 17.3]
Semi-rural area	32	15.8	26	19.9	58	17.9	[8.7, 33.2]
Other	24	18.7	27	18.2	51	18.4	[8.0, 37.0]
	11	0	20	18.2	31.0	14.4	[5.3, 33.4]

CONCLUSION

- HIV prevalence among GPG employees is lower than national average but the rates are still high and warrant the continued acceleration of work-based HIV prevention efforts.
- Women remain at higher risk of HIV infection particularly when risky sexual behaviours are taken into consideration.
- HIV prevention efforts should focus on improving uptake of prevention strategies such as condom use, male circumcision and on the reduction of behaviours that increases the risk of contracting HIV, particularly among women.