



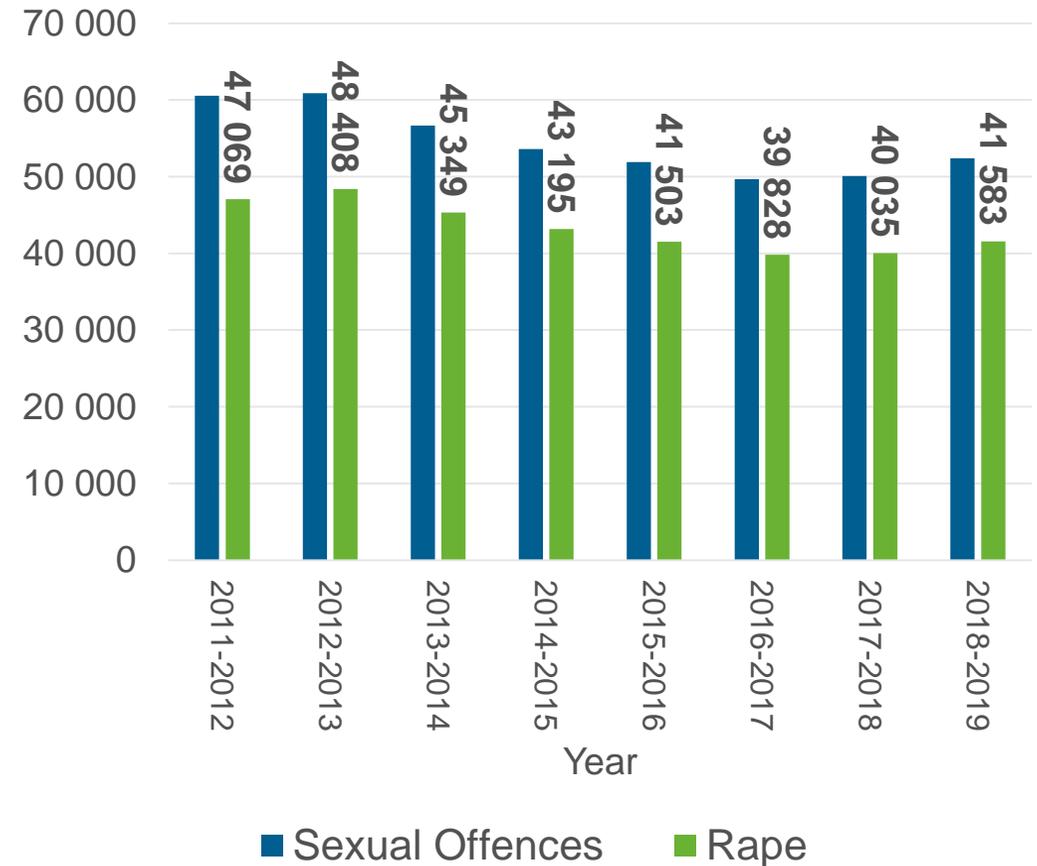
# **INCIDENT MENTAL HEALTH FOLLOWING RAPE-EXPOSURE IN HIV INFECTED VS HIV UNINFECTED WOMEN IN KWA-ZULU-NATAL, SOUTH AFRICA**

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# The nexus of HIV, Rape and Mental Health

- **41 583 rape cases** reported to the SAP in the 2018/2019 reporting year i.e. **114 per day**
- SA has the biggest **HIV epidemic** globally and highest prevalence are among women of reproductive age.
- Relationship between HIV and Mental Health established: Depression / substance abuse
- **Post-traumatic Stress Disorder (PTSD)** - when stress response does not subside and extend 1 month post trauma
- Prevalence of PTSD between 35-45% among rape survivors at 3 months post rape
- PTSD studies in general population emerging but few among GBV survivors including rape survivors
- Few longitudinal study – most look at 3 months post rape
- SA study show **lifetime prevalence of PTSD was 3.5%** among those exposed to a trauma event
- Rape had the strongest association with lifetime PTSD for women
- Depression (pooled OR= 1.97) and suicide attempts positively associated with IPV.

Sexual offences and rape reported to the South African police: 2011-2019



# THE RAPE IMPACT COHORT EVALUATION (RICE) STUDY

**Broad aims are to generate knowledge on the health burden associated with rape, with a focus on HIV and mental health acquisition**

- Prospective study
- KZN Province – 3 Thuthuzela Care Centre and 1 Crisis Clinic(Addington Hospital)
- Main study include a control cohort (no rape exposure reported) matched for age and location
- Women 16-40 yrs
- HIV positive and negative women
- Recruited and enrolled over 4 years and 6 months (Oct 2014-April 2019)
- 1<sup>st</sup> interview within 20 days of the rape event
- Follow up interviews at 3,6,9,12,18,24,30,36 Months
- Collect more than 1 assessment for PTSD and depression
  - MINI / DTS & CESD

# WHAT WE MEASURE

- Health / Behavioural / Psycho social
  - Demographics
  - Sexual / reproductive health / child health
  - HIV risk behaviours
  - Clinical assessments (e.g BP, BMI)
  - Health care seeking practices
  - Mental health
    - MINI (PTSD, Depression/ suicidality)
    - Depression (CESD)
    - PTSD (Davidson TS)
    - Suicidality – thoughts and attempts
    - Alcohol use (Audit)
    - Lifetime trauma
    - Perceive trauma
    - Social support
    - Rape stigma
  - Childhood adversities
  - IPV & NPSV
  - \*Criminal Justice processes and experiences - no data in the early interviews
- Biological
  - HIV/ Viral Load/ CD4/HSV2/ Trichomonias / pregnancy/ Metabolic Syndrome markers/ hair cortisol

# ANALYSIS:

- Rape cohort only
- Analysis by HIV status
- Transitional model (GLM) with a binomial distribution for the mental health status
- Assess the probability of persistent depression and PTSD given the preceding mental status
- Format of the model:

Mental status(t)=mental status(t-1)+time (p) +covariates(t=0)

# Recruited, enrolled and retained

- Enrolled total of 1799 participants
  - **852 rape exposed**
  - **947 control**
- Last participant enrolled in April 2019
- 3 Month follow-up completed
- 6-month follow-up window close end October
- Follow up continuous until end of April 2020

	Interviews at end September 2019 Number			Retention %	
	Control Cohort	Rape exposed Cohort	Total	Control	Rape Exposed
<b>Baseline</b>	947	<b>852</b>	1799		
Month 3	746	<b>492</b>	1238	78.78	57.75
Month 6	718	<b>418</b>	1136	75.82	49.06
Month 9	682	385	1067		
Month 12	710	425	1135		
Month 18	627	333	960		
Month 24	493	272	765		
Month 30	340	214	554		
Month 36	225	138	363		
<b>TOTAL</b>			<b>9017</b>		

# RETENTION AMONG RAPE SURVIVORS

	All Rape Participants	HIV positive Participants	HIV negative Participants
Time 0	852	411	441
3 Months	492 (57.7%)	232 (56.5% )	260 (59%)
6 Months	423 (49.6%)	207 (50.4)	216 (49.9%)

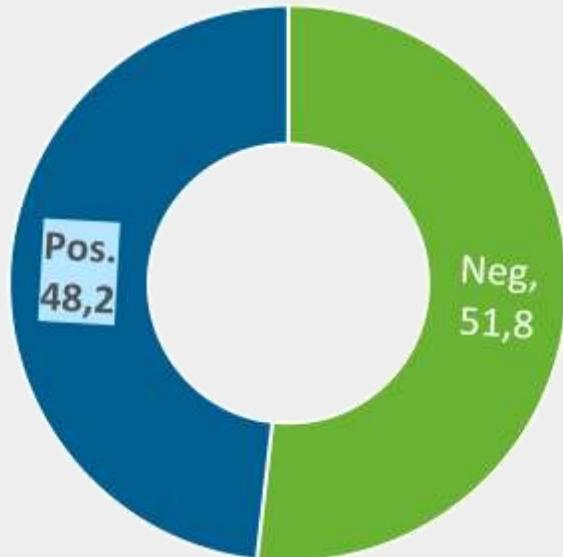
**\* No sig difference in retention across HIV groups**

## Demographic Profile

	HIV Positive	HIV Negative	P values	All
HIV status (N=852)	48.2 (411)	51.8 (441)		852
Age mean (SD)	26.9 (0.26)	23.1 (0.22)	0.00	25.0 (.18)
Grade12 or more	43.8 (180)	68.9 (304)	0.00	56.8 (484)
Employed	28.0 (115)	24.7 (109)	0.28	26.3 (224)
Live in a Formal Township	59.5 (232)	62.1 (260)	0.12	60.8 (492)
Live in and Informal Township	19.7 (77)	20.3 (85)	0.00	20.0 (162)
Child support grant	33.8 (139)	22.5 (99)	0.00	27.9 (238)
Often sometimes without food	23.1 (95)	16.8 (74)	0.02	19.8 (169)
Relationship status				
No current relationship	20.1 (83)	22.0 (97)	0.31	21.2 (180)
Cohabiting / Married	9.3 (38)	6.6 (29)		7.9 (67)
Partnered but not living together	70.5 (289)	71.4 (315)		71.0 (604)
Ever Emotional IPV	55.0 (221)	45.3 (188)	0.00	50.1 (409)
Ever Physical IPV	58.7 (236)	46.3 (192)	0.00	52.4 (428)
Ever Sexual IPV	25.6 (103)	16.4 (68)	0.00	20.9 (171)
Ever non-partner Sexual Viol	18.3 (142)	11.3 (115)	0.00	29.2 (247)
Age at 1st sex was 16 or under	32.1 (132)	28.1 (124)	0.20	30.1 (256)
First sex was forced /rape	7.4 (30)	3.4 (14)	0.01	5.4 (44)

### HIV status among the rape survivors

■ Pos ■ Neg



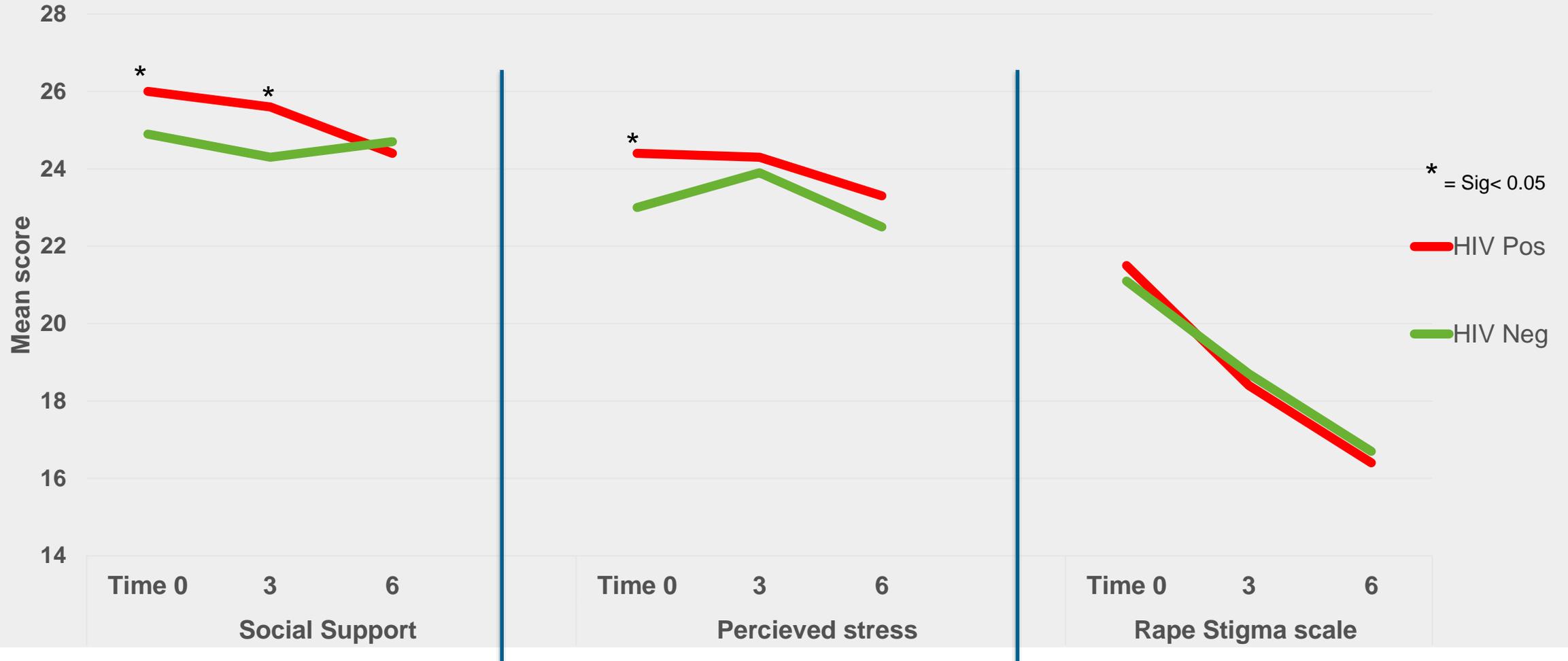
# HIV POSITIVES' TREATMENT PROFILE (N = 411)

On ARVs	52.1 % (214)
Missed an ARV dose in last 7 days (n-212)	30.7% (65 )
CD4 Count (n-321)	
CD 4 Count >= 1000	5% (16)
999-500	45.8% (147)
499-200	42.4% (136)
<200	6.9% (22)
Viral Load suppression < 1000 copies (n-198)	85.4% (169)

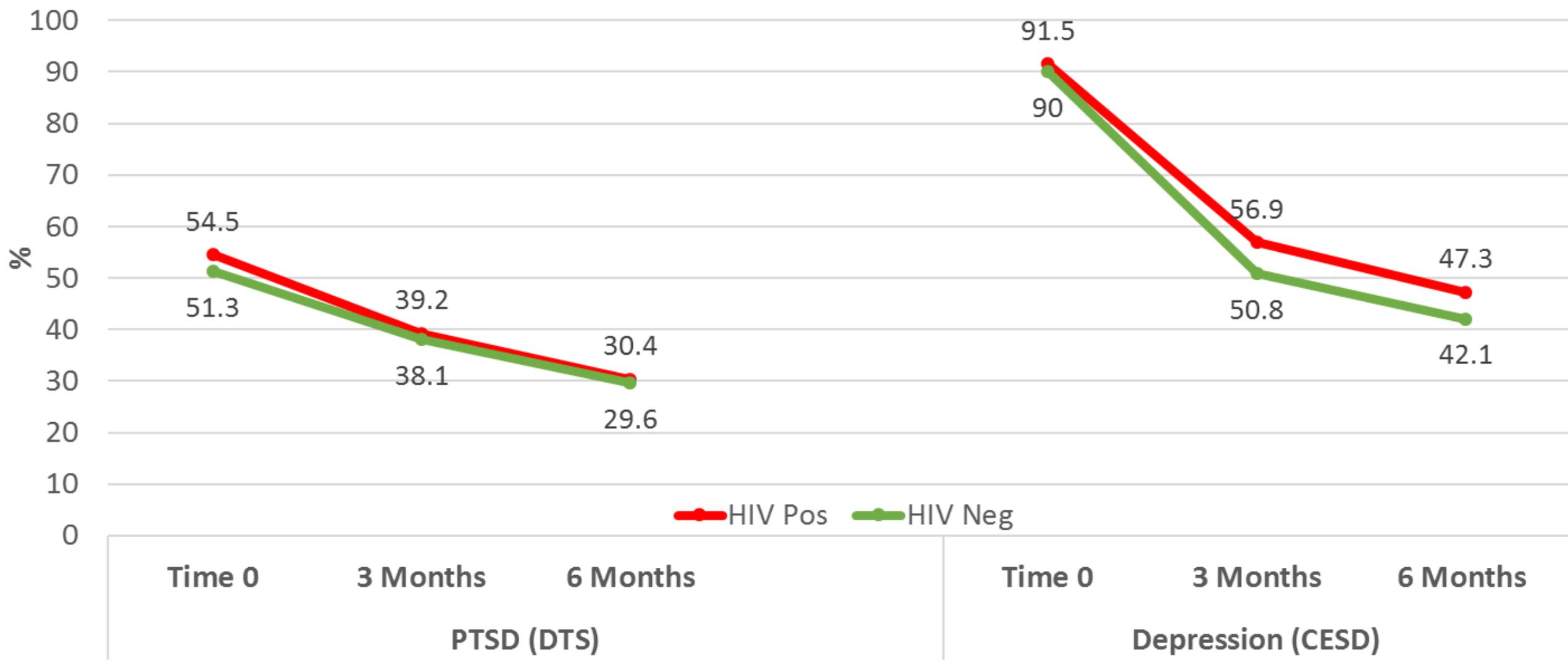
## Mental health measures at baseline

	HIV Positive	HIV Negative	P value
Alcohol Use	62.5% (257)	56.9% (251)	0.09
Risky alcohol use	35.5 %(146)	27.4% (121)	0.01
PTSD (DTS)	54.5% (224)	51.3% (226)	0.34
Depression (CESD)	91.5% (376)	90.0% (397)	0.46
Suicidality Current (MINI)	79.3% (326)	76.4% (338)	0.34
Suicide thoughts in last month	32.9% (135)	29.7% (131)	0.32
Resilience scale (mean)	73.8 (6.13)	74.6 (6.56)	0.08
Social Support Scale (mean)	33.9 (4.8)	35.07 (5.3)	0.00
Perceived Stress scale (mean)	24.37 (5.8)	23.01 (5.96)	0.00
Rape Stigma Scale (mean)	21.52 (7.1)	21.10 (6.7)	0.38
Ever attempted suicide	35.8% (147)	26.5% (117)	0.00
Life time Trauma Scale (mean)	3.1 (1.98)	2.8 (1.72)	0.00
Childhood Adversity Scale (mean)	16.83 (4.0)	16.60 (3.64)	0.39

# Social support, Perceived stress and Rape stigma



# Depression and PTSD over time



# PERSISTENT DEPRESSION

TRANSITION MODEL CONTROLLED FOR: AGE, EDUCATION, PREVIOUS TRAUMA, GBV  
REPORTED AT BASELINE

	Risk difference	P value
Previous depression	.213	<0.00
HIV status at baseline	.046	0.20
Often no food in the household	.141	<0.00
Rape stigma	.007	<0.00
Time	-.007	0.84
Childhood trauma	.027	0.02

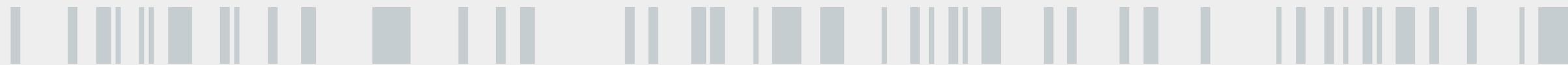
# PERSISTENT PTSD

TRANSITION MODEL CONTROLLING FOR : AGE, EDUCATION, PREVIOUS TRAUMA, GBV  
REPORTED AT BASELINE

	Risk difference	P value
Previous PTSD	0.258	<0.00
HIV status at baseline	-.003	0.90
Rape stigma	.005	0.02
Time	-.069	0.02

# Discussion

- Co-morbidity between depression and PTSD
- Poverty contribute to persistent depression
- Rape stigma contribute to persistent depression and PTSD – this is an area that require more targeted interventions
- HIV positive participants may have a support networks including attending and accessing health care which could all assist in managing the impact of the rape
- The participation in the RICE study could have been a support intervention for all participants
- Consideration for future analysis
  - Understand who was not retained.
  - Further explore differential development of mental health i.e.
    - who was resistant to PTSD
    - Who had a delay onset
    - Who remitted early
  - Explore imputation of missing data in greater detail
  - Data on rape case may be a important factor in the persistence of mental health
  - Longer follow up analysis



**THANK YOU**