# DEPRESSION AND POST-TRAUMATIC STRESS SYMPTOMS TWO YEARS POST-RAPE AND THE ROLE OF EARLY COUNSELLING: RAPE IMPACT COHORT EVALUATION (RICE) STUDY

SEXUAL VIOLENCE R INITIATIVE (SVRI) CONFERENCE
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# BACKGROUND

- Survivors of rape and sexual assault are at higher risk of developing adverse mental health outcomes compared to individuals exposed to other trauma types.
- Depression and post-traumatic stress disorder (PTSD) are the most prevalent types of mental health problems among survivors of rape
- Few studies have prospectively investigated long-term symptom persistence and recovery post rape.
- A critical gap in this body of research is the support and treatment that is provided for rape survivors in low and middle-income countries.
- In South Africa, a concerted effort to provide holistic care to rape survivors has been made in the last decade through setting up Thuthuzela Care Centres (TCCs)

# AIM

- The Rape Impact Cohort Evaluation (RICE) study provides an opportunity to explore the trajectory of both depression and PTSS over a two-year period.
- This study also allows us to assess the role of early supportive counselling (within 6 months post-rape) on long-term PTSS and depression symptom trajectories

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# METHODS-STUDY DESIGN, SETTING & RECRUITMENT

- The RICE study is a comparative cohort study of women exposed to rape and a control group of women who reported having never been exposed to rape at study entry.
- The rape exposed women were recruited from four post-rape care services (including three TCCs).
- The unexposed women were recruited from primary health services in close proximity of the rape care services.
- The study setting was in and around the city of Durban in Kwa-Zulu Natal province, South Africa.
- Follow-up was for a minimum of 12 months and a maximum of 36 months
- Interviews were scheduled at 3 monthly intervals in the 1st year (3, 6, 9, 12 months) and at six monthly intervals thereafter (18, 24, 30 & 36 months).
- Although only 24 months of data are analysed here.

# METHODS-MEASURES

| Centre for Epidemiologic Studies Depression Scale (CES-D) | Davidson Trauma Scale (DTS) | Counselling at rape services |
|---|---|---|
| Used to assess current severity of depressive symptoms | Used to assess both frequency and severity for post-traumatic stress symptoms (PTSS) | Part of package of acute post rape care. |
| 20-items | 17-items for both frequency and severity | Returned to the post-rape care service for counselling session(s) |
| Responses were reported on a 4-point Likert scale ranging from 0 (rarely or none of the time) to 3 (most or all the time). | On a five-point Likert scale for symptom frequency range from 0 (not at all) to 4 (every day) and symptom severity range from 0 (not at all distressing) to 4 (extremely distressing). | Provided by lay counsellors for immediate support or referred for additional psycho-social care, most often via NGO counselling service to which the lay counsellors are attached |
| A total score ranging from 0-60 | PTSS frequency items were added to create a score from 0 to 68 | Defined attending early counselling as ever reporting attending counselling at the 3- and 6-month follow-up visits |
| A cut-off score of 16 or more is indicative of depression. | A cut-off score of 20 or more is considered indicative of PTSS | |

# STATISTICAL METHODS

- **Exploratory analysis** to describe baseline study population characteristics by exposure group
- Used **longitudinal graphical methods** were used to explore average profiles of depression and post-traumatic stress symptom scores at the different time periods for both the rape exposed and unexposed groups
- This was further analysed with the inclusion of the early counselling received at post-rape services in the first six months after the rape incident.
- Used a **joint mixed model with linear splines**
- Final fitted model included baseline variables- age, childhood trauma and non partner sexual violence
- **Sensitivity analysis** was performed by comparing the model results obtained from using all available data (MAR assumed) and from incorporating inverse probability weights (IPW).
- **Post estimation** was conducted on all the models to obtain mean estimates at each time points for each exposure group with 95% confidence intervals.

# RESULTS

| | | Rape Exposed | Unexposed | |
|---|---|---|---|---|
| | | n=734 (48.3%) | n=786 (51.7%) | N=1520 |
| | | mean (SD)/n (%) | mean (SD)/n (%) | *p value* |
| **Demographics** | | | | |
| ***Age*** | | 25.0 (5.4) | 25.5 (5.5) | 0.049 |
| ***Education:*** | Completed grade 1-11 | 321 (43.7%) | 314 (40.0%) | 0.135 |
| | Completed grade 12 or > | 413 (56.3%) | 472 (60.1%) | |
| ***Employed:*** | Yes | 198 (27.0%) | 121 (15.4%) | <0.001 |
| | No | 536 (73.0%) | 665 (84.6%) | |
| ***Area of residence:*** | Urban-Formal | 464 (64.1%) | 606 (78.2%) | <0.001 |
| | Urban -Informal | 145 (20.0%) | 105 (13.6%) | |
| | Rural or semi-rural | 115 (15.9%) | 64 (8.3%) | |
| ***Current relationship status*** | Not in a relationship | 163 (22.2%) | 112 (14.3%) | <0.001 |
| | Married/ Cohabiting | 57 (7.8%) | 61 (7.8%) | |
| | Dating (non- cohabiting) | 513 (70.0%) | 612 (78.0%) | |
| ***Household food security*** | Sometimes or often go without food | 155 (21.1%) | 144 (18.3%) | 0.170 |
| | Never or seldom go without food | 579 (78.9%) | 642 (81.7%) | |
| ***Community Support*** | Not difficult to find money in an emergency | 119 (16.2%) | 100 (12.7%) | 0.053 |
| | Difficult to find money in an emergency | 615 (83.8%) | 686 (87.3%) | |

# RESULTS

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|---|---|---|---|---|
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| | | mean (SD)/n (%) | mean (SD)/n (%) | *p value* |
| **Clinical assessment** | | | | |
| ***HIV Status*** | Negative | 358 (48.8%) | 464 (59.0%) | <0.001 |
| | Positive | 376 (51.2%) | 322 (41.0%) | |
| ***Trauma scales*** | | | | |
| | Childhood trauma (score) | 16.5 (3.7) | 15.7 (2.4) | <0.001 |
| | Previous experiences of trauma (score) | 2.1 (1.8) | 1.2 (1.6) | <0.001 |
| ***Psychosocial scales*** | | | | |
| | Resilience score | 74.2 (6.4) | 75.4 (5.9) | <0.001 |
| | Social support score | 34.6 (5.2) | 35.0 (4.2) | 0.075 |
| | Perceived stressed score | 23.6 (5.8) | 21.4 (4.9) | <0.001 |
| | PTSS score | 35.2 (16.1) | 7.1 (10.8) | <0.001 |
| | CESD score | 33.9 (12.8) | 13.5 (9.4) | <0.001 |
| ***Alcohol use*** | | | | |
| | Audit C score | 2.1 (2.5) | 1.6 (2.4) | <0.001 |

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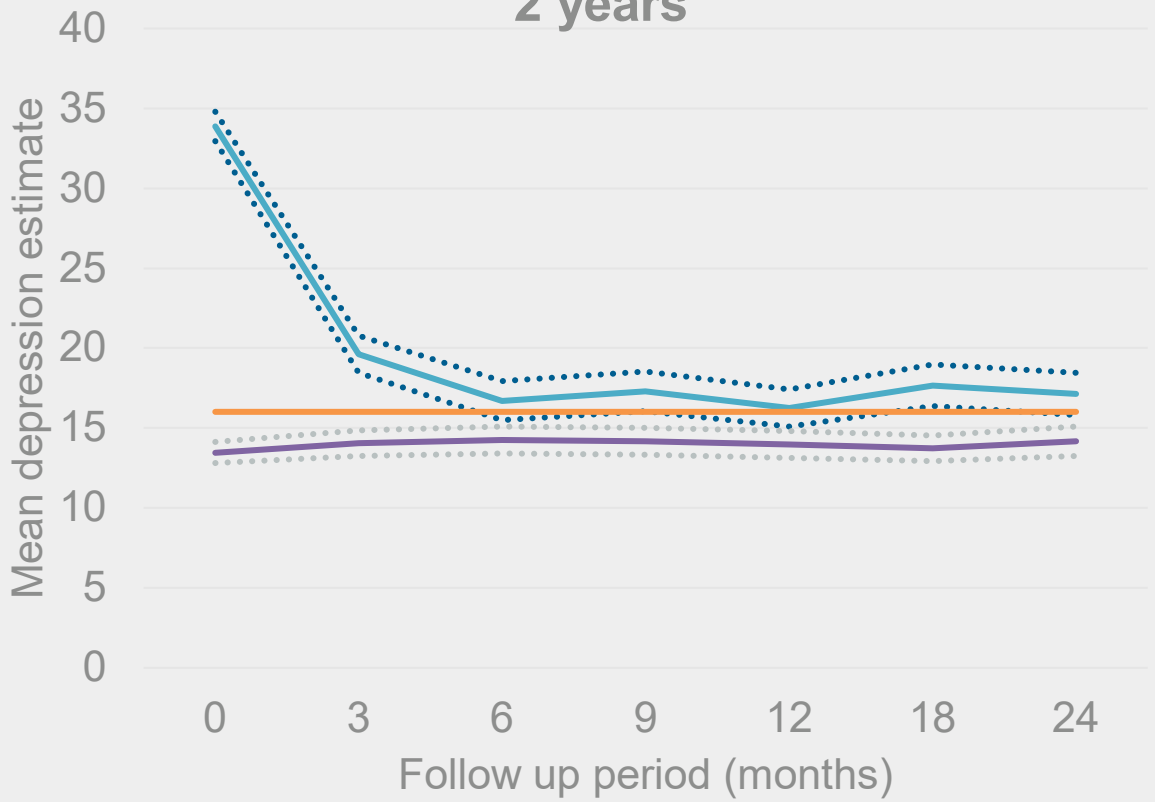
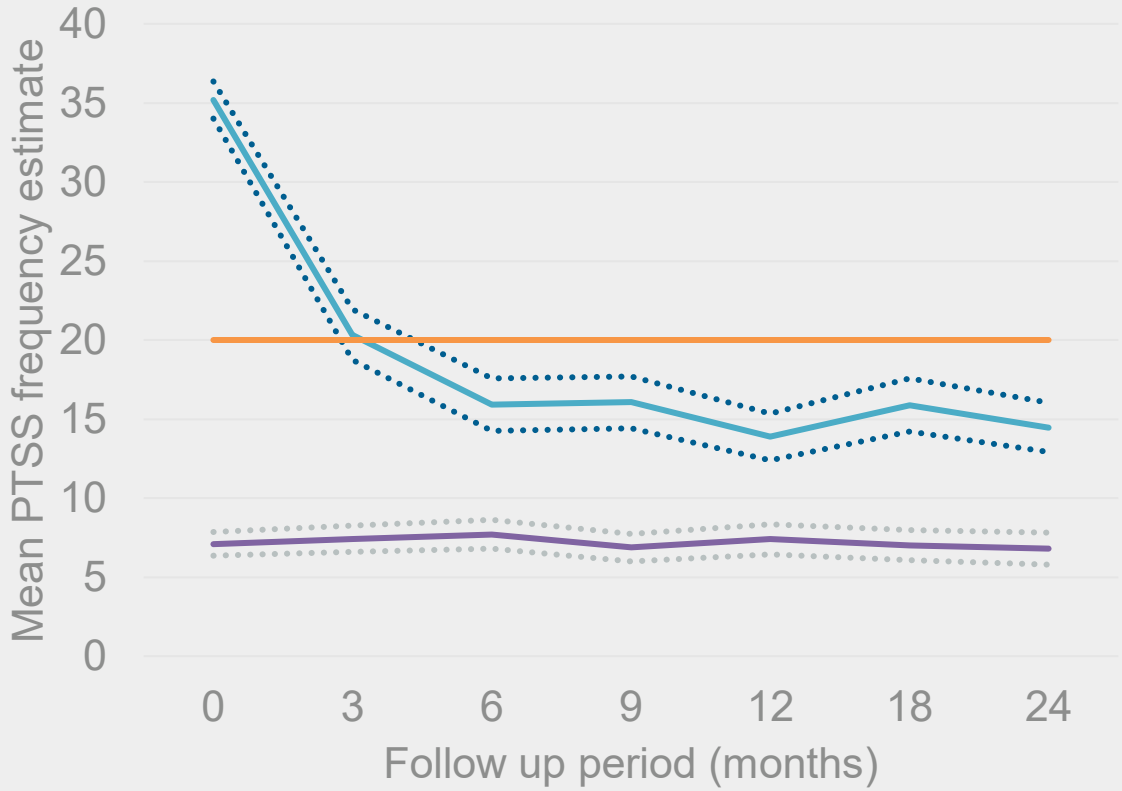
# RESULTS

## Mean profile plot of Depression over 2 years




## Mean profile plot of Posttraumatic Stress Symptom (PTSS) over 2 years

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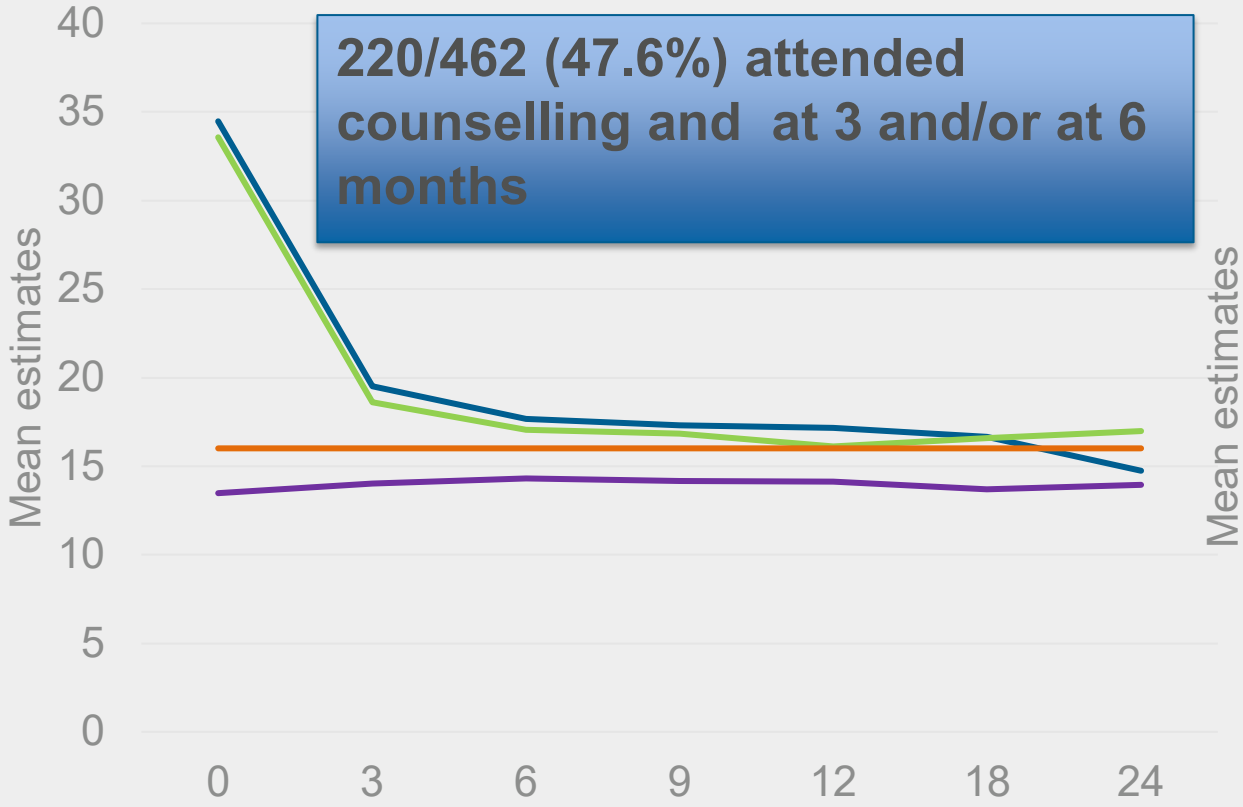
# RESULTS

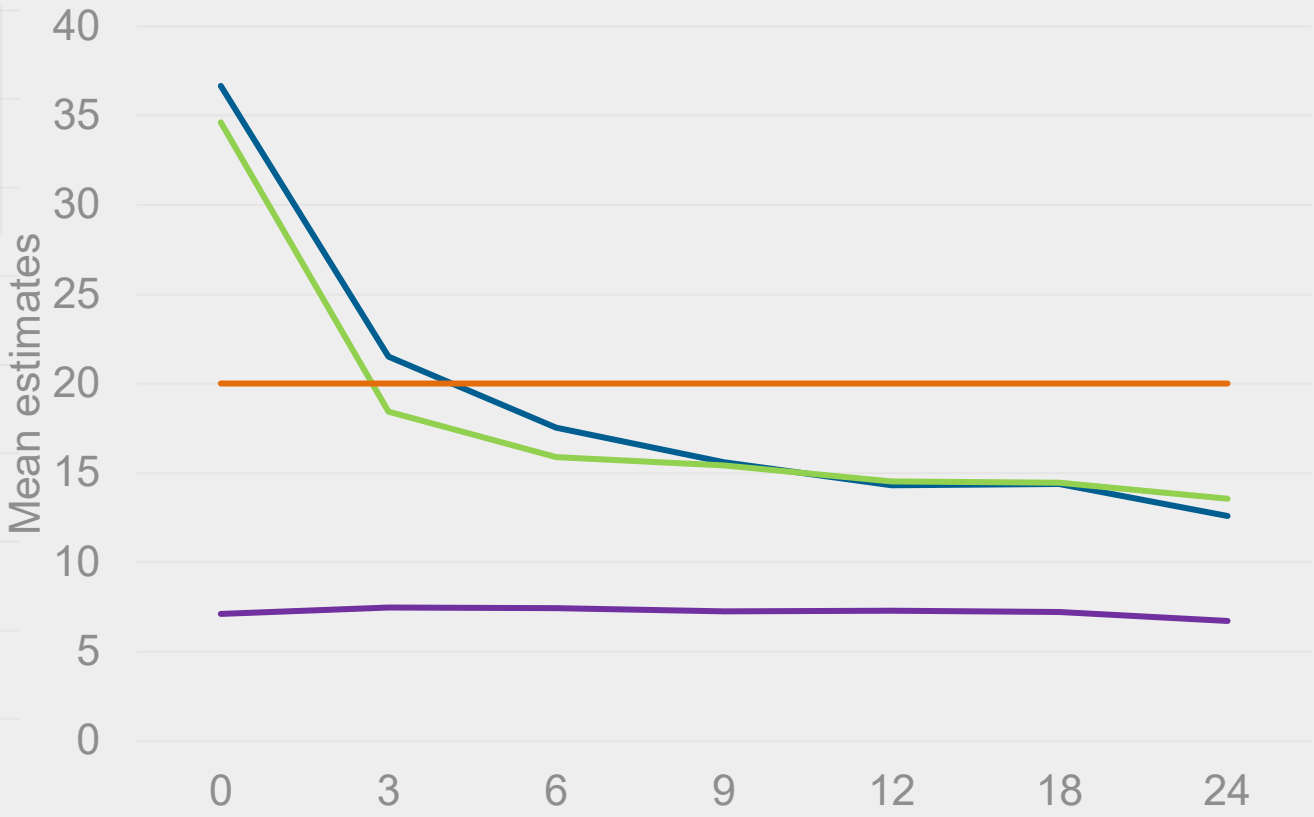
## Mean estimates of Depression Symptoms over 2 years

**220/462 (47.6%) attended counselling and at 3 and/or at 6 months**




- Women who were raped and attended early counselling
- Women who were raped and did not attend early counselling
- Women who were not raped
- Depression cut off score

## Mean estimates of Post Traumatic Stress Symptoms (PTSS) over 2 years




- Women who were raped and attended early counselling
- Women who were raped and did not attend early counselling
- Women who were not raped
- PTSS frequency cut off score

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# FURTHER EXPLORATION

## Revictimization

Overall, 23.1% (n=146) of the women experienced any rape revictimization during the two years of follow-up.

## HIV acquisition post rape

The rape exposed women were 60% more likely to acquire HIV compared to women in the control group

Hazard Ratio: 1.58 (95% CI: 1.01-2.47)

## PreP study

Assessing tools to support women's mental well being and the uptake of Prep

# CONCLUSIONS

- Rape has profound and prolonged mental health impacts and contributes to the health burden globally.
- Evidence-based interventions for rape survivors in high prevalence, low resource settings are needed to alleviate this burden.
- There is a need to better understand factors that influence the uptake and impact of early mental health interventions from the perspective of survivors to better understand optimal timing, duration and format of counselling.
- Enhance the capacity of providers to deliver basic mental health and psychosocial support to violence survivors

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