

# RESEARCH BRIEF:

# EVIDENCE ON THE LONG-TERM HEALTH IMPACT FOLLOWING RAPE

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## AUTHORS AND AFFILIATIONS

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## BACKGROUND

Rape is a gross violation of human rights with long term health consequences impacting on all survivors irrespective of age and gender. While physical injuries are common during rape, there are also long-lasting, severe psychological consequences. In order to describe the health consequences of rape and their impact on women up to three years afterwards, the Gender and Health Research Unit of the [South African Medical Research Council](#) conducted the Rape Impact Cohort Evaluation (RICE) Study. This brief summarises its methods and key findings to inform personnel within the Criminal Justice System.

## METHODS

The study was conducted in eThekweni between 2014 and 2020. It was a longitudinal study that enrolled women aged 16–40 years from two groups: (1) 852 women who reported a rape to post-rape care services i.e. Thuthuzela Care Centres (TCCs) or the Addington Hospital Crisis Centre; and (2) 853 women, recruited from Primary Health Care services, who had never been raped. The women who had been raped were enrolled in the RICE study within 20 days of the rape. All women were followed up for between 1 and 3 years. A full account of how the study was undertaken has been published [1]. The study assessed physical health, including HIV status, and mental health at each follow-up visit and compared health outcomes between the two groups. This research brief describes the impact of rape on women’s health over a 2-year follow-up period, by comparing the health of women in the two groups. Table 1 provides further information about the health measures used in the study.

**Table 1:** Assessments used to determine HIV and mental health burden in the RICE study

HIV status	All participants were tested initially and thereafter. A blood sample was taken at each visit from those previously HIV negative and tested for HIV.
Depression	All participants completed the Centre for Epidemiological Studies Depression Scale (CES-D) [2] scale at every visit. This has 20 statements about symptoms of depression (e.g. During the past week I had trouble keeping my mind on what I was doing) and interviewees were asked if they have experienced each in the past week and if so, how often. The response categories are numbered and the responses summed to give a score. If this is 16 or above, it is considered indicative of clinical depression.
Suicidal thoughts	At every visit, participants were asked if the thought of ending their life had been in their mind in the last 4 weeks?
Post-Traumatic Stress Symptoms (PTSS)	Participants completed the Davidson Trauma Scale (DTS) [3] at every visit. This has 17 questions about symptoms of PTSS and their frequency in the past week. (e.g. In the past week - have you ever had distressing dreams of the event?). The response categories are numbered and the responses summed to give a score. A score of 20 or more is an indication of clinically significant distress as a result of the PTSS.

### Explanation of statistical terms

**INCIDENCE RATE:** refers to the rate of occurrence of new infections over a specified period. In this study HIV incidence rate refer to the new HIV infections at each time point.

**CONFIDENCE INTERVALS:** refers to the possible range or intervals for a value i.e. the range of the proportion of depression. The confidence interval has an upper (Upper Confidence Interval (UCI)) and a lower bound (Lower Confidence Interval (LCI)) and is shown as dotted lines in the graphs (95% Confidence Interval).

**SIGNIFICANT DIFFERENCE:** this means there is a measurable difference between the two groups and the possibility that this difference is by chance is small (less than 5% chance).

## RESULTS

### Women participants in the RICE study

The women were predominantly isiZulu speaking (90%) and their ages ranged from 16–40 years. The average age was 25 years for the women who reported rape and 26 years for those who had not been raped.

More than a half of the women in the study had completed Matric or studied to a higher level of education. They were mostly unemployed. Only 3.5% of women who were not raped and 12.7% of those who had been raped were in fulltime employment. The women generally came from similar areas, but women who had been raped were more likely to report living in informal settlements or rural areas, than women who had not been raped. Further information on the two groups of women has been published in a journal article [4].

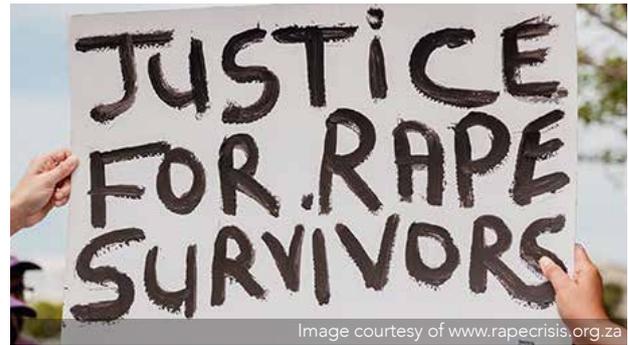


Image courtesy of [www.rapecrisis.org.za](http://www.rapecrisis.org.za)

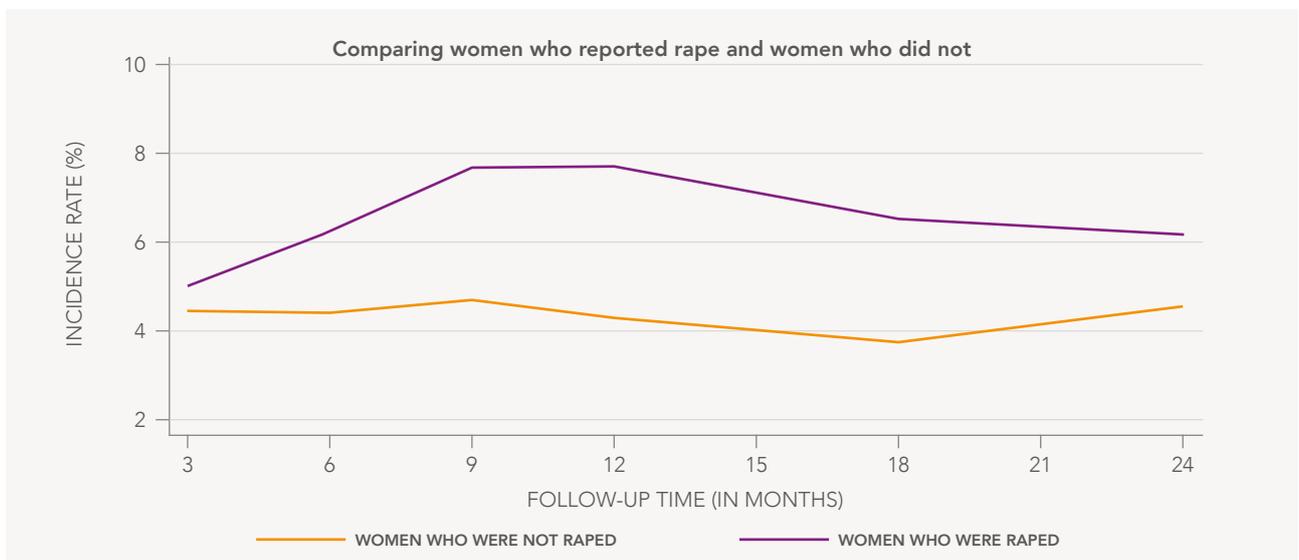
## THE HEALTH IMPACT OF RAPE

### Increased risk for HIV after rape

*The study found that women who were raped were about 50% more likely to acquire HIV in the period after the rape than women who were not raped.*

The graph in Figure 1 shows the incidence of HIV (i.e. new infections) assessed at each follow-up visit. The purple line shows the incidence among women who were raped, and the orange line shows it among women who were not raped. The HIV incidence was quite similar between the groups at 3 months, but this changed after this time, with the group of women who reported rape having significantly more new HIV infections than the women who did not report rape [5]. This pattern was seen consistently over the 2 years.

**Figure 1:** HIV incidence over the follow-up period



## MENTAL HEALTH

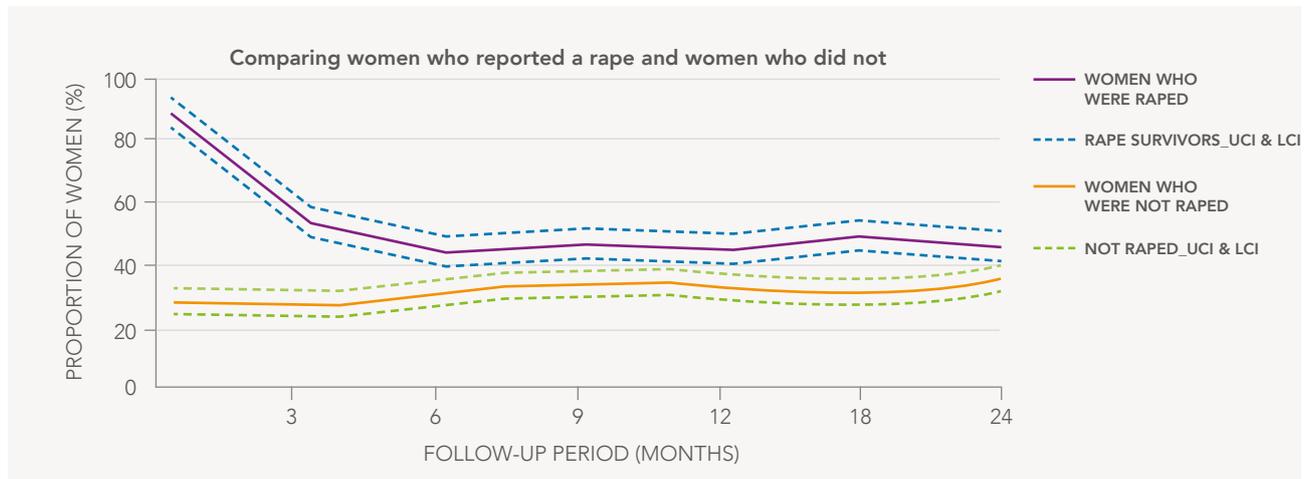
### Depression

*The study found that women who were raped were very depressed for the first 3 months, and thereafter, compared with the other women, they continued to have higher levels of clinical depression at all times.*

The proportion of participants with clinical depression at each time point for the two groups is shown in the graph in Figure 2. The purple line represents the women who were raped and shows high levels of depression soon after the rape that persisted over the next two years.

Although the trend shows the number of women with clinical depression decreased, from 9 months it remained significantly higher than the levels of depression among the women who did not report rape (orange line). Overall, the levels of depression among the women not raped changed little across the time period and remained consistently below.

**Figure 2:** Proportion of women with depression over 2 years



## Suicidal thoughts

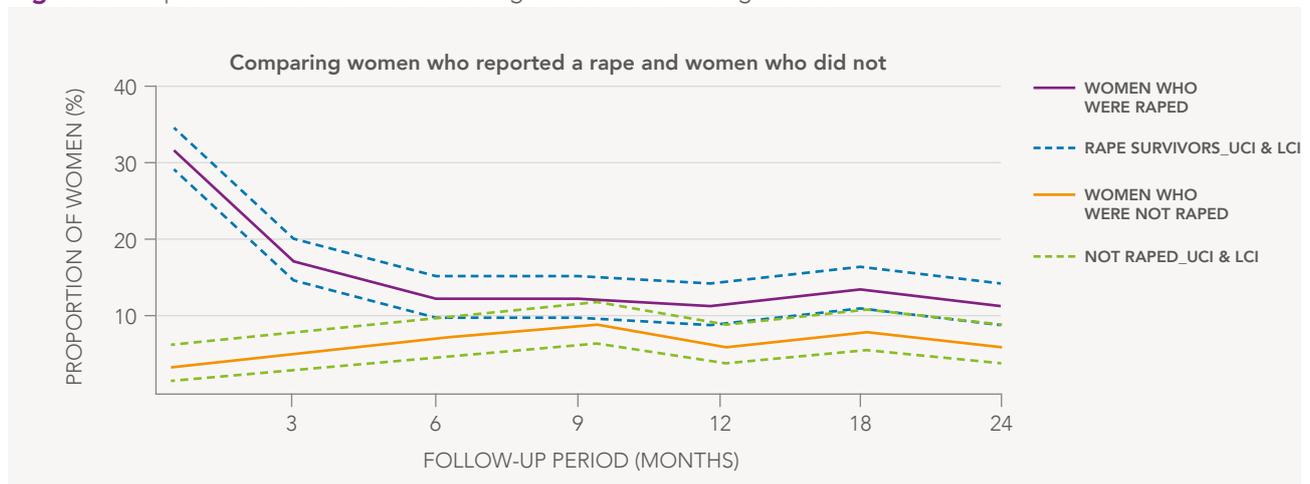
The study found many women who had been raped contemplated suicide and about one in 8 continued to have thoughts of suicide over the next two years. This was a much larger proportion than among women who had not been raped.

The proportion of women with thoughts of suicide at each time point in the two groups is shown in the graph in Figure 3. Women who were raped (purple line) were much more likely to have suicidal thoughts in the 2 years following the rape when compared to women in the control group (orange line). This is an indicator of persisting psychological distress after rape.



Image courtesy of [www.rapecrisis.org.za](http://www.rapecrisis.org.za)

**Figure 3:** Proportion of women who had thoughts about committing suicide

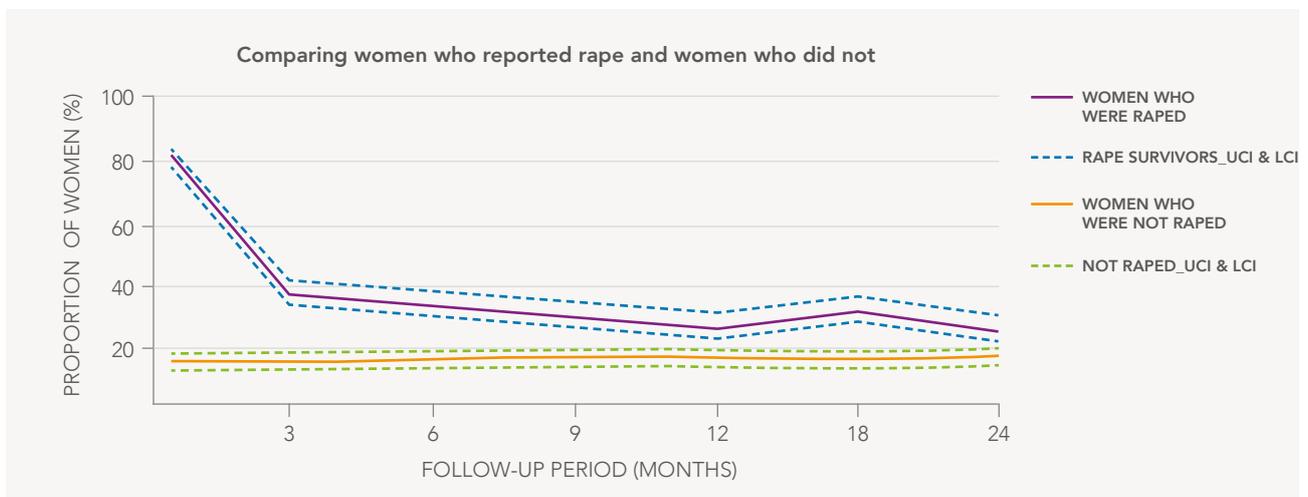


## Post-Traumatic Stress Symptoms (PTSS)

The study found that women who had been raped had very high levels of PTSS in the weeks after the rape. Although PTSS symptoms declined over the next 3-6 months, nearly 1 in 2 women continue to have clinically significant higher levels of PTSS symptoms compared to the women who had not been raped, which remained consistently low.

A high frequency of acute stress reactions to the rape was evident among the women who reported a rape. This was particularly high when they attended the RICE study site for the first time which was soon after the rape event (within 20 days of the rape). Although the purple line in the graph in Figure 4, representing the women who reported a rape, showed a downward trend, PTSS remained constant from 6 months and never decreased to the low level of those who did not report a rape. The orange dotted line representing PTSS frequency among the women who did not report a rape remained constantly low.

**Figure 4:** Proportion of women with Post Traumatic Stress Symptoms (PTSS) over the 2 years



## CONCLUSION

This research shows that women who have been raped have a much higher risk of developing HIV, depression, suicidality and PTSS over two years after the rape when compared to women who have not been raped. The study also shows that for some women- even though there is amelioration of symptoms over time, a substantial proportion of women have persisting symptoms of trauma and mental health difficulties long after the rape.

This study confirms rape causes multiple, long-term and cumulative health and psychological problems for rape survivors and it is essential that post rape care include long term mental health support and care. Attaining justice for rape crimes is often also a healing process and we must ensure that we facilitate rape survivors healing by removing obstacles that may contribute additional stress.



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