Numerous reports have investigated the link between the duration of sexual activity until orgasm and relative levels of hormones in the body. The chemical hormone Oxytocin has been previously strongly associated with romantic and sexual bonding between partners, where values of Oxytocin have been observed to increase relative to stimulation; both sexual and romantic. This investigation aims to establish a link between levels of oxytocin firstly between gender and the effect oxytocin has on the time to orgasm.

The random study involved sampling of 36 consenting subjects from the city of Shinobi; 18 females and 18 males, where the subjects filled a quota of 6 were each age group, 14-30, 31-50 and 51+ for each gender respectively. The sample size of islanders was extremely limited due to time constraints and the relative consenting age group populations in Shinobi.

After the individual was randomly chosen, their name, gender and age was recorded for identification and analysis purposes. No individuals younger than 14 were studied due to uncertainties as to sexual maturity, while there was no upper bound on age limit in the study.

Initial heart pulse was then measured and recorded, immediately followed by a blood test to measure abundance of the Oxytocin hormone (pg/mL) in the blood. Due to the limited population of Shinobi, individuals were not separated based on relationship status. As studies have shown, interactions with romantic partners may increase Oxytocin levels which could interfere with data. Such an interference was assumed to be negligible.

Immediately after the blood test, the islanders were forced to masturbate until orgasm. For each individual, the time taken to sexual climax was measured and recorded, where heart pulse rate was measured following the completion of masturbation. Immediately after heart rate was recorded, the individual’s blood was once again tested for abundance of the Oxytocin Hormone and recorded.   
For the noted blood tests, blood was removed via needle. For the heart rate tests, no intrusive procedures were utilised.

In analysis of data, linear regression models were used as the basis of ANOVA analysis between factors of duration and Oxytocin levels. Both independent and interactive variables were analysed to associations between recorded data.

Figure 1 shows the duration of masturbation prior to climax, with a slight trend upwards for males and females alike. There is a very strong association between these two variables [F=12.4, p=0.0012], where older individuals are more likely to masturbate for a greater period of time before orgasm. Further analysis shows that males typically take longer to climax than females [F=14.59, p<0.001]. Although this association may be the result of unknown variables (sexual history, physiology, etc), a trend between Duration and Initial Oxytocin abundance is evident. As Figure 2 shows, females possess greater blood oxytocin concentration (pg/mL) than males [F>1000, p=0] where there is some evidence that younger females possess more Oxytocin than older females [F=3, p=0.065]. The respective change of Oxytocin Concentration in a subject’s blood after masturbation was calculated for each individual. A weak association was established for the change in Oxytocin before and after orgasm in terms of gender [F=3.34, p=0.076], while no link is evident between Oxytocin change and age group [F=0.3, p=0.74] (Figure 3).

Perhaps the strongest association between data is between duration of masturbation and the Initial Oxytocin concentration in the subject’s blood. As Figure 4 shows, there is clear trend for females reaching orgasm sooner than males, where younger individuals tend to achieve orgasm faster than older individuals (applicable for both genders). The association between Initial Oxytocin and Duration is extremely significant [F=16.047, p=0.00032], where a higher Initial Oxytocin concentration is associated with decreased time to reach orgasm.

Justified by ANOVA analysis of linear regression models, there is strong statistical significance of an association between Oxytocin levels prior to masturbation and the subsequent time to reach orgasm. Although limited in sample size [n=36] and analysis of plausible explanatory variables, there was clear evidence that an increase in Oxytocin implies a reduction of time to reach orgasm in subjects. Further investigations could analyse the effect of Oxytocin against treatment and control groups to further validate the claims made in this study.