The Association of Female Masturbation with Self-Esteem, Body Image and Sexual Satisfaction
Indíana Rós Ægisdóttir

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BSc in Psychology

Author: Indiana Rós Ægisdóttir
ID number: 010892-2289

Department of Psychology
School of Business
Foreword

Submitted in partial fulfillment of the requirements of the BSc Psychology Degree, Reykjavik University, this thesis is presented in the style of an article for submission to a peer-reviewed journal.
Abstract
The current study was conducted to examine the association between masturbation and relationship status with self-esteem, sexual satisfaction and body image in young women. The study analyzed data from an online self-report anonymous questionnaire. Participants were 99 female students aged 20 – 25 years old (M = 22.93). Participants were all in the Psychology and the Sports Sciences Departments at Reykjavik University. The study was approved by the National Bioethics Committee and the Privacy and Data Protection Authority in Iceland. Results revealed that the majority of participants masturbated regularly. A two-way independent ANOVA was used for statistical analysis. Results revealed that there was no significant main effect between relationship status or masturbation and self-esteem and body image. Results indicated however, a significant main effect for both masturbation and relationship status with sexual satisfaction, indicating that participants who were in a relationship had significantly higher levels of sexual satisfaction than participants who were single. Likewise, participants who masturbated regularly had significantly higher levels of sexual satisfaction than those who do not masturbate regularly. There was not a significant interaction between masturbation or relationship status and self-esteem, sexual satisfaction or body image.

Keywords: Young women, masturbation, self-esteem, sexual satisfaction, body image.

Útdráttur

Lykilorð: Ungar konur, sjálfsfróun, sjálfstraust, kynlifsánægja, likamsímynd.
The Association Between Female Masturbation and Self-Esteem, Body Image and Sexual Satisfaction.

Masturbation, or self-genital stimulation for pleasure, is a frequent sexual behavior and has been associated with sexual health (Bockting & Coleman, 2003). Masturbation can be used as a strategy to improve sexual health since it is considered to be a safe sexual activity (Gerressu, Mercer, Graham, Wellings, & Johnson, 2008; Kaestle & Allen, 2011; Kontula & Haavio-Mannila, 2003). Statistics show that more men masturbate than women and of those who masturbate, men do so more frequently (Gerressu et al., 2008; Godson, 2002; Kinsey, Pomeroy, & Martin, 1948; Kinsey, Pomeroy, Martin, & Gebhard, 1953; Leitenberg, Detzer, & Srebnik, 1993) and start earlier (Peplau, 2003; Shibley Hyde & Jaffee, 2000). Interestingly, a relationship between frequency of masturbation and higher education was found in Finland, Estonia and Sweden (Kontula & Haavio-Mannila, 2003) and the United States (Laumann, Gagnon, Michael, & Michael, 1994), with higher-educated individuals of both sexes masturbating more often than individuals who are less educated.

The prevailing difference between genders in masturbation frequency is great. In the United States, 38% of women and 61% of men report masturbating in the preceding year, according to Das (2007). In Britain, the prevailing difference between genders is also high, showing that while 94.6% of men have masturbated, only 71.2% of women report having ever masturbated (Gerressu et al., 2008). Baldwin and Baldwin (1997), Note that the reasons men masturbate more are multifaceted, involving multiple biological and social factors. A part of the biological factor is that men notice their genitals and erotic responses earlier than women and socially, there are double standards for the sexuality of males and females. For example, females are more repressed sexually because of the impact sex might have, such as pregnancy. This leads to parents inhibiting and punishing masturbation and sexual curiosity in daughters more than in sons.
Women who masturbate reach orgasm more often and can consequently have a greater sexual drive. They require less time to experience sexual arousal and have a wider range of orgasmic variation (Hurlbert & Wittaker, 1991). Additionally, women can learn about their bodies, what pleases them sexually and how their bodies respond through masturbation (Hurlbert & Wittaker, 1991) as it is the simplest way to reach orgasm (Leonard, 2010).

Most of the research on sexuality among young individuals has been related to risk avoidance, prevalence and reduction of negative outcomes (Hogarth & Ingham, 2009). Limited research has been conducted on the impact of female masturbation on self-esteem (Coleman, 2003), body image (Shulman & Horne, 2003) and sexual satisfaction (Coleman, 2003; Horne & Zimmer-Gembeck, 2005). Furthermore, there is very little research on sexual satisfaction among young adults (Higgins, Mullinax, Trussell, Davidson, & Moore, 2011).

Self-esteem can be difficult, however, it has been defined as how the individual senses, appreciates, values or likes him or herself (Holt, 2012). Self-esteem is considered to be crucial for psychological survival and the awareness of self is one of the factors that sets us apart from other animals (McKay & Fanning, 2000). However, not much research has been done on the relationship between self-esteem and masturbation (Coleman, 2003).

Hurlbert and Wittaker (1991) examined the role of female masturbation in marital and sexual satisfaction. They found that among married women, those who masturbated, had a significantly higher self-esteem than non-masturbators. Similarly, Shulman and Horne (2003) also found this positive significant relationship between masturbation and body image. Furthermore, they found that women who masturbated more often, had higher body satisfaction than women who masturbated less. These findings are similar to those of Widerman and Pryor (1997). They found that among women who had been diagnosed with
bulimia nervosa, those who had high body dissatisfaction had either never masturbated or had started masturbating later compared to those who had lower body dissatisfaction.

Additionally, self-esteem can predict sexual satisfaction. Women with excellent or good self-esteem are more likely to report extreme psychological sexual satisfaction than women with low self-esteem (Higgins et al., 2011; Rehbein-Narvaez, García-Vázquez, & Madson, 2006).

Sexual satisfaction is how the individual evaluates their sexuality in a subjective way (Rheman, Fallis, & Byers, 2013). It is considered to be a crucial part of sexual health, as well as being correlated with overall happiness in both genders. There is a significant gender difference in sexual satisfaction, where men across the globe, report higher levels of satisfaction than women, regardless of cultural variations (Laumann et al., 2006). However, limited amounts of research has been conducted on the topic of sexual satisfaction (McClelland, 2010).

Hurlbert and Wittaker’s (1991) aforementioned study further showed that married women who masturbate have significantly higher sexual satisfaction in their marriages when compared to non-masturbators. Additionally, women who masturbate report having more orgasms and a higher orgasm consistency.

Higgings et al (2011) studied sexual satisfaction and sexual health among university students in the United States. Participants rated both their physiological and psychological sexual satisfaction with their current sex life and it was found that most of the participants were both physiologically (84%) and psychologically (79%) satisfied with their current sex life. A total of 79% of the participants were both psychologically and physiologically satisfied. Their results also showed that frequent orgasm was a strong indicator for both psychological and physiological sexual satisfaction. Furthermore, relationship status seems to
be a factor that predicts sexual satisfaction, with women in a stable long-term relationship being more sexually satisfied than single women (Castañeda, 2013).

To conclude, although limited research has been conducted on these subjects, factors found to predict high levels of sexual satisfaction are relationship status and masturbation, for example. Furthermore, masturbation has also been found to predict higher self-esteem and a more positive body image. The current study is innovative in the field as it examines the effects of both masturbation and relationship status on self-esteem, sexual satisfaction and body image in a single study.

The main aim of this study was to evaluate what association masturbation and relationship status might have with psychological factors such as self-esteem, body image and sexual satisfaction among young women. By doing so, it is pioneering further studies of this subject matter in the field. Based on the relevant literature, the six following hypotheses will be examined:

1. A majority of participants masturbate regularly.
2. Young women who are in a relationship will have higher self-esteem than women who are not in a relationship.
3. Young women who masturbate regularly will have higher self-esteem than women who do not masturbate regularly.
4. Young women who are in a relationship will be more satisfied with their body than young women who do not masturbate regularly.
5. Young women who masturbate regularly will be more satisfied with their body than women who do not masturbate regularly.
6. Young women who masturbate regularly will be more sexually satisfied than women who do not masturbate regularly.
7. Young women who are in a relationship will be more sexually satisfied than women who are not in a relationship.

Method

Participants

Participants were Icelandic female undergraduates in both the Psychology and Sports Sciences Departments at Reykjavik University. All participants answered the same self-report questionnaire. The sample was a convenience sample. The recruitment of participants was done by carefully-selected teachers who sent the questionnaire to their classes within their department. A total of 134 students, aged 20 to 25 years old, received the questionnaire and 99 completed the questionnaire, i.e. 73.8%. Participants’ age ranged from 20 to 25 years old (M = 22.93, SD = 1.33). Participants did not receive payment for participation. The study was approved by the National Bioethics Committee (VSNb2016010023/03.01) and the Privacy and Data Protection Authority in Iceland (case nr. 16-017).

Measurements

A questionnaire (Appendix B) was constructed by the researcher and included background questions, Otter body image scale, the SSS-W sexual satisfaction scale for women and the Rosenberg self-esteem scale. In addition, questions were asked about sexual activity with a partner and masturbation practices and frequency.

Masturbation. The question used in the current study to measure whether participants masturbated regularly, was “Have you ever masturbated? Masturbation defined as direct stimulation of own genitals, with a finger and/or an object”. Response options were “Yes”, “No”, “Have tried it, but do not do it on an ongoing basis”. For analysis, the answer options “No” and “Have tried it, but do not do it on an ongoing basis” were defined as not masturbating regularly and was labeled as 1. The answer option “Yes” was defined as masturbating regularly and was labeled as 2.
**Relationship Status.** The question used in the current study to assess relationship status was “What is your relationship status?” The answer options were “Single”, “In a relationship but not cohabiting”, “In a relationship and cohabiting”, “Married”. For analysis, the answer options “In a relationship but not cohabiting”, “In a relationship and cohabiting”, “Married” were defined as being in a relationship and was labeled as 1 and “Single” was labeled 0.

**Self-esteem.** Self-esteem was assessed using the ten item Rosenberg self-esteem scale (RSE) (Rosenberg, 1965). An Icelandic translation of the RSE scale was used with a head question asking “How well or poorly do the following statements apply to you?” and the following statements: “I feel that I am at least as worthy as other people”, “I feel that I have many good qualities”, “Overall, I feel unsuccessful”, “I am able to do things as well as other people”, “I do not feel like there are many things I can be proud of”, “I have a positive attitude towards myself”, “Overall, I am satisfied with myself”, “I wish I could have more respect for myself”, “Sometimes I certainly feel like I’m useless” and “Sometimes I feel like I’m worth nothing”. Participants indicated how well the statements applied to them on a four-point Likert scale ranging from (1) “Applies very well to me” to (4) “Does not apply very well to me”. The scoring of five items was reversed, so that a high value would represent high self-esteem. All ten items were transformed into one scale. The scores of the scales ranged from 10 to 40 with 10 representing very low self-esteem and 40 very high self-esteem. The scale had a high level of internal consistency with the Cronbach’s alpha of .91.

**Sexual Satisfaction.** Sexual satisfaction was assessed using six questions of the contentment domain of the Sexual Satisfaction Scale for Women (SSS-W) (Appendix B). Preliminary evidence shows that the scale is both valid and reliable (Meston & Trapnell, 2005). The scale included a head question with five statements where participants had to place their response on a four point Likert scale. The questions were translated into Icelandic.
The head question was “How well or poorly do the following statements apply to you in the past six months?” In the original scale, the question does not include “In the past six months”. This statement was added to both help individuals realize which period of their life they should have in mind while evaluating their sex life and to remove “the way my present sex life is” from the statements. The five statements were: “I am satisfied with my sex life”, “I often feel like something is missing in my sex life”, “I often feel like emotional closeness is missing in my sex life”, “I am satisfied with how often I have sexual intimacy (kissing, coitus, etc.)” and “I do not have any problems or worries concerning my sex life (how often I have sex or communication)”. In the original version of the scale, the rating was on a five-point Likert scale. However, in the current study, the response options were changed to match the four-point Likert scale and response options of the RSE and OSIQ. Furthermore, by having the four-point scale, the answer option “Neither agree nor disagree” was removed from the prior five-point scale so individuals had to take a stance on how they rated their sex life. The response options ranged from (1) “Applies very well to me” to (4) “Does not apply very well to me”. The sixth question from the scale was “Overall, how satisfying or unsatisfying is your current sex life?” with a four-point Likert scale ranging from (1) “Very satisfying” to (4) “Very unsatisfying”. The six questions were transformed into one variable. The scores of the scale ranged from 6 to 24, where 6 represented very low sexual satisfaction, and 24 very high sexual satisfaction. A factor analysis was conducted on the sexual satisfaction scale, and all the six questions loaded on a single factor. The scale had a good level of internal consistency with a Cronbach’s alpha of .88.

**Body Image.** Body image was assessed by using an Icelandic translation of five items from the Body and Self-Image subscale of the Offer Self-Image questionnaire (OSIQ) (Appendix B) (Offer, Ostrov, & Howards, 1977). The head question was “How well do the following statements apply to you?”. The five statements were: “When I think about how I
will look in the future, I am happy”, “I often feel ugly and unattractive”, “I am proud of my body”, “I feel happy with the physical changes of my body in recent years” and “I feel strong and healthy”. Participants rated how well the statements applied to them on a four-point Likert scale ranging from (1) “Describes me very well” to (4) “Does not describe me at all”. The scoring of four statements was reversed, so that a higher score would indicate higher body image. All five items were transformed into one scale. The scores of the scale ranged from 5 to 20, with 5 representing very low body image and 20 very high body image. The scale had a high level of internal consistency with a Cronbach’s alpha of .92.

**Procedure**

The questionnaire was created in Google Forms. Selected teachers from both the Psychology and the Sports Sciences Departments sent a link via e-mail to students in their classes at the end of March 2016. When opening the questionnaire, the participants saw from the information sheet (Appendix A) stating the purpose of the study, that it was a self-report anonymous questionnaire. Information concerning the completion of the questionnaire and what was expected of participants was also included. The participants were informed that they could quit anytime or skip specific questions. Additionally, it was stated that by answering the questionnaire, participants were agreeing to take part in the study, and all data would be deleted after processing. The collected data was exported from Google Forms into Microsoft Excel for coding. Finally, the data was imported into SPSS for data analysis.

**Statistical Analysis**

Descriptive statistics were calculated to provide information about masturbation practices, relationship status, self-esteem, body image and sexual satisfaction among participants. A bivariate correlation was employed to examine whether there was a linear relationship between self-esteem, sexual satisfaction and body image. Three two-way independent ANOVAs were conducted to compare the mean difference in the dependent
variables; self-esteem, sexual satisfaction and body image between the fixed factors, which were whether the participants masturbated regularly or not and relationship status.

**Results**

**Descriptive Analysis**

85% of participants masturbated regularly, while 15% did not masturbate regularly and the majority of participants were in a relationship (n = 59) while 40 participants were single.

Table 1 provides descriptive statistics for the three dependent variables; body image, sexual satisfaction and self-esteem among participants. The Table provides information about the number of participants, minimum and maximum available scores, mean scores and standard deviation scores on the dependent variables. Participants had, on average, a quite high body image, sexual satisfaction and self-esteem.

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Min</th>
<th>Max.</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Esteem</td>
<td>97</td>
<td>13</td>
<td>40</td>
<td>33.25</td>
<td>6.12</td>
</tr>
<tr>
<td>Sexual Satisfaction</td>
<td>96</td>
<td>7</td>
<td>24</td>
<td>17.13</td>
<td>4.54</td>
</tr>
<tr>
<td>Body Image</td>
<td>97</td>
<td>5</td>
<td>20</td>
<td>14.93</td>
<td>3.31</td>
</tr>
</tbody>
</table>

There was a significant but weak correlation between self-esteem and sexual satisfaction, $r(94) = 0.31, p < .01$. Additionally, there was a strong correlation between self-esteem and body image $r(94) = 0.66, p < .01$ and a moderate correlation between body image and sexual satisfaction, $r(91) = 0.40, p < .01$.

Three two-way independent ANOVA were conducted to test significant effects of the independent variables; whether the person masturbated regularly or not and relationship status on the dependent variables that were self-esteem, sexual satisfaction and body image.
There were no outliers assessed by inspection of boxplots of both masturbation and relationship status. There was homogeneity of variance as assessed by Levene’s test for equality of variance while assessing self-esteem ($p = .114$), body image ($p = .612$) and sexual satisfaction ($p = .062$).

Table 2
*Descriptive statistics of the means of self-esteem, sexual satisfaction and body image determined by the effects of the fixed factors; masturbation and relationship status.*

<table>
<thead>
<tr>
<th></th>
<th>Masturbate regularly</th>
<th>Do not masturbate regularly</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In a relationship</td>
<td>Single</td>
</tr>
<tr>
<td></td>
<td>In a relationship</td>
<td>Single</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>34.12</td>
<td>33.12</td>
</tr>
<tr>
<td>Sexual Satisfaction</td>
<td>19.16</td>
<td>14.90</td>
</tr>
<tr>
<td>Body Image</td>
<td>15.08</td>
<td>14.75</td>
</tr>
</tbody>
</table>

As seen in Table 3, relationship status did not have a significant main effect on self-esteem, nor did masturbation. However the main effect between masturbation and self esteem was marginally significant. Furthermore, as seen in Table 3 there was not a significant interaction effect of masturbation and relationship status on self-esteem.

Table 3
*Test of between subject effects with relationship status and whether the participant masturbated regularly or not as fixed factors and self-esteem as a dependent variable.*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Effects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-esteem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masturbation</td>
<td>1</td>
<td>3.11</td>
<td>.081</td>
</tr>
<tr>
<td>Relationship Status</td>
<td>1</td>
<td>.007</td>
<td>.935</td>
</tr>
</tbody>
</table>

| Interaction Effects     |    |       |      |
| Masturbation x Relationship status | 1  | .230  | .663 |
Table 4
Test of subject effects with relationship status and whether the participant masturbated regularly or not as fixed factors and body image as a dependent variable.

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Effects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body Image</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masturbation</td>
<td>1</td>
<td>.530</td>
<td>.479</td>
</tr>
<tr>
<td>Relationship Status</td>
<td>1</td>
<td>.002</td>
<td>.965</td>
</tr>
<tr>
<td><strong>Interaction Effects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masturbation x Relationship Status</td>
<td>1</td>
<td>.296</td>
<td>.588</td>
</tr>
</tbody>
</table>

As seen in Table 4, the two fixed factors, masturbation and relationship status did not have a statistically significant main effect on body image. Furthermore, there was no significant interaction effect of masturbation and relationship status on body image.

Table 5
Test of between subject effects with relationship status and whether the participant masturbated regularly or not as fixed factors and sexual satisfaction as a dependent variable.

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Effects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Satisfaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masturbation</td>
<td>1</td>
<td>4.01</td>
<td>.048</td>
</tr>
<tr>
<td>Relationship Status</td>
<td>1</td>
<td>13.57</td>
<td>.000</td>
</tr>
<tr>
<td><strong>Interaction Effects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masturbation x Relationship Status</td>
<td>1</td>
<td>.003</td>
<td>.959</td>
</tr>
</tbody>
</table>

Finally, as seen in Table 5 the fixed factors masturbation and relationship status had a statistically significant main effect on sexual satisfaction.
This statistical difference in means between masturbation and relationship status and sexual satisfaction can be seen in Table 2. Participants in a relationship and who masturbate regularly, had on average, higher levels of sexual satisfaction compared to those in a relationship and who do not masturbate regularly. Likewise, those individuals who are single and masturbate regularly, had higher levels of sexual satisfaction than those who are single and did not masturbate regularly. However, there was not a significant interaction effect of masturbation and relationship status on sexual satisfaction.

**Discussion**

The results of the present study supported the primary hypothesis that a majority of participants masturbated regularly, with 85% of participants doing so. These outcomes were expected, since all the participants were university students and as Kontula and Haavio-Mannila (2003) found in Estonia, Finland and Sweden, individuals with higher education had a higher frequency of masturbation. Likewise, Laumann et al (1994) reported that in the United States, 60% of female graduates had masturbated in the last year, while only 25% of undergraduate women had masturbated that year (Laumann et al., 1994). However, the current study did not include non-university students. Therefore, it would be interesting to examine in future studies whether this difference in prevalence is similar among individuals with lower education levels.

It was predicted in the second hypothesis that young women who were in a relationship would have had higher self-esteem than women who were not in a relationship. The main effect between relationship status and self-esteem was found to be non-significant, which tells us that in the current study, relationship status was not related to self-esteem. In the third hypothesis it was predicted that young women who masturbated regularly would have higher self-esteem than young women who don’t masturbate regularly but the main effect between masturbation and self-esteem were found to be non-significant, which tells us
that masturbation was not related to self-esteem levels. However, the differences in mean score were marginally significant for masturbation. Hence, this marginally significant correlation is something that should be explored further in future studies with larger samples. Additionally, the interaction effect between masturbation and relationship status with self-esteem was found to be non significant. These results are consistent to the study of Hurlbert and Wittaker (1991), which had found that married women that masturbated had higher self-esteem than those women who did not masturbate. However, research on this topic is lacking (Coleman, 2003) and the sample size in the current study was small. Furthermore, the average self-esteem was quite high, as expected, since all participants were attending university, which has been found to be positively correlated with high self-esteem (McMullin & Cairney, 2004).

The fourth hypothesis stated that young women who are in a relationship will be more satisfied with their body than women who are not in a relationship. When examining the main effect between relationship status and body image, there was a non significant association, which tells us that relationship status was not associated with body image in the current study. The fifth hypotheses predicted that young women who masturbate regularly would be more satisfied with their body than young women who did not masturbate regularly. This main effect was also non-significant, which tells us that masturbation was not related to body image. Furthermore, there was not a statistically significant interaction between masturbation and relationship status with body image, which tells us that whether participants masturbated or not and whether the participant was in a relationship or not, was not related to body image levels. These findings are inconsistent with previous findings of Shulman and Horne (2003). They found that women who masturbated had higher body image than those who did not masturbate. However, it is important to note that a small sample was
used and a major part of the participants, who were all university students reported that they masturbated regularly and the mean body image was quite high.

The sixth hypothesis stated that young women who masturbated regularly would be more sexually satisfied than those women who did not masturbate regularly. Results showed that the main effects of masturbation with sexual satisfaction was significant. Which tells us that masturbating regularly is related to having higher levels of sexual satisfaction levels. Finally, the seventh hypothesis predicted that young women who were in a relationship would be more sexually satisfied than women who were not in a relationship. Results showed that the main effect between relationship status was significant, which tells us that being in a relationship was related to having higher sexual satisfaction levels than the participants that were not in a relationship. These findings are in accordance with the study of Hurlbert and Witttaker (1991) who found that married women who masturbate have significantly higher sexual satisfaction than those who did not masturbate. However, the interaction effect between masturbation and relationship status was non-significant. That is, the effect of masturbation on sexual satisfaction levels was no different between those individuals who are single and those in a relationship.

There are several limitations to the current study, especially considering generalization. Firstly, all the participants were 20 – 25 years old and all from the same university. The rates of self-esteem, body image and sexual satisfaction were all fairly high and the majority of participants reported that they masturbated regularly. This would not be considered to be a problem if the sample size had been larger and more generalizable. Another limitation is that the study relied on self-reporting data on masturbation and sexual practices, which some may think of as a sensitive subject. This raises the question as to whether all participants answered truthfully or not. Further studies on this subject should include interviews to gain a deeper and better understanding of masturbation practices and
how they affect the individual psychologically and sexually. Last but not least, it is impossible to determine the cause and effect relationship between the factors of whether masturbating regularly causes higher self-esteem and sexual satisfaction, or being sexually satisfied or with higher self-esteem leads to masturbating.

The study also had important strengths. It is the first of its kind in Iceland. The innovative subject matter follows an untrodden path of research in Iceland and therefore needs more exploration. Other strengths of the study were that participation was as high as 74%, anonymity was ensured and the submission was via email. By having submissions online and the link sent via email, participants could answer the questionnaire in their preferred environment. Future studies should be longitudinal in order to assess differences in masturbation practices and the relationship with self-esteem, body image and sexual satisfaction, and to compare masturbation practices in different cohorts.

In conclusion, the results of the current study indicate that while body image and self-esteem are not associated with masturbation nor relationship status among young women in Iceland, sexual satisfaction is. Participants who masturbated regularly were more sexually satisfied than those who did not masturbate regularly. Likewise, those who were in a relationship, were more sexually satisfied than those who were not in a relationship. These results are based on only 99 female university students, hence these results could be considered a preliminary for larger, more generalizable studies. The current study highlights the positive effects of sexual activity such as masturbation. Additionally, these findings can improve the ways in which sexual education, both in a general and educational setting, could be improved, thus leading to greater sexual health and sexual satisfaction. Furthermore, the clinical implications could be used among psychologists and sexologists to help individuals improve their levels of sexual satisfaction.
References


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Appendix A

Information Sheet.

Upplýsingar til þátttakenda
Kæri viðtakandi

Vinsamlega íhuga þú að þú ákveður hvert þú viljir taka þátt í þessari rannsókn. Rannsókn þessi er verkefni til BSc prófs í sálfraði.

Tilgangur rannsóknarinnar er að að þú hafa þaðum þessu kvenkyns háskólans og þú kænt þaðum þessu sjálfisfróun, þátttakendur eru kvenkyns nemendur við hálóskólann í Reykjavík á aldrinum 20-25 ára.

Rannsakendur: Ábyrgðarmaður rannsóknarinnar og leiðbeinandi nemandans er: Bryndís Björk Ásgeirsdóttir, PhD, dósent við sálfraðisvið, 599-6432, bryndis@ru.is
Nemandi er: Indiana Rós Ægisdóttir, sálfraðinemi, háskólinn í Reykjavík, 861-5857, indiana13@ru.is

Hægt er að hafa samband við þátttakendur ef það vakna spurningar varðandi rannsóknina.

Þátttaka í rannsókninni felur í sér að: svara ópersónurekjanlegum spurningalista, sem tekur um það bil 10 – 15 mínútur að svara.

Áhættu við að taka þátt í rannsókninni: Rannsakandi telur ekki likur að tekin sé áhætta með þátttöku í rannsókninni. En finnist þátttaka spurningarnar of persónulegar er honum frjálst að hætta þátttöku hvenær sem er eða sleppa því að svara stókum spurningum.

Greiðslur eða önnur umbun til þátttakenda: Ekki er sértaklega greitt fyrir þátttöku í rannsókninni.

Persónuvernd, úrvinnsla og eyðing rannsóknargagna. Óll rannsóknargögn verða ópersónurekjanleg og verða þátttöku í rannsókninni. Allar spurningar og gögn eru ópersónurekjanleg. Þátttakendur er frjálst að hafna þátttöku eða hætta í rannsókninni á hvaða stigi sem er og án útskyringa.

Hverjir hafa samþykkt rannsóknina: Rannsóknin er unnin með samþykki Visindasídæfndar, tilkynning hefur verið send til Persónuverndar.

Fyrir hóðand rannsakenda,

Ábyrgðarmaður: Bryndís Björk Ásgeirsdóttir, 599-6432, bryndis@ru.is
Indiana Rós Ægisdóttir, 861-5857, indiana13@ru.is.
**Appendix B**

**Questionnaire**

### Hver er hjúskaparstaða þín?

- [ ] Einhleyp
- [ ] Í sambandi en ekki í sambúð
- [ ] Í sambandi og í sambúð
- [ ] Gift

### Hversu vel eiga eftirfarandi fullryðingar við um þig?

Veldu einn valmöguleika í hverri linu.

<table>
<thead>
<tr>
<th>Lýsir mér mjög vel</th>
<th>Lýsir mér nokkuð vel</th>
<th>Lýsir mér ekki nóg vel</th>
<th>Lýsir mér alls ekki</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ðegar ég hugsa um hvernig ég muni líta út í framfjöllinn er ég ánægð.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Mér finnst ég oftast vera ofrið og ósæðaðandi.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Ëg er ánægð með líkama minn.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Ëg er ánægð með þær íkarnilegu breytingar sem átt hafa sér stað hjá mér undan farin ár.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Mér finnst ég vera stark og hraust.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

### Hefur þú prófað að stunda sjálfsfróun?

Með sjálfsfróun er átt við beina örvun á eigin kynfærum, með fingri og / eða hlut

- [ ] Já
- [ ] Nei
- [ ] Hef prófað það, en geri það ekki að staðaldri
**Hversu vel eða illa eiga aftirfarandi staðreyndir við um þig? Siðastliðna SEX MÁNUÐI?**

Veldu einn valmöguleika í hverri línú.

<table>
<thead>
<tr>
<th></th>
<th>Á mjörg vel við um mig</th>
<th>Á frekar vel við um mig</th>
<th>Á frekar illa við um mig</th>
<th>Á mjörg illa við um mig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Íg er árægð með kynlíf mitt</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Mér finnst oft eins og eitt hvað vanti í kynlífð mitt</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Mér finnst oft eins og það vanti tilfinningalega náð í kynlífð mitt</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Íg er árægð með hversu oft ég stunda kynferðislega náð (kyessast, samfarir o.s.frv)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Íg er ekki með nein vandamál eða áhyggjur varðandi kynlíf (t.d. tíðni kynlífss eða samskipti)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

**Á heildina litli, hversu fullnægjandi eða ófullnægjandi er kynlífð þitt eins og það er nú?**

- ○ Mjögg fullnægjandi
- ○ Frekar fullnægjandi
- ○ Frekar ófullnægjandi
- ○ Mjögg ófullnægjandi
Hversu vel eða illa eiga eftirfarandi staðreyndir við um þig?
Veldu einn valmöguleika í hverri línu.

<table>
<thead>
<tr>
<th></th>
<th>Á mjög vel við um mig</th>
<th>Á frekar vel við um mig</th>
<th>Á frekar illa við um mig</th>
<th>Á mjög illa við um mig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mér finnst ég vera að minnsta kosti jafn mikils virði og aðrir</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Mér finnst ég hafa ýmsa góða eiginleika</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>þegar allt kemur til alls sýnist mér ég vera misheppnuð</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Ég get gert hluti jafn vel og flestir aðrir.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Mér finnst það ekki vera margt sem ég get verið stolt af</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Ég hef jákvæða afstöðu til sjálfrar mín</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>þegar allt kemur til alls er ég ánægð með sjálfa mí</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Ég vildi óska að ég bæri meiri viðringu fyrir sjálfri mér</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Stundum finnst mér ég sannarlega vera til einskins nýt</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Stundum finnst mér ég einskins virði</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>