

## Time to Orgasm in Women in a Monogamous Stable Heterosexual Relationship

Gajanan S. Bhat, MCh,<sup>1</sup> and Anuradha Shastry, BAMS<sup>2</sup>

### ABSTRACT

**Background:** Orgasm in women is a complex phenomenon, and the sparse data about time to orgasm (TitOr) in women are an impediment to the research on this complex phenomenon.

**Aim:** To evaluate the stopwatch measured TitOr in women in a monogamous stable heterosexual relationship.

**Methods:** The study was conducted through web-based and personal interview using a questionnaire, which addressed the issues related to TitOr. Sexually active women older than 18 years and women in a monogamous stable heterosexual relationship were included in the study. Those with comorbidities such as diabetes, hypertension, asthma, psychiatric illness, sexual dysfunction and those with partners with sexual dysfunction were excluded. The participants reported stopwatch measured TitOr after adequate sexual arousal over an 8-week period. The data analysis was performed using GraphPad software (©2018 GraphPad Software, Inc, USA).

**Outcomes:** The outcomes included stopwatch measured average TitOr in women.

**Results:** The study period was from October 2017 to September 2018 with a sample size of 645. The mean age of the participants was  $30.56 \pm 9.36$  years. The sample was drawn from 20 countries, with most participants from India, the United Kingdom, the Netherlands, and the United States of America. The mean reported TitOr was  $13.41 \pm 7.67$  minutes (95% confidence interval: 12.76 minutes–14.06 minutes). 17% of the participants had never experienced the orgasm. Penovaginal intercourse was insufficient to reach orgasm in the majority, in whom it was facilitated by certain positions and maneuvers.

**Clinical Implications:** The knowledge of stopwatch measured TitOr in women in real-life setting helps to define, treat, and understand female sexual function/dysfunction better and it also helps to plan treatment of male ejaculatory dysfunction, as reported ejaculatory latency in healthy men is much less than the reported TitOr here.

**Strengths & limitations:** Use of stopwatch to measure TitOr and a large multinational sample are the strength of the study. The absence of a crosscheck mechanism to check the accuracy of the stopwatch measurement is the limitation of the study.

**Conclusion:** Stopwatch measured average TitOr in the sample of women in our study, who were in a monogamous stable heterosexual relationship, is 13.41 minutes (95% confidence interval: 12.76 minutes–14.06 minutes) and certain maneuvers as well as positions during penovaginal intercourse help achieving orgasm, more often than not. **Bhat GS, Shastry A. Time to Orgasm in Women in a Monogamous Stable Heterosexual Relationship. J Sex Med 2020;XX:XXX–XXX.**

Copyright © 2020, International Society for Sexual Medicine. Published by Elsevier Inc. All rights reserved.

**Key Words:** Orgasm; Time to Orgasm; Orgasmic Latency; Female Sexual Dysfunction

Received September 23, 2019. Accepted January 6, 2020.

<sup>1</sup>Department of Urology, Andrology and Sexual Medicine, TSS Shripad Hegde Kadave Institute of Medical Sciences, Sirsi, Uttara Kannada District, Karnataka State, India;

<sup>2</sup>Department of Urology and Sexual Medicine, TSS Shripad Hegde Kadave Institute of Medical Sciences, Sirsi, Uttara Kannada District, Karnataka State, India

Copyright © 2020, International Society for Sexual Medicine. Published by Elsevier Inc. All rights reserved.

<https://doi.org/10.1016/j.jsxm.2020.01.005>

### INTRODUCTION

Orgasm in women is one of the least understood and most controversial subjects until today. Although many have studied orgasm in women, the issue has not been addressed in a comprehensive manner until now. In 2003, a group of experts agreed on a definition of orgasm in women as a variable, transient peak sensation of intense pleasure, creating an altered state of consciousness, usually with an initiation, accompanied by involuntary, rhythmic contractions of the pelvic striated

circumvaginal musculature, often with concomitant uterine and anal contractions, and myotonia that resolves the sexually induced vasocongestion, generally with an induction of well-being and contentment.<sup>1</sup> In men, orgasm coincides with ejaculation, which is clinically evident. However, there is very little evidence to prove that an event analogous to ejaculation occurs in women as well. Thus, unlike men, female orgasm is not clinically evident. Hence, measuring time to orgasm (TitOr) in women has not been easy, resulting in the very limited literature on the said subject. The majority have addressed the orgasm as one of the components of female sexual function, which was measured using tools such as the Female Sexual Function Index, which is not a direct measure of TitOr.<sup>2</sup> These tools measure difficulty in achieving certain sexual function and difficulty in reaching orgasm which means longer TitOr, less intense orgasms, and so on.<sup>3</sup> Although there is some literature on TitOr in women, none have reported stopwatch measured TitOr in women in real-life setting. In this context, we decided to conduct a questionnaire-based study to measure time to orgasm in women using stopwatch in a real-life setting.

## AIMS

The aim of the study was to measure the average time to reach orgasm after adequate sexual arousal, using a stopwatch, during heterosexual penovaginal intercourse, in women who were in a monogamous stable sexual relationship. Along with this, the effect of age, length of relationship, position during intercourse, and additional nonpenetrative sexual activities on the TitOr in these women was also evaluated.

For the purpose of the study, the following definitions were used:

- a. Orgasm: Intense transient peak sensation of intense pleasure, creating an altered state of consciousness, usually with an initiation, accompanied by involuntary, rhythmic contractions of the pelvic striated circumvaginal musculature, often with concomitant uterine and anal contractions, and myotonia that resolves the sexually induced vasocongestion, generally with an induction of well-being and contentment.<sup>1</sup>
- b. Sexual arousal: An intense desire for sex in the presence of erotic stimuli, either provided by the partner, audiovisual methods or both.
- c. TitOr: Time taken to reach orgasm (measured using stopwatch) after adequate sexual arousal. It was measured in seconds or minutes.

## METHODS

### Participants

The study was initiated after the approval by the institutional ethics committee. The participants of the study were sexually active women in a monogamous stable heterosexual relationship, with a minimum age of 18 years. The exclusion criteria were as

follows: comorbidities such as diabetes, hypertension, asthma, malignancy, psychiatric disorders or patients on drugs for psychiatric/endocrine disorders. Those women who had undergone pelvic surgeries and radiation to the pelvis as well those with genitourinary abnormalities were also excluded. Women whose partners had sexual dysfunction were also excluded. The exclusion was based on the answers given by the participants to the questions pertaining to the number of partners, comorbidities, medication history, treatment history, and sexual function status of the participants. Only those participants who volunteered to answer the English language questionnaire either through social platform such as WhatsApp, Facebook Messenger, SurveyPlanet, or a personal interview were included in the study. None of them were paid any remuneration. The data of the participant about the country of residence, educational status, age, relationship status, length of relationship, occurrence or absence of orgasm, TitOr, and occurrence of orgasm related to a specific position or activity were collected through the questionnaire.

At the beginning of the study, the handouts containing details of the study were distributed to the participants in our institute. Another digital handout detailing the details of the study was shared on social platforms such as WhatsApp, Facebook, SurveyPlanet, and Twitter. 917 women voluntarily came forward to participate in the study. Their informed consent was obtained. 272 women were excluded because of the exclusion criteria. Finally, 645 women were part of the study, whose detailed data were analyzed.

Of the 645 participants, 107 were interviewed personally, through a face-to-face interview, 221 participants were interviewed through WhatsApp chat, 142 participants provided information through Facebook Messenger, and 175 participants answered questionnaire through SurveyPlanet.

### Method of Measurement of TitOr

The female partner used the stopwatch to clock TitOr. The participants were asked to maintain an intercourse diary, in which they were asked to enter the details about the occurrence/absence of orgasm as well as TitOr during heterosexual penovaginal intercourse over a period of 8 weeks. The participants reported the details of the diary to the investigator during the personal interview or web-based interview. Occasionally, TitOr was cross-checked by verifying the screenshot of the clocked time during the last sexual encounter. The mean of recorded TitOr was reported as TitOr for that participant. The participants were asked to clock TitOr using stopwatch available in the smartphone. The clock was started by the participant herself when she felt that she was adequately aroused for sex, and the stopwatch was stopped by the participant when she reached the orgasm. Both the arousal and orgasm were explained by the co-investigator, who is a female herself, to the participant in a common language/colloquial language, if the participant could not understand the terms clearly. The explanation of these terms was based on the definitions mentioned in the previous section.

**Table 1.** Demographic details of the participants in the study

Sl no	Country (total number of participants)	Age in years (mean ± SD)	Unmarried/Married	Mean length of relationship in years	Number of participants with educational status as				
					Postgraduate	Graduate from college	Higher secondary	Primary school	Illiterate
1	India (227)	30.2 ± 9.5	88/139	7.5	40 (18%)	98 (43%)	35 (15%)	54 (24%)	0
2	United Kingdom (137)	28.7 ± 9.4	93/44	6.9	33 (24%)	66 (48%)	38 (28%)	0	0
3	Netherlands (107)	30.2 ± 9.1	70/37	7.1	54 (51%)	48 (45%)	5 (5%)	0	0
4	United States of America (57)	32.3 ± 10.3	28/29	8.5	10 (18%)	47 (83%)	0	0	0
5	Denmark (11)	37.1 ± 8.9	2/9	14.2	1 (9%)	10 (91%)	0	0	0
6	Belgium (10)	32.2 ± 11.5	6/4	9.1	4 (40%)	6 (60%)	0	0	0
7	Malaysia (8)	32.8 ± 10.7	5/3	8.4	2 (25%)	6 (75%)	0	0	0
8	Spain (8)	28.0 ± 8.2	6/2	4.8	4 (50%)	4 (50%)	0	0	0
9	Israel (8)	32.9 ± 9.2	3/5	8.0	0	8 (100%)	0	0	0
10	Hungary (7)	29 ± 6.8	3/4	6.7	3 (43%)	4 (57%)	0	0	0
11	Australia (7)	22.4 ± 5.9	6/1	3.4	4 (57%)	3 (43%)	0	0	0
12	Germany (7)	25.6 ± 5.6	4/3	4.4	3 (43%)	4 (57%)	0	0	0
13	Canada (7)	37.1 ± 3.1	2/5	11.4	2 (29%)	3 (43%)	2 (29%)	0	0
14	Vietnam (7)	30.4 ± 7.9	6/1	4.1	2 (29%)	3 (43%)	2 (29%)	0	0
15	Hong Kong (7)	36.6 ± 8.1	3/4	12.6	2 (29%)	3 (43%)	2 (29%)	0	0
16	Pakistan (6)	28.2 ± 5.5	0/6	4.7	2 (33%)	2 (33%)	2 (33%)	0	0
17	Czech Republic (6)	36.7 ± 6.7	1/5	14.2	2 (33%)	3 (50%)	1 (17%)	0	0
18	New Zealand (6)	30.8 ± 4.9	1/5	9.5	1 (17%)	5 (83%)	0	0	0
19	Russia (6)	33.3 ± 10.3	4/2	9.3	1 (17%)	3 (50%)	2 (33%)	0	0
20	France (6)	33.5 ± 10.7	4/2	7.3	2 (33%)	4 (67%)	0	0	0
Total	645	30.6 ± 9.4	335/310	7.5	166 (26%)	332 (52%)	93 (14%)	54 (8%)	0

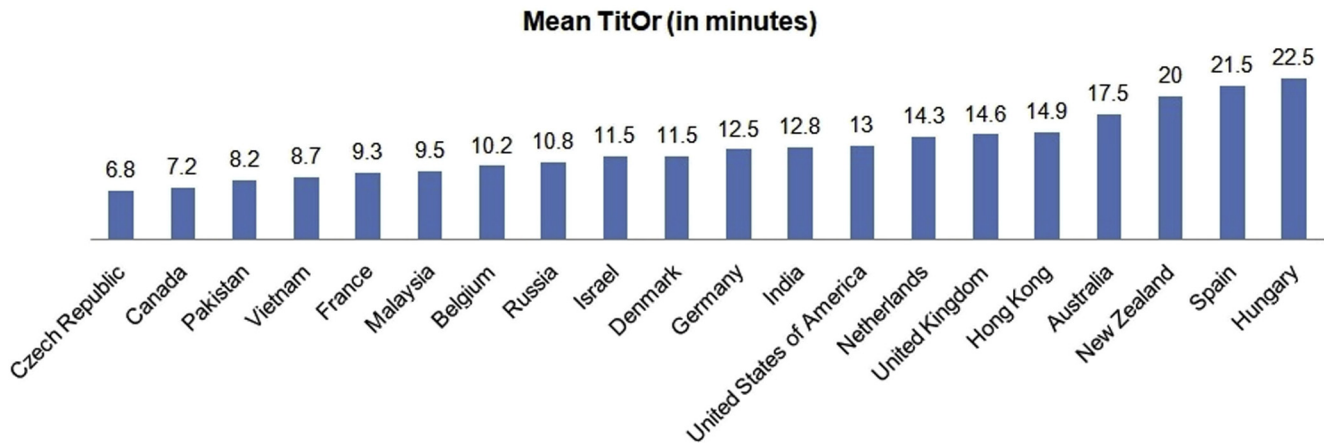


Figure 1. Bar diagram showing countrywise mean time to orgasm (TitOr). Figure 1 is available in color online at [www.jsm.jsexmed.org](http://www.jsm.jsexmed.org).

### Statistical Analysis

The statistical analysis was performed using GraphPad software (©2018 GraphPad Software, Inc, USA). Mean, median, standard deviation, and regression analysis were used as statistical tools and reported. A  $P$  value less than 0.0001 was considered statistically significant.

### RESULTS

The study period was from October 2017 to September 2018. 645 women participated in the study, whose mean age was  $30.56 \pm 9.36$  years with a mean length of relationship of  $7.54 \pm 7.33$  years. Of these 645 women, 310 (48.06%) were married, and the remaining 335 (51.94%) women were in a stable sexual relationship with their male partner. More than half the participants were graduates who had graduated from the

colleges. These participants were from 20 countries, whose demographic variables such as age, marital status, married life/length of relationship, and education status are summarized in Table 1.

One hundred ten participants (17.05%) reported that they never experienced orgasm. Hence, they did not report TitOr. Of these 110 women, 38 were unmarried and 72 were married. 535 participants reported stopwatch measured TitOr over an 8-week period. Their reported mean TitOr was  $13.41 \pm 7.67$  minutes (range: 3 to 40 minutes and 95% confidence interval: 12.76 minutes–14.06 minutes). Of these 535 women, 297 were unmarried and 235 were married. The countrywise details of the reported means of stopwatch measured TitOr are shown graphically in Figure 1. The countrywise variance in TitOr is shown graphically in Figure 2. Mean reported TitOr for married participants was  $12.51 \pm 7.18$  minutes (95% confidence interval:

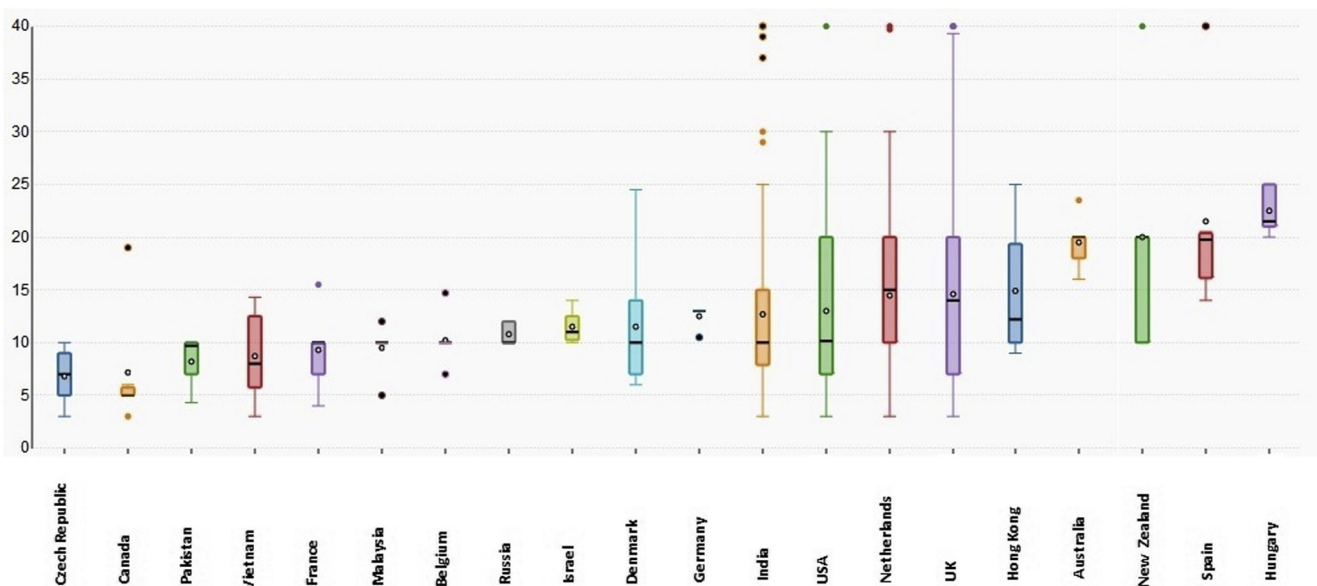


Figure 2. Box plot showing variance in reported TitOr depicted countrywise. TitOr = time to orgasm. Figure 2 is available in color online at [www.jsm.jsexmed.org](http://www.jsm.jsexmed.org).

**Table 2.** Details of mean TitOr reported by the participants based on the method of interview

Method of data collection	Total number of participants reported to have experienced orgasm	Total number of participants reported not to have experienced orgasm	TitOr (mean ± standard deviation)	95% confidence interval in minutes	Statistical difference in reported mean TitOr between the methods used for data collection suggested by <i>P</i> value
Personal interview (n = 107)	86	21	12.86 ± 7.56	11.26 to 14.46	Between personal interview and WhatsApp chat Not significant ( <i>P</i> value 0.4371)
WhatsApp chat (n = 221)	186	35	13.63 ± 7.6	12.54 to 14.72	Between personal interview and Messenger chat Not significant ( <i>P</i> value 0.4736) Between personal interview and SurveyPlanet Not significant ( <i>P</i> value 0.6957)
Facebook Messenger chat (n = 142)	123	19	13.6 ± 7.17	12.33 to 14.87	Between Messenger chat and WhatsApp chat Not significant ( <i>P</i> value 0.9723)
Surveyplanet (n = 175)	140	35	13.29 ± 8.28	11.92 to 14.67	Between WhatsApp chat and SurveyPlanet Not significant ( <i>P</i> value 0.7007) Between Messenger chat and SurveyPlanet Not significant ( <i>P</i> value 0.7474)
Total (n = 645)	535	110	13.41 ± 7.67	12.76 to 14.06	No significant difference in mean TitOr between methods of collection of data

TitOr = time to orgasm.

11.59 minutes–13.42 minutes), whereas the same was 14.14 ± 7.98 minutes (95% confidence interval: 13.23 minutes–15.05 minutes) in unmarried participants. The difference between the means was not statistically significant (*P* value = 0.0144). As mentioned earlier, we used 4 different methodologies to collect data, namely personal interview, WhatsApp chat, Facebook Messenger chat, and SurveyPlanet, and the reported mean TitOr was statistically not significant, when compared, based on the method of collection of data (details summarized in Table 2). Except for the personal interview, which was used to collect the data from the participants who visited our institution, all the other methods were used to collect data from the participants from 20 different countries.

The mean number of intercourses reported by the participants over 8 weeks was 9.28 ± 1.51. The participants who reported to have never reached orgasm had 9.59 ± 1.53 intercourses over a period of 8 weeks, whereas the participants who reported TitOr had a mean number of intercourses of 9.22 ± 1.49 over an 8-week period. The difference between the 2 groups as far as the number of intercourses was concerned was statistically not significant (*P* value = 0.0188). Of all the intercourses, about one-third was reported to have ended with orgasm by those reporting TitOr. The reported mean number of intercourses associated with orgasm was 2.74 ± 1.19.

Only 168 participants (31.4%) reported to have achieved orgasm with penovaginal intercourse alone, whereas the remaining 367 participants (68.6%) reported that they needed additional activities/maneuvers to achieve orgasm. Licking/kissing/light biting certain body parts was reported as the most common reported additional activity (32.43%) which helped the participants to reach orgasm. The additional activities/maneuvers to achieve orgasm reported by the participants are shown in tabular form as Table 3.

Among the participants who reported to have achieved orgasm, 476 participants (88.97%) reported that certain positions during sexual intercourse favored orgasm. Remaining 59 participants (11.03%) felt that the position during sexual intercourse does not affect orgasm. The position with women on top was reported as the most favorable position (42.2%) to achieve orgasm by the participants. The favorable positions reported by the participants are shown in a tabular form in Table 4.

On multivariate and univariate regression analysis, age of the participant, length of the relationship, marital status, number and frequency of sexual intercourse as well as educational status had no effect on TitOr. The derived degree of freedom on running the multivariate analysis was 534. Similarly, the values derived for *R*<sup>2</sup> was 0.089001, and the value of the *F* test statistic was 12.94478. The obtained *P* values for the age of the participant, length of the relationship, marital status, number and frequency of sexual intercourse, and educational status were 0.125476, 0.326946, 0.438564, 1.13E-10, and 0.034958, respectively. Compared with the other variables, the *P* value obtained for the educational status was very small and was less

**Table 3.** Additional activities/maneuvers that are reported to favor orgasm in participants in whom penovaginal intercourse alone is insufficient to achieve orgasm

Sl no.	Country	Total number of participants reporting additional activities/maneuvers required to achieve orgasm								
		Pressing breasts	Light bite on the nipple/sucking the nipple	Licking armpit/licking body parts/licking thigh/licking sole	Licking/light bite/sucking vagina	Rubbing of the clitoris	Finger in the anus	Additional finger in the vagina	Light whipping	
1	India	7	20	46	15	23	10	6	6	
2	United Kingdom	7	12	24	13	10	6	3	6	
3	Netherlands	8	6	18	6	6	3	5	6	
4	United States of America	3	5	13	0	5	1	3	2	
5	Denmark	1	0	0	0	3	2	1	0	
6	Belgium	1	2	1	0	0	1	0	0	
7	Malaysia	0	1	0	0	0	1	0	0	
8	Spain	1	2	1	0	0	0	2	0	
9	Israel	0	1	1	0	1	0	1	0	
10	Hungary	0	1	2	0	0	1	1	0	
11	Australia	1	1	1	0	0	2	0	0	
12	Germany	0	1	1	0	0	0	0	0	
13	Canada	1	0	2	0		1	1	0	
14	Vietnam	1	2	0	0	1	0	0	0	
15	Hong Kong	0	0	1	0	1	1	0	0	
16	Pakistan	1	0	2	0	0	0	0	0	
17	Czech Republic	0	1	1	0	0	0	0	0	
18	New Zealand	0	1	3	0	0	0	1	0	
19	Russia	0	0	1	0	0	1	0	0	
20	France	1	0	1	0	0	0	0	1	
Total	367	33	56	119	34	50	30	24	21	

**Table 4.** Positions during penovaginal intercourse reported as favoring orgasm

Sl no.	Country	Total number of participants reporting certain positions favor achieve orgasm							
		Entry from behind with knees bent (doggy)	Missionary	Woman on top	Standing with entry from the front	Sitting with entry from the front	Side to side with entry from the front	Prone with entry from behind	Nataraja position (standing with one leg up)
1	India	18	20	82	10	5	8	18	5
2	United Kingdom	12	10	51	5	8	8	7	0
3	Netherlands	10	8	31	7	12	5	9	0
4	United States of America	7	6	11	6	1	8	5	0
5	Denmark	0	0	4	2	0	0	0	0
6	Belgium	2	1	3	1	0	1	0	0
7	Malaysia	2	1	0	0	0	1	1	0
8	Spain	0	3	2	0	0	1	0	0
9	Israel	3	1	1	1	0	0	0	0
10	Hungary	0	2	0	0	0	1	1	0
11	Australia	0	0	1	1	1	2	0	0
12	Germany	1	1	1	0	0	0	1	0
13	Canada	0	2	1	1	0	0	2	0
14	Vietnam	1	0	1	0	1	0	1	0
15	Hong Kong	1	1	2	0	0	1	0	0
16	Pakistan	2	0	2	0	0	1	0	0
17	Czech Republic	0	0	3	1	0	0	0	0
18	New Zealand	1	0	3	0	0	0	1	0
19	Russia	0	1	2	1	0	0	1	0
20	France	1	1	0	0	0	0	3	0
Total	476	61	58	201	36	28	37	50	5



**Table 5.** Summary of literature on time to orgasm in women

Study	Cohort	Age in years	Setting	Type of stimulation	Time to orgasm	Method of measurement
Kinsey et al 1953 <sup>5</sup>	5,793 sexually active women	Not specified	Private rooms/ homes	Penovaginal intercourse	4 minutes after intromission (Mean)	Self-reporting
Huey et al 1981 <sup>6</sup>	619 female patients reporting sexual dysfunction	Not specified	Private rooms/ homes	Penovaginal intercourse (PVI) and masturbation	Masturbation, 6.73 ± 3.67 minutes (Mean ± SD) PVI, 7.02 ± 3.75 minutes (Mean ± SD) after intromission	Self-reporting
Levin et al 1985 <sup>7</sup>	28 sexually active women	27 ± 4 (Mean ± SD)	Laboratory	Self-stimulation.	0.75 to 25 minutes 7.8 ± 6.2 minutes (Mean ± SD) after stimulation	Stopwatch
Fisher et al 1986 <sup>8</sup>	18 women	22 -34	Laboratory	Sexually explicit materials	8.84 ± 5.96 minutes (Mean ± SD) after stimulation	Self-reporting and photoplethysmographic recording
Weiss et al 2009 <sup>9</sup>	2,360 Czech women	Not specified	Private rooms/ homes	Penovaginal intercourse	16.2 minutes after intromission	Self-reporting
Powers CR 2012 <sup>10</sup>	835 sexually active women	21.15 ± 3.79 (Mean ± SD)	Private rooms/ homes	Penovaginal intercourse	27 minutes (mean) after intromission	Self-reporting
Rowland et al 2016 <sup>3</sup>	866 sexually active women	22.8 ± 4.8 (Mean ± SD)	Private rooms/ homes	Partnered sex	Non distressed women-12 to 14 minutes following initiation Distressed women, 16-20 minutes after initiation	Self-reporting
Kontula et al 2016 <sup>11</sup>	12,787 Finnish women	18-81	Private rooms/ homes	All types of sexual activities	15 minutes after initiation of sexual activity	Self-reporting
Sherlock et al 2016 <sup>12</sup>	103 sexually active women	36.49 ± 12.19 (Mean ± SD)	Private rooms/ homes	All types of sexual activities	High-orgasmic partner, 16.63 ± 10.72 minutes (Mean ± SD) after initiation For low-orgasmic partner, 26.55 ± 61.28 minutes (Mean ± SD) after initiation	Self-reporting
Wise et al 2017 <sup>13</sup>	10 sexually active women	43.6 ± 14.9 (Mean ± SD)	Laboratory	Clitoral stimulation	1.45 to 13.82 minutes after stimulation	Stopwatch
Rowland et al 2018 <sup>14</sup>	2,304 sexually active women	28.8 ± 0.21 (Mean ± SE)	Private rooms/ homes	Partnered sex and masturbation	Partnered sex, 14 minutes after initiation Masturbation, 8 minutes after initiation	Self-reporting
Our study	645 sexually active women	30.56 ± 9.36 Mean ± SD)	Private rooms/ homes	Sexually explicit audiovisual materials, stimulation by partner	13.41 ± 7.67 minutes (Mean ± SD) from adequate arousal.	Stopwatch



than 0.05 (but more than the  $P$  value considered for statistical significance considered for the study), suggesting some effect on TitOr statistically. However, the effect is too miniscule to appear clinically.

## DISCUSSION

We are presenting here the analysis of the results of our study on the TitOr in women who were in a monogamous stable sexual relationship. We found that the mean TitOr in these women was about 13 and a half minute. We also found that certain additional maneuvers along with the penovaginal sexual intercourse and certain positions during the sexual intercourse helped women to reach orgasm more often than not.

The latency to orgasm in either sex is a matter of debate and forms an important matter for consideration when the treating physician addresses sexual dysfunction in either sex. There have been giant strides in the area of research on orgasmic latency in men with the introduction of a tool to measure ejaculatory latency, namely, intravaginal ejaculatory latency time by Waldinger et al.<sup>4</sup> Comparatively, the studies on orgasmic latency in women have been very sparse because of the complexity of orgasm in women.<sup>1</sup> However, there have been few studies which have addressed the issue of TitOr in women, and summary of these studies, along with the summary of our study findings, is shown in tabular form in [Table 5](#).

### Definition of TitOr/Orgasmic Latency

Different researchers have defined TitOr/orgasmic latency (OL) differently. The studies conducted in the laboratory setting defined TitOr/OL as the time taken to reach orgasm from the point of stimulation,<sup>7,8,13</sup> whereas the studies conducted through the questionnaire/retrospective analysis defined TitOr/OL as the time taken to reach orgasm after initiation of masturbation/intromission of the vagina by the penis or beginning of sexual activity such as kissing and cunnilingus,<sup>3,5,6,9–12,14</sup> except for our study wherein we have defined TitOr/OL as time taken to reach orgasm after adequate arousal.

### Time to orgasm/Orgasmic Latency

As shown in [Table 4](#), the reported TitOr/OL ranged from 0.75 to 40 minutes after stimulation/adequate arousal and ranged from 4 to 27 minutes after intromission of the penis/masturbation/initiation of sexual activity in normal women. Rowland and Kolba<sup>3</sup> and Huey et al<sup>6</sup> studied the TitOr/OL in distressed women as well as women with sexual dysfunction, wherein they reported TitOr/OL in the range of 5 to 20 minutes.

Although the penetrative sex is an important part of the sex life of heterosexual couples, the female partner reaches orgasm less often with sexual intercourse alone, which was seen in our study as well. Almost 11–33% of the women never experience orgasm during penetrative penovaginal intercourse.<sup>5,10</sup> Similarly, in our

study, about 17% of women reported to have never experienced orgasm. Women who do not achieve orgasm from coitus are reported to have more frequent intercourse than those women who achieve orgasm through intercourse,<sup>6</sup> a finding which could not be corroborated in our study. It is reported that those who could achieve orgasm through noncoital means were the ones who indulged in masturbation more often.<sup>6</sup> Clitoral stimulation, audiovisual sexually explicit materials, and skillful foreplay are known to be associated with more frequent orgasms as well as shorter TitOr.<sup>7,8,9,12</sup> Our study confirmed that nonpenetrative sexual activities along with the penetrative sex helped the women reach orgasm more frequently. However, Weiss et al<sup>9</sup> reported that the longer duration of penovaginal intercourse was associated with more consistent orgasms in women when compared with foreplay.

The mental and relationship factors such as stability and length of relationship as well as interpersonal communication are reported to affect the OL in women.<sup>11</sup> However, we did not find any association between the length of relationship and the TitOr in our study.

Masturbation is reported to have lesser OL in women when compared with partnered or penetrative sex.<sup>14,15</sup> Rowland et al<sup>15</sup> reported a mean OL of 8 minutes during masturbation, which was increased to 14 minutes during partnered sex. Although our study could not verify the OL during masturbation, we found that the OL reported by our participants was about half minute less than the OL reported by Rowland et al.<sup>15</sup>

Although the stopwatch was used as a tool to measure TitOr men in a laboratory setting earlier,<sup>7</sup> we are the first to use the stopwatch as a tool to measure TitOr in women in a real-life setting. Levin and Wagner<sup>7</sup> reported TitOr in women after clitoral stimulation in a laboratory setting, as 7.8 minutes. In our study, we found that, stopwatch measured TitOr in a real-life setting is 13.41 minutes after adequate arousal.

## Factors Affecting TitOr/OL

### Age

Usually sexual activity in women begins during adolescence, reaches peak around the age of 30 years, and remains the same up to the age of 55 years.<sup>16</sup> TitOr/OL increases in those nearing menopause and in the postmenopausal age group.<sup>17</sup> Irrespective of the age, a positive self–body image positively affects orgasm, indirectly affecting TitOr/OL positively.<sup>18</sup> Similarly, negative attitudes about sex affects TitOr/OL negatively in postmenopausal aged women.<sup>19</sup> In our study, we did not find any correlation between the age and TitOr.

### Partner Characteristics

Studies have reported that couples in long-standing, monogamous, committed relationship with better interpersonal communication skills have lesser TitOr/OL compared with those with multiple partners.<sup>20,21,22,23</sup> However Schmiedeberg and

Schroder opined that this effect is seen in the first couple of years only, and the frequency of intercourse decreases over years with increased TitOr, unless the partner uses novel methods during sex.<sup>24</sup> An attractive, sexually skillful partner has positive influence on orgasm with reduced time to orgasm.<sup>12</sup> Sexual dysfunction in the partner such as premature ejaculation, erectile dysfunction, and so on affects the orgasm negatively in women and in majority of the cases leads to anorgasmia in women.<sup>25,26</sup> Sidi et al<sup>27</sup> reported longer TitOr/OL in a cohort of Malayan women whose partners were older than those whose partners were younger. The effect of the partner on the TitOr could not be evaluated in our study as our partners were in those who were in a monogamous relationship.

#### Position During Sexual Intercourse

Swinging movements of the pelvis and trunk, back and forth during vaginal intercourse, tend to have a shorter TitOr/OL, compared with rubbing of clitoris in a still body.<sup>28</sup> Women on top position is known to shorten the TitOr/OL, especially when women are more active rather than passive, a fact that was brought out in our study as well.<sup>11</sup> This could be due to more effective rubbing of clitoris along with the swinging movements of female pelvis while on top.

#### Role of Sexual Activities Other than Penovaginal Intercourse

Although women achieve orgasm with penovaginal intercourse (PVI) alone on few occasions, it is the addition of other sexual activities, such as kissing, oral sex, and cunnilingus, which shortens TitOr/OL.<sup>8,29,30</sup> Participants in our study reported that activities such as rubbing of the clitoris, sucking of armpit, licking of body, vaginal licking, pressing the breast, finger in the anus, light bite on the nipple, licking of soles, additional finger in the vagina, nipple sucking, light whipping, and licking thigh shortened TitOr/OL, when done along with PVI. Some women reach orgasm faster with anal sex than with PVI.<sup>31</sup> Women reach orgasm faster during masturbation than during PVI.<sup>14,15,32</sup> Regardless of the age, women reached orgasm faster when their vagina was wet either due to stimulation or due to lubricant use.<sup>33</sup>

#### Effect of Woman's Anatomy and Genetics on TitOr/OL

Women with a smaller clitoral body and crus tend to reach orgasm faster.<sup>34</sup> Women with better pelvic floor muscle strength tend to have better orgasmic function which helps in reaching orgasm faster.<sup>35</sup> Those who initiate early pelvic floor muscle training in the postpartum period reach orgasm early compared with those who do not initiate pelvic floor muscle training.<sup>36</sup> However, the mode of delivery does not affect TitOr/OL during the postpartum period.<sup>37</sup> Wahlin-Jacobsen et al<sup>38</sup> have reported that women with lower number of cytosine-adenine-guanine trinucleotide repeat polymorphisms in androgen receptor gene have less intense orgasm and difficulty in reaching orgasm early. As ours was a questionnaire study, we found it

difficult to assess the effect of anatomy on TitOr; hence the same could not be assessed.

#### Effect of Education on TitOr/OL

Various studies have assessed the effect of education status on TitOr/OL. Lower education status is reported to be associated with more TitOr.<sup>39</sup> A similar finding was reported by Sidi et al<sup>27</sup> in a cohort of Malayan women. But we did not find any correlation between education status and TitOr in our study.

#### Strength and Limitations

The use of stopwatch to measure the TitOr and a large, spread-out sample from 20 nations across the globe are the strengths of the study.

As the method used to obtain the data is a questionnaire, the investigator has no mechanism to cross-check the veracity of the reported measurement except for occasional verification of a screenshot from the smartphone, from which the time was clocked. This is an important limitation of the study. Although the data are obtained from the participants from 20 countries, most participants were from the 4 countries, namely, India, the United Kingdom, the Netherlands, and the United States of America, with minimal representations from the remaining 16 countries. Such disproportionate sampling may affect the accuracy of the data as far as the minimally sampled 16 countries are concerned. This could be the basis of the wide variance of the mean TitOr from country to country, especially from those countries which are represented by a small number of participants.

Despite these limitations, the study has successfully addressed an important issue in relation to female orgasm, that is, TitOr, measured using a stopwatch in a real-life setting. Ours is the first study to report stopwatch measured TitOr in women in a real-life setting. The findings of this study could form the basis of future research on sexual function/dysfunction in women. Knowledge about TitOr in healthy, sexually active women, which is clearly more than the known ejaculatory latency in healthy men, could help in planning the treatment for ejaculatory disorders in men better.

#### CONCLUSIONS

Average TitOr in the sample of women in our study who were in a monogamous stable sexual relationship is 13.41 minutes (95% confidence interval: 12.76 minutes–14.06 minutes). Additional sexual activities such as kissing, passionate licking specific parts of the body, nipple sucking, clitoral rubbing, and so on are associated with shorter TitOr than penovaginal intercourse alone. Certain positions during sexual intercourse affect the TitOr and the woman on top is reported to be the best position during penovaginal intercourse to achieve orgasm.

**Corresponding Author:** Gajanan S. Bhat, MCh, Department of Urology, Andrology and Sexual Medicine, TSS Shripad Hegde Kadave Institute of Medical Sciences, Sirsi, Uttara Kannada District, Karnataka State, India. Tel: +919448068350; E-mail: [gajubhatru@gmail.com](mailto:gajubhatru@gmail.com)

*Conflict of Interest:* The authors report no conflicts of interest.

*Funding:* None.

## STATEMENT OF AUTHORSHIP

### Category 1

**(a) Conception and Design**

Gajanan S. Bhat; Anuradha Shastry

**(b) Acquisition of Data**

Gajanan S. Bhat; Anuradha Shastry

**(c) Analysis and Interpretation of Data**

Gajanan S. Bhat; Anuradha Shastry

### Category 2

**(a) Drafting the Article**

Gajanan S. Bhat

**(b) Revising It for Intellectual Content**

Gajanan S. Bhat; Anuradha Shastry

### Category 3

**(a) Final Approval of the Completed Article**

Gajanan S. Bhat

## REFERENCES

- Meston CM, Levin RJ, Sipski ML, et al. Women's orgasm. *Annu Rev Sex Res* 2004;15:173-257.
- Rosen R, Brown C, Heiman J, et al. The Female sexual function Index (FSFI): a multidimensional self-report instrument for the assessment of female sexual function. *J Sex Marital Ther* 2000;26:191-208.
- Rowland DL, Kolba N. Understanding orgasmic difficulty in women. *J Sex Med* 2016;13:1246-1254.
- Waldinger MD, Hengeveld MW, Zwindeman AH. Paroxetine treatment of premature ejaculation: A double-blind, randomized, placebo-controlled study. *Am J Psychiatry* 1994;151:1377-1379.
- Kinsey AC, Pomeroy WB, Martin CE, et al. Sexual behavior in the human female. Philadelphia: WB Saunders; 1953.
- Huey CG, Kline-Graber G, Graber B. Time factors and orgasmic response. *Arch Sex Behav* 1981;10:111-118.
- Levin RJ, Wagner G. Orgasm in women in the laboratory-quantitative studies on duration, intensity, latency, and vaginal blood flow. *Arch Sex Behav* 1985;14:439-449.
- Fisher TD, Pollack RH, Malatesta VJ. Orgasmic latency and subjective ratings of erotic stimuli in male and female subjects. *J Sex Res* 1986;20:85-93.
- Weiss P, Brody S. Women's partnered orgasm consistency is associated with greater duration of penile-vaginal intercourse but not of foreplay. *J Sex Med* 2009;6:135-141.
- Powers CR. Female Orgasm From Intercourse: Importance, Partner Characteristics, and Health, dissertation. Denton, Texas: University of North Texas Libraries, Digital Library; 2012. Available at: <https://digital.library.unt.edu/ark:/67531/metadc149654/>; <https://digital.library.unt.edu>. Accessed June 14, 2019.
- Kontula O, Miettinen A. Determinants of female orgasms. *Socioaffect Neurosci Psychol* 2016;6.
- Sherlock JM, Sidari MJ, Harris EA, et al. Testing the mate-choice hypothesis of the female orgasm: disentangling traits and behaviours. *Socioaffect Neurosci Psychol* 2016;6.
- Wise NJ, Frangoss E, Komisaruk BR. Brain activity unique to orgasm in women: an fMRI analysis. *J Sex Med* 2017;14:1380-1391.
- Rowland DL, Sullivan SL, Hevesi K, et al. Orgasmic latency and related parameters in women during partnered and masturbatory sex. *J Sex Med* 2018;15:1463-1471.
- Rowland D, Donarski A, Graves V, et al. The experience of orgasmic pleasure during partnered and masturbatory sex in women with and without orgasmic difficulty. *J Sex Marital Ther* 2019;1-12.
- Rao TS, Nagaraj AK. Female sexuality. *Indian J Psychiatry* 2015;57(Suppl 2):S296-S302.
- Jamali S, Rahamanian A, Javadpour A. Examining the sexual function and related attitudes among aged women: A cross sectional study. *Int J Reprod Biomed (Yazd)* 2016;14:29-38.
- Afshari P, Houshvar Z, Javadifar N, et al. The relationship between body image and sexual function in middle-aged women. *Electron Physician* 2016;8:3302-3308.
- Hashemi S, Tehrani FR, Simbar M, et al. Evaluation of sexual attitude and sexual function in menopausal age: a population based cross sectional study. *Iran J Reprod Med* 2013;11:631-636.
- Mallory AB, Stanton AM, Handy AB. Couples' sexual communication and dimensions of sexual function: A meta-analysis. *J Sex Res* 2019;1-17.
- Merwn KE, O'Sullivan LF, Rosen NO. We need to talk: Disclosure of sexual problems is associated with depression, sexual functioning, and relationship satisfaction in women. *J Sex Marital Ther* 2018;43:786-800.
- Gunst A, Ventus D, Kama A, et al. Female sexual function varies over time and is dependent on partner-specific factors: a population-based longitudinal analysis of six sexual function domains. *Psychol Med* 2017;47:341-352.
- Pereira VM, Nardi AE, Silva AC. Sexual dysfunction, depression, and anxiety in young women according to relationship status: an online survey. *Trends Psychiatry Psychother* 2013;35:55-61.
- Schmiedeberg C, Schroder J. Does sexual satisfaction change with relationship duration? *Arch Sex Behav* 2016;45:99-107.
- Kaya C, Gunes M, Gokce AM, et al. Is sexual function in female partners of men with premature ejaculation. *J Sex Marital Ther* 2015;41:379-383.

26. Jiann BP, Su CC, Tsai JY. Is female sexual function related to the male partner's erectile function? *J Sex Med* 2013;10:420-429.
27. Sidi H, Midin M, Puteh SE, et al. Orgasmic dysfunction among women at a primary care setting in Malaysia. *Asia Pac J Public Health* 2008;20:298-306.
28. Bischof-Campbell A, Hilpert P, Burri A, et al. Body movement is associated with orgasm during vaginal intercourse in women. *J Sex Res* 2019;56:356-366.
29. Herbenick D, Fu TJ, Arter J, et al. Women's experiences with genital touching, sexual pleasure, and orgasm: results from a US probability sample of women ages 18 to 94. *J Sex Marital Ther* 2018;44:201-212.
30. Richters J, Visser RD, Rissel C, et al. Sexual practices at last heterosexual encounter and occurrence of orgasm in a national survey. *J Sex Res* 2006;43:217-226.
31. Stulhofer A, Ajdukovic D. A mixed-methods exploration of women's experiences of anal intercourse: meanings related to pain and pleasure. *Arch Sex Behav* 2013;42:1053-1062.
32. Carvalheira A, Leal I. Masturbation among women: associated factors and sexual response in a Portuguese community sample. *J Sex Marital Ther* 2013;39:347-367.
33. Jozkowski KN, Herbenick D, Schick V, et al. Women's perceptions about lubricant use and vaginal wetness during sexual activities. *J Sex Med* 2013;10:484-492.
34. Vaccaro CM, Fellner AN, Pauls RN. Female sexual function and the clitoral complex using pelvic MRI assessment. *Eur J Obstet Gynecol Reprod Biol* 2014;180:180-185.
35. Martinez CS, Ferreira FV, Castro AA, et al. Women with greater pelvic floor muscle strength have better sexual function. *Acta Obstet Gynecol Scand* 2014;93:497-502.
36. Citak N, Cam C, Arslan H, et al. Postpartum sexual function of women and the effects of early pelvic floor muscle exercises. *Acta Obstet Gynecol Scand* 2010;89:817-822.
37. Dabiri F, Yabandeh AP, Shahi A, et al. The effect of mode of delivery on postpartum sexual functioning in primiparous women. *Oman Med J* 2014;29:276-279.
38. Wahlin-Jacobsen S, Flanagan JN, Pedersen AT, et al. Androgen receptor polymorphism and female sexual function and desire. *J Sex Med* 2018;15:1537-1546.
39. Villeda sandoval CI, Calao-Perez M, Enriquez Gonzalez AB, et al. Orgasmic dysfunction: prevalence and risk factors from a cohort of young females in Mexico. *J Sex Med* 2014;11:1505-1511.