

# Prevalence and Treatment of Frotteurism in the Community: A Systematic Review

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This article describes a systematic review of prevalence studies on frotteurism. We searched the following databases for previously published, peer-reviewed studies that used suitable diagnostic methods in adult nonclinical samples: Ovid MEDLINE, PsycINFO, Pubmed, AccessMedicine, Cochrane Library, Books@Ovid, DynaMed, Micromedex, Science Direct, and SciVerse Scopus. We conducted multiple searches using the following terms: frotteu\*, frottage, frotteurism, paraphilia, paraphilic, courtship disorder, prevalence, treatment, diagnosis, and *chikan*, and we evaluated the articles by using a six-point epidemiologic quality tool. We identified four prevalence studies, all of which were of limited methodological quality. Limitations included small sample sizes, the use of local rather than national samples, the failure to apply DSM or ICD-9 diagnostic criteria, and the lack of assessment regarding the reliability of diagnostic tools. One small study, a statistical outlier, reported a prevalence of 35 percent. In the three other studies, the prevalence of frotteurism was 7.9 percent, 9.1 percent, and 9.7 percent. We found no studies addressing treatment that met our inclusion criteria. Our findings reveal a need to develop more rigorous research on this topic.

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At night, he goes where the crowd is, at the station where the street entertainers are, he takes place behind a woman, preferably overweight, and then he . . . rubs himself against her buttocks.

—An early academic journal reference to frottage by Valentin Magnan, 1890<sup>1</sup>

The word *frotteur* derives from the French word *frotter*, meaning to rub, and describes those who rub their bodies, particularly their genitals, against non-consenting persons (Ref. 2, pp 183–4). The act of doing so is termed frotteurism and was first recognized as a specific mental disorder by the Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised (DSM-III-R), in 1987.<sup>3</sup> Currently, the Fifth Edition (DSM-5) defines frotteuristic dis-

order as being present if both of the following conditions are met:

A. Over a period of at least 6 months, recurrent and intense sexual arousal from touching or rubbing against a nonconsenting person, as manifested by fantasies, urges, or behaviors, and B. The individual has acted on these sexual urges with a nonconsenting person, or the sexual urges or fantasies cause clinically significant distress or impairment in social, occupational, or other important areas of functioning [Ref. 4, pp 691–2].

Our focus in this article is on the prevalence and treatment of frotteurism. These are especially important concerns, given frotteurism's continued presence in the DSM, the possible legal consequences of the criminal act (Ref. 2, pp 190–2), and the psychological distress that such acts often cause in victims.<sup>5</sup>

To date, no comprehensive literature review involving frotteurism has been published. Furthermore, a preliminary search of the literature revealed a paucity of prevalence studies. Although we located two book chapters (Ref. 6, pp 131–49; Ref. 7) with comprehensive coverage of the subject, they were limited by the lack of a focused question, search terms, or databases searched, as well as the absence of critical appraisals regarding the available literature.

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Some significant research in the field has been conducted in Japan<sup>5</sup>; however, its subsequent publication in Japanese rather than English has limited its impact. Therefore, we translated one such Japanese article of note to make its content accessible to a larger readership.

Given the dearth of formal, systematically constructed literature reviews on the topic of frotteurism and the public health importance of this topic, we set out to determine the prevalence of individuals in the community who had engaged in frotteurism, by selecting and examining all sources of prevalence data in nonclinical samples. This review is intended to present a systematic appraisal of studies on frotteurism, with respect to its prevalence and treatment. To inform future research, we also sought to determine the strengths and weaknesses of the relevant studies. In seeking to meet these goals, we selected and examined all sources of published prevalence data in nonclinical adult samples.

## Methods

We selected prevalence studies only in nonclinical samples to determine the prevalence of frotteurism. We focused on nonclinical samples because prevalence in clinical samples may be biased by a falsely elevated rate of the disorder, known as Berkson's bias.<sup>8</sup> For example, the prevalence of frotteurism in men seeking treatment for sex offenses or for paraphilias is likely to be higher because one diagnosis in this group is associated with other diagnoses.<sup>9</sup>

We identified peer-reviewed investigations of frotteurism in the following databases: Ovid MEDLINE, PsycINFO, Pubmed, AccessMedicine, Cochrane Library, Books@Ovid, DynaMed, Micromedex, Science Direct and SciVerse Scopus. Multiple searches were conducted with the terms frotteu\*, frottage, frotteurism, paraphilia, paraphilic, courtship disorder, prevalence, treatment, diagnosis, and *chikan*. No date limits were placed on the search terms. There is not an MeSH (medical subheading) category for frotteurism in MEDLINE, so we used free-word searches. An ancestry search of relevant papers was conducted from the articles retrieved, to discover references missed by other methods,<sup>10</sup> and a hand search was conducted of this *Journal*. In addition, significant efforts were made to contact leading persons with academic experience in the field. We contacted each of the first authors of the included prevalence studies and

two members of the Sexual Offenders Committee of the American Academy of Psychiatry and the Law. These efforts did not identify any additional papers for inclusion. Further, several books with chapters on frotteurism were searched for relevant studies. Finally, one Japanese article on the subject of frotteurism, toucherism, and *chikan* was painstakingly translated into English. The overall emphasis was to maximize the sensitivity of the search strategy. The process was completed in September 2012.

Since peer review unfortunately does not guarantee the validity of published research, we decided to follow guidelines for the construction of an epidemiologic quality tool to rate each prevalence article independently.<sup>11</sup> After an extensive search of the literature, we did not manage to locate an epidemiologic quality tool entirely suitable for our purposes. Therefore, we revised an earlier such tool that one of us (J.H.C.) had used in an earlier study,<sup>12</sup> and customized a six-point epidemiologic quality tool specifically for this review. Of the four articles that we ultimately selected, each received one point for meeting each of the following six criteria: obtaining a national sample, obtaining a response rate in excess of 60 percent, obtaining a sample of more than 1,000 participants, asking survey questions that were consistent with the DSM definition of frotteurism at the time of the survey, assessing the reliability of the survey tool, and excluding childhood behavior. The first author (R.S.J.) conducted the literature review, and the remaining four authors rated each article independently. Any discrepancies in scoring were discussed until consensus was achieved. Inclusion criteria for treatment studies included both experimental and nonexperimental studies that incorporated a comparison group.

## Results

Our search of 36 separate databases found a total of 436 hits; 371 were articles, and 47 of those were listed in PubMed. Ten articles addressed, at least in part, the prevalence rate of frotteurism, and four such prevalence studies used a nonclinical adult population to calculate its prevalence.<sup>13–16</sup> In these four studies, which involved 997 male participants, 104 met the interviewers' various criteria for frotteurism. Other studies were excluded, either because they examined the prevalence of frotteurism solely in children<sup>17–19</sup> or because they included clinical samples

## Prevalence and Treatment of Frotteurism

**Table 1** Nonclinical Studies on the Prevalence of Frotteurism

Study	Country	Subjects	Sample Size* (n)	Diagnostic Tool	Number Endorsing† (n)	Prevalence (%)
Templeman and Stinnett <sup>13</sup>	United States	Oregon male undergraduates	60	Clarke Sexual History Questionnaire (SHQ)	21	35.0
Freund and Seto <sup>14</sup>	Canada	Community males	483	Erotic Preferences Examination Scheme (EPES)	47	9.7
Yajima <sup>15</sup>	Japan	Male undergraduates	421	Yajima Questionnaire (YQ)	33	7.9
Kar and Koola <sup>16</sup>	India	Indian English-speaking males	33	Sexual Preferences Questionnaire (SPQ)	3	9.1

\* N = 997, all males.

† n = 104.

alone.<sup>9,20–24</sup> In addition, a book chapter was found that made reference to preliminary data on the prevalence of frotteurism.<sup>25</sup> We wrote to the author and learned that these subjects were included in that author's larger published study, which met our inclusion criteria.

As can be seen in Table 1, the four studies were conducted in the United States,<sup>13</sup> Canada,<sup>14</sup> Japan,<sup>15</sup> and India.<sup>16</sup> Two of the studies surveyed males alone,<sup>13,14</sup> whereas two included women.<sup>15,16</sup> All of the cross-sectional surveys were convenience samples. Three of the studies asked subjects specifically whether they had actually engaged in the act of frotteurism,<sup>13,14,16</sup> and the remaining study asked instead whether the participants wanted to do so.<sup>15</sup> The included studies used a variety of diagnostic modalities, including the Clarke Sexual History Questionnaire (Clarke SHQ),<sup>13</sup> the Erotic Preferences Examination Scheme (EPES),<sup>14</sup> the Sexual Preference Questionnaire (SPQ),<sup>16</sup> and the Yajima Questionnaire.<sup>15</sup>

Regarding prevalence rates, it should be noted that all four of the studies applied, at most, only one of the two DSM-5 criteria for frotteuristic disorder. Three of the four studies<sup>14–16</sup> estimated the prevalence rate of frotteurism, in the various ways that it was defined, to within the narrow range of 7.9 to 9.7 percent, whereas the fourth study<sup>13</sup> estimated a prevalence rate of 35 percent. The use of a 99 percent confidence

interval (CI) reveals that the fourth study's 35 percent prevalence rate lies in excess of the interval's upper limit of 32.3 percent, signifying that it is a statistical outlier. Prevalence rates, along with the other pertinent characteristics of the studies, including diagnostic tools, setting, and number of participants, are summarized in Table 1.

Table 2 summarizes the consensus that was achieved regarding the quality rating score for each of the studies. Although no nationally representative samples were found, the highest-scoring study asked questions that were somewhat consistent with the DSM criteria for frotteurism and also excluded frotteuristic behavior engaged in by the subject during childhood.<sup>14</sup> Two of the studies had significantly larger sample sizes than the others, both in excess of 400 subjects. A point was deducted from all of the studies for obtaining local samples only. Other common reasons for point loss were the use of a convenience sample that did not report a response rate and failing to establish the reliability of the questions asked.

The 1998 study by Freund and Seto<sup>14</sup> scored the highest on the epidemiological tool with 1.5 points. They examined the frotteuristic preferences of 483 young adult community males. As can be seen in Table 3, the male subjects were asked two questions that concerned behavior from Freund's 385-item Erotic Preferences Examination Scheme (EPES).

**Table 2** Epidemiologic Quality Tool Results in the Nonclinical Studies

Study	National Sample	Response Rate	Large Sample Size	DSM-consistent Questions	Reliability	Excludes Childhood Behavior	Summed Score
Freund and Seto <sup>14</sup>	0	0	0	0.5	0	1	1.5
Yajima <sup>15</sup>	0	0	0	0	0	1	1
Templeman and Stinnett <sup>13</sup>	0	0	0	0.5	0	0	0.5
Kar and Koola <sup>16</sup>	0	0	0	0.5	0	0	0.5

**Table 3** Nonclinical Questions Posed Regarding FrotteurismTempleman and Stinnett<sup>13</sup>

Two questions were posed; an answer in the affirmative (i.e., any response other than zero) to either question resulted in the participant's being categorized as a frotteur for purposes of prevalence:

"How many times have you ever intentionally rubbed up (in a sexual way) against someone who did not know you, against his/her will in a crowd?" (a) 0, (b) 1, (c) 2–5, (d) 6–10 (e) 11–15. . . " OR

"How many times have you intentionally touched with your hands (in a sexual way) someone who did not know you, against his/her will in a crowd? (a) 0, (b) 1, (c) 2–5, (d) 6–10, (e) 11–15"

Freund and Seto<sup>14</sup>

Two questions were posed; an answer in the affirmative (i.e., a yes) to both questions resulted in the participant's being categorized as a frotteur for purposes of prevalence:

"Since age 16, have you ever attempted to fondle the breasts or crotch of an unsuspecting female who was almost or totally a stranger?" AND

"Since age 16, have you ever stood behind an unsuspecting female who was almost or totally a stranger to you and pressed (intentionally) your penis against her buttocks?"

Yajima<sup>15</sup>

One question was posed, and two separate prevalence values were calculated, depending on the number of participants who selected option a) or b), respectively:

[translated from Japanese] "I would like to ask about your sexual preferences. With regard to the following, would you want to engage in the activity? Chikan: a) very much, b) if it were only once"

Kar and Koola<sup>16</sup>

One true-or-false question was posed, and a response of true classified the participant as a frotteur for purposes of prevalence:

"I rub genitals against people for sexual stimulation in crowded public places. True or False"

The authors required endorsement of both questions by a subject, for that subject to be deemed a frotteur for purposes of computing prevalence (Seto M, personal correspondence, April 2012) and of the 483 male subjects, 9.7 percent did so. Among the 3 percent of subjects ( $n = 13$ ) who identified themselves as ever having coerced a female into sexual activity, the prevalence of frotteurism was 77 percent. Furthermore, in data published as part of a book chapter in 1997,<sup>25</sup> the authors reported that with regard to a smaller ( $n = 249$ ) patient subset in the same study, 30.5 percent responded in the affirmative to one of the two questions.

The next study,<sup>15</sup> which scored 1.0 point, examined attitudes about various sex crimes among 421 Japanese university males and obtained data by the use of a written questionnaire administered in private. Two questions about frotteurism were included. As described in Table 3, the first question that was posed focused on whether the male subjects "want very much" to engage in *chikan* (the Japanese term for frotteurism<sup>26</sup>). The second question asked instead whether the male subjects would want to engage in the act were it to occur only once. With regard to these questions, 7.9 percent of the 421 Japanese male university subjects answered the first question in the affirmative, and 22.1 percent of those same 421 subjects answered the second question affirmatively.

The third study,<sup>13</sup> which scored 0.5 point, examined the sexual preferences of 60 undergraduates at Eastern Oregon State College, 85 percent of whom were white. The author made use of an early version of the Clarke Sexual History Questionnaire (1977),<sup>27</sup> an extensively researched self-report instrument with questions regarding frottage that have not changed from its first published iteration. Per Table 3, the Clarke SHQ posed two behavioral questions. In response to either one of those two items, 21 (35%) of the 60 participants acknowledged that they had engaged in frotteuristic behavior at least once. It was not possible to differentiate those who had done so only once from those who had engaged in frottage on numerous occasions.

The fourth study,<sup>16</sup> which also earned 0.5, examined the sexual preferences of a sample of English-speaking male volunteer subjects in India to whom an 18-item, semistructured questionnaire was administered: the Sexual Preference Questionnaire (SPQ). Regarding frotteurism, the authors posed one yes-or-no question, as seen in Table 3. Subjects who answered in the affirmative were then asked to specify the frequency of frottage, from "only a few times in the past" to "at least once a day." Three of the 33 male subjects (9.1%) who returned their questionnaires answered the question in the affirmative.

A search for studies addressing the treatment of frotteurism failed to locate any articles that met

our inclusion criteria. A broader search for studies addressing solely the treatment of paraphilias similarly failed to elicit any articles pertaining to treatment.

## Discussion

We found only a small number of articles addressing the prevalence of frotteurism in the community. Moreover, the prevalence studies that we did find were limited with regard to the quality of the data, particularly because none used a national sample, had large sample sizes, or used DSM-specific questions. Moreover, response rates were difficult to determine. Nevertheless, the prevalence rates across the four studies that included men only were 35 percent,<sup>13</sup> 9.7 percent,<sup>14</sup> 9.1 percent,<sup>16</sup> and 7.9 percent.<sup>15</sup>

There are several possible explanations for the finding of a high (35 percent) prevalence of frotteurism in the study by Templeman and Stinnett.<sup>13</sup> First, the questions did not exclude childhood behavior. Second, the questions posed may have been biased in favor of an affirmative response. Of interest, in the four studies there was no consistent method of asking these questions, nor were questions asked in a manner consistent with DSM or International Classification of Diseases (ICD)-9 diagnostic criteria. Specifically, three of the four studies<sup>13,14,16</sup> inquired about the act of frotteurism as opposed to wanting to engage in frottage.<sup>15</sup> As the DSM-5's definition of frotteuristic disorder requires "6 months [of] recurrent and intense sexual arousal from touching or rubbing against a nonconsenting person, as manifested by fantasies, urges, or behaviors" (Ref. 4, pp 691–2), asking about desire is prudent. Furthermore, it has been noted that asking about the act of frotteurism without simultaneously establishing concurrent and long-standing "recurrent, intense desire" runs the risk of overstating the prevalence of the condition.<sup>14</sup> It can do so by counting merely those who have opportunistically engaged in the act but did not necessarily feel compelled by strong and persistent urges to do so repeatedly over a six-month or longer period. Finally, the Diagnostic Interview Schedule does not include questions on frotteurism, which may serve as a barrier to conducting prevalence studies.

Yajima<sup>15</sup> published the only study to ask a question related to the DSM-5's Criterion A for frotteuristic disorder. The study participants were not asked whether they had actually engaged in the act of frottage (*chikan*), nor were they asked whether their

urges caused "clinically significant distress or impairment in social, occupational, or other important areas of functioning." (Ref. 4, pp 691–2). Study subjects, fearing possible prosecution, may have been more willing to admit to significant desire as opposed to acts of frottage.

Yajima found a 7.9 percent prevalence rate for those who "want very much" to engage in frottage. The author also asked about wanting to engage in *chikan* "if it were only once," with an endorsement rate of 22.1 percent, but this question may not be as indicative of frotteurism as Yajima's other question involving wanting "very much" to do so, which produced a lower prevalence rate of 7.9 percent.<sup>15</sup> It is also not clear that the DSM-5 criteria represent valid and culturally generalizable standards for the diagnosis of frotteuristic disorder.

As with any systematic review, there is always the possibility that there are relevant studies that were not identified by our search techniques. We also could not find any studies on the treatment of frotteurism, nor could we examine whether there was a publication bias. In addition, the scoring of the studies involves a potential for subjectivity, although we all agreed on the ratings regarding the validity of the studies.

Our data nevertheless reinforce the need for more research on frotteurism, particularly given the dearth of pertinent studies regarding prevalence and the methodological weaknesses in the studies that we evaluated. We have shown that clinicians and forensic psychiatrists should be cautious in treating any of the current data on prevalence as valid, and we also found that there is an absence of treatment studies. A better understanding of the true prevalence and treatment of frotteurism in nonclinical populations should better inform public policy.

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