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Sexual Variety in Norwegian Men and Women of Different Sexual Orientations and Ages

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ABSTRACT

The purpose of this study was to examine Norwegians' reports of seven varied sexual acts. Data were obtained from a questionnaire survey of a probability-based web sample of 2,181 men and 1,967 women aged 18–89 years. Among seven acts of sexual variety, the most common sexual experiences were trying to watch pornography with a partner, engaging in sex in unusual places, and using sex toys. Older age was negatively associated with all sexual behaviors. Regarding more unorthodox acts of sexual variety, heterosexual men's sexual preferences involved having and desiring group sex, whereas heterosexual women's sexual experiences and desires involved having sex in unusual places. Lesbian, gay, bisexual (LGB) individuals generally showed greater curiosity or experience of having group sex and engaging in BDSM (bondage, discipline, dominance and submission, and sadomasochism) activities than heterosexual adults. However, while LGB men had a high preference for group sex activities, LGB women had more positive attitudes toward BDSM activity. Individuals appear to accumulate more acts of sexual variety over time, thus making the incorporation of sexual variety a function of age. This study supports the idea that sexual variety has expanded among those born from 1960 onwards.

Introduction

Kinsey's studies of sexuality in the 1950s revealed that people's sexual behavior and habits were more diverse than what was commonly believed (Kinsey et al., 1948, 1953). Today, erotic secrets are revealed in various media daily with the subtext that sex makes one healthy and happy. Heavy emphasis is placed on how people can improve their skills as sexual partners. The media has created an image of a successful sexual life, which emphasizes that one must have sex frequently, have multiple orgasms, varied sexual acts, and knowledge of sexual variety and "kinky sex" (Træen, 2008). This can be seen as a sign of living in the stage of "social competence." It was the Swedish scientist Lorentz Lyttkens (1989) who first claimed that we currently live in *the stage of social competence*, the fourth stage in the "civilization process" described by the philosopher Norbert Elias (1978), which began to develop in Western industrialized countries between the First and Second World Wars. An important characteristic of the stage of social competence is that people's private lives and intimacies are revealed. Social competency is visible in various areas of social life. Given that sexual behavior is social, sexuality has become a realm of social competence, where people strive to be acknowledged as sexually competent performers (Træen, 2008). This framework suggests that we live in a society where the experience of sexual variety (e.g., having sex in unusual places, the use of sex toys, kinky sex etc.) functions as a means to illustrate one's sexual competence.

This trend seems also to be reflected in recent evidence, which has shown an overall increase in adult sexual repertoires, same-sex experimentation, and changes in sexual attitudes and

values toward more permissiveness (Bajos et al., 2010; Herbenick et al., 2017; Kontula, 2015; Mercer et al., 2013; Træen et al., 2021; Vanwesenbeeck et al., 2010; De Visser et al., 2014). For instance, a comparison between two cross-sectional nationally representative surveys in Australia showed a significant increase in men and women's use of sex toys and engagement in role play/dressing-up between the First (2001–02) and Second (2012–13) Australian Study of Health and Relationships (ASHR; De Visser et al., 2014). However, not all sexual practices are equally common among adults (Herbenick et al., 2017, 2010a, 2010b; Rissel et al., 2014). In the second ASHR survey (Richters et al., 2014) of 20,094 men and women aged 16–69 years approximately 15% of men and 21% of women had used sex toys during partnered sexual activity in the past year, about 8% were engaging in role-playing or dressing up, while less than 3% had engaged in swinging, group sex, or BDSM (bondage, discipline, dominance and submission, and sadomasochism). Similar proportions have been indicated by a nationally representative sample of 18–91-year-olds from the U.S., with 8% reporting having engaged in role-playing, 2% in group sex, and 2% in swinging during the past year (Herbenick et al., 2017). Lifetime experiences were substantially higher, with 42% of men and women reporting the use of sex toys, 24% reporting role-playing, 9% reporting group sex, and 6% reporting experiences with swinging. Ever having tried BDSM activities (sex involving tying up/bondage, playful whipping, and spanking) was most common among adults below the age of 30 years and least common among the older age groups (60–69 and 70+ years). Men and women did not significantly differ in their lifetime experiences

with role-playing and BDSM activities. In Norway, BDSM practices seem to have become mainstream experiences among younger adults, with 38% reporting lifetime experiences with at least one kinky sexual activity (including bondage, sex that includes consensual roughness and/or pain, or role-playing) (Træen, 2016). The desire to participate in kinky sex in the future was substantially higher, with nearly six in ten (58%) being interested in engaging in one or several BDSM activities. Neither of the presented surveys compared acts of sexual variety during sex (tried or desired) between heterosexuals and people who identify as lesbian, gay, or bisexual (LGB).

While prevalence of the most common types of partnered sexual behaviors (e.g., vaginal intercourse, oral and manual sex) have been presented elsewhere (Træen et al., 2021), the purpose of the present study was to examine a broader selection of acts of sexual variety in adult Norwegians of different sexual orientations across birth cohorts. Sexual variety was operationalized as individuals' experience with or desire for trying different acts of sexual variety (watching pornography together, sex in unusual places, sex toy use, role-playing, group sex, BDSM, and swapping partners).

Method

Participants and Recruitment

For this study, the Norsk Gallup (a subsidiary of Kantar in Norway) collected data based on their web panel, which has approximately forty thousand active members (<https://www.galluppanel.no/>). Norwegian members of Kantar's Gallup Panel were randomly recruited through national phone registries; thus, there was no possibility of self-recruitment. The Gallup Panel represents Norway's population of internet users, which in turn reflects 98% of the population with access to the internet (see <http://www.medienorge.uib.no/english/>). The Gallup Panel members were contacted regularly to fill out online questionnaires. To motivate participation, Kantar developed a carefully planned incentive program. Although small incentives were given (e.g., lotteries, occasional surprises of varied quality), these were not sufficient to encourage study participation. All study participation was voluntary, and participants were guaranteed anonymity and safety. All research complied with the Personal Data Act and the guidelines of the Norwegian Data Protection Authority and followed the ethical guidelines developed for market and poll organization surveys (Norway's Market Research Association and the European Society for Opinion and Market Research [ESOMAR]).

In March 2020, 11,685 Gallup Panel members were randomly invited to participate in an online survey on sexuality. Of those who were asked to participate, 4,160 individuals (18–89 years) completed the questionnaire, with a response rate of 35.6%. Fifty-one per cent completed the online survey on their mobile phones.

The mean ages of the women and men were 44.4 ($SD = 16.8$) and 48.4 ($SD = 17.1$) years, respectively. In the questionnaire, we asked about self-identified gender. About half of the respondents reported being men (52.4%, $n = 2181$) and 47% women ($n = 1967$), while 12 individuals ticked "other" (0.3%). The 12 "other" respondents were excluded from the analyses in

this study. Most identified themselves as heterosexual (93.5%, $n = 3815$), and 2.6% as homosexual/lesbian (83 males, 24 females), 3.3% as bisexual (60 males, 73 females), 0.6% as asexual (11 males, 13 females), and 0.1% as "other" (2 males). Respondents who identified as asexual or "other" were excluded from the analyses in the current study. About 60% were not religious, while most of those who reported religious affiliation were Christian (18.1% = Christians with no particular denomination, 17.1% = Protestant). Regarding residence, most respondents lived in urban areas (56.8%), and only 16.3% lived in rural areas. Most participants had a bachelor's degree or similar educational qualification (41.4%), while 22.8% reported a master's degree, Ph.D., or similar. More than six in ten (63.4%) reported being married, cohabiting, or being in a registered partnership; 25.4%, 8.4%, and 2.8% reported being unmarried, separated or divorced, and widowed, respectively. Of those who were previously separated/divorced/widowed/unmarried, 28.8% reported currently being in a relationship.

Measures

For self-identified *gender*, the respondents were asked "Are you . . ." with the response options 1 = male, 2 = female, and 3 = other. As explained above, the 12 individuals who responded "other" were excluded from the analyses in this study.

Age groups were assessed by year of birth and recoded as five categories: 1 = 18–29, 2 = 30–39, 3 = 40–49, 4 = 50–59 and 5 = 60+ years.

Sexual orientation was described by completing the phrase "Do you currently regard yourself as," with possible responses being 1 = homosexual/lesbian, 2 = heterosexual, 3 = bisexual/pansexual, 4 = asexual, and 5 = other. Response options 1 and 3, were recoded as 1 = LGB while response option 2 was recoded as 2 = heterosexual. Response options 4 and 5 were recoded as missing.

Sexual variety was indicated by the question used in the German GeSiD study (<https://gesid.eu/studie/>), "What have you tried, or want to try, during sex?," followed by seven items: "watch pornography together," "have sex in unusual places," "have sex with several persons simultaneously," "use sex toys (e.g., dildo or vibrator)," "role-play," "BDSM," "have sex in a swingers-club or swap partners." It should be noted that it was not specified what constitutes "unusual places." The response categories were 1 = I have already tried it, 2 = I want to try it, and 3 = I have not and do not want to try it. To conduct multiple linear regression analysis, the variable was recoded as 1 = have not, and do not want to try it (3), and 2 = have tried or want to try it (1 and 2). The 7 items in question were developed by Günter Schmidt in 1995, and used for the first time in the 3rd wave of the German Student Sex Survey in 1996. The theoretical background for the questions rests on theories of sexual pluralization (Sigusch, 1996; Simon, 1996), and individualization (Beck & Beck-Gernsheim, 1990, 1993, 1994; Giddens, 1993). It was assumed that students, as the "spearhead" of the sexual revolution, would have a large repertoire and many experiences with so-called "more unusual" sexual practices. The battery of questions was later included in a survey among three generations of women and

men from Hamburg and Leipzig (Dekker & Von Stritzky, 2004), in a 4th wave of the student sex survey in 2012 (Dekker & Matthiesen, 2015), and most recently in the GeSiD.

Group sex experience was also measured by the question “Have you ever been sexually together with several partners at the same time (had group sex)?” Those who responded “Yes” to the question were asked the follow-up question “Which of the following combinations do you have most experience with?” The respondents could only tick one of the following response categories “One man and two women,” “One woman and two men,” “Two men and two women,” “One man and more than two women,” “One woman and more than two men,” “Three or more men, no women,” “Three or more women, no men,” and “Other.”

Statistical Analysis

Cross-tabulation with chi-square analysis was used to study group differences, while multiple regression analyses were conducted to study the associations between sexual experiences or desire for sexual experiences and gender, age, relationship status, and sexual orientation (Table 3). The relative importance of gender, sexual orientation, and age were assessed using standardized regression coefficients (beta). To explore the differences in sexual experiences between the four groups of participants (i.e. heterosexual men, LGB men, heterosexual women, LGB women), a discriminant analysis was performed. The variables were analyzed using Wilks’ lambda (Klecka, 1980). A lambda of 1 occurs when the mean of the discriminant scores is the same in all groups, and there is no between-group variability. Wilks’ lambda provides a test of the null hypothesis that the population means are equal. The larger the lambda value, the lower the discriminating power. The standardized canonical discriminant function coefficients show the relative association between discriminating variables and discriminant functions. To focus on group differences, group centroids – the mean discriminant scores for each group on the respective functions – were studied. Centroids summarize the group locations in space defined by the discriminant functions. All data analyses were conducted using SPSS 25.0 for Windows.

Results

Initially, bivariate analyses showed statistically significant differences in the sexual acts that men and women tried, wanted to try, or did not want to engage in (Table 1).

The three most common experiences to have tried were having sex in unusual places (61%), used sex toys (56%), and watched pornography with a partner (42%). The three least common experiences were having visited a swinger’s clubs or swapped partners (2%) followed by participation in BDSM (10%) and role-play (13%). The largest gender differences were found among those who wanted to try having sex with several persons simultaneously, to visit swingers clubs or swap partners, and to try role play. More men than women tried or wanted to try these activities in the future. No significant gender differences were found in trying out BDSM ($p > .05$).

Group sex experience was reported by 48.5% of LGB men (65 of 134) and 15.5% (283 of 1825) of heterosexual men

($p < .001$), and by 29.3% (27 of 92) of LGB women and 10.8% (183 of 1689) of heterosexual women ($p < .001$). Among the 558 respondents with experience of group sex, 69.8% of LGB men reported that the combination they had most experience with was “three or more men and no women,” followed by 11.1% who reported “one woman and two men.” Among heterosexual men, it was most common to report “one man and two women” (54.4%), followed by “one woman and two men” (26.7%). The difference in the reporting between LGB men and heterosexual men was statistically significant ($p < .001$). A total of 53.8% of LGB women and 36.7% of heterosexual women reported experience with the combination “one man and two women,” and 26.9% of LGB women and 48.0% of heterosexual women reported experience with the combination “one woman and two men.” The difference in the reporting between LGB women and heterosexual women was not statistically significant ($p = .642$).

The trends of sexual acts that the participants tried at different ages appear to follow a wedge-shaped pattern (see Figures 1 and 2). For instance, among women there was a steady increase in the proportions of those having tried watching pornography with a partner during sex, having sex in unusual places, use of sex toys, and having sex with several persons simultaneously (the latter being less common), with a peak at the age of 40–49 years. For men, the increase in proportions of those activities was flatter than among women. While the experience of most acts of sexual variety was lowest among the youngest men and women (18–29 years), the experience of having tried BDSM shows a different pattern, being most common among those below the age of 30 years. Experience with sexual role-playing was highest among women below the age of 50 years and among men aged 30–39 years. Swinger experience was the least common and relatively stable across age groups.

Fairly common experiences for all participants were using sex toys, having sex in unusual places, and watching pornography together (Table 2). Significantly more LGB than heterosexual men had watched pornography with their partner, had sex with several persons simultaneously, had used sex toys, participated in role-play, experienced BDSM, and visited swingers clubs or swapped partners.

Compared to heterosexual women, LGB women had more experience and desire for all acts of sexual variety except watching pornography with a partner ($p = .140$) and having sex in unusual places ($p = .056$).

The relative importance of gender, sexual orientation, and age on sexual experiences and desires was studied. As illustrated in Table 3, multiple linear regression analyses showed that being older was associated with lower levels of having experienced or desired to experience watching pornography with a partner ($\beta = -0.21$; $p < .001$), having sex in unusual places ($\beta = -0.30$; $p < .001$), having used sex toys ($\beta = -0.45$; $p < .001$), participating in role-playing ($\beta = -0.32$; $p < .001$), having BDSM sex ($\beta = -0.31$; $p < .001$), having had sex with several persons simultaneously ($\beta = -0.23$; $p < .001$), and visited swingers clubs or swapped partners ($\beta = -0.10$; $p < .001$). Being female was associated with lower levels of having tried or wanted to try group sex ($\beta = -0.25$; $p < .001$) and swingers activity ($\beta = -0.16$; $p < .001$). Sexual orientation

Table 1. What men and women have tried, want to try, and not want to try, during sex (percent).

		All	Men	Women	χ^2	<i>p</i>
Watch pornography together	Already tried	42.4	42.6	42.1	20.656	.000
	Want to try	13.4	15.7	10.8		
	Have not and do not want to try	44.3	41.7	47.1		
	<i>N</i> =	3349	1778	1571		
Have sex in unusual places	Already tried	60.7	58.1	63.6	26.617	.000
	Want to try	19.3	22.6	15.6		
	Have not and do not want to try	20.0	19.4	20.7		
	<i>N</i> =	3474	1844	1630		
Have sex with several persons at the same time	Already tried	14.8	16.8	12.6	216.034	.000
	Want to try	18.4	26.7	9.2		
	Have not and do not want to try	66.8	56.4	78.2		
	<i>N</i> =	3464	1806	1670		
Use sex toys	Already tried	55.7	53.4	58.2	9.157	.010
	Want to try	15.4	16.7	14.1		
	Have not and do not want to try	28.9	30.0	27.7		
	<i>N</i> =	3511	1835	1676		
Role play	Already tried	13.0	13.2	12.7	33.445	.000
	Want to try	16.8	20.3	12.9		
	Have not and do not want to try	70.3	66.5	74.4		
	<i>N</i> =	3248	1700	1548		
BDSM	Already tried	10.4	10.6	10.3	0.572	.751
	Want to try	9.7	10.1	9.4		
	Have not and do not want to try	79.8	79.4	80.3		
	<i>N</i> =	3485	1819	1666		
Have sex in a swingers club or swap partners	Already tried	2.0	2.5	1.5	84.781	.000
	Want to try	7.9	11.7	3.7		
	Have not and do not want to try	90.2	85.8	94.8		
	<i>N</i> =	3549	1832	1717		

was statistically significantly associated with all outcomes except having sex in unusual places and using sex toys, but the associations were generally not strong.

The discriminant analysis to explore the differences between participants of different genders and sexual orientations in sexual variety (Table 4) resulted in three statistically significant discriminant functions (see Wilk's lambda). The first discriminant function was dominated by the variables having sex with several persons and having sex in a swingers club and was labeled "Group sex." As seen from the magnitude of the standardized canonical discriminant coefficients, the second discriminant function was dominated by the variable regarding BDSM experience and was labeled "BDSM." Finally, the third discriminant function was dominated by the experience of watching pornography with one's partner and was labeled "pornography."

In Figure 3, the group centroids are plotted on a graph defined by the two most significant discriminant functions. Heterosexual men were grouped in the direction of the positive and negative poles, respectively, on the "Group sex" and "BDSM" functions. This indicates that heterosexual men were characterized by having or desiring to have group sex experiences but not BDSM. Conversely, heterosexual women were grouped in the direction of the negative and positive poles, respectively, on the "Group sex" and "BDSM" functions. This indicates that heterosexual women were characterized by little desire for or experience with group sex but had positive

opinions about BDSM experiences. LGB men had high and positive scores on the "Group sex" function and positive scores on the "BDSM" function. This indicates that LGB men were characterized by a strong inclination to have group sex experiences and also had positive opinions regarding BDSM. LGB women were grouped in the direction of the positive pole on the "Group sex" function, and highly positive on the "BDSM" function. This indicates that LGB women were characterized by having or desiring group sex experiences and had positive opinions regarding BDSM experiences.

Discussion

Among the measured acts of sexual variety, the most common sexual acts individuals had experienced were having sex in unusual places, using sex toys, and watching pornography with a partner. The least common sexual experience was having visited swingers clubs or swapping partners (2%). This corresponds with previous findings from Australia, where less than 3% had engaged in swinging (Richters et al., 2014). Being younger predicted experience with or desire for most sexual activities. An examination of the acts of sexual variety that men and women had tried at different ages showed that the proportions of those who had watched pornography during sex, had experience with sex in unusual places, used sex toys, and had group sex were lowest among the youngest (<30 years) and oldest age groups (60+ years).

MEN

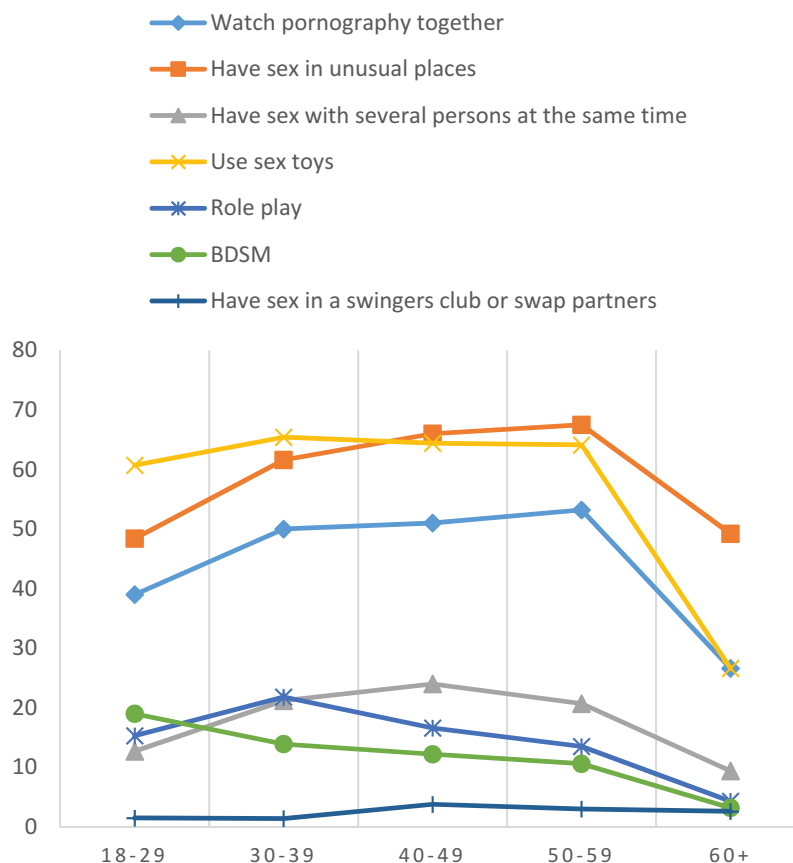


Figure 1. Sexual activities men have tried, by five age groups.

Experience having tried BDSM was, however, most common among men and women under the age of 30 years. Having tried role play was also most common among the youngest women. Finally, being LGB or being male predicted sexual experience or desire for having sex with several persons simultaneously, having BDSM sex and sex in a swinger's club or partner swapping.

One main finding is that we accumulate acts of sexual variety over time. When comparing those who have tried or want to try various acts, accumulating experiences appears largely a function of age. In particular, adults under the age of 30 years seem to have not yet tried many acts of sexual variety but have a high desire to explore, while those aged 30 to 59 have lower proportions of activities they wish to try but more acts of sexual variety they had already tried. In line with previous studies (Bajos et al., 2010; Kontula, 2015; Mercer et al., 2013; Vanwesenbeeck et al., 2010; De Visser et al., 2014), we found an increase in sexual variety, particularly among men and women aged 30 to 59 years. However, few Norwegians older than 60 years have tried many acts of sexual variety. Considering this, sex seems to have become more varied over generations.

Another central finding is the generational shift in types of sexual acts tried or desired to try between participants <60 and ≥60 years old. Our findings indicate that most participants had these experiences with various sexual acts by the time they were

between 30 and 59 years; thus, for these generations – born from 1960 onwards – sexual variety is a function of time and age. In contrast, participants born between 1931 and 1959 neither tried nor wanted to try many acts of sexual variety. This could indicate a cohort or generational effect rather than an age effect. Cohort effects exist as people from different generations construct specific social realities. It must be mentioned that the oldest participants in this study (≥70 years old) were teenagers prior to the so-called sexual revolution, whereas participants less than 70 years old were teenagers during or after this period. This is likely to have influenced their attitudes and behavior (Kontula & Haavio-Mannila, 1995; Træen & Stigum, 1998).

Interestingly, experience with BDSM was highest among men and women less than 30 years old. The proportion of those who had tried role play was also highest among women below 30 years old. Given that experience with BDSM-like activities was less common among participants aged 30 years and above, this experimentation seems to not be a function of age, but rather a shift in younger adults' social reality. Specifically, having been socialized in a sexually liberated climate may have influenced the individual's development of liberal sexual practices. Consequently, this is likely to have caused increased experience-seeking in women, since their sexual plasticity makes them more responsive to such social changes (Baumeister, 2000). However, the openness in the

WOMEN

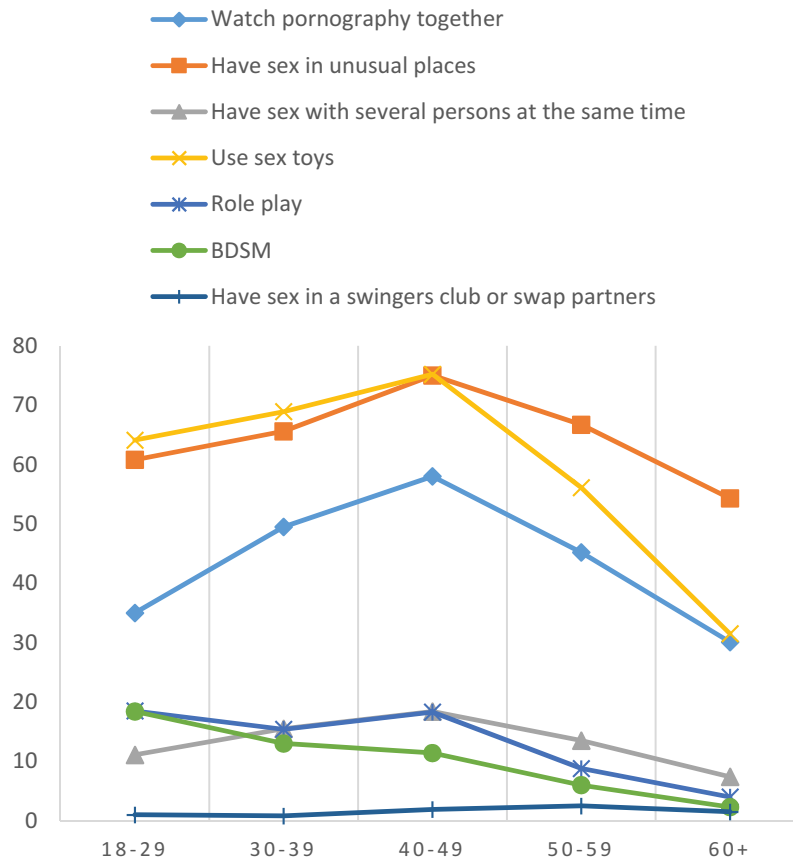


Figure 2. Sexual activities women have tried, by five age groups.

media about sex and easy access to pornography on the internet may have encouraged experimentation with new sexual practices and normalized behaviors by changing sexual attitudes (Wright, 2020). As part of the popularity of the film and book “Fifty Shades of Grey,” BDSM activities and fantasies have become more mainstream. Experiences with BDSM-like activities may, therefore, become an additional domain of sexual competence.

We found that it was also more typical of male LGB participants to have tried, or desired to try, more unorthodox acts of sexual variety, compared to heterosexuals. Evolutionary theory and mating preferences may serve as an explanation for the observed differences between LGB and heterosexual men (Bailey et al., 1994). Specifically, LGB men may be able to obtain male sexual partners more readily than heterosexual men can female sexual partners, in part because of men’s greater interest in casual sex (e.g., Schmitt, 2005). The diverse and varied sexual practices of individuals belonging to sexual minorities are also confirmed by other studies (Bailey et al., 2003; Herbenick et al., 2010a; Rosenberger et al., 2011). This could indicate that sexual minority groups may be more inclined to accept non-traditional sexual practices beyond traditional practices than heterosexuals (Diorio, 2016). However, discriminant analysis revealed some crucial differences between men and women of different sexual orientations. Our findings indicate that heterosexual men’s preferences

and experiences involved having sex with several persons simultaneously, while BDSM was not salient. This was contrary to heterosexual women, who preferred BDSM but not group sex. This preference for BDSM in women was also found in another study among 18–29-year-old Norwegians (Kvalem et al., 2014). One explanation may be related to the popularity of the film and book “Fifty Shades of Grey,” although BDSM-like sexual fantasies in women may have already existed prior to this (Kutchinsky, 1988). According to Kutchinsky (1988) the BDSM fantasies of women involve a specific partner whose desire to not be abandoned causes them to physically tether the woman. In this sense, BDSM activities serve as tokens of love, being in line with the “romantic script,” which contextualizes all sexual behavior within a “frame” of commitment and love (Gagnon & Simon, 2005). Men’s preference for group sex activity represents the opposite and a deviation from the “romantic sexual script.” The preference for sex with several partners simultaneously represents a desire to follow a “hedonistic sexual script,” and escape from the prevailing love ideology where sex is legitimized by love and perceived as synonymous with “good” sexuality. Sexual minority groups are also socialized to these ideals but may be re-socialized in meeting with other sexual minorities. To recapitulate, LGB men had a high preference for group sex activities and had moderately positive opinions regarding BDSM activity, while LGB women had moderately and highly positive opinions toward group sex

Table 2. What men and women have tried, want to try, and not want to try, during sex, by sexual orientation (percent).

	Men			Women		
	LGB	Heterosexual	Sign.	LGB	Heterosexual	Sign.
Watch pornography together						
Already tried	58.2	41.5	.000	42.7	42.1	.140
Want to try	21.3	15.1		17.3	10.5	
Have not and do not want to try	20.5	43.4		40.0	47.5	
<i>N</i> =	122	1635		75	1479	
Have sex in unusual places						
Already tried	62.4	57.9	.103	54.7	64.3	.056
Want to try	25.6	22.4		24.4	15.1	
Have not and do not want to try	12.0	19.7		20.9	20.6	
<i>N</i> =	125	1700		86	1527	
Have sex with several persons at the same time						
Already tried	47.2	14.4	.000	28.0	11.8	.000
Want to try	30.7	26.6		23.2	8.4	
Have not and do not want to try	22.0	59.0		48.8	79.8	
<i>N</i> =	127	1660		82	1560	
Use sex toys						
Already tried	63.1	52.9	.001	67.1	57.7	.002
Want to try	21.5	16.2		21.2	13.7	
Have not and do not want to try	15.4	30.9		11.8	28.7	
<i>N</i> =	130	1685		85	1573	
Role play						
Already tried	25.4	12.2	.000	26.0	11.9	.000
Want to try	23.7	20.0		19.5	12.6	
Have not and do not want to try	50.8	67.8		54.5	75.5	
<i>N</i> =	118	1564		77	1456	
BDSM						
Already tried	25.8	9.3	.000	27.4	9.3	.000
Want to try	21.0	9.3		21.4	8.7	
Have not and do not want to try	53.2	81.4		51.2	82.0	
<i>N</i> =	124	1676		84	1565	
Have sex in a swingers club or swap partners						
Already tried	7.3	2.0	.000	3.7	1.4	.039
Want to try	25.8	10.8		7.4	3.5	
Have not and do not want to try	66.9	87.2		88.9	95.2	
<i>N</i> =	124	1689		81	1619	

LGB = Lesbian, gay, bisexual/pansexual.

Table 4. Sexual experiences, or desire for acts of sexual variety according to four distinct groups of participants (discriminant analysis) (*n* = 2419).

Having tried or want to try sexual acts ... ^a	Group sex	BDSM	Pornography
Have sex with several persons at the same time	0.921*	0.122	-0.117
Have sex in a swingers club or swap partners	0.668*	0.062	0.628
Role play	0.372*	0.244	-0.058
BDSM	0.332	0.859*	0.078
Having used sex toys	0.139	0.482*	0.335
Watch pornography together	0.281	0.057	0.532*
Have sex in unusual places	0.176	0.094	0.193*
	Canonical corr coeff.		
	0.302	0.163	0.074
	Wilk's lambda		
	0.880	0.968	0.994
	<i>p</i> < .001	<i>p</i> < .001	<i>p</i> < .05
	Group centroids		
Heterosexual men	0.177	-0.111	-0.039
LGB men	1.085	0.308	0.240
Heterosexual women	-0.296	0.053	0.037
LGB women	0.220	0.866	-0.305

^aPooled within group correlations between discriminating variables and standardized canonical discriminant functions; *Largest absolute correlation between each variable and any discriminant function.

and BDSM activity, respectively. One reason for the group sex preferences may be connected to LGB liberation and a desire to break with prominent heteronormativity in society (Roseneil et al., 2013). Furthermore, the preference for group sex may be

due to heterosexual couples seeking a threesome, wherein women may be experimenting with their sexual fluidity (Rupp et al., 2014).

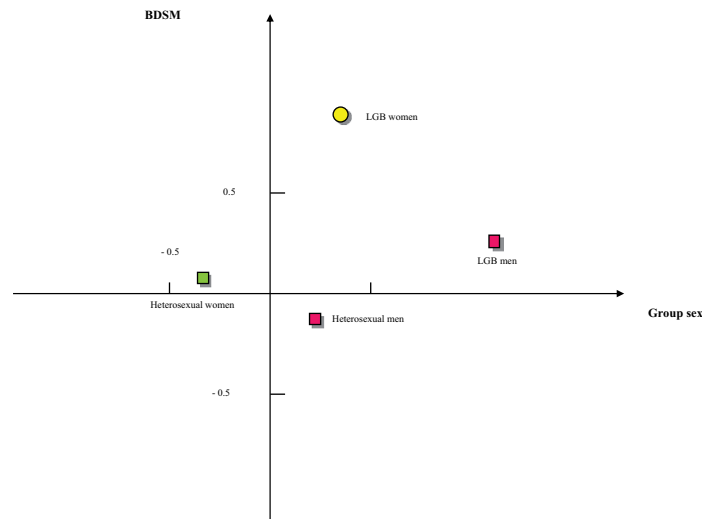
Study Limitations

The strength of this study was the large number of participants. However, the study also had some limitations which will be addressed. Over the past three decades, it has become increasingly common to collect data via the Internet. It is a challenge for research to select samples that mirror the population or sub-groups of the population. In this context, random samples drawn from web-panels represent one alternative (Danielsson, 2002), which was applied in this study. Even though it is not very likely, a response bias between the web sample of 18 to 89-year-old participants and a random sample drawn from the Population Register in the same age range cannot be ruled out. This may be the case if those who use the Internet are very different from those who do not use the Internet with regard to the topics studied in the survey. This kind of bias is difficult to control or predict. A decade ago, the poll organization Synovate, which is comparable to Kantar, claimed that the Internet population seemed more sensation seeking and willing to take risks and less traditional than the general population (Træen, 2010; Træen & Schaller, 2010; Træen & Stigum, 2010). However, with the exception of number of sex partners, the reporting of the other studied variables were most likely not highly influenced by sensation seeking.

Table 3. Sexual experiences, or desire for acts of sexual variety, by gender, age, and sexual orientation (multiple linear regression analysis).

	Watching pornography		Sex in unusual places		Group sex		Using sex toys		Role play		BDSM		Swingers activity	
	Beta	<i>p</i>	Beta	<i>p</i>	Beta	<i>p</i>	Beta	<i>p</i>	Beta	<i>p</i>	Beta	<i>p</i>	Beta	<i>p</i>
Gender	-.075	.000	-.057	.001	-.254	.000	-.032	.039	-.121	.000	-.043	.008	-.160	.000
Sexual orientation	-.052	.002	.015	.359	-.143	.000	-.020	.183	-.051	.001	-.130	.000	-.102	.000
Age	-.205	.000	-.299	.000	-.233	.000	-.449	.000	-.321	.000	-.310	.000	-.099	.000
N =	3311		3438		3429		3473		3215		3449		3513	
R ²	5.0%		8.7%		13.7%		20.2%		11.6%		12.3%		4.6%	

The dependent variables are coded 1 = "Have not tried and do not want to try" and 2 = "Have tried or want to try." Gender is coded 1 = Male and 2 = Female, and sexual orientation is coded 1 = LGB and 2 = Heterosexual.

**Figure 3.** The placement of the discriminant groups in terms of group centroids along the two most significant discriminant functions.

Furthermore, when only 2% of the general population does not have access to the Internet, it is likely that this difference has leveled out. Our sample was reportedly a national probability sample, but the low response rate may suggest selection bias and affect the generalizability of the results. Already two decades ago, Hellevik (1999), claimed that a drop in response rate seems to be a trend in questionnaire surveys, including on topics other than sexuality. In this sex survey there was no recording of why people did not want to participate, and the extent to which any systematic bias was introduced by the low participation rate is unclear. Other Nordic sex surveys have indicated that non-response is fairly random with respect to sexual behavior (Haavio-Mannila & Kontula, 2003; Kontula & Haavio-Mannila, 1995; Lewin et al., 2000; Stigum, 1997). Furthermore, a low response rate does not necessarily imply a selection bias (Søgaard et al., 2004). To conclude, we do not believe our probability sample is severely biased.

A separate issue pertains to the indicator used to measure sexual variety. Although our study covered a diverse array of acts of sexual variety, incorporating similar sexual behaviors as those measured in previous studies (Frederick et al., 2017; Herbenick et al., 2017; Richters et al., 2014), the list of sexual acts is not nearly exhaustive.

Another limitation is the cross-sectional study design, thus precluding distinguishing between age and cohort effects. Furthermore, social desirability bias cannot be ruled out, given that recalling one's previous socially unacceptable sexual experiences may be perceived as unpleasant for some respondents. In the current sample, there may be an overrepresentation of highly educated respondents. Almost 4 in

10 (38%) of the participants had more than 14 years of education. In all Norwegian sexual behavior studies, the response rate was the highest among those with higher education. The official statistics in 2020 (Statistics Norway) show that about 1 in 3 (34.6%) of the Norwegian population aged 16 years or older have a high level of education; thus, the current sample might be slightly, but not severely, biased.

A final important limitation pertains to the relatively few LGB participants that may affect the generalizability of the findings to the LGB population. Heterosexual individuals were compared to LGB individuals combined. This was done to increase the statistical power. However, the increase in statistical power comes with the loss of important, granular information about these groups.

Conclusion

The current study had four main findings. First, given that adults 30 to 59 years old had greater sexual variety and variability than those below 30 years old, this difference suggests that individuals accumulate sexual experiences over time. Second, there may have been a generational shift in the types of activities participants have tried or want to try when comparing those aged <60 and ≥60 years, with substantially lower sexual variety among the latter. Third, experimentation with BDSM activities was most common among adults aged 18–29 years. Finally, LGB participants' sex lives were characterized by more sexual variety than heterosexuals'.

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References

- Bailey, J. M., Gaulin, S., Agyei, Y., & Gladue, B. A. (1994). Effects of gender and sexual orientation on evolutionarily relevant aspects of human mating psychology. *Journal of Personality and Social Psychology*, 66(6), 1081–1093. <https://doi.org/10.1037/0022-3514.66.6.1081>
- Bailey, J. V., Farquhar, C., Owen, C., & Whittaker, D. C. (2003). Sexual behaviour of lesbians and bisexual women. *Sexually Transmitted Infections*, 79(2), 147–150. <http://dx.doi.org/10.1136/sti.79.2.147>
- Bajos, N., Bozon, M., Beltzer, N., Laborde, C., Andro, A., Ferrand, M., Goulet, V., Laporte, A., Le Van, C., Leridon, H., Levinson, S., Razafindratsima, N., Toulemon, L., Warszawski, J., & Wellings, K. (2010). Changes in sexual behaviours: From secular trends to public health policies. *AIDS (London)*, 24(8), 1185–1191. <https://doi.org/10.1097/QAD.0b013e328336ad52>
- Baumeister, R. F. (2000). Gender differences in erotic plasticity: The female sex drive as socially flexible and responsive. *Psychological Bulletin*, 126(3), 347–374. <https://doi.org/10.1037/0033-2909.126.3.347>
- Beck, U., & Beck-Gernsheim, E. (1990). *Das ganz normale Chaos der Liebe*. Suhrkamp.
- Beck, U., & Beck-Gernsheim, E. (1993). Nicht Autonomie, sondern Bastelbiographie. Anmerkungen zur Individualisierungsdiskussion am Beispiel des Aufsatzes von Günter Burkart. *Zeitschrift für Soziologie*, 22(3), 178–188. <https://doi.org/10.1515/zfsoz-1993-0302>
- Beck, U., & Beck-Gernsheim, E. (1994). *Risikante Freiheiten*. Suhrkamp.
- Danielsson, S. (2002). *The propensity score and estimation in nonrandom surveys – an overview*. Report no 18 from the project “Modern statistical survey methods”. University of Linköping. Retrieved February 16th from <http://www.statistics.su.se/modernsurveys/>
- De Visser, R. O., Richters, J., Rissel, C., Badcock, P. B., Simpson, J. M., Smith, A. M. A., & Grulich, E. (2014). Change and stasis in sexual health and relationships: Comparisons between the first and second Australian studies of health and relationships. *Sexual Health*, 11(5), 505–509. <https://doi.org/10.1071/SH14112>
- Dekker, A., & Matthiesen, S. (2015). Studentische Sexualität im Wandel: 1966–1981–1996–2012. *Zeitschrift für Sexualforschung*, 28(3), 245–271. <https://doi.org/10.1055/s-0035-1553700>
- Dekker, A., & Von Stritzky, J. (2004). Pluralisierung des Beziehungsverhaltens: Eine Studie an drei Generationen großstädtischer Männer und Frauen [Pluralisation of relationship behavior: A study on three generations of urban men and women]. *Verhaltenstherapie & Psychosoziale Praxis*, 36(3), 473–489.
- Diorio, J. A. (2016). Changing discourse, learning sex, and non-coital heterosexuality. *Sexuality & Culture*, 20(4), 841–861. <https://doi.org/10.1007/s12119-016-9359-9>
- Elias, N. (1978). *The civilizing process. Vol. I. The history of manners*. Blackwell.
- Frederick, D. A., Lever, J., Gillespie, B. J., & Garcia, J. R. (2017). What keeps passion alive? Sexual satisfaction is associated with sexual communication, mood setting, sexual variety, oral sex, orgasm, and sex frequency in a national U.S. study. *Journal of Sex Research*, 54(2), 186–201. <https://doi.org/10.1080/00224499.2015.1137854>
- Gagnon, J., & Simon, W. (2005). *Sexual conduct. The social sources of human sexuality* (2nd ed.). Aldine Transaction.
- Giddens, A. (1993). *Wandel der Intimität. Sexualität, Liebe und Erotik in den modernen Gesellschaften*. Fischer.
- Haavio-Mannila, E., & Kontula, O. (2003). *Sexual trends in the Baltic sea area*. Publication of the Population Research Institute.
- Hellevik, O. (1999). Noen forskningsetiske problemer innenfor kvantitativ metode [Some ethical problems in research using quantitative methods]. In *Ettikk og metode [Ethics and method]* (Series 12, pp. 37–48). The National Committees for Research Ethics Norway.
- Herbenick, D., Bowling, J., Fu, T. C., Dodge, B., Guerra-Reyes, L., Sanders, S., & Xu, J. (2017). Sexual diversity in the United States: Results from a nationally representative probability sample of adult women and men. *PLoS One*, 12(7), e0181198. <https://doi.org/10.1371/journal.pone.0181198>
- Herbenick, D., Reece, M., Schick, V., Sanders, S. A., Dodge, B., & Fortenberry, D. (2010b). Sexual behavior in the United States: Results from a national probability sample of men and women ages 14–94. *The Journal of Sexual Medicine*, 7(5), 255–265. <https://doi.org/10.1111/j.1743-6109.2010.02012.x>
- Herbenick, D., Reece, M., Schick, V., Sanders, S. A., Dodge, B., & Fortenberry, J. D. (2010a). An event-level analysis of the sexual characteristics and composition among adults ages 18 to 59: Results from a national probability sample in the United States. *Journal of Sexual Medicine*, 7(Suppl 5), 346–361. <https://doi.org/10.1111/j.1743-6109.2010.02020.x>
- Kinsey, A. C., Pomeroy, W. B., & Martin, C. E. (1948). *Sexual behavior in the human male*. W. B. Saunders.
- Kinsey, A. C., Pomeroy, W. B., Martin, C. E., Gebhard, P. H., & Saunders, B. (1953). *Sexual behavior in the human female*. W. B. Saunders.
- Klecka, W. R. (1980). *Discriminant analysis*. Sage Publications.
- Kontula, O. (2015). Sex life challenges: The Finnish case. In J. D. Wright (Ed.), *International encyclopedia of the social & behavioral sciences* (2nd ed., Vol. 21, pp. 665–671). Elsevier. <https://doi.org/10.1016/B978-0-08-097086-8.35017-6>
- Kontula, O., & Haavio-Mannila, E. (1995). *Sexual pleasures. Enhancement of sex life in Finland, 1971–1992*. Dartmouth Publishing Company.
- Kutchinsky, B. (1988). *Erotik, erotikka og pornografi. Et essay om kon, kultur, kærlighed og kioskliteratur* (Eroticism, erotica and pornography. An essay about sex, culture, love and kiosk literature, Danish text). *Nordisk Sexologi*, 6, 108–128.
- Kvalem, I. L., Træen, B., Lewin, B., & Štulhofer, A. (2014). Self-perceived effects of Internet pornography use, genital appearance satisfaction, and sexual self-esteem among young Scandinavian adults. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 8(4), 4. <https://doi.org/10.5817/CP2014-4-4>
- Lewin, B., Fugl-Meyer, K., Helmius, G., Lalos, A., & Månsson, S. A. (2000). *Sex in Sweden. On the Swedish sexual life*. National Institute of Public Health.
- Lyttkens, L. (1989). *Den disciplinerade människan [The disciplined human being]*. Allmänna Förlaget.
- Mercer, C. H., Tanton, C., Prah, P., Erens, B., Sonnenberg, P., Clifton, S., Macdowall, W., Lewis, R., Field, N., Datta, J., Copas, A. J., Phelps, A., Wellings, K., & Johnson, A. M. (2013). Changes in sexual attitudes and lifestyles in Britain through the life course and over time: Findings from the national surveys of sexual attitudes and lifestyles (Natsal). *The Lancet*, 382(9907), 1781–1794. [https://doi.org/10.1016/S0140-6736\(13\)62035-8](https://doi.org/10.1016/S0140-6736(13)62035-8)
- Richters, J., De Visser, R. O., Badcock, P. B., Smith, A. M. A., Rissel, C., Simpson, J. M., & Grulich, A. E. (2014). Masturbation, paying for sex, and other sexual activities: The second Australian study of health and relationships. *Sexual Health*, 11(5), 461–471. <http://dx.doi.org/10.1071/SH14116>
- Rissel, C. E., Badcock, P. B., Smith, A. M. A., Richters, J., De Visser, R. O., Grulich, A. E., & Simpson, J. M. (2014). Heterosexual experience and recent heterosexual encounters among Australian adults: The second Australian study of health and relationships. *Sexual Health*, 11(5), 416–426. <https://doi.org/10.1071/SH14105>
- Rosenberger, J. G., Reece, M., Novak, D. S., & Mayer, K. H. (2011). The Internet as a valuable tool for promoting a new framework for sexual health among gay men and other men who have sex with men. *AIDS and Behavior*, 15(S1), 88–90. <https://doi.org/10.1007/s10461-011-9897-y>
- Roseneil, S., Crowhurst, I., Hellesund, T., Santos, A. C., & Stoilova, M. (2013). Changing landscapes of heteronormativity: The regulation and normalization of same-sex sexualities in Europe. *Social Politics: International Studies in Gender, State & Society*, 20(2), 165–199. <https://doi.org/10.1093/sp/jxt006>
- Rupp, L. J., Taylor, V., Regev-Messalem, S., Fogarty, A., & England, P. (2014). Queer women in the hookup scene: Beyond the closet? *Gender & Society*, 28(2), 212–235. <https://doi.org/10.1177/0891243213510782>
- Schmidt, G. (2000). *Kinder der sexuellen Revolution. Kontinuität und Wandel studentischer Sexualität 1966–1996. Eine empirische Untersuchung*. Psychosozial.

- Schmitt, D. P. (2005, April). Sociosexuality from Argentina to Zimbabwe: A 48-nation study of sex, culture, and strategies of human mating. *Behavioral and Brain Sciences*, 28(2):247–275; discussion 275–311. PMID: 16201459. <https://doi.org/10.1017/s0140525x05000051>.
- Sigusch, V. (1996, October). Die Trümmer der sexuellen Revolution. *Die Zeit Nr*, 41(4), 33–34.
- Simon, W. (1996). *Postmodern sexualities*. Routledge.
- Søgaard, A. J., Selmer, R., Bjertness, E., & Thelle, D. (2004). The Oslo health survey: The impact of self-selection in a large, population-based survey. *International Journal for Equity in Health*, 3(3), 1–12. <https://doi.org/10.1186/1475-9276-3-3>
- Stigum, H. (1997). Mathematical models for the spread of sexually transmitted diseases using sexual behavior data. *Norwegian Journal of Epidemiology*, 7(5).
- Træen, B. (2008). When sex becomes a duty. *Sexual and Relationship Therapy*, 23(1), 61–84. <https://doi.org/10.1080/14681990701724758>
- Træen, B. (2010). Sexual dissatisfaction among heterosexual Norwegians in couple relationships. *Sexual and Relationship Therapy*, 25(2), 132–147. <https://doi.org/10.1080/14681991003622518>
- Træen, B. (2016). Norwegian young adults' attitudes toward and experience with kinky sexual activities. *Scandinavian Psychologist*, 3, 15e. <https://doi.org/10.15714/scandpsychol.3.e15>
- Træen, B., Fischer, N., & Kvaalem, I. L. (2021). Sexual intercourse activity and activities associated with sexual interaction in Norwegians of different sexual orientations and ages. *Sexual and Relationship Therapy*, 1–17. <https://doi.org/10.1080/14681994.2021.1912316>
- Træen, B., & Schaller, S. (2010). Sexual well-being in Norway 2008. *International Journal of Sexual Health*, 22(3), 180–194. <https://doi.org/10.1080/19317611003776087>
- Træen, B., & Stigum, H. (1998). Parallel sexual relationships in the Norwegian context. *Journal of Community & Applied Social Psychology*, 8(1), 41–56. [https://doi.org/10.1002/\(SICI\)1099-1298\(199801/02\)8:1<41::AID-CASP440>3.0.CO;2-3](https://doi.org/10.1002/(SICI)1099-1298(199801/02)8:1<41::AID-CASP440>3.0.CO;2-3)“[https://doi.org/10.1002/\(SICI\)1099-1298\(199801/02\)8:1<41::AID-CASP440>3.0.CO;2-3](https://doi.org/10.1002/(SICI)1099-1298(199801/02)8:1<41::AID-CASP440>3.0.CO;2-3)”
- Træen, B., & Stigum, H. (2010). Sexual problems in 18–67-year-old Norwegians. *Scandinavian Journal of Public Health*, 38(5), 445–456. <https://doi.org/10.1177/1403494810371245>
- Vanwesenbeeck, I., Bakker, F., & Gesell, S. (2010). Sexual health in the Netherlands: Main results of a population survey among Dutch adults. *International Journal of Sexual Health*, 22(2), 55–71. <https://doi.org/10.1080/19317610903425571>
- Wright, P. J. (2020). Pornography and sexual behavior: Do sexual attitudes mediate or confound? *Communication Research*, 47(3), 451–475. <https://doi.org/10.1177/0093650218796363>