The diverse joys of sex and relationships in straight, gay, and bisexual Polish men

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Summary

Aim. The purpose of this study was to describe sexual orientations, intimate relationships, sexual behaviours, and pleasure in self-identified straight, gay, and bisexual men.

Method. The analysis drew on a database obtained from a cross-sectional online study of the sexuality of Polish straight (SM; $N = 1,079$), gay (GM; $N = 1,704$) and bisexual (BM; $N = 713$) men. This data was utilised to compare men from these three groups across their sexual orientations, intimate relationships and sexual behaviours, including the most pleasurable sexual activities.

Results. In general, the sexualities of GM and BM seem to be more diverse and less oriented to particular sexual activities. Sexual minority men (SMM) tended to be more often in open (nonexclusive), had more diverse sexual experiences, and enjoyed a greater variety of sexual activities. This particularly concerned BM.

Conclusions. Present analysis revealed patterns and significant differences in sexual orientations, intimate relationships, sexual behaviours, and pleasure of SM, GM and BM. The results, pointing to a greater diversity of sexual expression and preferences in SMM, may both trigger reshaping of some of the stereotypical beliefs, as well as positively influence educational (sexual education, specialized teaching) and clinical practice (more accurate assessment of patients' needs and problems).

Key words: sexual and gender minorities, sexual behaviour, pleasure

Introduction

Research on gay, lesbian, bisexual, transgender, and queer (LGBTQ) health has predominantly concentrated on risk factors contributing to increased health adversities in these populations [1]. This is particularly salient in studies on the sexual health of SMM, which are frequently focused on HIV (Human Immunodeficiency Virus) and other STI (Sexually Transmitted Infections) rather than pleasurable sexual expression, sexual satisfaction and well-being [2-4]. This concentration on risk, disease and dysfunction is also far from the contemporary conceptualisations of sexual health [5], ideas expressed in the Declaration of Sexual Rights [6] and the functions of sexuality appreciated by modern sexology [7], which all underscore the importance of sexuality as a constructive and positive force in human life [4]. Sexual pleasure, defined as a state of both physical and psychological enjoyment associated with solitary and shared erotic experiences, has been recognised as an important element of general well-being and sexual health in particular [4].

The erasure of sexual pleasure in contemporary studies on sexuality has been convincingly demonstrated and criticised as reinforcing heteronormativity and heterosexism [8]. It is also consistent with the long history of resistance to modern sex research [9] and the expression of sexual negativism [7]. Research on same-sex sexualities has been thus predominantly limited to adverse contexts and consequences, e.g. STI/HIV, prejudice and discrimination or sexual violence [8]. Even projects aimed at describing same-sex sexual experiences [10] or directly pertained to the issue of satisfaction through the open-ended question: 'What's your idea of the best sex life?' [11] were framed around HIV risk and prophylaxis.

Polish research on LGBTQ sexual health is no exception to this rule. So far there is only one Polish study in which the sexuality and preferences of men having sex with men (MSM) were explored [12]. Nevertheless, this research also inquired into sexual behaviours of men in the context of HIV, yet since sexual identities of participants were not included, it did not allow for comparisons between GM, BM and SM [12]. As a result, there is still a paucity of data which could guide affirmative clinical practice focused on supporting pleasure-oriented consensual sexual expression and fulfilment in sexually diverse populations.

Aim of the study

The main aim of this study was to investigate sexual orientations, intimate relationships, sexual partners and behaviours, including the most pleasurable sexual activities in self-defined straight, gay and BM.

Method

The present analysis drew on a database obtained from as part of a larger research project on the sexuality of Polish SM, GM and BM, whose methodology has been elaborately described in previous publications [13, 14]. This was an online cross-sectional study involving 3,697 men. It was carried out between June and September 2016 on a convenience sample of men. The research project was approved by the Bioethical Committee of the Jagiellonian University[1] and meets the requirements of the Declaration of Helsinki. Inclusion criteria of the parent study were: (1) minimum age of 18 years; (2) male gender; (3) informed consent to take part in the study, expressed by pressing a button to confirm that the participant had read the provided information on the study; (4) past and/or current sexual contacts. Participants were recruited through announcements placed on health – and lifestyle-related websites, and websites directed at the non-heterosexual audience. A total of 201 male respondents from the parent study, who reported incomplete data ($N = 160$), or declared a disproportionately high number of sexual partners (top 1%; $N = 41$) were excluded from the analysis. The final sample consisted of 3,496 participants.

Data was collected using a self-designed questionnaire developed for the parent study, which consisted of single – and multiple-choice items, as well as open – and closed-ended questions. It was subject to assessment by a group of six competent judges (two gay men, two heterosexual men, one sexologist, and one methodologist), whose feedback was used in the development of the final version of the survey. The variables collected for the present analysis, questionnaire content, and wording are displayed in Table 1.

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Table 1. **Demographic variables and aspects of sexuality assessed by self-designed questionnaire used in the analysis**

Characteristics	Variables	Comments: questionnaire content or wording
Demographic data	Age	Year of birth
	Residence	Size of the place of residence [SC]
	Education	Level of education [SC]
	Financial situation	'Considering your actual net income (take-home pay), does your household make ends meet?' [SC, 5-point Likert scale]
Sexual identity/ orientation	Identity	'Do you consider yourself as a straight, gay or bisexual?' [SC]
		'In my entire life span, I have had sexual contacts with women only, men only or both.' [SC]
	Behaviour Attraction	'Do you feel sexual attraction to…?' [SC, 5-point Likert scale and 'I am not sure/difficult to say' option]
Intimate relationships and partners	Relationship status	'Choose the description which best fits your relationship status' [SC]
	Duration of the relationship	Number of months/years together [months were later coded as years, e.g. 1 month = 0.08 years]
	Partner's gender	Two genders possible, i.e. men or women [SC]
	Sexual contact outside the relationship	None, one, both have sexual contacts outside the relationship [SC]
	Number of sexual partners*	Within last 4 weeks and last 12 months
Sexual behaviours	Activities performed	Preconceived list of lifetime sexual activities [MC]
	Most pleasant activity performed	MC from the same list with maximum three most pleasant activities

Note: SC – single-choice; MC – multiple-choice; *due to the high positive skewness of the 'number of sexual partners' variables distributions, the top 1% of observations were excluded from the analysis.

Participants

The demographic characteristics of the study sample are summarised in Table 2. BM were significantly older ($M = 30.89$) than GM ($M = 29.44$) and SM ($M = 28.15$). They

also more often resided in smaller towns compared to GM and SM (OR_{BMvsSM} = 0.54, OR_{GMvsBM} = 1.68) and were less educated than the rest of the men in the sample (Table 2). Compared to SM, both GM (OR = 0.73) and BM (OR = 0.74) were also less likely to report that they could easily 'make ends meet'.

Table 2. **Demographics of the studied samples**

	SM (1,079)	GM (1,704)	BM (713)	GM (ref = SM)	BM (ref = SM)	GM (ref = BM)
Age (years)				GLM[1] (Cohen's d)		
Mean	28.15	29.44	30.89	0.15**	0.30***	0.15**
SD	7.54	8.85	11.16			
Median	26	28	28			
Min	18	18	18			
Max	73	72	71			
Residence (%)				ologit[2 a b ***] (OR) (ref = > 1mln)		
< 10k	14.2	13.6	18.9	0.90ns	0.54***	1.68***
10.1-100k	20.1	22.4	31.8			
100.1-500k	21.3	23.9	20.5			
500.1k-1mln	24.6	22.2	17.5			
>1mln	19.8	18.0	11.2			
Education (%)				mlogit[3***] (RR) (ref = master)		
< high school	3.7	8.7	10.9	2.41***	3.44***	0.70*
high school grad.	36.1	36.9	42.2	1.05ns	1.37**	0.77*
bachelor	24.6	19.7	16.3	0.82ns	0.77ns	1.06ns
master or higher	35.7	34.7	30.1			
Is it difficult to make ends meet? (finances)				ologit[4 c d **] (OR) (ref = easy)		
with difficulty	8.4	13.1	11.1	0.73***	0.74***	1.00ns
with some difficulty	26.8	30.5	33.0			
rather easily	39.9	35.0	35.3			
easily	24.8	21.4	20.6			

Note: ns = $p > 0.05$; * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$

GLM = generalised linear model with robust standard errors; ologit = ordinal logistic regression; mlogit = multinomial logistic regression; OR = odds ratio; RR = relative risk. [1] $chi^2 (2)$ = 37.88, $p < 0.001$; [2] $chi^2 (2)$ = 58.57, $p < 0.001$; [3] $chi^2 (6)$ = 62.20, $p < 0.001$; [4] $chi^2 (2)$ = 21.77, $p = 0.002$.

[a] does not violate proportional odds assumption $chi^2 (6)$ = 11.48, $p = 0.075$ [b] cut point 1 = − 1.95, cut point 2 = − 0.65, cut point 3 = 0.27, cut point 4 = 1.41; [c] does not violate proportional odds assumption $chi^2 (4)$ = 6.51, $p = 0.164$; [d] cut point 1 = − 2.29, cut point 2 = − 0.57, cut point 3 = 1.04

Statistical analyses

To search for potential differences among SM, GM and BM, we used the following techniques:

a) Generalised linear model with robust standard error and maximum likelihood optimisation for nonnormally distributed continuous variables;
b) Logistic regression for dichotomous variables;
c) Ordinal logistic regression for ordinal categorical variables which met the proportional odds assumption;
d) Multinomial logistic regression for non-ordinal categorical variables and ordinal variables which did not meet the proportional odds assumption.

In terms of measuring the effect size, Cohen's d, odds ratio, and relative risk were used.

To control whether the observed differences are stable, additional models were constructed including four control variables (age, residency, education, and financial situation).

Model fit statistics are presented in the appendix.

Results

Sexual orientations

As much as 91.3% of SM revealed having had sex exclusively with women, and 77.9% of GM – exclusively with men. Only 0.9% of SM had sex exclusively with men, and 0.3% of GM – exclusively with women. Higher proportions of men from both groups reported having sex with both genders, but it was more often so for GM (21.8%) than for SM (7.8%). BM revealed having sex with both men and women most often (74.6%), followed by men exclusively (19.5%) and women exclusively (5.9%).

In terms of sexual attraction, most of the SM declared being attracted exclusively to women (81.0%) and most of the GM – exclusively to men (78.6%). BM most often revealed experiencing attraction mostly towards men (44.9%), followed by two genders (23.4%) and mostly towards women (21.6%). Of all three groups of participants, BM most often found it difficult to describe their sexual attraction in terms of gender of the sexual partners (8.3%).

Intimate relationships and partners

SM were significantly more often in formal, i.e. marriage (21.3%) or informal (50.5%) relationships than BM (18.2% and 25.8%, respectively) and GM (1.3% and 41.4%, respectively). GM (56.0%) and BM (50.9%) more often described themselves as single than SM (26.0%). There were also significant differences in relationship

duration with a higher mean value for BM ($M = 8.40$ years), than for SM ($M = 5.05$ years) and GM ($M = 4.74$ years).

As for the current partner's gender, the vast majority of SM (98.8%) indicated female partners, and of GM (98.5%) – male partners. BM more often (67.3%) partnered with women than with men. There were also significant differences in the type of relationship between the groups of men. As much as 92.2% of SM, 70.7% of GM, and 45.7% of BM indicated that both they and their partners did not engage in sexual contacts outside the current, formal or informal, relationship indicated in the questionnaire as the answer to the relationship status question. SMM more often declared the type of open relationship in which at least one partner had sexual contacts outside the relationship. However, for GM less often than for BM (13.4% vs 42.3%, RR = 0.20) only one partner had such contacts.

SM, GM and BM also significantly differed in terms of the number of sexual partners, both during the last month ($M_{SM} = 0.93$ vs $M_{GM} = 1.27$ vs $M_{BM} = 1.31$, respectively) and the last year ($M_{SM} = 1.79$ vs $M_{GM} = 5.20$ vs $M_{BM} = 4.38$) preceding the study.

Intimate relationships and partner data are summarised in Table 3.

Table 3. **Intimate relationships and partners**

	SM	GM	BM		GM (ref = SM)	BM (ref = SM)	GM (ref = BM)
Relationship status (%)					mlogit*** (RR) (ref = single)		
Single	26.0	56.0	50.9				
Informal	50.5	41.4	25.8		0.38***	0.26***	1.46***
Married	21.3	1.3	18.2		0.03***	0.44***	0.06***
Other	2.1	1.2	5.1		0.27***	1.21^{ns}	0.22***
N	1,079	1,704	713				
Duration of the relationship (formal or informal in years)					GLM*** (Cohen's d)		
Mean	5.05	4.74	8.40		0.05^{ns}	0.51***	0.56***
SD	5.07	5.27	8.56				
Median	3	3	5				
Min	0.08	0.08	0.08				
Max	40	41	45				
N	760	717	300				
Partner's gender (%)					logit*** (OR) (ref = man)		
Man	1.2	98.5	32.7				
Woman	98.8	1.5	67.3		< 0.00***	0.02***	0.01***
N	760	717	300				

Sexual contact outside the relationship (%)					mlogit*** (RR) (ref = none)		
None	92.2	70.7	45.7				
One	7.1	13.4	42.3		2.47***	12.05***	0.20***
Both	0.7	15.9	12.0		31.63***	36.89***	0.86ns
N	760	717	300				
Number of sexual partners (drop 1% from the distribution tail)							
Last 4 weeks					GLM*** (Cohen's d)		
Mean	0.93	1.27	1.31		0.31***	0.40***	0.03ns
SD	0.65	1.28	1.26				
Median	1	1	1				
Min	0	0	0				
Max	7	8	8				
Last 12 months					GLM*** (Cohen's d)		
Mean	1.79	5.20	4.38		0.55***	0.61***	0.11**
SD	2.35	7.66	6.10				
Median	1	2	2				
Min	0	0	0				
Max	34	50	50				
N	1,079	1,704	713				

Note: ns = $p > 0.05$; * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$. GLM = generalised linear model with robust standard errors; logit = logistic regression; mlogit = multinomial logistic regression; RR = relative risk

Sexual behaviour and pleasure

The most commonly reported sexual behaviours in SM were: passionate kiss on the lips (99.2%), masturbation (98.8%) and kissing different parts of the partner's body (98.7%). Hand stimulation by the partner (96.9%) and of the partner (96.2%), vaginal penetration (95.3%), and insertive oral sex (94.3%) were also highly prevalent. The least common were anal (4.2%) and oral (6.4%) receptive penetration. Vaginal penetration was unanimously valued and indicated by 82.5% of SM as the most pleasurable activity, with oral insertive sex coming second (69.1%).

These patterns were different in GM and BM. The most commonly reported activities in GM were: masturbation (99.1%), passionate kiss on the lips (96.0%), oral receptive (95.7%) and insertive (94.7%) sex, and kissing different parts of the partner's

body (93.4%). Vaginal penetration (13.8%) and oral stimulation of the genitals of the female partner (29.5%) were the least common yet present. GM most highly valued receptive anal sex (47.0%), although the preferences were more evenly distributed across various activities, with passionate kiss on the lips being appreciated by 45.2% of GM. The bisexual sample presented the greatest diversity, i.e. all investigated activities were substantially prevalent, ranging from 98.7% for masturbation, to 65.9% for anal receptive sex, and more evenly chosen as the most pleasurable, with oral insertive sex indicated by most BM (52.5%).

As to the significant differences in the frequencies of activities between the groups, they were observed across most of the activities except masturbation (98.8% vs 99.1% vs 98.7%) and oral insertive sex (94.3% vs 94.7% vs 91.9%) which were performed by the comparable proportion of SM, GM and BM.

The most prominent differences were noted for vaginal penetration with frequencies for SM, GM and BM of 95.3%, 13.8%, and 70.5%, respectively, anal receptive penetration (4.2% vs 85.5% vs 65.9%), oral receptive sex (6.4% vs 95.7% vs 86.3%), oral stimulation of the genitals of the female partner (93.6% vs 29.5% vs 70.7%) and anal insertive penetration (48.4% vs 80.8% vs 76.3%; SM vs GM and SM vs BM: $p < 0.001$; GM vs BM: $p < 0.05$).

SM, GM and BM also significantly differed in terms of the most pleasurable sexual activity, apart from 'kissing different parts of the partner's body', which was indicated by around 16-17% of men from each of the groups.

The control for age, residency, education, and financial situation did not yield any substantial changes to the significance of the observed differences.

Sexual behaviours are summarised in Table 4.

Table 4. **Sexual behaviours**

Have you ever performed this activity?	%				logit (p value)		
	SM	GM	BM		GM (ref = SM)	BM (ref = SM)	GM (ref = BM)
Masturbation	98.8	99.1	98.7		ns	ns	ns
Passionate kiss on the lips	99.2	96.0	94.1		***	***	*cns
Kissing different parts of partner's body	98.7	93.4	90.9		***	***	*cns
Vaginal penetration	95.3	13.8	70.5		***	***	***
Anal penetration (insertive)	48.4	80.8	76.3		***	***	*
Anal penetration (receptive)	4.2	85.5	65.9		***	***	***
Oral sex (insertive)	94.3	94.7	91.9		ns	*cns	** c05
Oral sex (receptive)	6.4	95.7	86.3		***	***	***
Oral stimulation of the genitals of a female partner	93.6	29.5	70.7		***	***	***

table continued on the next page

	SM	GM	BM		GM (ref = SM)	BM (ref = SM)	GM (ref = BM)
Hand stimulation by the partner	96.9	90.4	90.0		***	***	ns
Hand stimulation of the partner	96.2	89.6	89.9		***	***	ns
Most pleasable activities	%				logit (p value)		
	SM	GM	BM		GM (ref = SM)	BM (ref = SM)	GM (ref = BM)
Masturbation	27.0	39.4	38.6		***	***	ns
Passionate kiss on the lips	23.7	45.2	29.2		***	*	***
Kissing different parts of partner's body	16.5	17.8	15.8		ns	ns	ns
Vaginal penetration	82.5	0.3	34.9		***	***	***
Anal penetration (insertive)	18.0	40.5	36.7		***	***	ns
Anal penetration (receptive)	0.8	47.0	32.4		***	***	***
Oral sex (insertive)	69.1	42.0	52.5		***	***	***
Oral sex (receptive)	2.0	42.7	30.6		***	***	***
Oral stimulation of the genitals of a female partner	29.8	2.5	12.2		***	***	***
Hand stimulation by the partner	18.4	11.9	11.8		***	***	ns
Hand stimulation of the partner	7.4	5.2	4.9		*c01	* c01	ns
n	1,079	1,704	713				

Note: ns = p > 0.05; * = p < 0.05; ** = p < 0.01; *** = p < 0.001; logit = logistic regression.

[cns] after control of demographic variables p value has changed into > 0.05; [c05] after control of demographic variables p value has changed into p < 0.05; [c01] after control of demographic variables p value has changed into p < 0.01; control demographic variables = model with age, residency, education and financial situation as controls.

Discussion

The main aim of the present analysis was to descriptively investigate sexual orientations, intimate relationships, sexual partners, and behaviours, including the most pleasurable sexual activities in self-identified straight, gay and bisexual men.

Sexual orientations

Our study confirms the widely accepted notion that sexual orientation is not a fully homogenous phenomenon. It is multidimensional and consists of facets such as identification, behaviour, and attraction as the most frequently singled out facets. What is more, in a significant proportion of men, these dimensions diverged [15]. Interestingly, the proportion of GM who declared having sexual contacts with women was

higher (21.8%) than the corresponding proportion of SM having sexual contacts with men (7.8%), even though a comparable percentage of both groups was attracted to exclusively one gender (78.6% of GM attracted exclusively to men and 81.0% of SM attracted exclusively to women). The most straightforward interpretation appears to be the traditional concept of masculinity [16], as well as the social mores in conservative or even antigay Poles [17, 18], which may limit sexual exploration and engagement in same-sex contacts in SM.

Intimate relationships and partners

In our analyses, there was a significant difference between men of all orientations in the proportion of men staying in formal relationships. Since the Polish legal system does not recognise same-sex relationships, the observed disparity may reflect structural inequalities between same-sex and different-sex relationships. As Poland belongs to the group of states with no such regulations [17], the small proportion of GM in formalised relationships most probably included men who have either married abroad, or have been married to women. It can also be assumed that an unspecified proportion of BM may have stayed in formal relationships which they had entered outside the Polish borders thus influencing the final proportion of BM staying in formal relationships.

SM also significantly more often indicated being in a relationship, compared to GM and BM who were more often single. There are at least several explanations that could be put forth. Considering the conservative social climate surrounding SMM and same-sex relationships in Poland, traditional interpretations pertaining to heteronormativity, heterosexism, internalised homophobia, and minority stress influences could be applied [3, 19]. Comprehensive sexual education in Poland is either absent or delivered in a biased fashion, where LGBTQ persons are unfavourably depicted or omitted [20]. GM and BM can thus either avoid any intimate engagement with other men or debase the existing relationships. This, with a lack of support from family members, religious and legal institutions, may influence the formation or viability of the existing relationships [21-23]. Other interpretations pertain to the masculine gender role socialisation, in which such aspects of male identity as competitiveness, being rational, in control, strong, capable, and independent, are highly valued [21, 22]. This remains a prevalent model of socialisation in Poland [24]. It was suggested that gender role socialisation can influence same-sex relationships more than sexual orientation and that overmasculine socialisation may be linked to poorer quality of and satisfaction from relationships, as well as the tendency to quit the relationship in face of difficulties [22]. Those influences, i.e. internalised negativism and gender role socialisation, may intersect. It was suggested that the more conflicted a gay man is about his sexuality, the more rigid and stereotyped his gender role identity is likely to be [22].

It is worth noting, however, that as many as 42.7% of GM and as many as 44.0% of BM declared being in a relationship, which counters the prevalent stereotype of

GM as either unwilling or unable to form bonds, or forming short-lived and bumpy relationships [25]. Moreover, it was BM with the longest mean (8.40 years) and median (5 years) of relationship duration, and GM falling only slightly behind SM (mean = 4.74 vs mean = 5.05 years and median = 3 years in both groups).

Another difference was the relationship models preferred by men in our study. A 'closed' model of a relationship was declared by the majority of and most often by SM (92.2%). Furthermore, the majority of GM (70.7%) pointed to this type of relationship. Most of the BM, however, were in a type of open arrangement (54.3%). Some interesting patterns emerged – when SM declared sexual contacts outside the relationship, they indicated it was only one party which engaged in such contacts (7.1%). It appears reasonable to assume the majority of these declarations concerned a respondent's own activities, rather than those of a partner. This was different in GM and BM. Approximately the same proportion of GM declared that only one partner (13.4%) had contacts outside the relationship, as both partners (15.9%) had so. As much as 42.3% of BM declared that one partner had such contacts, with 12.0% declaring that these were both partners. It seems that consensual non-monogamy may still be rare and not accepted among straight people in Poland, but it is more prevalent in SMM. This corresponds to the observations made by other authors [23, 26-28].

Our results appear to confirm that SMM have sexual contacts with significantly more partners (mean for the last 12 months for GM vs BM vs SM: 5.20 vs 4.38 vs 1.79). Greater variability of these numbers in GM (SD = 7.65, Max = 50) and BM (SD = 6.10, Max = 50) than in SM (SD = 2.35, Max = 34), suggests that it is perhaps a proportion of men who are particularly sexually active. While for some persons such patterns may be a derivate of a sexually positive approach, realisation of one's sexual needs and fulfilling one's sexual potential, for others they may appear as out of control sexual behaviours, need for emotional regulation or problems with intimacy. However, the latter set of possibilities should not be assumed automatically. It is not the number of sexual contacts or partners which is the premise for health, but consensual character, responsibility, freedom from stigma and violence, and well-being in multiple realms related to sexuality [5].

Sexual behaviour and pleasure

In line with the previous studies, masturbation was the most common sexual activity across the distinguished groups of men [7]. However, more GM and BM than SM indicated masturbation as the most pleasurable sexual activity they had performed. The observed differences may be related to the social and intraindividual minority contexts which shape gay and bisexual men's sexualities. Autoeroticism seems to be less stigmatised than same-sex sexual contacts between men, thus for some SMM it can be less interrupted by minority stress processes (such as internalised homonegativity). The GM sexual milieu has also been described as highly challenging, valuing sexual

performance and endurance [21-23], hence the solitary sexual activity could be safer and more comfortable. Another explanation could be that partnered sexual activity requires sound sexual interpersonal skills, which in some SMM could be underdeveloped due to, e.g. stigma, exclusion, lack of knowledge and role models [21-23]. Finally, with inadequate sexual education in Poland, sexual minority individuals have limited access to educational and cultural resources on sexual activities and pleasure.

Although masturbation was indicated as the most pleasurable activity by a higher proportion of SMM than SM, it was still exceeded by partnered sexual activities in terms of associated pleasure in GM and BM. One of them was passionate kiss on the lips. It was rated second to receptive anal penetration as the most pleasurable sexual activity in GM, significantly and largely more often than in SM or BM. This result counters with yet another stereotypic image of gay sex as centred around anal penetration, genital-oriented, and technique-driven rather than more romantic and passionate. The definition of what was meant by 'passionate' had not been, however, provided in the survey and men from our sample may have differed in their understanding of this phrase.

Our data is also consistent with previous notions that anal sex in GM cannot be treated as the homologue of vaginal penetration in SM [23, 29]. Not only as much as 95.3% of SM performed vaginal penetration, but the vast majority (82.5%) chose it as the most pleasurable activity. Insertive or receptive anal penetration were admittedly common in GM (80.8% and 85.5%, respectively), but valued at most by only 40.5% and 47.0% of gay respondents, which was comparable to many other partnered or solitary activities.

Our results point to the greater diversity in the sexuality of SMM, both in terms of sexual expression and preferences. Sexual minority men's sexualities, which customarily lacked validation and affirmation in contemporary western culture, seem to be less dependent on traditional sexual scripts, which equate straight and masculine sexuality with penetration [30]. Lacking or biased sexual education in Poland and many other cultural settings may facilitate sexual experimentation among SMM and finding their own way to sexual fulfilment and satisfaction. The differences can also be the results of the full reversibility of sexual roles in same-sex sexual contacts [23, 29, 31]. The fact that the control for demographic characteristics did not yield substantial changes to the results indicates that they cannot be attributed to the complex, possible influence of minor differences in age, place of residence, education, and financial situation on sexual expression and preference of men from the investigated groups.

Limitations, strengths, generalisability, and conclusions

The results of our study should be addressed with the recognition of its limitations. These are: (1) non-probability sampling method: young, educated city-dwellers were over-represented in the study due to the convenience sampling and online survey

method, and it is reasonable to expect that these demographic characteristics would have influenced men's sexual experiences, relationships and sexual openness; (2) the retrospective method of data collection, which may lead to errors resulting from distortions when reconstructing past events (such as the number of sexual partners and distinct sexual activities).

Despite the above-mentioned limitations, our study presents considerable strengths. The sample size is relatively large, and it seems to be the first Polish study of GM and BM pertaining to their sexuality outside the HIV and STI context. It utilises an identity rather than a behaviour proxy for sexual orientation, which, as it could be expected, implicitly incorporates group-specific psychological processes (e.g. minority stress). It also allows some comparisons with SM. Finally, although the generalisability of the results of our study is limited, it creates a better basis for the exploration of gay and BM sexuality than studies conducted only in straight samples.

Our results point to a greater diversity of gay and BM sexual expression and preferences, which can reshape some stereotypical beliefs, positively influencing educational (sexual education, specialised teaching) and clinical practice (more accurate assessment of patients' needs and problems).

Further research exploring a wider range of sexual expression in samples with improved representativeness should follow.

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Appendix

Model fit statistics

Table	Variable	chi^2	p	AIC	BIC	R^2
Table 2	Age (years)	13.80	< 0.001	7.2	254996.0	0.011
	Residence	58.57	< 0.001	11103.3	11140.3	0.005
	Education	62.20	< 0.001	8733.9	8789.3	0.007
	Is it difficult to make ends meet? (finances)	21.77	< 0.001	9141.4	9172.2	0.002
Table 3	Relationship status	592.22	< 0.001	6778.8	6834.3	0.081
	Duration of the relationship (formal or informal in years)	44.00	< 0.001	6.5	52591.4	0.045
	Partner's gender	1830.50	< 0.001	589.0	605.4	0.758
	Sexual contact outside the relationship	329.99	< 0.001	2165.3	2198.1	0.133
	Number of sexual partners in last 4 weeks	143.21	< 0.001	3.1	24107.8	0.033
	Number of sexual partners in last 12 months	376.02	< 0.001	6.5	103902.0	0.056
Table 4 (Activities performed –without demographic control)	Masturbation	0.69	0.707	424.5	443.0	0.002
	Passionate kiss on the lips	43.97	< 0.001	1007.1	1025.6	0.042
	Kissing different parts of partner's body	70.91	< 0.001	1417.0	1435.4	0.048
	Vaginal penetration	2200.05	< 0.001	2652.0	2670.5	0.454
	Anal penetration (insertive)	336.26	< 0.001	3948.0	3966.5	0.079
	Anal penetration (receptive)	2089.58	< 0.001	2705.3	2723.8	0.436
	Oral sex (insertive)	7.07	0.029	1581.7	1600.2	0.005
	Oral sex (receptive)	2780.51	< 0.001	1698.7	1717.2	0.622
	Oral stimulation of the genitals of a female partner	1320.05	< 0.001	3449.3	3467.8	0.277
	Hand stimulation by the partner	54.19	< 0.001	1838.4	1856.9	0.029
	Hand stimulation of the partner	47.83	< 0.001	1962.1	1980.6	0.024

Table 4 (Activities performed –with demographic control)	Masturbation	0.69	0.707	424.5	443.0	0.002
	Passionate kiss on the lips	98.51	< 0.001	970.6	1044.5	0.094
	Kissing different parts of partner's body	139.79	< 0.001	1366.1	1440.0	0.094
	Vaginal penetration	2353.22	< 0.001	2516.8	2590.8	0.486
	Anal penetration (insertive)	419.51	< 0.001	3882.7	3956.7	0.098
	Anal penetration (receptive)	2106.57	< 0.001	2706.3	2780.3	0.440
	Oral sex (insertive)	82.19	< 0.001	1524.6	1598.5	0.052
	Oral sex (receptive)	2805.16	< 0.001	1692.1	1766.0	0.627
	Oral stimulation of the genitals of a female partner	1390.61	< 0.001	3396.8	3470.7	0.292
	Hand stimulation by the partner	131.08	< 0.001	1779.5	1853.4	0.070
	Hand stimulation of the partner	163.48	< 0.001	1864.5	1938.4	0.082
Table 4 (Most pleasurable activities – without demographic control)	Masturbation	50.05	< 0.001	4500.5	4518.9	0.011
	Passionate kiss on the lips	150.85	< 0.001	4396.0	4414.5	0.033
	Kissing different parts of partner's body	1.61	< 0.001	3190.9	3209.4	0.001
	Vaginal penetration	2428.21	< 0.001	1998.1	2016.6	0.549
	Anal penetration (insertive)	168.64	< 0.001	4260.6	4279.1	0.038
	Anal penetration (receptive)	899.50	< 0.001	3364.4	3382.8	0.211
	Oral sex (insertive)	198.65	< 0.001	4645.0	4663.5	0.041
	Oral sex (receptive)	706.43	< 0.001	3424.8	3443.3	0.171
	Oral stimulation of the genitals of a female partner	446.53	< 0.001	2251.6	2270.1	0.166
	Hand stimulation by the partner	25.14	< 0.001	2796.2	2814.7	0.009
	Hand stimulation of the partner	7.43	< 0.001	1559.2	1577.7	0.005

Table 4 (Most pleasurable activities – with demographic control)	Masturbation	85.94	< 0.001	4482.6	4556.5	0.019
	Passionate kiss on the lips	183.48	< 0.001	4381.4	4455.3	0.040
	Kissing different parts of partner's body	27.79	0.004	3182.8	3256.7	0.009
	Vaginal penetration	2450.67	< 0.001	1993.7	2067.6	0.554
	Anal penetration (insertive)	198.34	< 0.001	4248.9	4322.8	0.045
	Anal penetration (receptive)	918.84	< 0.001	3363.0	3436.9	0.216
	Oral sex (insertive)	243.25	< 0.001	4618.4	4692.3	0.050
	Oral sex (receptive)	721.79	< 0.001	3427.4	3501.3	0.175
	Oral stimulation of the genitals of a female partner	462.48	< 0.001	2253.7	2327.6	0.172
	Hand stimulation by the partner	41.58	< 0.001	2797.8	2871.7	0.015
	Hand stimulation of the partner	34.81	< 0.001	1549.8	1623.8	0.022

Note: AIC – Akaike information criterion; BIC – Bayesian information criterion.