The proneness to sexual excitation and inhibition in MSM and non-MSM

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The aim of the study was to assess and compare levels of sexual excitation/inhibition levels and prevalence of sexual disorders in groups of heterosexual and MSM (men having sex with men) subjects. 107 men from Poland filled an internet survey consisted of Sexual Inhibition/ Sexual Excitation Scales (SIS/SES) and questionnaire designed by the authors. Data has been gathered between May 2015 and March 2016.

Table 1. The studied groups characteristics.

MSM group (n=60)	Heterosexual men group (n=47)
• Age 19 – 43 (M=27.88, SD=6.34)	• Age 20 – 56 (M=34.17, SD=9.1)
• Mainly collage (56.7%) and high (26.7%) education	• Mainly collage (46.8%) and high (25.5%) education
• 80% from a city >100k inhabitants	• 70.2% from a city >100k inhabitants
• Mainly white collar type of occupation (65%)	• Mainly white collar type of occupation (59.9%)
• 45% identified as Catholic and 45% as non-believers	• 55.3% identified as Catholic and 34% as non-believers

Results

Both investigated groups achieved similar scores reflecting their propensities for sexual excitation (SES) and inhibition due to the risks of failure in sexual performance (SIS1). However, MSM group scored higher on the inhibition scale, related to the threat of negative consequences of sexual response (SIS2). Heterosexual men group more frequently reported problems with premature ejaculation and less commonly reported troublesome low desire levels. There were no differences in the erectile disorders occurrence between MSM and heterosexual men groups.

Table 2. SIS/SES scores in studied groups.

Variables	Chi² (1,107)	p value	G r o u p comparison
Erectile disorder	0.65	0.55	N.S.
Premature ejaculation	5.54	0.02	MSM<Hetero
Hypoactive sexual desire	5.99	0.02	MSM>Hetero

Table 3. Sexual dysfunctions report in studied groups.

Variables	Student t test; F(1, 107)	p value	G r o u p comparison
SES	0.82	0,37	N.S.
SIS1	0.71	0.40	N.S.
SIS2	(Welsh's t test)	0.03	MSM>Hetero

Statistical and psychometric properties:
Cronbach's alpha: SES - 0.89, SIS1 - 0.85, SIS2 - 0.76
Shapiro-Wilk test for SES, SIS1 and SIS2 scales in both groups indicated p>0.05, thus distribution of scores was close to normal.
MSM group was younger (Mann-Whitney test; U = 808; p<0.001)

Conclusions

- Findings show different picture of excitation/inhibition profile among MSM group in comparison to the previous reports [1]
- General tendency to react with sexual excitation and general inhibitory tone seems not to differentiate men who have sexual contact exclusively with opposite sex and those who also have sex with men (both exclusively and inclusively)
- Higher SIS2 levels in Polish MSM group my reflect:
 - hypothetically stronger minority stress [2] in Polish sample which influence sexual response (in comparison to the previously investigated groups [1])
 - external, stressful and sexually inhibiting factors contained in SIS2 scale items may be perceived and processed differently in both groups of men
 - alternatively, this could be an example of culture difference impact.
- Noteworthy, in our sample behavioural aspect was used to define sexual orientation, which not necessary goes with self-identification as a member of LGBT community. Prior studies [1] defined LGB participants basing on their self-identification.
- Results concerning the prevalence of sexual dysfunctions:
 - do not support previous observations related to more common erectile problems in homosexual group (differences statistically not significant) [3,4,5]
 - partially support relations about more frequent occurrence of premature ejaculation in heterosexual group [1]. Nevertheless, prior findings are inconsistent [6]
- confirms prior reports about more common complains in MSM group on diminished sexual desire level [4,7]. As it was stated elsewhere [8], such reaction may reflect adaptive reaction in stressful circumstances.

Background

Sexual orientation concept

Studies show, that sexual orientation, as a permanent pattern of emotional, sexual and romantic attraction should be defined in various ways. It may be based on the practiced sexual behaviour, response in a form of sexual feelings directed to particular sex, romantic feelings (love) or self-concept (sexual identification). Moreover, it has been proven that studied subjects often present discrepancy between self-concept and undertaken behaviour (e.g. “I’m not a gay but sometimes I have sex with other guys”). This is a reason why more detailed categories rather than ‘hetero’, ‘homo’ and ‘bisexual’ have been distinguished. MSM is one of them.

Dual Control Model (DCM)

DCM is based on the idea, which states that sexual response is a final result of constant cooperation of two, separated brain systems: excitation and inhibition. Their balance should result in adaptive sexual reactions, while severe divergence leads to occurrence of sexual disorders and problems. Important role in sexual regulation plays a aware and unaware cognitive information processing of sexual stimuli. Especially adaptive is adequate to the context level of inhibition proneness. Men vary greatly in their tendencies to react with sexual excitation and inhibition. Sexually stimulating or inhibiting effect have interpersonal and cultural influences, mediated by individual psychological and neurophysiological characteristics. Anyway, studies showed that distribution of excitation and inhibition scores is close to normal. In relation to the psychometric measurement of sexual excitation and inhibition propensity, they should be assessed separately but interpreted jointly. The example of psychometric tool based on DCM concept is SIS/SES, a 45-items questionnaire. Previous findings revealed significant differences between SES and SIS1 levels among homosexual and heterosexual men – both higher in gay men [1].

SIS/SES scales	Description
SES	Propensity for sexual arousal.
SIS1	Inhibition due to the risk of failure in sexual performance. May be interpreted as a “inhibitory tone” in relation to sexual response
SIS2	Inhibition due to the threats related to consequences of sexual fulfilment. Can be interpreted as a situational inhibition.

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