

Sexual orientation and eating disorders: exploring the possible link

Orientacja seksualna a zaburzenia odżywiania: badanie możliwego związku

¹ Faculty of Philology, University of Lodz, Łódź, Poland (student)

² Faculty of Health Sciences, Medical University of Lodz, Łódź, Poland (student)

³ Department of Medical Psychology, Medical University of Lodz, Łódź, Poland

Correspondence: Jakub Kuna, BSc, Department of Medical Psychology, Medical University of Lodz, Sterlinga 5, 91-425 Łódź, Poland, e-mail: kubakuna01@gmail.com

Abstract

This paper is aimed at investigating the potential connection between the prevalence of eating disorders and sexual orientation, as well as to exploring the nature of the possible relationship. For that purpose, results of studies found in digital databases were searched and analysed. Such a link has been found to exist, yet its character is difficult to determine due to limited data, problems in classifying patients' sexual orientation, or collecting honest answers to sensitive but crucial questions. Most studies on the subject have been conducted in the USA and, rather predictably, mainly among women. Higher incidence rates were found in non-heterosexual men and bisexual women. It is not clear if homosexual women are more susceptible as well. It may be a result of being exposed to unique risk factors, such as common body image dissatisfaction, fear of coming out, or falling a victim to bullying. The lack of family support among sexual minorities also seems to be a significant factor – not only regarding the development of eating disorders but their effective treatment as well. This knowledge may be helpful in the prevention of eating disorders, making clinical examination more accurate and facilitating adjustments of therapy for people with eating disorders. Further research is needed, including more eating disorders and sexual orientation groups.

Keywords: sexual orientation, homosexual, non-heterosexual, eating disorders, anorexia, bulimia

Streszczenie

Artykuł ma na celu sprawdzenie istnienia związku pomiędzy występowaniem zaburzeń odżywiania a orientacją seksualną, jak również ewentualnego charakteru takiego powiązania. W tym celu zestawiono wyniki prac znalezionych w cyfrowych bazach danych. Związek taki istotnie występuje, jednak ustalenie jego charakteru jest trudne ze względu na ograniczone dane, problematyczną klasyfikację orientacji seksualnej badanych oraz pozyskiwanie szczerych odpowiedzi na drażliwe, lecz kluczowe pytania. Większość badań została przeprowadzona w Stanach Zjednoczonych i, jak się spodziewano, głównie wśród kobiet. Wykazano, że zaburzenia odżywiania częściej występują u nieheteroseksualnych mężczyzn oraz biseksualnych kobiet – nie mamy pewności, czy homoseksualne kobiety również są bardziej podatne. Taki stan może wynikać z narażenia na unikalne czynniki ryzyka, takie jak częste niezadowolenie z własnego wyglądu, strach przed coming outem czy bycie ofiarą prześladowania. Brak wsparcia rodziny wśród przedstawicieli mniejszości seksualnych również wydaje się istotnym czynnikiem – nie tylko w zakresie rozwoju zaburzenia, lecz także jego efektywnego leczenia. Wiedza ta może pomóc w prewencji zaburzeń odżywiania, uczynić wywiad z pacjentem oraz jego terapię bardziej precyzyjnymi. Potrzebne są jednak dalsze badania, szczególnie w zakresie pozostałych zaburzeń odżywiania oraz orientacji seksualnych.

Słowa kluczowe: orientacja seksualna, homoseksualny, nieheteroseksualny, zaburzenia odżywiania, anoreksja, bulimia

INTRODUCTION

Eating disorders (ED) are a very peculiar group of disease entities, which are highly misunderstood in public discourse, particularly considering their complex aetiology (Blodgett Salafia et al., 2015). The affected people are socially stigmatised (Crisp, 2005), and there is no visible trend towards changing such a mindset (Mroczkowska, 2012). The complexity of the underlying causes of ED has not yet been thoroughly studied, preventing more successful education of the public concerning ED. The potential risk factors include genetic susceptibility, psychological determinants such as low self-esteem, perfectionism or impulsiveness and, perhaps most frequently mentioned, cultural background – the emphasis on a fit body in the media, which may lead to body image dissatisfaction (Striegel-Moore, 1997). Non-heterosexual orientation has also been proposed as a risk factor. The first studies attempting to verify this suggestion were undertaken in the 1980s (Herzog et al., 1984), yet it still remains inadequately examined. The main reason for this status is insufficient sample size, lack of randomization or, which is typical for such studies, focusing on white heterosexual women or white gay man (Bankoff and Pantalone, 2014). In the paper, we have provided an overview of the available data on the link between sexual orientation and ED risk, with the emphasis on the shortcomings of the research and future needs. The paper is descriptive and mainly aims at discussing the problems and uncertainties related to the study subject.

METHODS

We have conducted an electronic search of two major databases (Medline/PubMed and Google Scholar) to find relevant research papers. The following keywords were used: (eating disorders OR anorexia OR bulimia) AND (sexual orientation OR homosexuality OR gender role). The search was limited to English language and the period of time of 1980–2016. Four additional papers were identified in other articles' lists of references. We have found a total number of ten papers fulfilling the search criteria, after the exclusion of a significant number of theoretical and review papers.

METHODOLOGICAL PROBLEMS

During this study, a few problems related to the collection of data were noted. The most commonly examined group are young people who in fact develop ED most frequently, but it precludes any reliable conclusions in respect of the whole population. In some studies, subtypes such as anorexia or bulimia are not considered separately but rather a common umbrella of ED is used. As for the sexual orientation, the group of unsure/questioning people is often not mentioned, even though it has been proven that

there is a correlation between this particular sexual category and ED. Also, in some articles homosexuals and bisexuals are combined into one group as non-heterosexuals, but it is critical to differentiate between these two orientations. Surprisingly, there are not many studies about ED in lesbians or bisexual women. Though studies on ED most commonly focus on women, only in a limited number of the studies sexual orientation is considered a risk factor.

ED were mainly diagnosed in accordance with ICD and DSM obligatory at the time of studies. Some studies used self-reported ED as a criterion (e.g. asking if a patient was diagnosed with ED in the preceding 12 months), while in others participants were asked about ED's symptoms (such as skipping meals, vomiting or using laxatives). The category of ED is often reduced to anorexia nervosa (AN) and bulimia nervosa (BN). Rarely, binge eating disorder (BED) is mentioned.

Studies also face the problem of defining the patients' sexual orientation. It is crucial for their thoroughness. A trichotomous division of sexual orientation is an oversimplified view, and it may lead to vague conclusions. ED may also be related to sexual identities not included in the typical classification of sexual orientation, such as unsure, questioning, mostly heterosexual or bi-curious. Only seeing sexual orientation as a dynamic, multi-layered process, as Kinsey et al. (1948) and Klein (1993) suggested, helps to understand the complexity of this subject. Furthermore, an essential feature of sexual orientation is its inconstancy related to age. A survey conducted on a group of people aged 12–25 years old has shown that those in their early adolescence are the most unsure of their sexual orientation but the percentage of them in the population decreases with age. Also, it was proven that women were more likely to change their sexual orientation throughout the years and the ratio of sexual orientation changeability was the highest in the group of non-heterosexual people (Ott et al., 2011). There may be a connection between the development of sexual orientation and prevalence of ED, especially in the "unsure" group. We also want to note not distinguishing between sexual behaviours and sexual orientation which is highly questionable, especially in studies performed on adolescent or young adult cohorts. The fluidity of sexual orientation may also be related to other factors such as social influence and current life situation (e.g. imprisoning). In some studies, patients were assigned to particular sexual orientation groups based only on their sexual behaviours which may be determined by certain environmental factors.

The difference in the occurrence of non-heterosexuality in population and the group of patients with ED may be used as an indicator of the relationship between these issues. However, as years of studies on LGBT demographics show, it is hard to be sure about these numbers. Some studies indicate less than 4% of the LGBT population, while others state that more than 10% are non-heterosexual. The method used by researchers is crucial – a Polish study has shown that in a paper survey 6% of people confirmed same-sex

attraction, whilst in an online version of the same survey up to 12% people gave the same answer (Skowronski et al., 2008). We think that it is best to assume that there are approximately 5–10% of non-heterosexual people. These statistics mainly apply to USA and Europe and to young people, who are most susceptible to ED.

RESULTS

One of the first papers investigating the analysed subject was published in 1984. It stated that men with AN or BN were more often homosexual or dealt with sexual isolation (Herzog et al., 1984). Another article from 1987 suggested that in a group of ED male patients, homosexuality occurred twice more often than in the general population (Fichter and Daser, 1987). A study from 1996, one of the first to examine women, indicated that though a BN ratio was similar in both lesbians and straight females, lesbians were more susceptible to BED (Heffernan, 1996). All of these early studies, however, were conducted on small groups of patients.

Nowadays, such studies are performed more frequently and on bigger, better described cohorts. To start with, we would like to focus on studies where the participants were asked not about the occurrence of ED as such, but their symptoms.

A study from 2004 showed that mostly heterosexual girls were more likely to vomit and use laxatives (as means of controlling weight) than their straight peers. The same correlation was found in gay and bisexual boys (Austin et al., 2004).

A study published in 2015 found that men attracted to same sex or both sexes showed a higher prevalence of disordered eating symptoms. No disparity was found between lesbians and heterosexual women. However, bisexual women had higher rates of ED. These results suggest that bisexuality (or sexual orientation uncertainty) may, in fact, be more closely linked to ED than homosexuality (Shearer et al., 2015).

The article from 2013 found that among American high school students with the average age of 16, homo- and bisexual boys and girls had higher odds of diet pill use or purging. A similar tendency was found in unsure women and men. The highest odds were found in the group of bisexual boys (Austin et al., 2013).

One of the first studies that used DSM-IV to diagnose patients was published in 2007. It showed that gay and bisexual men had a higher prevalence of ED than their heterosexual peers. No such differences were found among women (Feldman and Meyer, 2007).

In 2014, the results of a large study conducted on over 110,000 participants with the average age of 22 were published. According to the study, non-heterosexual and unsure men used diet pills more frequently, and were more likely to demonstrate compensatory behaviours (such as vomiting or using laxatives) than heterosexual males. Among women, such relations were not clear. Nevertheless,

sexual-minority participants of both sexes used reducing diets more often. Moreover, participants not included in the results (e.g. transgenders or people who did not answer the question about their sexual orientation) were noticeably more likely to demonstrate weight loss behaviours (Matthews-Ewald et al., 2014).

In the same study, participants were asked about professionally diagnosed ED in the preceding 12 months. Again, non-heterosexual and unsure men, but also bisexual women were more likely to have a diagnosis of ED. The same feature was noticed in the group not included in the final results (Matthews-Ewald et al., 2014).

Another study published in 2014 showed that in comparison to heterosexual peers mostly heterosexual and bisexual males were more likely to perceive themselves as overweight. Among women, lesbians and bisexual women were more likely to perceive their weight as correct while they were overweight. In the male group, each non-heterosexual subgroup was more likely to demonstrate risky weight control behaviours (e.g. fasting, purging, using diet pills) with mostly heterosexual and gay males showing the highest prevalence. Among females, bisexual women were more likely to demonstrate such behaviours. In general, sexual minorities were more likely to engage in risky weight control behaviours compared to their heterosexual peers. The study was conducted on nearly 13,000 teenagers in the USA (Hadland et al., 2014).

Finally, in another big study (nearly 290,000 participants, median age: 20) the authors decided to use an overall category of non-heterosexuals with heterosexual women as a reference group. What was novel, they also recognised transgender group as a separate entity. It was shown that unsure males and females and non-heterosexual men were more often diagnosed with ED. Vomiting and using laxatives were slightly more frequent in non-heterosexual men and unsure women. Surprisingly, the group of transgender people was the most likely to be diagnosed with ED or to demonstrate compensatory behaviours – more than four times more often than straight women (Diemer et al., 2015).

DISCUSSION: ON THE RELATIONSHIP BETWEEN SEXUAL ORIENTATION AND ED

Gay and bisexual men are visibly more likely to have ED's symptoms and ED. It may be assumed that 5% of male population is gay, but among ED patients up to 42% refer to themselves as non-heterosexual (Feldman and Meyer, 2007). What is the origin of such a link?

To start with, we took socio-cultural factors into consideration. Ideal body image among non-heterosexual men is complex – it combines low body fat and muscular shape (Yelland and Tiggemann, 2003). This may lead to risky eating behaviours (Mor et al., 2014). It has been suggested that non-heterosexual men tend to sexualize their bodies, which makes them more susceptible to ED (Siever, 1994).

These factors may result in distorted body image – studies have shown that gay men are more likely to overestimate their BMI (Richmond et al., 2012).

The level of body image dissatisfaction among non-heterosexual men is also of concern (Blashill et al., 2016). It may be credited as the basis of ED, as it turns out it is a stronger prognostic factor than low self-esteem (Hospers and Jansen, 2005). An American study shows that men who have sex with men are more likely to demonstrate body image dissatisfaction. Moreover, this dissatisfaction (especially on the matter of muscularity) was correlated with internalised homophobia index (Siconolfi et al., 2016). Such men (internalised homophobia is less frequent among women) (Herek et al., 1997) often describe their ideal body image as athletic, and it may be related to the experienced need for separating from the image of a feminine gay man. Additionally, they are less likely to be victims of bullying (Brennan et al., 2012; Tskhay and Rule, 2017).

In fact, bullying and aggression may also result in ED – it has also been proven to increase body image dissatisfaction (Cunningham et al., 2010). Sexual violence is another important factor. Studies have shown that women molested in their youth are more susceptible to ED (especially bulimia) (Wonderlich et al., 1997). It is also worth mentioning that bisexual women are more likely to fall victims to rape than lesbians and heterosexual women. Another study has suggested that lesbians and gays are victims of sexual violence more often (Walters et al., 2013). These situations may lead to PTSD which has been proven to increase the risk of ED (Brewerton, 2007; Sweetingham and Waller, 2008).

The LGB population has some distinctive risk factors such as coming out. The process itself may cause stress. People who came out are more likely to experience verbal aggressiveness or discrimination (Huebner et al., 2004). Such disclosure may also be perceived negatively by one's family. Good family relationships are important in the prevention of ED. What is more, ED treatment gives better results when the patient's family is involved (Robin et al., 1999). Hence, the lack of family acceptance may lead to developing ED. One of the implications of such a family situation may be homelessness. In the USA, 20–40% of young homeless people are non-heterosexual (Quintana et al., 2010), and a study conducted in Austria showed that 17.5% of homeless people aged 14–23 years old have ED (Aichhorn et al., 2008).

The impact of the media should not be ignored. Although it is misperceived in society as the only and the most crucial risk factor, it may, in fact, trigger ED. Studies show that gay and bisexual men are more susceptible to the body image portrayed by media (Gigi et al., 2016). It has also been proven that these men experience higher levels of body dissatisfaction and demonstrate risky eating behaviours more often (McArdle and Hill, 2009). Indeed, men, in general, are less susceptible to media influence than women, but the level of the susceptibility increases in late adolescence/young adulthood, a critical age for the development of ED (Carper et al., 2010; Hargreaves and Tiggemann, 2004).

There are a few significant differences regarding women. Bisexual women are more likely to have ED, but it is hard to draw any certain conclusions when it comes to homosexual women. Most of the studies suggest that lesbians are less likely to have ED. Some of them indicate the same or higher ED prevalence among lesbians (compared to heterosexual women) but simultaneously the level of body dissatisfaction is lower or the same as among heterosexual peers (Beren et al., 1996; Strong et al., 2000).

It is hard to determine the origin of such discrepancy. Hence, wide-scale studies are needed to address the problem. The innovative approach of taking not patients' sex but gender sense into consideration during a study shows promising results. It has been suggested that – independently of sex – femininity may be linked to ED while masculinity appears to be a protective factor (Cella et al., 2013).

Also, a sense of belonging to LGBT community is considered a protective factor (Shearer et al., 2015). It may be due to self-acceptance, social support and thereby lower stress level. This is also a reason why participants of LGBT events such as Pride events should not be used as the only study sample. Such protective influence helps to understand one more thing. It seems that higher prevalence of ED among bisexual women may be related to the lack of this factor, as, in fact, LGBT people are commonly and unfairly prejudiced to bisexual women. Furthermore, bisexual people may be considered promiscuous, and their bisexuality may be a way to hide homosexual tendency (Brewster and Moradi, 2010). Also, bisexual women are the most likely to fall victim to sexual violence which is another factor increasing ED prevalence (Walters et al., 2013).

Despite limited data concerning ED among unsure people, we assume that there are a few similarities to non-heterosexual people due to common risk factors and socio-cultural background. Considering that unsure people are mostly in their adolescence/young adulthood, this group requires more research.

Finally, mostly heterosexual group (as defined by the subjects' declaration) is also included in some studies. Likewise, they are also more susceptible to ED. The reasons for such a status are probably similar to the ones in the unsure group, although it is not clear whether these groups are mutually exclusive. We propose to distinguish this group as a different sexual orientation in further studies (Savin-Williams and Vrangalova, 2013).

Unfortunately, drawing any firm conclusions from these studies would be a generalization. Frequently incomparable study methods, difficulties in categorization of both eating disorder and sexual orientation, mixing up behaviours (again, both eating and sexual) with ED or sexual orientation, and the obvious problems with finding unbiased cohorts of subjects, all these factors highlight the need of well-planned, complex studies in the field. Finally, Calzo et al. (2017) have also pointed out the lack of research among sexual minorities across the lifespan.

CONCLUSION AND PRACTICAL IMPLICATIONS

The relationship between ED and sexual orientation is very complex, and it requires further studies – especially including more disorders (such as bigorexia or orthorexia) and groups – transgender, unsure and mostly heterosexual. Nonetheless, we may draw some conclusions based on the current knowledge. Non-heterosexual men are more likely to have ED. Among women, such relationship is more visible in the group of bisexual women – perhaps due to limited data. It is hard to be sure about this kind of relationship among homosexual women, yet there appears to be a difference between them and their heterosexual peers. Sexual minority individuals are exposed to some unique risk factors such as fear of coming out or internalised homophobia. This fact may help to customise treatment. Some non-heterosexual people may have specific personality traits which predispose to ED, e.g. susceptibility to media influence. Therefore, sexual orientation does not cause ED per se, however, it places a person in a certain sociocultural niche, where s/he is exposed to many risk factors.

How may this knowledge be applied into practice? First of all, we suggest paying close attention to the patient's sexual orientation and behaviours during the medical interview, as this likely to help diagnosing the patient more accurately. We see focusing on sexual minority individuals in terms of prevention as equally important. The results of these actions may lead to reducing the risk of ED.

Conflict of interest

The authors do not report any financial or personal connections with other persons or organizations, which might negatively affect the content of this publication and/or claim authorship rights to this publication.

References

- Aichhorn W, Santeler S, Stelzig-Schöler R et al.: [Prevalence of psychiatric disorders among homeless adolescents]. *Neuropsychiatr* 2008; 22: 180–188.
- Austin SB, Nelson LA, Birkett MA et al.: Eating disorder symptoms and obesity at the intersections of gender, ethnicity, and sexual orientation in US high school students. *Am J Public Health* 2013; 103: e16–e22.
- Austin SB, Ziyadeh N, Kahn JA et al.: Sexual orientation, weight concerns, and eating-disordered behaviors in adolescent girls and boys. *J Am Acad Child Adolesc Psychiatry* 2004; 43: 1115–1123.
- Bankoff SM, Pantalone DW: Patterns of disordered eating behavior in women by sexual orientation: a review of the literature. *Eat Disord* 2014; 22: 261–274.
- Beren SE, Hayden HA, Wilfley DE et al.: The influence of sexual orientation on body dissatisfaction in adult men and women. *Int J Eat Disord* 1996; 20: 135–141.
- Blashill AJ, Tomassilli J, Biello K et al.: Body dissatisfaction among sexual minority men: psychological and sexual health outcomes. *Arch Sex Behav* 2016; 45: 1241–1247.
- Blodgett Salafia EH, Jones ME, Haugen EC et al.: Perceptions of the causes of eating disorders: a comparison of individuals with and without eating disorders. *J Eat Disord* 2015; 3: 32.
- Brennan DJ, Craig SL, Thompson DE: Factors associated with a drive for muscularity among gay and bisexual men. *Cult Health Sex* 2012; 14: 1–15.
- Brewerton TD: Eating disorders, trauma, and comorbidity: focus on PTSD. *Eat Disord* 2007; 15: 285–304.
- Brewster ME, Moradi B: Perceived experiences of anti-bisexual prejudice: instrument development and evaluation. *J Couns Psychol* 2010; 57: 451–468.
- Calzo JP, Blashill AJ, Brown TA et al.: Eating disorders and disordered weight and shape control behaviors in sexual minority populations. *Curr Psychiatry Rep* 2017; 19: 49.
- Carper TL, Negy C, Tantleff-Dunn S: Relations among media influence, body image, eating concerns, and sexual orientation in men: a preliminary investigation. *Body Image* 2010; 7: 301–309.
- Cella S, Iannaccone M, Cotrufo P et al.: Influence of gender role orientation (masculinity versus femininity) on body satisfaction and eating attitudes in homosexuals, heterosexuals and transsexuals. *Eat Weight Disord* 2013; 18: 115–124.
- Crisp A: Stigmatization of and discrimination against people with eating disorders including a report of two nationwide surveys. *Eur Eat Disord Rev* 2005; 13: 147–152.
- Cunningham NJ, Taylor M, Whitten ME et al.: The relationship between self-perception of physical attractiveness and sexual bullying in early adolescence. *Aggress Behav* 2010; 36: 271–281.
- Diemer EW, Grant JD, Munn-Chernoff MA et al.: Gender identity, sexual orientation, and eating-related pathology in a national sample of college students. *J Adolesc Health* 2015; 57: 144–149.
- Feldman MB, Meyer IH: Eating disorders in diverse lesbian, gay, and bisexual populations. *Int J Eat Disord* 2007; 40: 218–226.
- Fichter MM, Daser C: Symptomatology, psychosexual development and gender identity in 42 anorexic males. *Psychol Med* 1987; 17: 409–418.
- Gigi I, Bachner-Melman R, Lev-Ari L et al.: The association between sexual orientation, susceptibility to social messages and disordered eating in men. *Appetite* 2016; 99: 25–33.
- Hadland SE, Austin SB, Goodenow CS et al.: Weight misperception and unhealthy weight control behaviors among sexual minorities in the general adolescent population. *J Adolesc Health* 2014; 54: 296–303.
- Hargreaves DA, Tiggemann M: Idealized media images and adolescent body image: “comparing” boys and girls. *Body Image* 2004; 1: 351–361.
- Heffernan K: Eating disorders and weight concern among lesbians. *Int J Eat Disord* 1996; 19: 127–138.
- Herek GM, Cogan JC, Gillis JR et al.: Correlates of internalized homophobia in a community sample of lesbians and gay men. *J Gay Lesbian Med Assoc* 1997; 2: 17–25.
- Herzog DB, Norman DK, Gordon C et al.: Sexual conflict and eating disorders in 27 males. *Am J Psychiatry* 1984; 141: 989–990.
- Hospers HJ, Jansen A: Why homosexuality is a risk factor for eating disorders in males. *J Soc Clin Psychol* 2005; 24: 1188–1201.
- Huebner DM, Rebchook GM, Kegeles SM: Experiences of harassment, discrimination, and physical violence among young gay and bisexual men. *Am J Public Health* 2004; 94: 1200–1203.
- Kinsey AC, Pomeroy WR, Martin CE: *Sexual Behavior in the Human Male*. W.B. Saunders, Philadelphia 1948.
- Klein F: *The Bisexual Option*. Second Edition. The Haworth Press, Binghamton 1993.
- Matthews-Ewald MR, Zullig KJ, Ward RM: Sexual orientation and disordered eating behaviors among self-identified male and female college students. *Eat Behav* 2014; 15: 441–444.
- McArdle KA, Hill MS: Understanding body dissatisfaction in gay and heterosexual men. The roles of self-esteem, media, and peer influence. *Men Masc* 2009; 11: 511–532.
- Mor Z, Parfionov K, Davidovitch N et al.: Gym exercising patterns, lifestyle and high-risk sexual behaviour in men who have sex with men and in heterosexual men. *BMJ Open* 2014; 4: e005205.
- Mroczkowska D: Postrzeżenie i rozumienie zaburzeń jedzenia – fakty i mity. *Forum Medycyny Rodzinnej* 2012; 6: 82–91.
- Ott MQ, Corliss HL, Wypij D et al.: Stability and change in self-reported sexual orientation identity in young people: application of mobility metrics. *Arch Sex Behav* 2011; 40: 519–532.

- Quintana NS, Rosenthal J, Krehely J: On the Streets. The Federal Response to Gay and Transgender Homeless Youth. Center for American Progress, Washington 2010.
- Richmond TK, Walls CE, Austin SB: Sexual orientation and bias in self-reported BMI. *Obesity (Silver Spring)* 2012; 20: 1703–1709.
- Robin AL, Siegel PT, Moye AW et al.: A controlled comparison of family versus individual therapy for adolescents with anorexia nervosa. *J Am Acad Child Adolesc Psychiatry* 1999; 38: 1482–1489.
- Savin-Williams RC, Vrangalova Z: Mostly heterosexual as a distinct sexual orientation group: a systematic review of the empirical evidence. *Dev Rev* 2013; 33: 58–88.
- Shearer A, Russon J, Herres J et al.: The relationship between disordered eating and sexuality amongst adolescents and young adults. *Eat Behav* 2015; 19: 115–119.
- Siconolfi DE, Kapadia F, Moeller RW et al.: Body dissatisfaction in a diverse sample of young men who have sex with men: The P18 Cohort Study. *Arch Sex Behav* 2016; 45: 1227–1239.
- Siever MD: Sexual orientation and gender as factors in socioculturally acquired vulnerability to body dissatisfaction and eating disorders. *J Consult Clin Psychol* 1994; 62: 252–260.
- Skowronski D, Beisert M, Nowicka M et al.: The analysis of sexual lifestyles of adult Poles. Comparison of an internet-based survey and paper-based survey. *Sexologies* 2008; 17: S56.
- Striegel-Moore R: Risk factors for eating disorders. *Ann N Y Acad Sci* 1997; 817: 98–109.
- Strong SM, Williamson DA, Netemeyer RG et al.: Eating disorder symptoms and concerns about body differ as a function of gender and sexual orientation. *J Soc Clin Psychol* 2000; 19: 240–255.
- Sweetingham R, Waller G: Childhood experiences of being bullied and teased in the eating disorders. *Eur Eat Disord Rev* 2008; 16: 401–407.
- Tskhay KO, Rule NO: Internalized homophobia influences perceptions of men's sexual orientation from photos of their faces. *Arch Sex Behav* 2017; 46: 755–761.
- Walters ML, Chen J, Breiding MJ: The National Intimate Partner and Sexual Violence Survey (NISVS): 2010 Findings on Victimization by Sexual Orientation. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, Atlanta 2013.
- Wonderlich SA, Brewerton TD, Jocz Z et al.: Relationship of childhood sexual abuse and eating disorders. *J Am Acad Child Adolesc Psychiatry* 1997; 36: 1107–1115.
- Yelland C, Tiggemann M: Muscularity and the gay ideal: body dissatisfaction and disordered eating in homosexual men. *Eat Behav* 2003; 4: 107–116.